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From Gap to Gain: Insourcing Inbound Logistics in the Heavy Truck Industry

A Comparative Case Study of B2B and B2C Strategies

Master's Thesis in the *Supply Chain Management* Master's Programme

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Abstract

In today's increasingly complex and uncertain business environment, maintaining a cost-efficient, resilient, and environmentally sustainable inbound supply chain is crucial for remaining competitive. This thesis investigates how heavy truck manufacturers can improve their inbound supply chain by identifying key challenges and exploring potential areas for improvement, with a particular focus on long-distance suppliers.

The study begins by examining logistical challenges faced in the inbound supply chain of a heavy truck manufacturer, when sourcing from distant suppliers. The starting point for identifying the challenges is based on cost-efficiency, resilience, and environmental sustainability. It then explores how B2B companies can draw insights from the practices of high-performing B2C companies to manage these challenges. Finally, drawing inspiration from B2C strategies, this thesis assesses the potential of insourcing to manage the logistical challenges in long-distance inbound logistics.

The findings reveal that the heavy truck manufacturer has logistical challenges with limited supply chain overview, lack of control in the supply chain, supplier dependence, and weak incentives for supplier resilience and environmental sustainability. These interrelated issues are rooted in strategic decisions. While some B2C practices are not directly transferable to a B2B context, the study finds that they nonetheless offer valuable insights, particularly the potential benefits of a more insourced approach for long-distance inbound logistics. The study finds that while insourcing can improve supply chain overview and control in the case, it does not substantially reduce supplier dependency and may even lead to new challenges.

Based on the findings, the study recommends that the heavy truck manufacturer should retain its current partial outsourcing strategy while developing a more dynamic and flexible model. This allows for continuous adaptation to changing conditions. Insourcing should be considered as a strategic measure rather than a standard solution, applied selectively based on context-specific factors such as internal capacity, risk, and supplier criticality. Furthermore, by expanded benchmarking efforts and drawing inspiration from successful B2C companies, the heavy truck manufacturer can strengthen its ability to manage long-distance inbound logistics and address external challenges more effectively.

Keywords: supply chain management, inbound logistics, gap analysis, transferability, make-or-buy decision, insourcing

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*Ebba Engström & Linn Eriksson
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List of Abbreviations

A list of acronyms used throughout this master's thesis, listed in alphabetical order, is presented below:

3PL	Third-party logistics
AI	Artificial intelligence
B2B	Business-to-business
B2C	Business-to-consumer
EDI	Electronic data interchange
GSCM	Green supply chain management
IT	Information technology
KPA	Key performance area
LSP	Logistics service provider
PUP	Pick-up point
RQ	Research questions
SC	Supply chain
SCM	Supply chain management
SKU	Stock-keeping unit

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1. INTRODUCTION

This chapter provides a background of the thesis and some of the key logistics challenges faced by heavy truck manufacturers in the current landscape. It then outlines the purpose of the research and the research questions that have guided the study. Finally, the research setting is described in greater detail to clarify the scope and limitations of the investigation.

1.1 Background

In today's rapidly changing and unpredictable global business environment, companies face numerous challenges to maintain competitiveness (Dobroszek, 2020). The networks and connections within global supply chains are becoming increasingly extensive, driven by rapidly evolving, constantly growing, and often unpredictable business environments (Manuj & Sahin, 2011). At the same time, global uncertainties, such as geopolitical tensions, logistics disruptions, and increasing environmental sustainability requirements, have stressed supply chains (Liu et al., 2022; Rajani et al., 2022).

As a result, companies are being forced to reevaluate their traditional logistics strategies and business models to respond quickly, efficiently, and resiliently in this new reality (Gattorna & Ellis, 2019). They are also dealing with more complex and demanding supply chain decision-making processes (Manuj & Sahin, 2011). This is especially true for the heavy truck manufacturing industry within B2B, which must adapt to these evolving challenges.

In parallel, the B2C sector has developed advanced and scalable logistics models that enable rapid deliveries and high adaptability, characteristics that are becoming increasingly important within the B2B sector as well (Svensk Handel, 2018). Some companies have experienced significant growth due to optimized logistics, improved delivery speed, and reliability. In 2023, one leading digital native retailer increased its delivery capabilities by over 65%, reflecting the impact of a well-managed supply chain (Young, 2024). This highlights how efficient logistics play a key role in driving business expansion. Such strategies are not only relevant to the B2C sector but also present valuable insights for industries like heavy truck manufacturing (Enkel & Mezger, 2013).

One strategy for addressing logistical challenges is reevaluating sourcing strategies, especially regarding the responsibility and control of inbound flows from long-distance suppliers. This is not only about the physical flow of materials but also the degree of management and control over these flows (McKenna & Walker, 2008; Stadler et al., 2015). Historically, outsourcing of logistics has been the dominant approach in the automotive industry, offering benefits such as cost reductions and focus on core competencies (Hartman et al., 2017; Johansson & Spångberg, 2007). However, there is increasing evidence that outsourcing does not always deliver as expected. Many firms are now reversing previous outsourcing decisions due to issues with quality assurance,

coordination, and rising supply chain complexity. These challenges have shifted interest in insourcing to restore control and operational stability (Sindreu, 2024).

For heavy truck manufacturers, drawing inspiration from B2C companies and embracing insourcing may therefore offer an effective strategy to mitigate supply chain vulnerabilities.

1.2 Problem Description

As global supply chains grow more complex, businesses face significant challenges in maintaining competitiveness. By adopting successful strategies from B2C logistics and reevaluating responsibility models within logistics, heavy truck manufacturers may discover new ways to manage the challenges.

In this context, it is crucial to investigate the specific challenges faced by heavy truck manufacturers in managing inbound supply chains from long-distance suppliers, and how B2C companies have addressed similar areas. By leveraging insights from the B2C sector and strategically rethinking logistics responsibility, particularly insourcing, manufacturers may uncover new ways to enhance their competitiveness. This is the focus of the present study.

Lastly, although insourcing is receiving increased attention in practice, academic research on its drivers, implementation challenges, and broader consequences remains limited. While outsourcing has been extensively studied, insourcing has received comparatively little attention (Hartman et al., 2017). As a result, scholars have called for further research to provide clearer guidance on when and how insourcing should be pursued (Hartman et al., 2017; Hirschheim & Lacity, 2000). This thesis seeks to contribute to addressing this gap.

1.3 Purpose and Research Questions

Considering the increasing challenges in global supply chains, manufacturing companies in the heavy truck industry should examine how successful B2C players manage their logistics, particularly in relation to inbound supply chains. The purpose of this study is therefore to explore *where* and *how* a heavy truck manufacturer can improve its inbound supply chain for long-distance suppliers to better manage their challenges within this area.

This is achieved by identifying areas of logistical challenges and potential gaps in comparison to established best practices of the B2C sector, as well as evaluating how a heavy truck manufacturer can apply B2C best practices. Finally, the study aims to analyze whether insourcing as a potential strategy can manage the identified challenges.

To fulfill this purpose, three different research questions (RQs) have been formulated, which, along with their aims, will be explained below.

- **RQ1:** What are the logistical challenges in the inbound supply chain of a heavy truck manufacturer when dealing with long-distance suppliers?

RQ1 aims to identify the logistical challenges faced by a heavy truck manufacturer in its inbound supply chain for long-distance suppliers to fulfill the purpose *where* to improve the inbound supply chain. This is done by investigating their current practices through interviews, focusing on mapping key challenge areas and underlying factors.

- **RQ2:** How can B2B companies learn from the practices of high-performing B2C companies to address the challenges identified in long-distance inbound supply chains?

RQ2 aims to explore *how* B2B companies can adapt practices from high-performing B2C companies to effectively address the long-distance inbound logistics challenges identified in RQ1. This comparison forms the basis for identifying *how* to improve areas for a heavy truck manufacturer by transferring applicable practices from the B2C to the B2B context.

- **RQ3:** How can insourcing help a heavy truck manufacturer manage the logistical challenges of a long-distance inbound supply chain?

RQ3 aims to explore whether insourcing, as a strategic approach, can help manage the logistical challenge identified in RQ1 to fulfill the purpose of *where* and *how* insourcing can improve the inbound supply chain. The focus is not solely on the physical flows, but rather takes a more structural perspective, emphasizing the degree of control and governance within the supply chain. As an extension of RQ3, the objective is to provide a recommendation on whether the company should consider insourcing its inbound supply chain.

1.4 Delimitations

Firstly, a supply chain is a broad concept that includes many different processes. Therefore, this study is limited to the inbound supply chain, with a specific focus on long-distance suppliers, to keep the scope manageable and allow for deeper analysis. The report also mainly adopts a purchasing perspective, as it is written from within the purchasing department.

Secondly, the study primarily focuses on the direct supply chain (1st tier), as this part of the chain contains the most immediate and relevant logistical interactions that directly impact production. By limiting the scope to this level, the study avoids the increased complexity that would result from including deeper tiers of the supply chain.

Thirdly, the study will focus on the general advantages and disadvantages that an insourcing strategy may bring to a heavy truck manufacturer, without conducting a detailed

cost analysis such as investment requirements, operational expenses, or long-term financial implications. Nor does it evaluate or compare specific third-party logistics providers (3PLs). The study will also not explore how an insourcing solution could be implemented, as the focus is on identifying key factors influencing logistics responsibility rather than evaluating 3PL providers or implementation processes.

Additionally, the study investigates the current setup with partially outsourced inbound logistics and the alternative of fully insourcing. A delimitation is therefore that the study does not investigate the option of fully outsourcing the inbound logistics function. Exploring that path, along with including all three options, would have significantly broadened the scope and required a more high-level strategic analysis - something that wasn't feasible within the time and resource constraints of this study.

Moreover, it is important to acknowledge that the study has limitations that may affect the generalizability of its findings. Since it focuses on a specific part of the supply chain within the context of a single case study, there are certain limitations in terms of how transferable the results are to other logistics flows or companies. This is a conscious limitation aimed at creating a more focused and in-depth analysis, given that many companies operate with highly diverse combinations of supply chains.

Finally, the study is subject to a limited selection process for both the companies and the interviewees, which may result in certain perspectives and experiences not being considered. This could affect how representative the results are for the industry. Furthermore, the study is conducted within a time frame of approximately four months, which limits the ability to capture long-term changes or effects. Therefore, the conclusions are based on the current situation rather than future developments.

Figure 1.1 illustrates the study's focus on the long-distance inbound supply chain. Only the elements enclosed within the grey box are included in the scope of this report. Elements outside this boundary - such as second-tier suppliers, 3PL services, and downstream distribution - are excluded from the analysis.

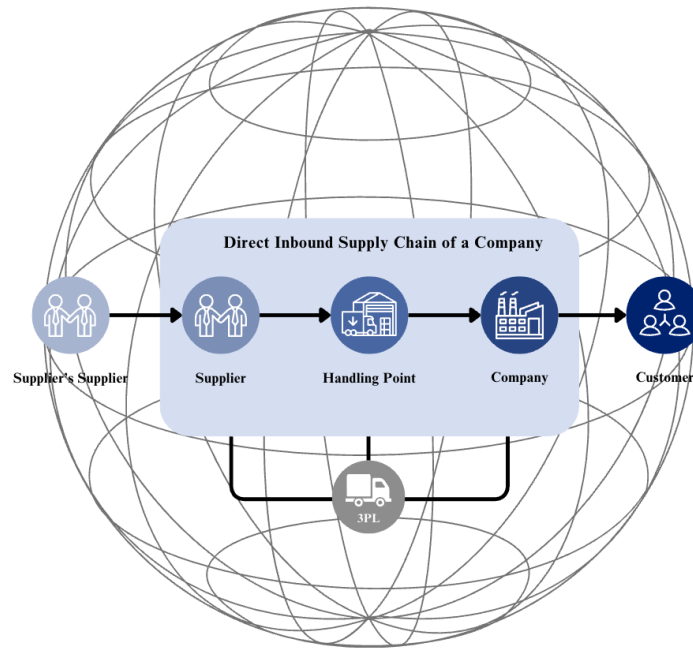


Figure 1.1: Visualization of report delimitations

1.5 Outline of the Thesis

This report is divided into seven chapters, with the structure illustrated in Figure 1.2. It begins with Chapter 2, which sets the theoretical foundation by providing both background and contextual framing of the topic. Chapter 3 presents the methodology, explaining how the study was conducted. The theoretical framework and empirical findings from Chapter 4 are then integrated and discussed in Chapter 5, forming the basis for answering the research questions. Chapter 6 provides answers to the research questions, recommendations, and includes a section on future research, highlighting areas for further exploration. Finally, the report ends with appendices that provide additional material to support the main content.

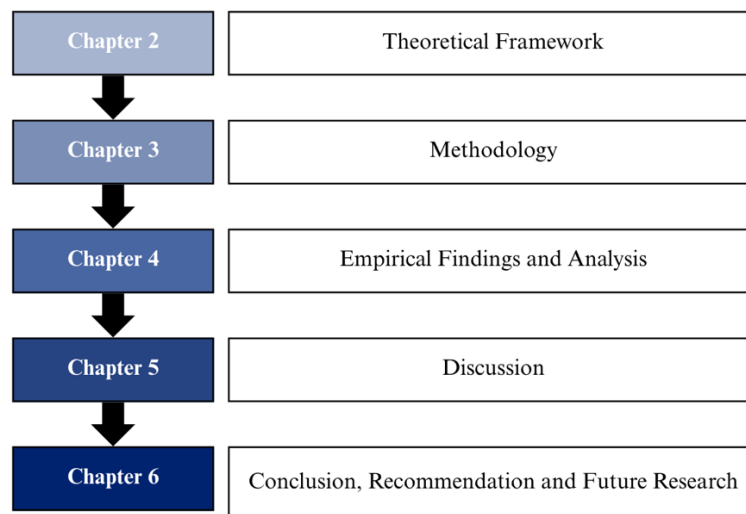


Figure 1.2: Thesis outline

2. THEORETICAL FRAMEWORK

This chapter presents the theoretical framework that form the foundation of the research.

2.1 Key Definitions

To understand the content of this report, it is essential to have a clear view of several key definitions and how they are interconnected. The report examines various companies' inbound logistics and supply chains, making it necessary to understand the concepts of supply chain, supply chain management, and inbound logistics.

This chapter therefore aims to provide a foundational understanding of the key concepts and frameworks that underpin the entire thesis.

2.1.1 The Supply Chain

The supply chain (SC) encompasses a network of organizations involved in the flow of materials, information, and finances from suppliers to end customers (Stadtler et al., 2015). It includes all stages from raw material sourcing to final delivery covering material flows and inventories between them (Levi et al., 2014).

Effective Supply Chain Management (SCM) integrates organizational units and coordinates material, information, and financial flows to meet end-customer demands in the supply chain (Stadtler et al., 2015). Traditionally considered a logistical function focused primarily on material movement, SCM has evolved into a strategic core function that drives business performance and aligns operational activities with broader organizational goals (Mentzer et al., 2008).

Logistics, often seen as a vital component of SCM, specifically deals with the planning and control of efficient flow and storage of goods, services, and related information from origin to consumption (Cooper et al., 1997). One part of logistics is inbound logistics, covering the flows of materials and information from suppliers to production (Antonio Mitsumasa, 2017). This is particularly important in high-volume, high-variety industries like automotive (Zijm et al., 2019).

A visualization of a company's inbound supply chain is presented in Figure 2.1.

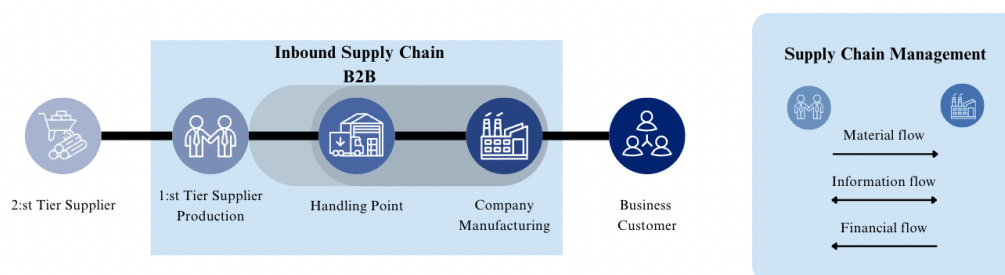


Figure 2.1: An overview of an inbound supply chain in an organization

2.2 Competitiveness and Challenges in Inbound Supply Chains

This chapter aims to provide the theoretical basis for RQ1 and RQ2 by examining how systemic features of the inbound supply chain can contribute to competitiveness. It also addresses logistical challenges in a supply chain that may arise and can compromise competitiveness.

2.2.1 Competitive Supply Chain

In a supply chain context, the overarching goal is to enhance competitiveness and responsiveness (Stadtler et al., 2015). A competitive supply chain is strategically managed to improve adaptability to market changes, coordinate resources efficiently, and reduce operational costs (Fawcett et al., 2008; Levi et al., 2014). This can be achieved through various strategies, both in how production is organized and how material flows from suppliers are managed (Gunasekaran, 2005).

To enhance supply chain competitiveness, firms must focus on integration and coordination of material, information, and financial flows where logistics plays a central role (Stadtler et al., 2015). For example, internal integration with close communication between departments within a company is crucial for achieving both operational and business performance, as well as for creating flexibility and proactivity (Christopher, 2016; Flynn et al., 2010). Furthermore, Christopher (2016) argues that silo structures and low internal communication reduce an organization's ability to adapt, which is essential in an agile and responsive supply chain. Seamless integration between supply chain stages is therefore essential for delivering value efficiently and reliably (Levi et al., 2014). To build a competitive and sustainable supply chain, companies must also balance cost-efficiency, resilience, and environmental sustainability (Ivanov, 2022). These aspects are often interconnected, sometimes reinforcing each other, sometimes in conflict (Marroun et al., 2024).

A crucial part of logistics is inbound flow management (Antonio Mitsumasa, 2017). Since it serves as the starting point of the delivery process, disruptions in inbound logistics, caused by geopolitical tensions, supplier failures, or natural disasters, can affect the entire supply chain, leading to delays and inefficiencies (Ramezankhani et al., 2018; Svensson, 2002). Therefore, competitive supply chains must design their inbound logistics to be lean, agile, and responsive, capable of adapting to disruptions while maintaining operational continuity. Research has shown that inbound logistics is one of the most critical areas for improvements within the supply chain (Ramezankhani et al., 2018).

Performance measurement is vital for continuous improvement and, therefore, creates long-term competitiveness (Chan, 2003). By evaluating both financial and non-financial metrics, organizations can identify inefficiencies, align internal goals, and track progress toward sustainability and resilience objectives (Chan, 2003; Chibba, 2007). These

systems enable firms to understand their current challenges and support the long-term development of supply chain capabilities. In addition, cost-efficiency, resilience, and sustainability have become key focus areas within supply chain management (Ramezankhani et al., 2018).

Cost-effectiveness

Cost-effectiveness means achieving the desired outcome at the lowest possible cost (Chan, 2003). In inbound logistics, this includes, among other things, material costs, transportation, administration, and warehousing. Efficient choices of transportation methods can reduce costs without compromising other objectives. Furthermore, consolidation of goods, which means grouping smaller deliveries into one, can contribute to competitiveness in the inbound supply chain as it can reduce logistics costs by optimizing transport and inventory (Buffa, 1986).

In the context of relationships, certain transaction costs arise that should be kept as low as possible (Xu, 2009). These are influenced by factors such as bounded rationality, opportunism, asset specificity, transaction frequency, and volume (Hartman et al., 2017; Xu, 2009). Bounded rationality refers to decisions being made with limited information (Hartman et al., 2017). Opportunism refers to actors acting in their own interest, such as by hiding or distorting information, which increases monitoring costs. Asset specificity concerns how specialized resources are; the more specific they are, the harder it is to reuse them or switch suppliers (Xu, 2009). Finally, frequency and volume influence whether it is worthwhile to insource, high volume and frequency can justify in-house solutions, while low volume often favors outsourcing (Grela & Hofman, 2021).

Resilience

Resilience refers to the ability to manage and recover from disruptions, such as pandemics, wars, or natural disasters (Han et al., 2020). Companies with strong resilience can return to normal operations more quickly, reducing the risk of production stops and financial losses (Schätter et al., 2023). A diversified supplier network, for example, contributes to increased resilience.

Environmental Sustainability

Green supply chain management (GSCM) involves creating environmental sustainability by integrating ecological considerations into all stages of the supply chain, including material selection, manufacturing processes, and product delivery (Hoejmose et al., 2012). By optimizing transportation, companies can significantly reduce emissions and waste (Marroun et al., 2024). Integrating environmental sustainability across the supply chain is increasingly recognized as a strategy for improving both organizational performance and competitiveness (Hoejmose et al., 2012).

2.2.2 Key Challenges in Managing Global Supply Chains

Managing logistics and supply chains involves a high degree of complexity, as it requires coordinating multiple interconnected activities, stakeholders, and flows of goods, information, and finances (Serdarasan, 2013). Ensuring efficiency and responsiveness in these areas presents various challenges, as supply chain complexity grows with trends such as globalization, innovation, sustainability, customization, outsourcing, and flexibility (Serdarasan, 2013).

Managing Supply Chain Complexity

One of the challenges in logistics and supply chain management is that it involves large interconnected systems, making both design and operation complex (Levi et al., 2014). The broader the system being considered, the more variables need to be accounted for, further increasing complexity.

Managing Uncertainty and Visibility Challenges

A challenge with logistics and supply chain management is the uncertainty within the company not knowing exact travel times, or machine and vehicle breakdowns, as well as market uncertainty related to customer demand or other disruptions, such as pandemics or geopolitical events, which create challenges for logistical systems (Levi et al., 2014).

One factor related to this is the uncertainty caused by a lack of information sharing between partners, often due to concerns about the misuse of sensitive data, especially cost-related information (Bala, 2014). It can be difficult to get actors to realize that increased transparency and collaboration can benefit their own results, and there is often skepticism due to concerns that partners may abuse the information and reap the benefits from it, especially if it is confidential information. Therefore, trust-building measures and clarification of the economic value are required to motivate the sharing of information (Bala, 2014). Without this, it becomes difficult to gain a clear overview of the supply chain and make well-informed decisions.

There are also technical challenges in supply chains, such as the integration of data and information. Information sharing becomes problematic when it comes to technology, as cross-organizational information systems are costly, time-consuming, and risky (Bala, 2014). In large, interconnected systems, this is further complicated, where those you are connected to are also linked to others in the extended supply chain (Mentzer et al., 2001). Without the right digital technology, it becomes difficult to achieve sufficient transparency (Wagner & Postel, 2022).

In a competitive supply chain visibility is important, defined as the timely, accurate, and complete sharing of supply chain data (Kalaiarasan et al., 2023). This enables better decision-making and strategic alignment across partners. Achieving such visibility requires close collaboration between supply chain partners to ensure transparency and alignment toward common goals, as well as investments in technology such as

connectivity and real-time data collection (Kalaiarasan et al., 2023). While costly, these systems increase transparency and operational control, key enablers of both resilience and environmental sustainability (Sodhi & Tang, 2019).

Managing Dependency

In inbound logistics, companies must decide how many suppliers to rely on. Single sourcing can mean using one supplier with either a single production site or multiple sites within the same supplier's network to fulfill its needs (Treleven & Bergman Schweikhart, 1988). Sole sourcing, on the other hand, occurs when only one feasible supplier exists. Multiple sourcing involves using more than two suppliers to source the same component or service, and dual sourcing refers to using exactly two suppliers (Burke et al., 2007).

There is always a risk that something may happen to a supplier. In a single sourcing strategy, this dependency can have severe consequences in the event of disruptions such as fires, strikes, or natural disasters (Treleven & Bergman Schweikhart, 1988). However, the argument for single sourcing is that it often results in higher quality, better delivery performance, or lower costs, as the buyer can establish deeper relationships and stronger collaboration with the supplier. Ultimately, the choice involves a trade-off between cost and resiliency, the number of suppliers determines the level of redundancy and the ability to switch suppliers if disruptions occur, but higher redundancy may come with increased costs and complexity (Namdar et al., 2018).

Managing Bargaining Power

The key organizational goals in resource dependence are to enter a supply chain to reduce uncertainty, attain input/output stability, and improve the probability of survival (Crook & Combs, 2006). However, dependence increases when a company relies on another firm in the supply chain, giving the other company more power. Members who provide critical resources or control key resources possess bargaining power (Crook & Combs, 2006). It can be challenging to have bargaining power as there is a fear that it may cause conflict, which could threaten the company's ability to coordinate, which is the purpose of having effective supply chain management.

Asymmetric dependency relationships between buyer and supplier can yield both negative and positive outcomes (Caniëls et al., 2018). When the dominant party actively exercises its power, for instance through coercive tactics, it risks undermining supplier satisfaction and joint value creation. However, research also shows that latent or unused dominance, where power is not exercised or abused despite being present, can enhance satisfaction within the relationship. While the relative value may be greater for the buyer, the relationship can still be perceived as beneficial if the supplier experiences a sufficiently high level of absolute value (Caniëls et al., 2018).

Managing Regulatory and Cultural Differences in Globalization

Globalization has created new opportunities for companies to develop products in one country, manufacture them in another, and sell them in a third (Bala, 2014). However, global trade also brings new challenges related to differences between countries in terms of international trade, transportation infrastructure, IT development, and intensified competition. This also extends to the challenge of aligning strategies among supply chain stakeholders, such as suppliers in inbound logistics (Bala, 2014). As a result, companies must continuously adapt by optimizing operations, logistics activities, and flow management to maintain efficiency and competitiveness (Shailendrakumar, 2007).

There is also integration challenges related to cultural differences and variations in supplier competence (Bala, 2014). Different countries have distinct collaboration cultures, just as companies have unique corporate cultures. Additionally, managing uncertainty in the economic or political environment across different countries or regions remains a complex task (Bala, 2014).

In summary, Section 2.2 is used to understand supply chain competitiveness and the perceived logistical challenges that a heavy truck manufacturer may face today in relation to RQ1. This is visualized in Figure 2.2.

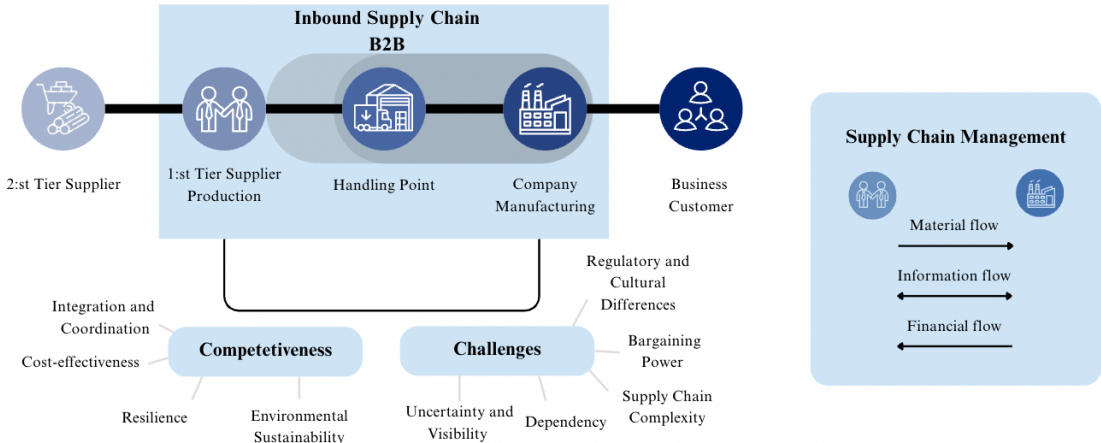


Figure 2.2: Overview of key factors and challenges for building a competitive supply chain

2.3 Transferability between B2B and B2C

Companies differ in what they produce and who they serve. Despite these differences, they all compete on similar performance dimensions such as quality, price, delivery capability, flexibility, and speed (Gunasekaran, 2005). These shared competitive factors suggest that certain strategies and operational practices may still be transferable across them (Vesci et al., 2021).

This chapter aims to provide the foundation for RQ2 by presenting some strategic differences between companies and exploring the potential for transferring strategies across organizations.

2.3.1 B2B and B2C Business Models

The difference between the business models business-to-business (B2B) and business-to-consumer (B2C) must be explained. B2B refers to transactions between companies, such as manufacturers and wholesalers, while B2C involves selling directly to retailers and after that to end consumers without intermediaries (Kumar & Raheja, 2012). The key distinction lies in the target customer, businesses vs. individuals. Additionally, B2B demand is typically derived from consumer demand further down the chain, whereas B2C demand is directly driven by consumer preferences (Lilien, 2016). These differences also shape distinct buying behaviors (Pedeliento & Andreini, 2013).

Companies can adopt various strategies and approaches to differentiate their product or service offerings in both B2B and B2C markets, which ultimately leads to distinct logistics requirements. Giannikas et al. (2017) identify three key dimensions, products, receivers, and orders, along which companies in both B2B and B2C sectors can distinguish themselves. These dimensions will be further explored.

Products

Although many products today can be ordered by end customers, there are certain goods that are primarily intended for businesses (Giannikas et al., 2017). This illustrates a difference between B2B and B2C, where B2B products are often specialized, technically complex, require more time and resources, and are designed for professional use according to the buyer's specific requirements. Such products can be crucial to the buyer's operations, where switching entails high costs that reduce the buyer's flexibility and independence (Gassenheimer & Manolis, 2001). Thus, customization serves as an indicator of both dependence and vulnerability. The supplier's increased power position and the possibility of opportunistic behavior force the buyer to be careful in their choice of supplier and to nurture the relationship. At the same time, this dependence, by being able to choose from only a few suppliers, can lead to increased trust in the current suppliers, which strengthens the buyer's negotiating position (Gassenheimer & Manolis, 2001).

B2C products, on the other hand, are typically aimed at a broader consumer base with simpler requirements from the suppliers (Giannikas et al., 2017).

Orders

Order patterns differ significantly between B2B and B2C. In B2C, orders placed by end consumers are typically smaller in both size and value, often just 1-2 items, since purchases are made for personal or household use (Giannikas et al., 2017).

B2B companies, on the other hand, fulfill the needs of entire businesses. As a result, B2B orders are usually larger, often filling entire trucks, with fewer stock-keeping units (SKUs) but high volumes to replenish inventory (Giannikas et al., 2017). Demand spikes also vary between the two models. While B2B demand typically increases by 3-10 times during peak

periods, B2C can surge by 100-300 times. B2C is therefore characterized by higher turnover rates, more and smaller customers, and more frequent but smaller deliveries (Giannikas et al., 2017).

Receivers

A further difference between B2B and B2C lies in the type of receivers, customers, involved. In B2B, customers can range from manufacturers and wholesalers to retailers and logistics providers with multiple intermediaries before reaching the end consumer (Giannikas et al., 2017). In contrast, B2C typically involves retailers who often sell to end consumers directly.

Level of engagement in GSCM differs between them, resulting in varying incentives for companies to adopt sustainable practices (Hoejmose et al., 2012). B2C firms are typically more proactive in implementing GSCM due to consumer awareness, demand for transparency, and public visibility. In contrast, GSCM adoption in B2B is more limited and driven by long-term business needs, with a focus on efficiency and cost rather than consumer pressure. From a relational perspective, the key difference lies in how companies build and are influenced by their business relationships. In B2C, GSCM is shaped by direct consumer interaction, while in B2B, trust, collaboration, and top management support become crucial drivers, often resulting in a more reactive and relationship-driven approach to sustainability (Hoejmose et al., 2012).

2.3.2 Transferability Across Industries

Achieving transferability between cases can be difficult, as each case is shaped by its unique context and industry. However, some level of transferability is possible by identifying patterns and principles that can inspire similar applications across different settings (Vesci et al., 2021). The challenge lies not in copying models directly, but in adapting them effectively to new contexts (Pozzebon et al., 2019).

Although companies differ in industry and business models, it is still possible to transfer or adapt elements across sectors (Enkel & Mezger, 2013). This requires crossing industry boundaries and using ‘lateral thinking’ and ‘analogical problem solving’ (Enkel & Mezger, 2013). Lateral thinking is a deliberate process that uses logical reasoning but is closely related to insight and creativity and is about daring to think outside the box (De Bono & Zimbalist, 1970). Analogical problem solving involves solving a problem by comparing it to experiences and known situations (Gick & Holyoak, 1980), in other words, by applying the same type of analogy to a similar problem. To find areas to such inspiration, a form of benchmarking could be used - expanded benchmarking.

Expanded Benchmarking

Benchmarking, a process of learning from others to drive improvement (Marra et al., 2017). Benchmarking compares products, services, or practices to identify strengths, weaknesses, and actions needed for enhanced performance (Balm, 1996; Marra et al.,

2017). Expanded benchmarking, involves comparing practices not just within an industry but across various sectors to identify innovative best practices and gain a broader competitive advantage (Balm, 1996).

In summary, Section 2.3.1 explains the fundamental differences that may exist between B2B and B2C companies, which serve as a basis for the analysis conducted in RQ2. 2.3.2 supports RQ2 by helping B2B companies understand how they can draw inspiration from B2C best practices, without directly imitating them. Section 2.3 is visualized in Figure 2.3. The grey squares within the lower blue area represent segments of the inbound supply chain where logistics responsibilities may lie outside the company due to outsourcing.

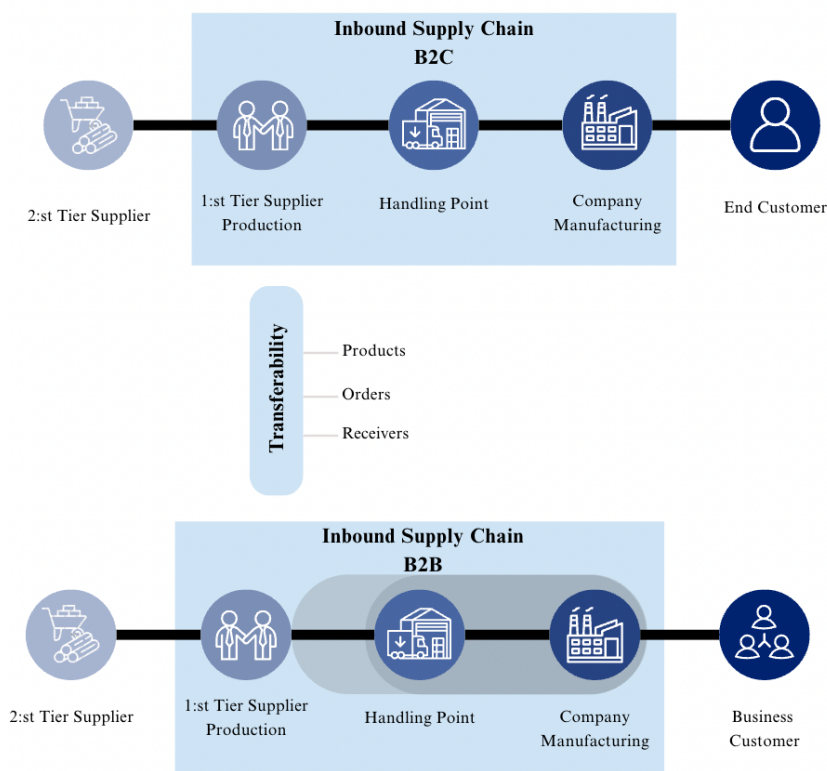


Figure 2.3: Overview of the differences between B2C and B2B inbound supply chain

2.4 Strategic Sourcing

Companies face several sourcing alternatives when it comes to allocating resources and procuring components (Kotabe et al., 2008), including insourcing, outsourcing, or a combination of both. This report specifically focuses on the option of insourcing a previously outsourced activity, examining its opportunities and risks, as well as the importance of achieving the right balance.

This chapter aims to support RQ3 by examining how insourcing can enhance the performance of supply chain operations and help overcome current challenges.

2.4.1 Sourcing Strategies in Supply Chains

When designing the strategy, factors such as cost, risk and core competencies are weighed against each other. Once an activity has been outsourced, companies may choose to continue with the same partner, switch partners, or bring the activity back in-house, insource (Ödling & Täfvander, 2017). This make-or-buy decision is illustrated in Figure 2.4.

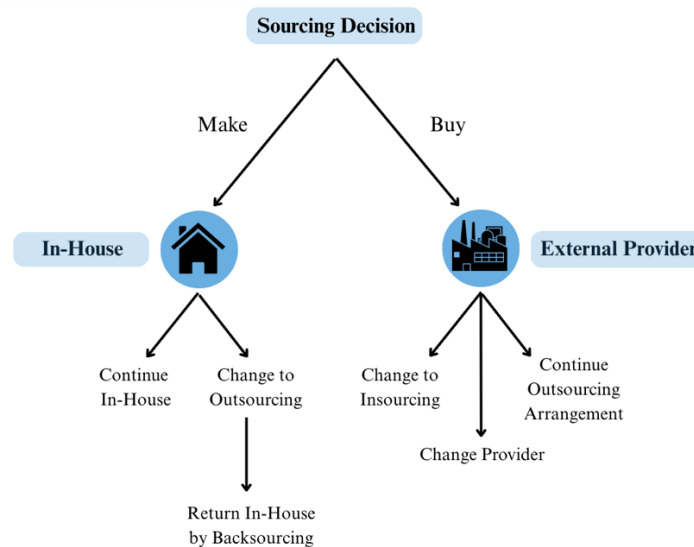


Figure 2.4: Sourcing decision model (Ödling & Täfvander, 2017)

One of the most important aspects to consider in the make-or-buy decision is whether the activity being potentially insourced or outsourced is a core competence. Core competencies are the unique and valuable resources that differentiate a company from its competitors and contribute to its strategic goals (Prahalad & Hamel, 1990). To maintain competitiveness in rapidly evolving markets, companies must therefore focus on their core business (Quinn & Hilmer, 1995). It is important to retain core competencies in-house, as they are crucial to a company's long-term success, while non-core activities are often suitable for outsourcing (Quinn & Hilmer, 1995). However, some non-core activities may still be strategically important, making outsourcing risky (Abrahamsson et al., 2003).

Additionally, core competencies are not static, what is considered core today may change due to market shifts, technological advancements, or internal organizational changes (Axelsson, 1998). Therefore, companies must carefully balance their insourcing and outsourcing decisions, ensuring they align with long-term strategic goals rather than short-term cost savings (Nitschke, 2005).

Outsourcing

Outsourcing involves transferring company activities to external parties, typically non-critical functions (Abrahamsson et al., 2003; Ax et al., 2015). Van Weele (2010) highlights that outsourcing also involves delegating control and responsibility for these activities. This can be done by outsourcing to a supplier or a logistics expert, known as a logistics

service provider (LSP) (Alkhatib et al., 2015). A common type of LSP is a third-party logistics provider (3PL), which refers to outsourcing specific logistics tasks that were previously managed in-house, either partially or fully (Lieb, 1992; Haifa et al., 2024).

In this thesis, outsourcing is considered the transfer of control and decision-making authority over an activity in the inbound supply chain to a manufacturing supplier. This means that it becomes the supplier's sole responsibility to ensure that goals and requirements are met, and they have the freedom to manage the activity as they see fit, for example, through a 3PL.

The main drivers of outsourcing include cost reduction, where companies convert fixed costs into variable costs and benefit from suppliers' economies of scale (Hartman et al., 2017), as well as gaining access to external expertise and technology. Outsourcing also enables increased focus on core business activities, as non-strategic tasks can be outsourced, freeing up time and resources to strengthen the company's position in the market (Hartman et al., 2017).

Insourcing

While outsourcing remains a widely used strategy, new global developments have led companies to reassess their make-or-buy decisions, increasingly considering insourcing as a better alternative (Maelah et al., 2010). Insourcing involves bringing activities back in-house or contracting external entities to work within the organization under agreed tasks (Hartman et al., 2017).

In this thesis, insourcing is a decision where control and decision-making authority of an activity in the inbound supply chain are managed internally within the company. This means that the internal actor takes full responsibility for ensuring that goals and requirements are met. The company handles this activity in the way it deems best, which may, for example, involve using a 3PL to manage the supply chain more efficiently.

Companies choose insourcing to maintain control over critical functions, protect competitive advantages, and reduce reliance on external suppliers (McKenna & Walker, 2008). Insourcing also offers faster decision-making and better alignment with sustainability goals and regulatory requirements. Additionally, insourcing may be chosen when outsourcing has proven ineffective or when changes in the business environment make outsourcing less advantageous, especially in terms of control and cost management.

2.4.2 Benefits and Possibilities of Insourcing

Insourcing can turn several of the risks and disadvantages associated with outsourcing into strategic advantages. For example, hidden costs, lack of transparency, dependency on suppliers, and reduced control can be better. Instead, insourcing enables increased control, better resource utilization, and higher cost-efficiency (Nakhaei et al., 2010).

Increased Control

One of the main advantages of insourcing is increased control over activities, knowledge, data, and cost structures, which may be crucial to the company (Selviaridis & Spring, 2010; Ödling & Täfvander, 2017). Control refers to the company's ability to oversee resources, processes, and supply chains without relying on external parties (Hartman et al., 2017).

This control reduces reliance on external parties and minimizes principal-agent problems (Shah, 2014). The principal-agent problem occurs when there is a conflict between a principal, the employer, and the agent, the person or entity acting on the employer's behalf. Insourcing also offers greater flexibility and quicker responses, as companies are less dependent on suppliers and their terms when market conditions change.

Cost Reduction

A key driver of insourcing is cost reduction (Grela & Hofman, 2021). By bringing operations in-house, companies can regain control over profit margins previously held by external suppliers. Johansson and Spångberg (2007) note that suppliers act in their own interest, and outsourcing can lead to hidden costs that were not initially considered. Insourcing allows companies to reduce these costs by managing the cost structure internally (Hartman et al., 2017).

Enhanced Communication and Transparency

Insourcing also enables more effective and transparent communication, as information exchange occurs within the organization with fewer parties involved (Ödling & Täfvander, 2017). This facilitates quick adjustments in operations, which can lead to increased efficiency, improved quality and lower costs.

Outsourcing can lead to poor communication and limited visibility, especially when suppliers are part of complex networks (Johansson & Spångberg, 2007). This means that changes sometimes occur outside the company's control. Insourcing, on the other hand, gives the company control over the network, reducing dependence on suppliers and improving oversight, risk management, and decision-making flexibility.

Reduced Dependency and Bargaining Power

Hartman et al. (2017) argue that outsourcing can increase dependency. By insourcing, this dependency is reduced, thereby minimizing the risk of being affected by external actors' problems or decisions (Hartman et al., 2017).

Additionally, transitioning from outsourcing to insourcing can also affect the power dynamics in supplier relationships (Hartman et al., 2017). By bringing activities in-house, companies signal their ability to manage more functions internally, reducing the dependency strengthening their negotiating position with suppliers. This can be used strategically to pressure suppliers for cost-efficiency, with the risk of losing business if they fail to meet demands (Hartman et al., 2017).

2.4.3 Challenges and Risks of Insourcing

By insourcing, companies can reduce the risks and challenges associated with outsourcing, but insourcing also has its own set of challenges (Chapman & Andrade, 1998; Hartman et al., 2017). It requires a conscious and well-founded strategic decision to be successful. In complex situations, its success is heavily influenced by the company's unique conditions and context (Ödler & Täfvander, 2017).

Lack of Knowledge Transfer

A key challenge in insourcing is transferring the knowledge and expertise previously held by the external actor and developing it internally within the company (Ödler & Täfvander, 2017). However, the external party may not always cooperate or share the necessary information for a smooth transition.

Shifting from an outsourced to an insourced supply chain can also damage relationships with the former supplier (Whitten & Leidner, 2006). If the external party dislikes the change, there is a risk that both communication and collaboration may weaken, and that crucial information and knowledge previously available may become unavailable. Therefore, the importance of maintaining strong relationships should be considered when deciding to insource, as strained relationships could harm the company's reputation and potentially lead to poorer financial performance (Whitten & Leidner, 2006; Ödler & Täfvander, 2017).

New Costs

Another disadvantage is the loss of economies of scale where insourcing may eliminate the supplier's ability to coordinate volumes across multiple clients, which can increase the unit costs if the internal volumes are not large enough (Andersson, 1998). Insourcing also requires time and resources, potentially hindering focus on core activities and leading to high initial costs with long-term financial benefits (Grela & Hofman, 2021; Heikkilä & Cordon, 2002).

Complex Processes

The scope of insourcing significantly impacts the company's risk. When functions integrated into a larger network are insourced, the process can become complex, particularly for large-scale functions that involve multiple suppliers at different levels. Insourcing such functions often requires a major restructuring of the supply chain, adding complexity and increasing risk (Hartman et al., 2017). High uncertainty regarding strategic changes increases the risks, which makes it advisable to avoid changes (Whitten et al., 2010).

Increased Responsibility and Reduced Risk-Sharing

Another disadvantage of insourcing is that the company itself bears all the economic and operational risks if something goes wrong, as there is no longer an external party with whom to share responsibility and place pressure on. In contrast, outsourcing transfers part

of the risk to the supplier, which can be a strategic advantage (Kremic et al., 2006; Somjai, 2017). Ödling and Täfvander (2017) also emphasize that outsourcing allows for risk distribution between parties, a possibility that disappears with insourcing. Another downside of insourcing is the increased responsibility for all decision-making, which requires significant internal resources to identify and implement the most effective solutions (Ellis et al., 2019).

To minimize the risks, a carefully planned process is required that includes both strategic and tactical considerations. This involves evaluating technical needs, building internal capabilities, and potentially creating or restructuring an internal logistics function (Chapman & Andrade, 1998).

Dependence on Internal Competence Development

Insourcing can help preserve and develop internal expertise, further reducing reliance on suppliers and enhancing long-term innovation and improvement capacity. However, to fully benefit from the advantages of insourcing, it is crucial for the company to develop new internal competencies and ensure effective knowledge transfer from the external party that previously handled the operation (Ödling & Täfvander, 2017). Otherwise, the outsourced party would still perform it better.

2.4.4 Balancing Insourcing and Outsourcing

Insourcing has both benefits and drawbacks, and its impact depends on context. However, a very high degree of insourcing can reduce competitiveness. To avoid the downsides of both extremes, a balanced approach, often called partial outsourcing, is recommended. This relationship is illustrated in Figure 2.5, where an inverted U-curve shows the optimal degree of outsourcing lies somewhere in the middle, while the extremes, total insourcing or total outsourcing, tend to give worse outcomes (Kotabe et al., 2008). Combining insourcing and outsourcing, provides greater business value as external solutions can complement internal competencies without the company becoming overly reliant on outsourcing (Nitschke, 2005). It also allows for adaptation to changing conditions and minimizes the risks of relying solely on one model (Moretto & Rossini, 2012).

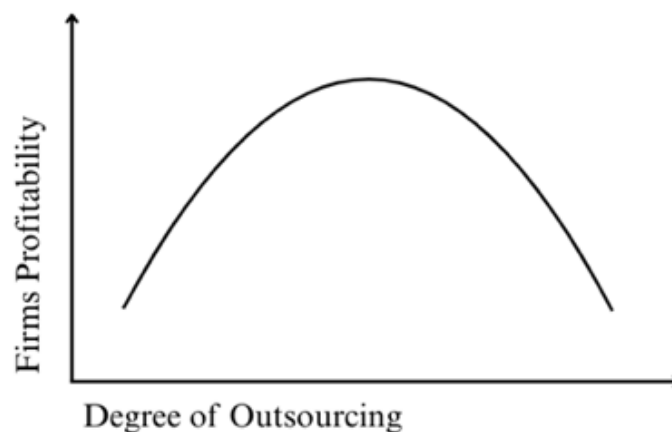


Figure 2.5: The relationship between firm profitability and the degree of outsourcing (Kotabe et al., 2008)

The decision of whether to insource or outsource should not be seen as static. Hwang and Kim (2019) emphasize that the balance between sourcing strategies is dynamic and requires continuous adaptation to ensure long-term competitiveness. Partial outsourcing changes over time, which also makes purely vertical structures less realistic in practice (Moretto & Rossini, 2012).

In summary, Section 2.4.1 provides a foundation for understanding the implications of make-or-buy decisions in terms of logistical responsibility in RQ3. Section 2.4.2 and 2.4.3 is used in RQ3 as part of the foundation for decision-making regarding an insourcing strategy. Lastly, 2.4.4 is used in RQ3 as part of the foundation for decision-making regarding an insourcing strategy. Section 2.4 is visualized in Figure 2.6.

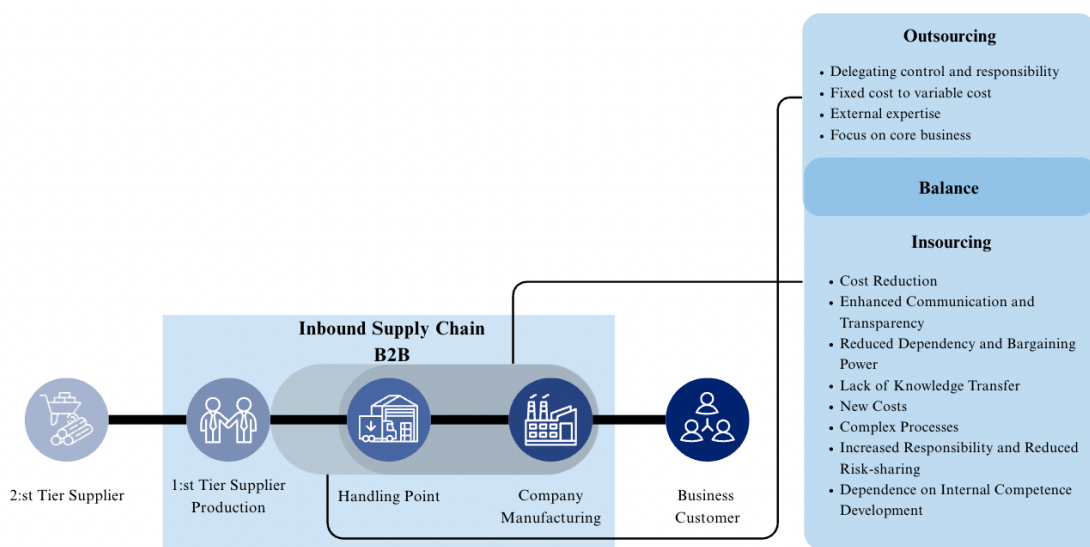


Figure 2.6: Summary of insourcing and outsourcing consequences

2.5 Summary of the Theoretical Framework

This chapter aims to summarize the theoretical framework to establish a solid understanding of the research area and problem statement, and to serve as a foundation for the analysis of RQ1, RQ2, and RQ3.

Supply Chain Management (SCM) plays a critical role in creating value and sustaining a competitive edge, particularly through the direct inbound supply chain from supplier to customer. It focuses on the efficient coordination of goods, information, and services, while ensuring cost-efficiency, resilience, and environmental sustainability.

In B2B sectors like heavy truck manufacturing, managing inbound logistics is crucial for controlling costs and maintaining operational smoothness. However, logistical challenges such as limited flexibility, vulnerability to disruptions, and poor visibility can impact supply chain competitiveness, which provides the foundation for RQ1.

s

To address these challenges, B2B companies can perform gap analyses and expanded benchmarking practices, looking to B2C direct inbound supply chains for innovative solutions. While B2B and B2C supply chains differ in aspects such as product type, order volume, and receivers, adopting B2C strategies requires careful adaptation to B2B needs. By employing lateral thinking and analogical problem-solving, B2B companies can potentially take inspiration from B2C practices and integrate them into their own operations, *which forms the basis for RQ1*.

One potential solution to B2B companies' challenges is strategic insourcing of operations that were previously outsourced. *To provide an academic foundation for RQ3*, it is recognized that insourcing offers the potential for companies to regain control over key functions, enabling better cost management, improved resilience, and reduced dependency on external suppliers. However, insourcing also presents challenges, such as the need for substantial investments and talent, as well as the complexities involved in transitioning from outsourced to in-house operations.

In many cases, a balanced model, where insourcing and outsourcing are combined, proves most effective, allowing both internal control and external flexibility. Thus, insourcing becomes not just an organizational tool but a strategic piece in building the competitive supply chain of the future.

Figure 2.7 presents a visual summary of Chapter 7, which outlines the theoretical framework of this report.

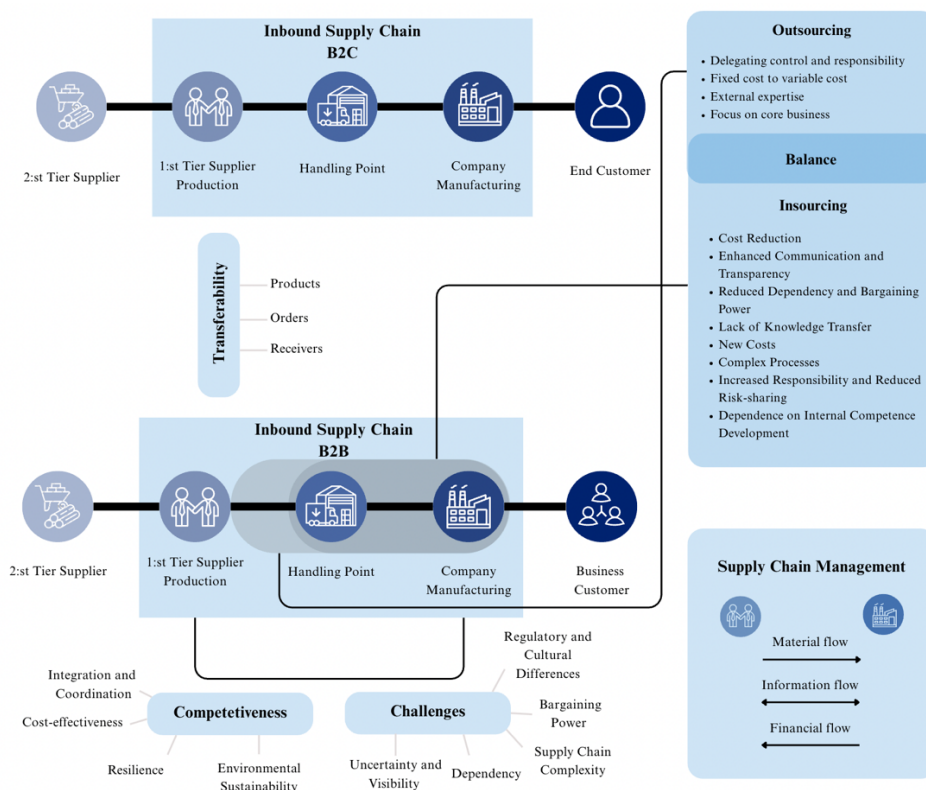


Figure 2.7: Summary of theoretical framework

3. METHODOLOGY

This chapter presents the models and frameworks used to address the study's purpose and research questions. This is done to provide the reader with an understanding of how the study was conducted.

For confidentiality reasons, all companies mentioned in this thesis have been anonymized to protect privacy and safeguard sensitive information. The case study focuses on a heavy truck manufacturer, referred to as "Alpha," which will serve as the central point of analysis throughout the report. The B2C companies will be anonymized as "C1," "C2," and "C3."

3.1 Research Design

The research design follows Bryman and Bell's (2022) approach, combining data collection from theoretical frameworks with empirical data, primarily gathered through a co-structured interview study, to answer the research questions. It incorporated both secondary data, sourced from existing materials and previously collected data, and primary data, gathered specifically for this study, to ensure a comprehensive perspective (Kothari, 2004).

The study adopted a qualitative case study approach, focusing on the inbound supply chain of a heavy truck manufacturer. As the analysis was based on a specific case, certain contextual variables and complexities were not fully accounted for, which limited the direct generalizability of the findings. This approach enabled an in-depth exploration of real-world challenges within a specific organizational context while acknowledging the limited access to complete information from all stakeholder groups. It also supported inductive exploration and theory development within a specific supply chain context (Gammelgaard, 2017). Through a bottom-up approach, the study uncovered underlying patterns and dynamics based on stakeholder insights. Guided by Gioia et al. (2013), it aimed to combine conceptual openness with methodological structure by analyzing empirical insights from interviews and company material, interpreted through relevant theoretical lenses. Although grounded theory was not fully applied, its principles supported structured coding and interpretation (Vollstedt & Rezat, 2019). The research began with an exploratory review to identify gaps and shape the research questions (Armstrong, 1970), which were then explored through semi-structured interviews.

Alternatives, such as surveys or quantitative analysis (Castellan, 2010), were excluded, as they would not have provided the same depth of insight into the complexities of the situation. Given the nature of the problem, which was better understood through personal perspectives and organizational dynamics, a bottom-up, inductive approach was deemed more appropriate for uncovering patterns and interpreting the data. Therefore, semi-structured interviews were considered well-suited for this study, as they allowed for open dialogue and follow-up questions, enabling a deeper exploration of participants' perspectives (Bryman & Bell, 2022).

The research followed a cyclical and iterative process, inspired by the concept of Systematic Combining, where the theoretical framework, empirical fieldwork, and case analysis developed simultaneously (Dubois & Gadde, 2002). Triangulation was used to enhance the reliability of the qualitative research by combining different methods and perspectives to verify findings, thereby increasing the robustness and credibility of the conclusions (Lauri, 2011).

3.2 Data Collection

The study combined secondary data, collected by individuals not involved in analyzing it for this report, with primary data, which was both collected and analyzed by the researchers conducting the study (Church, 2002). This combination ensured a comprehensive analysis, where both data sources complemented each other to provide a robust understanding of the research questions.

3.2.1 Secondary Data

The secondary data collection served both as foreground, providing conceptual understanding and foundational elements for the report, and as background for addressing the research questions. Foreground data included key concepts such as supply chain, inbound logistics, gap analysis, and insourcing, while background data encompassed common supply chain challenges, transferability between industries, and the advantages and disadvantages of insourcing.

To ensure that the data collection was well-structured and comprehensive, a systematic methodology was applied. This approach involved the careful identification, selection, evaluation, and categorization of relevant academic sources to ensure rigor and reduce bias (Linares-Espinós et al., 2018).

When using secondary data from academic literature, it is essential to ensure that the data is appropriate and that permission to use it has been granted (Daas & Arends-Tóth, 2012). The secondary data also must meet high standards of reliability and professionalism. Therefore, a comprehensive review of secondary data was conducted by examining a wide range of sources and databases.

The theoretical framework in the report consisted primarily of scholarly articles or other materials that had undergone peer review or similar verification processes. The main search platforms used were Google Scholar and Chalmers University Library, chosen for their broad coverage of academic literature, user-friendliness, and open access to a wide range of resources. In addition, reputable industry publications such as Industry Press and Dagens Industri were utilized.

3.2.2 Primary Data

The primary data was collected through an interview study, using interview guides that had been created in advance to support a consistent and insightful data collection process. The interviews followed a semi-structured approach, where the guide provided a clear framework with predetermined open-ended questions to balance structure and adaptability (Bryman & Bell, 2022). This allowed a certain degree of flexibility, enabling the interviewer to ask follow-up questions and explore themes that emerged during the conversation.

Interview Guides

To address the various aspects of the study, three different interview guides were developed, which are presented in *Appendix A*. The interviewees were sent the interview guide prior to the interview to give them an overview of the interview structure and the primary questions they could expect. This allowed them to prepare accordingly and ensured the effective execution of the interview method (Kothari, 2004). Since the interviews were semi-structured, additional follow-up questions sometimes arose that the participants had not prepared for (Bryman & Bell, 2022).

The first interview guide focused on identifying key challenges in Alpha's inbound supply chain. It was structured around three core performance areas: cost, resilience, and environmental impact, to capture a broad range of perspectives from internal stakeholders. The second interview guide was designed to map the current setup and outsourcing strategies of selected benchmark B2C companies. Similarly, this guide was structured around cost, resilience, and environmental performance, aiming to explore what these companies did differently or more effectively. Alpha's identified challenges served as a reference point when formulating the follow-up questions, enabling a targeted comparison and the identification of specific strategy gaps. The third interview guide aimed to explore Alpha's overall perspective on full insourcing versus outsourcing. This guide helped clarify which themes were most relevant to investigate in the collection of the academic literature.

Interview Sampling

Sampling is a common strategy in qualitative studies (Robinson, 2014), where purposive sampling enables the selection of respondents most likely to provide meaningful and relevant information (Campbell et al., 2020). In this study, the inclusion criterion was that participants should work with and possess knowledge about the company's inbound supply chain related to long-distance suppliers in some capacity (Robinson, 2014).

The purposive sampling strategy was adopted to collect relevant insights from key stakeholders within the organization to explore the challenges outlined in RQ1. Despite the purposive nature of the sampling, the selected individuals still represented a broad spectrum of departments, professional roles, ages, and levels of experience within the company. This diversity strengthened the credibility of the findings and enabled a richer

and more comprehensive understanding of the organization's internal dynamics (Ahmad & Jan, 2018).

Seven individuals from the core purchasing team, on which the thesis was primarily based, were interviewed. Their perspectives provided a grounded understanding of the challenges and practices that formed the basis of the identified research question. To broaden the scope and complement the purchasing perspective, two additional interviews were conducted with individuals from different departments within the company, focusing on relationship management and logistics. These respondents contributed valuable insights into interdepartmental collaboration and the broader logistics context, enriching the overall understanding of the research problem. Their input also added complementary viewpoints on cross-functional collaboration and strategic logistics considerations.

For RQ2, one representative from each B2C company was interviewed. The interviewees held different roles within their respective organizations, but all had relevant experience or responsibilities related to logistics and/or inbound material or goods flows. This diversity in roles enabled the study to capture a wide range of insights into supply chain practices and inbound logistics strategies across companies.

For RQ3, the same purposive sampling strategy (Campbell et al., 2020) as for RQ1 was applied. Five previously interviewed members of the purchasing team were also re-engaged for the interviews concerning RQ3, as their roles provided continued relevance for the third research question. In addition, four new respondents from the operations department were included to capture a broader perspective, given their closer involvement in the strategic management of inbound logistics. Relevant insights from RQ1 interviews, also applicable to RQ3 even if the participants were not re-interviewed, were still utilized in the analysis of this research question.

Selection of B2C Companies

To gain insights for the gap analysis, three external B2C companies were selected and interviewed. The selection was based on their strong reputation and documented success in managing inbound logistics effectively and in implementing a clear insourcing strategy.

To obtain a broad perspective and capture strategic diversity (Ahmad & Jan, 2018), the B2C companies came from different markets. In some cases, the selection was also influenced by accessibility and existing personal or professional connections, which increased the likelihood of participation and facilitated the interview process. While this element of convenience sampling may have introduced a degree of bias (Golzar et al., 2022), it was deemed appropriate given the exploratory nature of the study and the relevance of the insights provided. Judgmental sampling was deliberately avoided to minimize the risk of sampling bias and reduce the likelihood of obtaining unrepresentative results (Sreejesh et al., 2014).

In addition, one additional B2C company was initially included in the interview study but was later excluded from the analysis, as it was deemed too far removed from the study's relevant context. This demonstrated that the boundaries of the study were actively tested and critically evaluated. Such a deliberate selection process strengthened the credibility of the research by ensuring that only relevant and contextually appropriate data were included, rather than simply compiling all available input without scrutiny (Ahmad & Jan, 2018).

Semi-structured Interviews

The interviewees were informed before the start of the interview that both their identities and the company name would be anonymized, to make them feel comfortable and encourage more open and honest responses (Ayling & Mewse, 2009).

The interviews lasted between 45 minutes and 1.5 hours to ensure that all questions were covered. Some interviews were conducted in person, while others were held digitally. However, no noticeable differences in the quality or depth of the responses were observed, suggesting that both formats were equally effective for data collection

3.3 Method of Analysis

Next, a data analysis was carried out, which involved managing, analyzing, and interpreting the primary and secondary data collected to answer the research questions (Bryman & Bell, 2022). To ensure that each research question was supported by relevant data, properly analyzed, and led to the desired outcome, the selection of data sources and the analytical approach were guided by the following directional questions:

- Data: What data do we need?
- Literature: Where will we obtain the information from?
- Data Method: Who will we speak to in order to gather relevant data?
- Analysis: How will we analyze the data?
- Deliverables: In what terms will we present our findings?

3.3.1 Gap-analysis

Gap analysis is a method used to assess discrepancies between an organization's current state and its desired future state (Kim & Ji, 2018). It aims to identify areas that need improvement to align the current situation with desired outcomes. The difference between these two states defines the gap and by highlighting these, organizations can take specific actions to close them and improve performance. (Marra et al., 2017).

The process generally follows four key steps (Kim & Ji, 2018):

1. Identifying the current needs of the organization.
2. Defining the ideal or desired future state.
3. Recognizing the gaps between the present and future state.

4. Developing and executing plans to close these gaps.

In this context, the gap analysis functions as a guiding framework throughout the report. RQ1 identifies the current challenges faced by a heavy truck manufacturer. RQ2 investigates how successful B2C companies address these challenges and highlights the strategy gap between the two. Finally, RQ3 explores whether insourcing could be a viable strategy to improve the manufacturer's ability to overcome these challenges.

3.3.2 RQ1

RQ1 was of descriptive character, focusing on mapping the current state, which involved identifying and outlining existing challenges within the area of study. To follow Kim and Ji's (2018) methodology for gap analysis, RQ1 was used to first identify the company's current challenges based on empirical data, in line with step 1. To identify and analyze the current challenges within Alpha's inbound supply chain, a thematic analysis of interview data from Alpha employees was conducted. Through this method, patterns and themes were extracted from the qualitative responses, providing a systematic understanding of the challenges the organization was facing (Kuckartz, 2019). The challenges were identified using cost-efficiency, resilience, and environmental sustainability as starting points, as these areas are considered crucial for a company's competitiveness and long-term viability (Ivanov, 2022).

In the first step, interview data were coded by assigning colors to areas with similar themes. This coding allowed the grouping of responses and enabled the identification of recurring patterns (Vollstedt & Rezat, 2019). This provided insight into how these factors interacted and affected each other, which was visualized through a mind-map. Certain factors were then identified as underlying causes of other challenges, helping to structure and clarify the problem areas. Through the thematic analysis (Kuckartz, 2019), the challenges were ultimately categorized into four main blocks: limited supply chain overview, lack of control in the supply chain, supplier dependence, and weak incentives for supplier resilience and environmental sustainability. These main challenges had 2 underlying factors each.

To further analyze and visualize these challenges, a diagram was used to identify the root causes and factors of the challenges that emerged, offering insights into how these factors might have been interconnected or influenced each other. By using the diagram, potential connections between different problem areas were clarified, providing a more comprehensive understanding of the underlying causes and factors behind the identified challenges.

3.3.3 RQ2

RQ2 had an analytical character, centering on comparative analysis, where different alternatives or scenarios were examined to identify patterns, differences, and relationships. In Kim and Ji's (2018) methodology for gap analysis, step 2 involved defining the ideal or

desired future state, which meant examining how B2C companies performed. This was done first in the method of analysis for RQ2, followed by an analysis of the gaps between the current and future states through a visualization of these gaps, which constituted step 3 in Kim and Ji's (2018) gap analysis methodology.

Based on the thematic categorization of challenges, grounded in the four logistical challenges from RQ1, the positions and strategies of B2C companies were mapped and then compared to Alpha's challenges. This method allowed for an effective comparison between Alpha's challenges and the solutions of B2C companies, enabling the identification of common patterns and potential areas for improvement. By identifying these differences and gaps between the current and future states, the areas where Alpha contrasted with B2C companies could be mapped. These gaps were visualized by creating scales for the underlying factors in the main challenges, positioning Alpha and the three B2C companies relative to each other.

In addition to the case study analysis, a transferability analysis was conducted between B2C and B2B contexts, aiming to assess the extent to which expanded benchmarking against B2C companies was relevant and applicable for a company like Alpha. The analysis sought to nuance the understanding of whether B2C companies' strategies could even be considered a realistic and desirable "ideal state" in logistics responsibility for Alpha.

3.3.4 RQ3

RQ3 was of a normative nature, aiming to provide recommendations and suggest strategic directions for the future. As such, it was more speculative and solution oriented. RQ3 focused on investigating how insourcing of Alpha's inbound supply chain could manage the challenges identified in RQ1, improving Alpha's processes and performance.

Through a combination of data from the theoretical framework and the empirical analysis, the underlying factors of the previously identified challenges were mapped to determine how they might be affected by an insourcing strategy. To concretize these effects, a new visualization model was developed, building upon the model from RQ1, which illustrated how a shift to full insourcing could change the current situation.

Secondary data was collected to identify the general advantages and disadvantages of insourcing logistics operations, as outlined in academic literature. This analysis also integrated theoretical perspectives to highlight strategic considerations and risk factors related to a potential responsibility shift. These external insights from the academic literature were combined with internal perspectives from interviews with Alpha employees, enabling a comprehensive analysis of the potential consequences.

Finally, all insights were integrated into a strategic recommendation regarding how Alpha should proceed to improve the challenges of their inbound supply chain from long-distance suppliers and assess whether insourcing was a suitable measure for Alpha.

3.4 Reliability, Validity and Trustworthiness of the Thesis

According to Gammelgaard (2017), it is important that case study research is evaluated based on its results, particularly in terms of reliability and validity, two essential criteria that need to be considered when conducting a study and analyzing its outcomes (Price et al., 2015).

Reliability refers to the consistency of a measure, ensuring that data collection is carried out uniformly so that results can be fairly compared (Price et al., 2015). In this study, reliability was strengthened using interview guides, which ensured that all interviews followed the same structure and that respondents had equal opportunity to prepare for their answers. In addition, the interviewees were carefully selected based on their relevance to the research topic.

Validity refers to the extent to which a measurement accurately reflects the concept or variable it is intended to capture (Price et al., 2015). This means that the measurement truly reflects what it aims to measure. In this report, validity was ensured by designing the interview questions to be closely aligned with the study's purpose and research questions. The questions were developed based on prior research to capture key aspects of the phenomenon under investigation. As part of ensuring research quality, the findings were presented to the case company in a final, on-site presentation. This also served as a form of respondent validation, allowing key stakeholders to provide feedback and confirm that the interpretations made in the report accurately reflected their perspectives.

Furthermore, it is important that the report demonstrates trustworthiness, as outlined by Connelly (2016), ensuring the quality of the study through four key criteria: credibility, transferability, dependability, and confirmability.

Credibility concerns ensuring data quality and internal validity, meaning that the study's results accurately reflect reality (Connelly, 2016). To achieve this, the collected information was carefully reviewed and validated to maintain high quality and align with the study's purpose. Transferability refers to the external validity of the study, ensuring that the findings can be applied to other contexts (Connelly, 2016). This study specifically analyzed the transferability of supply chain practices between a heavy truck manufacturer in a B2B context and actors within B2C environments. Dependability relates to the study's reliability, referring to the consistency of results when repeated under similar conditions (Connelly, 2016). To ensure reliability, data collection methods were standardized, a semi-structured research process was defined, and communication was kept clear and transparent. The final criterion, confirmability, refers to the objectivity of the study, ensuring that the researcher does not allow personal values or theoretical perspectives to

influence the findings (Connelly, 2016). To enhance objectivity, interviews were recorded whenever possible, allowing for a thorough review and verification of information.

3.4.1 Use of AI Tools

In accordance with Gatrell et al. (2023), the use of language and translation tools such as ChatGPT is permitted if it is transparently disclosed in the manuscript. To improve language and translations, the ChatGPT tool from OpenAI has been used in this report as a support during the work process. However, the tool has not generated any content but has only been used for linguistic editing. The authors take full responsibility for the reliability and accuracy of the content and output.

3.5 Ethical, Societal and Ecological Aspects

This study took ethical principles into consideration, for example by ensuring that transparency and responsibility in data collection, processing, and presentation were carried out responsibly and transparently (Saunders et al., 2016). Participants in the study were informed of the study's purpose, the voluntary nature of participation, and data handling procedures. Prior to the interviews with Alpha employees, informed consent was obtained. To ensure participant comfort and protect confidentiality, all sensitive data was anonymized (Ayling & Mewse, 2009), and no individuals or specific roles could be identified in the results. Furthermore, the study strived for objectivity by avoiding biased interpretations and instead grounding conclusions in the empirical findings and analysis. This reinforced the integrity of the research and ensured that the results were not influenced by preconceived expectations.

The study also considered societal and ecological aspects (Guerrero et al., 2018), analyzing how logistical strategies impacted supply chain resilience, efficiency, and sustainability. This approach aimed to balance economic, ethical, and ecological factors for a more competitive and sustainable future.

4. EMPIRICAL FINDINGS AND ANALYSIS

In the following chapter, which includes empirical findings and analysis, a case study of a heavy truck manufacturer’s inbound supply chain for long-distance suppliers is presented. The case illustrates a scenario for the company's inbound supply chain and its potential challenges that may arise. Furthermore, the inbound supply chain strategies of three best-practice companies in the B2C sector are presented. The characteristics of the companies interviewed are presented in Table 4.1. The chapter concludes with a discussion of the potential consequences of changing the company’s inbound supply chain scenario through insourcing.

The empirical analysis aims to lay the foundation for further discussion and comparison in Chapter 5 to answer the research questions of the report: (1) *What are the logistical challenges in the inbound supply chain of a heavy truck manufacturer when dealing with long-distance suppliers?* (2) *How can B2B companies learn from the practices of high-performing B2C companies to address the challenges identified in long-distance inbound supply chains?* (3) *How can insourcing help a heavy truck manufacturer manage the logistical challenges of a long-distance inbound supply chain?*

Table 4.1: Characteristics of interviewed companies

	Company Alpha	B2C Company C1	B2C Company C2	B2C Company C3
About the company	A global heavy truck manufacturer operating in the B2B sector, specializing in a broad portfolio of customized product solutions.	A global B2C retailer with a broad product portfolio consisting of goods from external suppliers. The assortment is characterized by high variety, large volumes and standardized products ranging from everyday items to electronics.	A B2C fashion retailer offering a wide and standardized assortment of clothing, shoes and accessories through e-commerce channels.	A B2C fashion retailer offering a wide and standardized assortment of clothing and accessories through both physical stores and e-commerce channels.
Inbound supply chain model for long-distance suppliers	Partially outsourced, with the supplier responsible for transport and handling up to the pick-up point (PUP). After that, operational control is transferred to Alpha, while ownership of the goods remains with the supplier until they arrive at Alpha’s warehouse. Logistical challenges arise due to limited overview and control within the inbound supply chain of long-distance suppliers, high supplier dependency, and a lack of incentives for suppliers to invest in increased resilience and environmental sustainability.	Most of the inbound supply chain is managed internally, allowing for strong control and good visibility despite the scale of operations.	Outsourced up to the port in the supplier’s country, after which the responsibility is taken over internally. Despite outsourcing, the company retains the ability to impose strict requirements on the outsourced segments.	Outsourced up to the port in the supplier’s country, after which the company takes internal responsibility for further transport and distribution. Despite outsourcing, the company retains the ability to control to which terminal suppliers shall deliver the goods.

The graphical representations of the inbound supply chain models will use two colors, black and blue, to illustrate the level of control and management in different parts of the chain. Blue represents the segments where the company controls and manages the supply chain processes internally, thus holding full control and responsibility. Black, on the other hand, indicates segments that are outsourced to external parties, where the responsibility lies outside the company's direct control. An example of a supply chain model applying this color and symbol coding is shown in Figure 4.1.

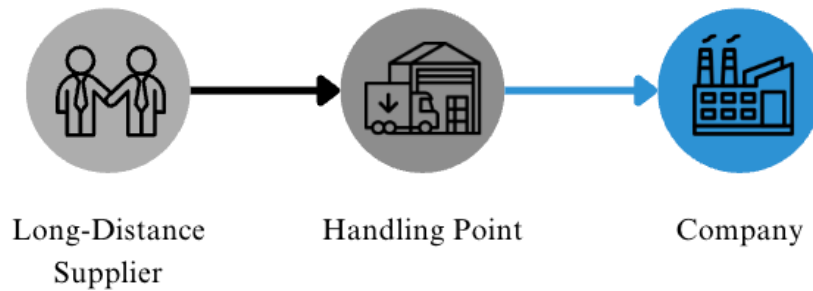


Figure 4.1: Example of an illustration of an inbound supply chain

4.1 Case of Company Alpha

In the global transportation industry, large manufacturers of heavy trucks play a crucial role in delivering efficient and sustainable logistics solutions. The heavy truck manufacturer, Company Alpha, has a long and established industrial history within the B2B sector, as well as an extensive network of suppliers and production facilities across multiple continents. Over time, Alpha has built strong capabilities in production, technology, and supply chains, offering complete transport solutions beyond truck manufacturing. While production remains their core competence, the inbound supply chain plays a key role in their logistics strategy.

Alpha offers customized products where each component in the complete product is as important and has a direct impact on the final product's quality. This places special demands on the company's logistics and supply chains, as the products rely on specific components and materials to meet technical specifications and high-quality standards. To ensure the desired quality at the right price, Alpha relies on a limited number of long-distance suppliers for many components, due to the high asset specificity of these items. This results in low levels of multiple sourcing for several critical components. Today, cooperation is governed by contracts and guidelines.

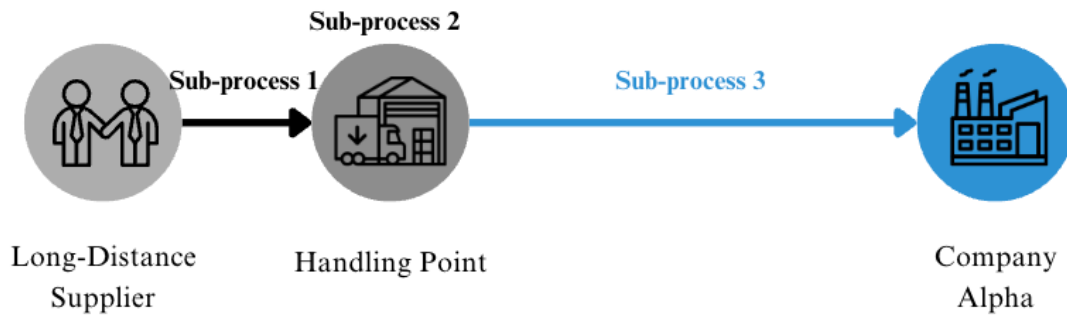


Figure 4.2: Alpha's inbound supply chain for long-distance suppliers

The case of Alpha's inbound supply chain for long-distance suppliers is partially outsourced, as shown in Figure 4.2. In the first subprocess (sub-process 1), the responsibility for the initial part of the transport and handling of components lies entirely with the suppliers. This means that the suppliers are responsible for transporting and handling components up to a so-called pick-up point (PUP). In the second subprocess (sub-process 2), i.e., the PUP, the supplier is responsible for coordination of the components before handing them over to Alpha in the next step. To manage potential delays and ensure a smooth transition, a safety stock is maintained at the PUP. The PUP is also unique to each supplier, and the location is chosen by the supplier themselves. The operations within the outsourced parts, which the supplier is responsible for, are managed either by the supplier themselves or handed over to a 3PL, without specific guidelines from Alpha. In the third subprocess (sub-process 3), from the PUP to Alpha, the supplier owns the goods until they arrive at Alpha's warehouse. This is even though Alpha is responsible for the transport and handling of the goods from the PUP to their warehouse.

To streamline communication between parties, EDI signals are used, but access to real-time monitoring is limited, particularly for the outsourced part of the flow. The supplier then invoices Alpha for the portion of the supply chain outsourced to them by including the price for transport and handling in the price of each item.

4.2. Logistical Challenges from the Case of Alpha

Through interviews with various roles within Alpha, several logistical challenges in the case of its inbound supply chain have been identified. Four areas of challenge emerge: *limited supply chain overview, lack of control in the supply chain, supplier dependence, and weak incentives for supplier resilience and environmental sustainability*. Additionally, underlying factors are presented, which are causes that may contribute to these challenges.

4.2.1 Limited Supply Chain Overview

One challenge in a global inbound supply chain is the limited overview of supply chain activities. In a large organization like Alpha, this becomes a particularly significant issue. The challenges and their underlying factors are illustrated in Figure 4.3.

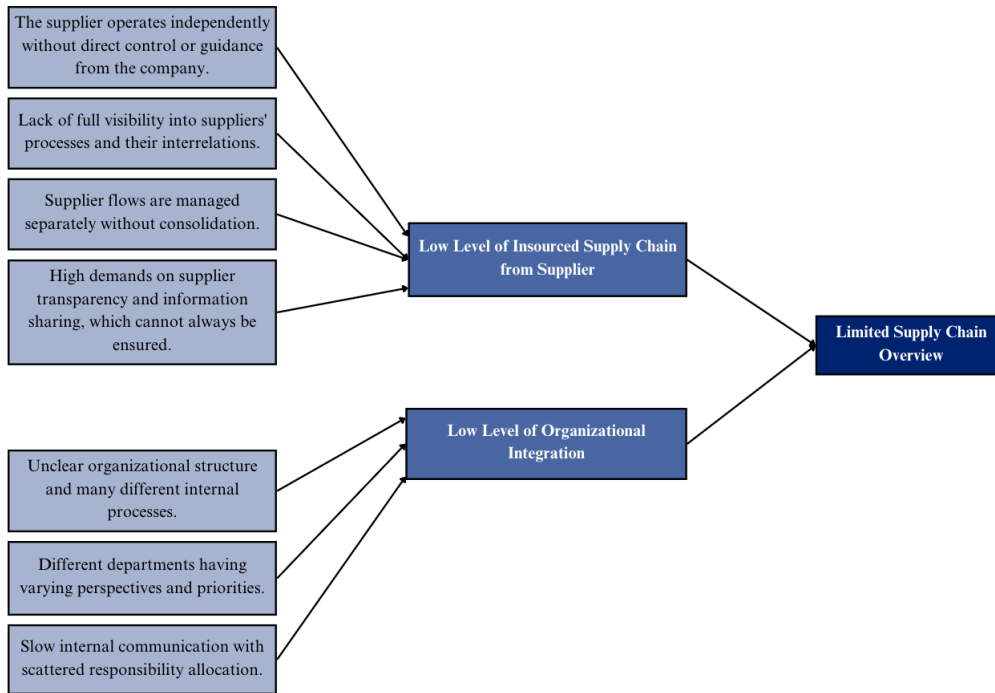


Figure 4.3: Factors behind the logistical challenge of limited supply chain overview

Firstly, an underlying factor is the company's sourcing strategy, where parts of the responsibility for the inbound supply chain have been outsourced to external suppliers. Alpha has thus transferred the management and responsibility of certain parts of the supply chain to the suppliers, where the supplier operates independently with limited direct control or guidance from the company, for example the choice of 3PLs. This can create a fragmented and difficult-to-overview structure, where the lack of full visibility into suppliers' processes and their interrelations complicates the ability to form a coherent picture of the entire supply chain. Without a clear overall view, it becomes challenging to proactively optimize logistics flows, plan purchases, and streamline crisis management.

Since parts of the supply chain are outsourced to the suppliers themselves, these supplier flows are also managed separately with limited consolidation. This leads to an increased number of individual supply chains from supplier to PUP, as well as many PUPs that are not handled internally, further complicating the overview. The fragmented and outsourced structure places high demands on supplier transparency and information sharing, which cannot always be ensured. When each supplier is also responsible for its own logistics without coordination to PUP, the opportunity to benefit from economies of scale and standardized processes is limited, weakening cost efficiency and environmental sustainability.

Secondly, Alpha, as a large global organization with complex material flows, faces the challenge of an unclear organizational structure and many different internal processes. Internally, there are significant differences in perceptions of the company's processes and ways of working, with different departments having varying perspectives and priorities. This causes the organization to pull in different directions, making it a challenge to

achieve a common direction, coordinated development, and a clear overview. Additionally, many experience slow internal communication with scattered responsibility allocation, further hindering the ability to diversify the supplier base and shorten the supply chain.

4.2.2 Lack of Control in the Supply Chain

In the current case, maintaining full control over the entire supply chain, from supplier to Alpha, presents a significant challenge. The factors behind this are illustrated in Figure 4.4.

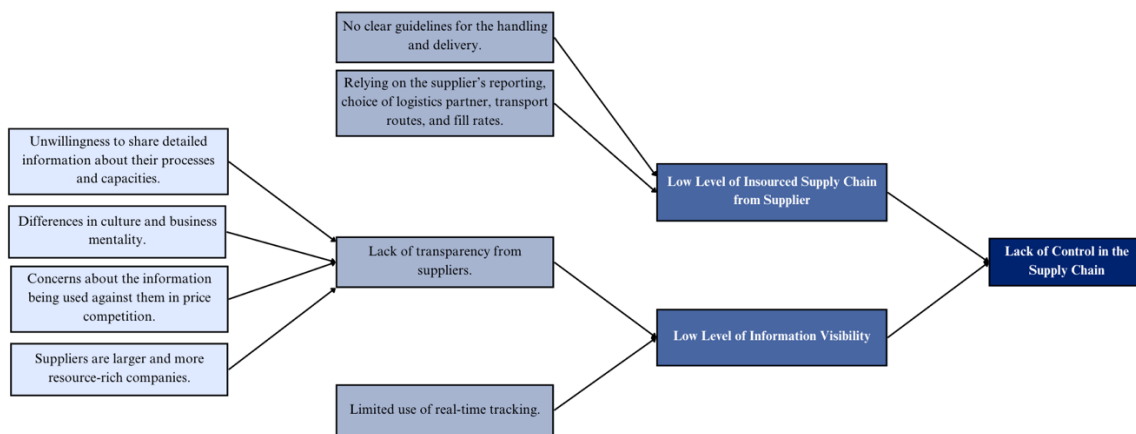


Figure 4.4: Factors behind the logistical challenge of lack of control in the supply chain

Firstly, an important underlying factor in this challenge is that the responsibility for handling and transportation between the supplier and PUP, as well as PUP, has been outsourced to the suppliers. Today, there are clear agreements regarding delivery precision and quantities, but no clear guidelines for the handling and delivery from the supplier to the PUP. This means that this part of the chain is entirely in the hands of the supplier, with the company relying on the supplier's reporting, choice of 3PLs, transport routes, and fill rates. Therefore, the company only has direct control in the final steps of the chain, from the PUP to production, which is managed internally.

Secondly, another underlying factor contributing to the lack of control is the lack of transparency from suppliers, particularly due to large parts of the supply chain being outsourced. One of the main reasons for the lack of transparency is suppliers' unwillingness to share detailed information about their processes and capacities. This can be due to several factors, such as cultural differences, business mentality, and concerns about the information being used against them in price competition. Furthermore, suppliers may be cautious about disclosing details about their cost structures and workflows, especially if they collaborate with other customers or competitors, which makes them hesitant to share sensitive information.

The lack of transparency is worsened by the fact that many of Alpha's suppliers are large, resource-rich companies, which creates a dependency that limits Alpha's bargaining power and makes it more difficult to demand increased openness.

Additionally, the limited use of real-time monitoring reduces transparency. This means that Alpha cannot track transport routes in real-time or know exactly where the components are during transport from the suppliers to the PUP. Even if the items to be picked up at the PUP are known, there is no full control over transport efficiency, fill rates, or how the components are handled during transport, which can lead to suboptimal transportation and increased costs without oversight. Furthermore, the lack of control in the supply chain makes it difficult to assess whether the costs included by suppliers in the item price for components, handling, and transportation are reasonable.

4.2.3 Supplier Dependence

Another challenge identified is the company's complex dependency situation with several of its suppliers, particularly for components with high asset specificity, where limited alternatives lead to lock-in effects. The factors behind this challenge are visualized in Figure 4.5.

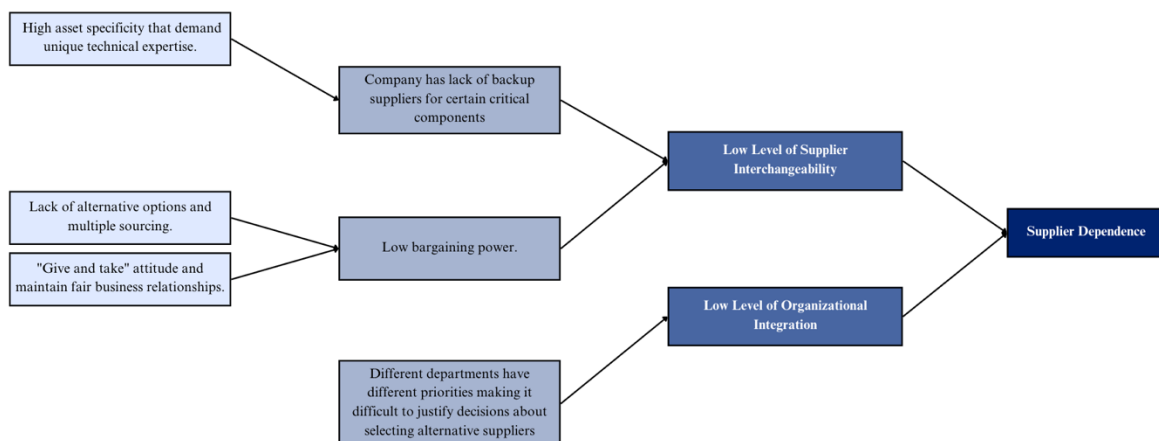


Figure 4.5: Factors behind the logistical challenge of supplier dependence in the supply chain

Firstly, an underlying factor contributing to supplier dependence is the company's lack of backup suppliers for certain critical components, due to a low degree of supplier interchangeability. Since production requires some specialized components with high asset specificity that demand unique technical expertise, there are only a limited number of suppliers who can meet the technical and quality requirements. This makes the company dependent on suppliers with the right expertise. Additionally, several suppliers have made investments in custom tools, machines, and systems specifically for the company's components, which further complicates the possibility of switching suppliers. This means that any production issues with the supplier directly impact the company's supply chain, such as the need for hastily organized transportation during disruptions, which increases costs. Furthermore, the limited number of suppliers hinders the ability to switch to more

sustainable alternatives when an existing supplier does not meet environmental requirements.

Also, the lack of alternative options and multiple sourcing reduces the company's bargaining power. To ensure that critical suppliers remain financially stable and continue to deliver high-quality components, the company must therefore be cautious about pushing prices too hard. The company needs to adopt a "give and take" attitude and maintain fair business relationships, sharing knowledge. Losing a supplier could create significant risks, as replacements cannot easily be found. Therefore, the company prioritizes long-term collaborations and joint development over short-term cost savings, even though this may limit the ability to fully drive efficiency improvements and requirements. When heavily dependent on individual suppliers, it also makes it more difficult to enforce resilience and environmental demands.

Secondly, another significant factor behind the dependency situation is Alpha's internal resistance to switching suppliers. Different departments have different priorities, with some focusing more on product quality than cost or resilience, making it difficult to justify decisions about selecting alternative suppliers.

4.2.4 Weak Incentives for Supplier Resilience and Environmental Sustainability

Currently, suppliers are responsible for parts of the inbound supply chain, from the supplier to the PUP, as well as the PUP itself. Ensuring that these suppliers have incentives to invest in resilient and environmentally friendly solutions within the supply chain presents a significant challenge. This information is illustrated in Figure 4.6.

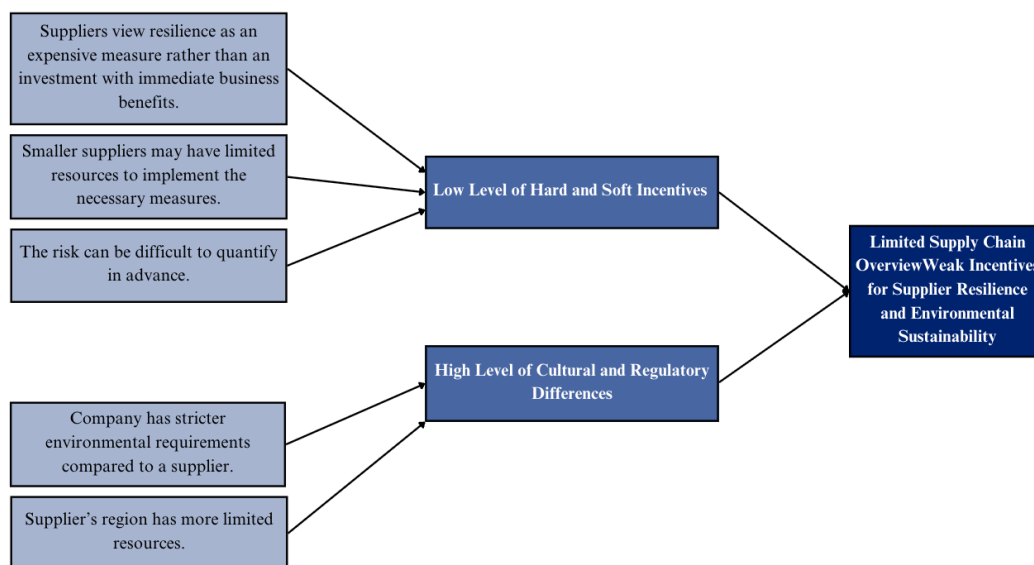


Figure 4.6: Factors behind the logistical challenge of weak incentives for supplier resilience and environmental sustainability

Firstly, an underlying factor is that suppliers view resilience as an expensive measure rather than an investment with immediate business benefits. Establishing additional production facilities, maintaining buffer stocks, or ensuring alternative supply chains entails high initial costs, which many suppliers find difficult to justify. While the company can fund specific equipment investments, resilience is also considered the supplier's responsibility. This creates a situation where smaller suppliers may have limited resources to implement the necessary measures, despite being required to contribute to a robust supply chain. Unlike direct cost savings or productivity improvements, resilience primarily provides benefits in the event of disruptions, a risk that can be difficult to quantify in advance. Together, these factors make it challenging to create financial incentives for suppliers to invest in long-term resilient solutions, especially if these measures do not lead to increased production volumes or revenue. In the absence of clear incentives, suppliers tend to prioritize short-term efficiency gains over long-term stability, increasing the risk that smaller disruptions will escalate and require significant interventions from the company.

Secondly, the ability to impose requirements on suppliers is further affected by global differences in environmental and resilience standards. Suppliers in different regions operate under varying regulatory conditions, making it challenging to implement a uniform strategy. A supplier in a more developed market, such as Sweden, may find it easier to meet stricter environmental requirements compared to a supplier in a region with more limited resources. These differences complicate the creation of universal incentives for a global company and can lead to some suppliers perceiving the requirements as unfair or unrealistic.

To reduce the risk of disruptions in the supply chain, suppliers need to implement strategies such as dual sourcing, safety stock, and interchangeable components to handle various types of interruptions. Therefore, suppliers are required, through agreements, to achieve these solutions, often with stricter and more detailed contractual terms than those typically required in their home countries or by their own goals. Despite this, it remains a major challenge to get suppliers to implement these solutions.

4.2.5 Interrelation of Challenges

The four challenges, limited overview, lack of control, supplier dependence, and weak incentives for suppliers, are closely interconnected and relevant for understanding the complexity of a global inbound supply chain. Despite their interplay, they differ in underlying factors, visibility, and their impact both internally and externally for the company.

Limited overview is both an internal and external challenge. Internal factors such as complex internal structures and inconsistent processes interact with external factors like outsourcing and fragmented flows. This structural fragmentation reduces the possibility of control, which is mainly an external challenge related to lack of transparency and

reliance on information sharing from suppliers. Like the overview challenge, it is also influenced by external factors like outsourcing. The lack of overview has limited visibility which impacts long-term planning and resilience, while the lack of control often manifests in operational disruptions such as uncertainty in deliveries.

These gaps are further increased by supplier dependence, a strategic vulnerability grounded in external technical lock-ins, limited supplier substitutability, and internal barriers to supplier switching. The challenge has limited visibility until a problem arises, such as a supplier loss. Asymmetrical dependence reduces negotiation space and complicates the ability to impose requirements, such as for resilience and environmental sustainability. This leads to the fourth challenge, weak incentives for suppliers. The incentive challenge is primarily external and arises from suppliers' lack of business-driven reasons to invest in robust, environmentally friendly solutions, particularly in the absence of direct gains or common standards. Compared to the issues of overview and control, the incentive problem is more abstract and less visible in the short term, but it is critical from a strategic sustainability and risk perspective.

Overall, all these challenges are highly relevant in their own way and for the whole picture, but they differ in visibility. The lack of overview and control often results in operational disruptions, while dependence and incentives are more long-term and hidden risk factors that are more difficult to address without strong external relationships. Successful management requires a holistic perspective that considers both internal and external structures, as these factors are mutually dependent. Therefore, these challenges are primarily external in nature but have clear internal consequences.

4.3 Inbound Supply Chain Strategies of B2C Companies

The interviewed B2C companies, despite differences in product offerings, geographic reach, and inbound supply chain structures, have successfully developed robust inbound logistics systems. Their best-practice strategies will be presented in this subsection.

4.3.1 B2C Company C1

C1 is a global leader in e-commerce and logistics, known for its customer-centric strategy, technological advancements, and strong market position. Although logistics is outside of its core business, C1 has, through continuous adaptation to market needs, built a flexible and sustainable inbound supply chain.

The company offers a comprehensive product portfolio on its platform, ranging from groceries to electronics. The assortment primarily consists of standardized and interchangeable products, as many suppliers offer similar goods. This enables a broad and dynamic range with high volumes, without the need for customized solutions or exclusive manufacturing expertise. Furthermore, this allows C1 to have strong negotiating power, and together with its strong market position, it can quickly replace suppliers that do not

meet the company's requirements and objectives, such as for environmental, cost, and transparency goals.

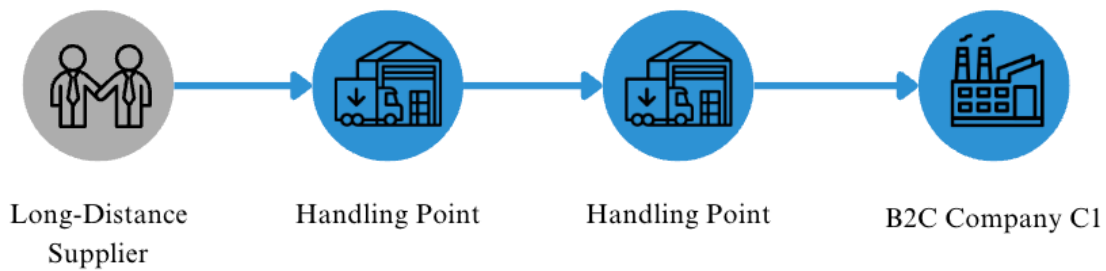


Figure 4.7: C1's inbound supply chain for long-distance suppliers

C1 collaborates with suppliers worldwide, including distant players. For long-distance suppliers CI has built an inbound supply chain based on in-house solutions and a decentralized warehouse structure. This is shown in Figure 4.7. Products are transported and consolidated via C1's logistics system from the supplier to consolidation centers, where they are gathered before further distribution to smaller, local warehouses near customers. This is done to maximize the load factor in each transport. By managing the logistics flow internally, C1 believes it can standardize its supply chains and use uniform systems and processes. This has allowed the company to maintain good visibility across its entire inbound supply chain. C1 currently uses real-time tracking of transportation and warehouse management, focusing on cost-effectiveness, delivery accuracy, and increased opportunities for proactivity. Furthermore, C1 sees the insourcing strategy as key to maintaining control over the supply chains and improving the ability to optimize transport, capacity utilization, and staffing, enabling proactive decision-making.

To create incentives for its suppliers, C1 uses various contracts and regulations. It also applies environmental certifications to reward sustainable suppliers, increasing their visibility on the platform. Simultaneously, C1's already strong market position creates incentives for suppliers to meet requirements to stay with the company. However, C1 faces challenges in creating common incentives due to differing standards and strategies applied in various countries.

4.3.2 B2C Company C2

C2 is a Nordic fashion e-commerce actor with a business model that combines own products with external brands. The company has a close collaboration between its departments, where responsibility is shared across several functions, and each function stays updated on each other's workflows.

The company offers a wide range of standardized and somewhat interchangeable fashion items, which can be produced by several different suppliers that C2 can choose from. However, there are certain requirements for specific brands that they want on their platform, which somewhat limits supplier interchangeability and, therefore, negotiation power. To avoid being too dependent on specific suppliers, C2 has designed its product

range so that many items can be replaced by others and is open to changing the materials used in products if something goes wrong. C2 has a robust backup strategy involving multiple long-distance suppliers located in the same or different countries, allowing flexibility to shift between them depending on factors such as currency fluctuations or unforeseen disruptions.

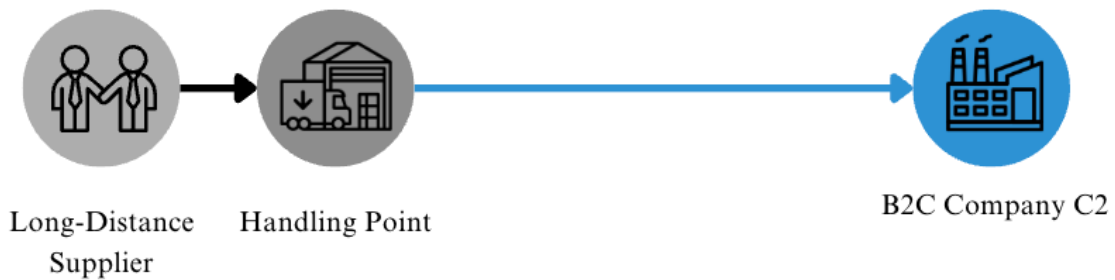


Figure 4.8: C2's inbound supply chain for long-distance suppliers

The company has established an inbound supply chain for its own products sourced from long-distance suppliers, using a partially outsourced setup with direct deliveries. This is presented in Figure 4.8. The distance between the long-distance supplier and the intermediate storage represents the transport from the supplier to the port of departure in their own country.

Distant suppliers are responsible for transportation to the port in the country of origin, while C2 takes over the responsibility and handles transportation and management to the central warehouse. To ensure control in the outsourced part where the supplier has responsibility, C2 controls which carriers' suppliers are allowed to use. C2 collaborates closely with selected 3PL providers and follows C2's standardized guidelines. By handling the inbound flow from the port themselves, they can control delivery accuracy and costs internally. Furthermore, C2 sees the insourcing strategy as important for transparency and quality control, overcoming internal limitations.

Real-time monitoring is limited, but C2 uses systems to track updated arrival times and transport changes. They also have clear data and continuous mapping of deviations with suppliers. By choosing which 3PL providers suppliers can use, they ensure a certain standardization of data systems, which simplifies oversight and improves control.

To create incentives for their suppliers, C2 uses various contracts and regulations. They also continuously and proactively work with training on sustainability efforts and improved routines to create knowledge among their suppliers. However, due to varying standards and cultures at the suppliers, C2 faces challenges in creating common incentives.

4.3.3 B2C Company C3

C3 is a Swedish B2C company with global sales of fashion items. The company places high value on internal communication, actively working to improve communication and collaboration between different departments and tries to rely on the same reports.

They offer a wide assortment that includes both fashion items and basic products. C3 also functions partially as a retailer for other brands. Since the production of the products does not require unique expertise, C3 is not dependent on individual suppliers and can easily replace a supplier if requirements are not met. This gives C3 good negotiating power with its suppliers. The company collaborates with suppliers both from nearby markets and globally.

They offer a wide assortment that includes both fashion items and basic products. C3 also functions partially as a retailer for other brands. Since the production of the products does not require unique expertise, C3 is not dependent on individual suppliers. The company collaborates with suppliers both from nearby markets and globally. C3 strives for long term relationships with their suppliers, focusing on common goals in areas such as sustainability, human rights and quality.

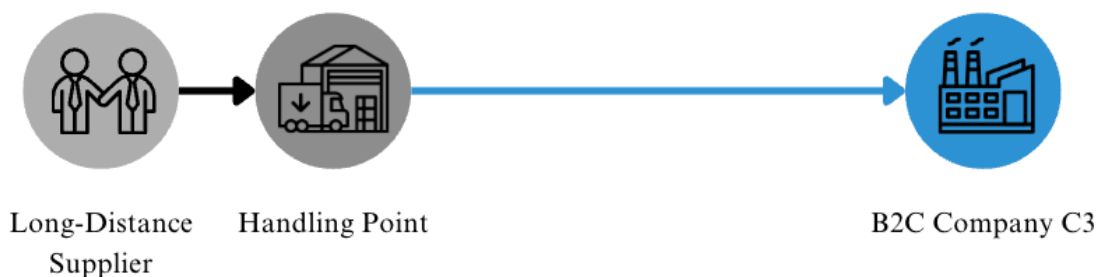


Figure 4.9: C3's inbound supply chain for long-distance suppliers

C3 has built its inbound supply chain for long-distance suppliers through a partially outsourced supplier chain to a centralized warehouse without intermediate storage, as shown in Figure 4.9. The company does not own any factories but relies on external suppliers to produce its goods. Suppliers are responsible for transportation to the port in the country of origin, while C3 takes over the responsibility for transport and handling from the port to the central warehouse. To ensure control in the outsourced part where the supplier is responsible, C3 controls to which terminal suppliers shall deliver the goods. C3 has agreements with specific shipping companies responsible for transportation of goods to port in Sweden. This helps reduce shipping costs and environmental impact, as goods from the same supplier and port are consolidated in the same delivery, aiming for high filling degree and using biofuel. Furthermore, C3 sees the insourcing strategy as important for control, transparency, and proactivity in the supply chain.

To effectively monitor and manage the entire supply chain, C3 uses real-time tracking through its systems that are automatically updated by the carrier. This allows them to track

delays in real time. This process is carried out in close collaboration between purchasing, logistics, and IT, ensuring an efficient and up-to-date process.

To create incentives for their suppliers, C3 uses various contracts and regulations. They also work with close and long-term relationships with suppliers to create joint sustainability initiatives that benefit both parties, through regular dialogue, training, and shared goals to help align efforts across the supply chain. At the same time, they have enough negotiating power that suppliers want to meet their requirements to stay with the company. C3 also faces challenges in creating common incentives due to varying cultures and standards.

To create incentives for their suppliers, C3 uses a mix of contracts and regulatory frameworks. In addition, they build close and long-term relationships with suppliers to enable joint sustainability initiatives that benefit both sides. This kind of collaboration - through regular dialogue, training, and shared goals - helps align efforts across the supply chain. At the same time, C3 holds enough negotiating power that suppliers are motivated to meet their requirements to maintain the partnership.

4.4 Summary of Company Findings

A summary of the empirical findings can be seen in Table 4.2.

Table 4.2: Summary of empirical findings based on Alpha's logistical challenges

	Company Alpha	B2C Company C1	B2C Company C2	B2C Company C3
Supply chain overview	<p>Outsourced parts of the supply chain.</p> <p>Fragmented supply chain, where each flow is managed separately by supplier without consolidation or standardization.</p> <p>Internal misalignments.</p>	<p>Inourced supply chain where products are consolidated from suppliers.</p> <p>Systems, processes, and supply chains are standardized.</p>	<p>Outsourced parts of the supply chain.</p> <p>Standardized and consolidated supply chains from port.</p> <p>Close collaboration between different functions.</p>	<p>Outsourced parts of the supply chain.</p> <p>Standardized and consolidated supply chains from port.</p> <p>Clear communication between departments, based on shared reports.</p>
Control in the supply chain	<p>Outsourced parts of the supply chain where the supplier selects the 3PLs without control from Alpha.</p> <p>Lack of transparency from the supplier.</p> <p>Limited use of real-time monitoring.</p>	<p>Inourced supply chain with control over products from the supplier.</p> <p>Real-time monitoring of transportation and warehouse management.</p>	<p>Outsourced parts of the supply chain where the company controls and selects the supplier's 3PLs.</p> <p>Limited real-time monitoring.</p>	<p>To ensure control in the outsourced part C3 controls to which terminal suppliers shall deliver the goods. C3 also has agreements with specific shipping companies responsible for transportation of goods to port in Sweden.</p> <p>Real-time monitoring.</p>
Supplier dependence	High level of dependency of specialized suppliers.	Low level of dependency with interchangeable	Medium level of dependency with	Medium level of dependency with

	Lack of backup suppliers. Internal resistance to supplier changes.	standardized products. Large supplier base with backup suppliers.	partially interchangeable standardized products. Some flexibility to change product materials when needed. Backup long-distance suppliers.	partially interchangeable standardized products. Backup suppliers.
Incentives for supplier resilience and environmental sustainability	The supplier's own responsibility to create resilience and environmental sustainability. Low bargaining power. Global differences in environmental and resilience standards.	Uses environmental certifications to reward sustainable suppliers. High bargaining power. Strong market position. Global differences in environmental and resilience standards.	Uses training programs to build supplier awareness and knowledge. Some bargaining power. Global differences in environmental and resilience standards.	Works through close and long-term relationships to jointly meet high standards High bargaining power Global differences in environmental and resilience standards.

4.5 Perspectives on an Insourcing Strategy

This section explores the potential consequences of a hypothetical case where Alpha fully insources its inbound supply chain for their long-distance suppliers, based on the company's specific context. The insights are drawn from interviews with Alpha's internal interviewees.

Increased Control and Supply Chain Overview

As a result of insourcing, there is potentially enhanced control and overview of the entire chain, from what is being transported to where materials are located and in what volumes. With an improved overview of long-distance flows, the opportunity also arises to consolidate shipments directly at the supplier's facility.

More Transparent and Predictable Processes

By managing logistics internally, a more transparent and predictable process is created, where Alpha is less dependent on suppliers' transparency and information sharing regarding their supply chain management, where an additional external party could be involved. Insourcing also creates opportunities to collect, own, and thus take responsibility for more data internally, improving traceability, reducing information gaps, and strengthening the decision-making foundation.

Reduced Costs

By taking full responsibility, transaction costs, profit margins, and hidden fees typically embedded in supplier pricing would be reduced. This could contribute to a more structured and predictable cost structure.

Limited Impact on Strategic Supplier Dependency

Insourcing would not change Alpha's strategic dependencies in the supply chain, as it does not address the lack of multiple sourcing options.

Natural Incentives for Improvement

When Alpha manages logistics internally, a natural incentive emerges to optimize the overall setup, as the consequences of logistics decisions directly affect Alpha's own operations.

Decreased Incentives among the Suppliers

When Alpha takes full responsibility of the supply chain, suppliers may become less engaged in matters such as resilience and environmental sustainability, as they no longer perceive a direct responsibility or impact in these areas.

Reduced Risk Distribution

When logistics are managed internally, the risk-sharing is reduced with the suppliers and higher demands are placed on in-house expertise, capacity, and accountability in case of deviations. Assuming full responsibility for the inbound supply chain would make Alpha more exposed to external risks. In the event of disruptions, Alpha would no longer be able to place responsibility on the supplier and would have to manage the consequences independently.

Complex and Resource-Intensive Implementation

Insourcing requires extensive mapping of material flows, suppliers, and internal processes, which is highly resource- and time-intensive. The increasing complexity of the logistics landscape, marked by strikes, container shortages, and changing customs regulations, demands expertise that is currently lacking, further increasing investment needs. A higher degree of logistics responsibility would therefore require significant time and financial resources. Additionally, insourcing could require careful consideration of numerous complex factors, making it a challenging process to implement.

5. DISCUSSION

This chapter presents a theoretical discussion and analysis grounded in the empirical findings with reference to the theoretical framework. The discussion is guided by the study's purpose: *to explore where and how a heavy truck manufacturer can improve its inbound supply chain for long-distance suppliers to better manage their challenges within this area.*

The chapter discusses the answers to the research questions: *(1) What are the logistical challenges in the inbound supply chain of a heavy truck manufacturer when dealing with long-distance suppliers? (2) How can B2B companies learn from the practices of high-performing B2C companies to address the challenges identified in long-distance inbound supply chains? (3) How can insourcing help a heavy truck manufacturer manage the logistical challenges of a long-distance inbound supply chain?*

Section 5.1 begins with an analysis of the empirical findings in Chapter 4, where Alpha's inbound supply chain and its challenges are compared to strategies from B2C companies. By identifying key challenges and their interrelation, the section highlights *where* there is potential for improvement. By identifying the strategy gaps between Alpha and the practices of B2C companies, the section also provides insights into *how* these improvements could potentially be achieved.

Section 5.2 involves a deeper analysis of the fundamental differences between B2B and B2C contexts, recognizing that some gaps may come from market and structural differences. It critically assesses the feasibility of improving Alpha's supply chain through expanded benchmarking and discusses *how* elements could realistically be transferred to a heavy truck context.

Finally, Section 5.3 explores insourcing as a potential strategy to evaluate whether such an approach could address and manage the logistical challenges. Therefore, this section considers *how* insourcing might serve as a feasible strategy for optimizing inbound supply chains for a heavy truck manufacturer.

In doing so, the discussion aims to answer the study's purpose not only by identifying improvement areas but also by recommending actionable strategic directions.

5.1 Gap Analysis between Alpha and B2C Companies

Inbound logistics, that is, the flow of materials from supplier to production, is a key component of supply chain management, especially in global, complex industries such as the automotive industry (Antonio Mitsumasa, 2017; Zijm et al., 2019). Since supply chain management today is considered a strategic function with a direct impact on a company's competitiveness (Stadtler et al., 2015), effective and robust inbound logistics become crucial. Research points out that this part of the chain is particularly sensitive to

disruptions, which can quickly lead to chain reactions (Ramezankhani et al., 2018) and should therefore be prioritized. The empirical findings support this, indicating that Alpha faces several challenges in managing inbound logistics for long-distance suppliers. In contrast, B2C companies have achieved significant growth through highly optimized inbound logistics (Young, 2024). In this context, gap analysis serves as a valuable method for identifying key differences between the two sectors (Kim & Ji, 2018), while expanded benchmarking (Balm, 1996) highlights the importance of cross-sector learning.

Four main challenges in Alpha's inbound supply chain were identified through the empirical findings: limited supply chain overview, lack of control in the supply chain, supplier dependence and weak incentives for supplier resilience and environmental sustainability. These are driven by different underlying factors, which form the basis for the comparison with B2C companies. The differences are illustrated using visual scales that position each company along a continuum from low to high level, depending on their strategic characteristics. The placement of each actor is based on informed judgment rather than exact metrics and should be seen as an indicative overview rather than a quantitative assessment. The level of detail in available data also influences confidence in each positioning. In cases where data was insufficient, no position was marked.

5.1.1 Limited Supply Chain Overview

Unlike the B2C companies in this study, Alpha struggles with limited overview of its inbound supply chain, especially when it comes to long-distance deliveries. According to Stadtler et al. (2015), an overall overview is a fundamental requirement for effectively coordinating material and information flows within supply chain management. The empirical findings show that Alpha's challenge can partly be explained by complex and slow internal communication between departments, as well as the consequences of outsourced inbound logistics. In contrast, B2C companies demonstrate how strategies such as consolidation, standardization, and strong internal collaboration can contribute to improved overview, as presented in Figure 5.1.

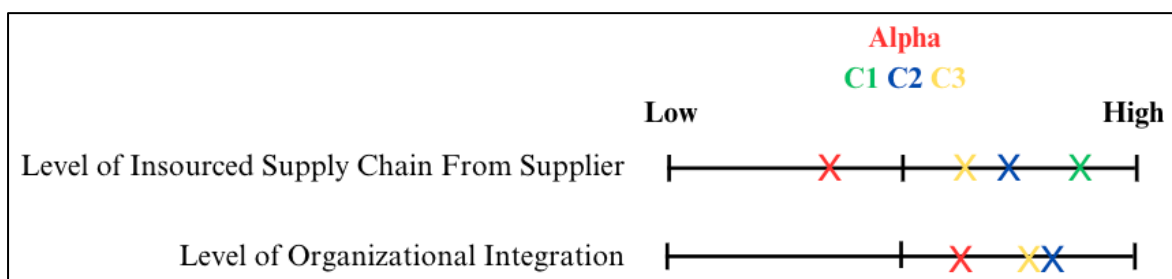


Figure 5.1: Gap of supply chain overview between Alpha and B2C companies

Level of Insourced Supply Chain from Supplier

Alpha's current, partially outsourced structure, where the suppliers are responsible for transport up to the PUP, leads to a fragmented supply chain with multiple parallel logistics flows. Since Alpha does not control the supplier's choice of 3PL providers used

by suppliers, it also reduces the ability to impose common requirements on quality, transparency, and reporting. Levi et al. (2014) argue that the broader the system, the more variables need to be accounted for, which increases complexity and makes both integration and operational management more difficult. This can explain why the empirical results show that the outsourced and fragmented structure reduces effective overview and coordination.

In contrast, the empirical findings indicate that B2C companies, such as C1, through insourcing and strict control over logistics flows, enable consolidation from multiple suppliers, thus reducing the number of parallel logistics flows. This reduces complexity, which, according to Levi et al. (2014), improves integration and explains their better overview. Furthermore, C1 can maximize load capacity in each transport, aligning with the theory that this reduces costs and contributes to reduced environmental impact through fewer transports (Buffa, 1986). Managing the logistics flow internally also allows C1 to standardize and thus use uniform systems and processes to maintain a good overview of the entire inbound supply chain.

C2 and C3 that have a partially insourced supply chain, achieve similar results of overview. C2 ensures high process quality in the outsourced segment by requiring suppliers to use pre-approved 3PL providers. This gives the company direct influence over how goods are handled, contributing to a more uniform and transparent process. C3, on the other hand, does not dictate which 3PLs suppliers must use. Instead, they achieve a degree of control by specifying delivery to a designated terminal. This ensures that processes maintain a high and uniform standard, which can facilitate the overview. By consolidating goods at the port, they also work with high load capacity, which strengthens both efficiency and environmental sustainability, supporting the theory that sustainable supply chains can provide a competitive advantage (Buffa, 1986; Hojmosse et al., 2012; Marroun et al., 2024). Alpha's partially outsourced model, without control over the chosen 3PL providers in the outsourced part, thus hinders a similar overview.

Level of Organizational Integration

In large global organizations, organizational fragmentation can hinder internal overview of logistics flows, which is confirmed by the theory where internal integration is highlighted as crucial for operational efficiency, but simultaneously challenging in large systems (Flynn et al., 2010; Levi et al., 2014). Alpha's divided responsibilities between departments reflect these theoretical challenges, where a lack of internal integration risks combining visibility and coordination in the inbound flow. This is also confirmed by the empirical results, showing that there are significant disagreements between different departments within the company, indicating a lack of a unified overview.

In contrast, C2 has close collaboration between functions, enabling better monitoring and faster identification of deviations. Close communication between purchasing, logistics, and other relevant departments creates conditions for quicker decision-making and better

adaptability to changes, which is central to an agile and responsive supply chain (Christopher, 2016). C3 also places great importance on cross-functional communication, which, according to empirical findings, increases visibility and thereby improves supply chain management.

In summary, Alpha’s limited overview is a result of a decentralized supply chain that hinders effective coordination and visibility. This contrasts with the B2C companies, which have succeeded in creating more coordinated and transparent flows through insourcing and stricter control. Key takeaways from this chapter are presented in Table 5.1.

Table 5.1: Key takeaways from Chapter 5.1.1

Where	<ul style="list-style-type: none"> Alpha struggles with limited overview in its inbound supply chain, particularly for long-distance, due to the partially outsourced chain without control of the supplier's choice of 3PLs. Alpha's internal communication is characterized by complexity and departmental division, making decision-making and a holistic overview more challenging.
How	<ul style="list-style-type: none"> Insourcing, consolidation, and standardization are successfully used by B2C actors to reduce complexity and improve overview. B2C actors use close collaboration and cross-functional communication between their departments to improve overview and make quicker decisions.

5.1.2 Lack of Control in the Supply Chain

According to theory, effective supply chain management requires a high degree of planning and control throughout the entire chain, with control being seen as a fundamental prerequisite for achieving both operational efficiency and strategic goals (Cooper et al., 1997; Mentzer et al., 2008). This can explain the empirical findings, where a lack of control emerges as a central challenge in Alpha’s long-distance inbound supply chain. Alpha’s lack of sufficient control over certain parts of the flow thus illustrates the theory’s assumption that without an overarching approach, the ability to manage and optimize logistics decreases. In contrast to Alpha, the B2C companies interviewed employ different strategies to ensure control, as presented in Figure 5.2.

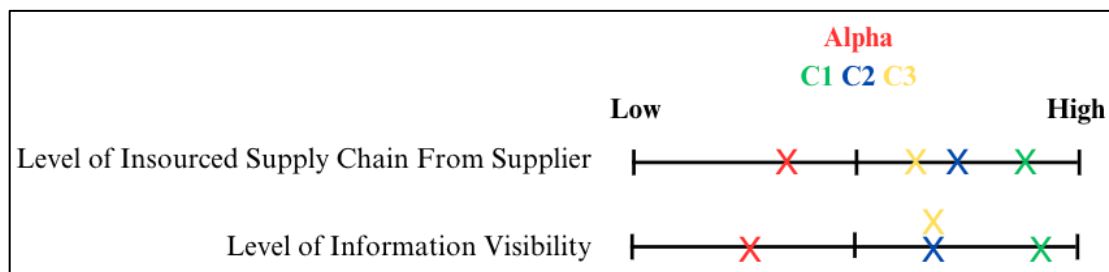


Figure 5.2: Gap of control in the supply chain between Alpha and B2C companies

Level of Insourced Supply Chain from Supplier

Empirical data shows that Alpha's limited control over inbound logistics is largely due to its outsourced structure. When suppliers are responsible for transportation and can freely choose 3PL providers, Alpha’s visibility and ability to manage key factors such as

fill rate, routes, and delivery precision are reduced. This is confirmed in theory, where outsourcing often leads to reduced control (Nakhaei et al., 2010).

In contrast, the empirical data shows that several B2C companies have chosen to retain more control over their inbound supply chain. C1 achieves this through full insourcing of its supply chain, while C2 and C3 reach similar outcomes by either controlling the choice of 3PL providers or by specifying delivery to designated terminals within their outsourced segments. This allows them to manage the outsourced part rather than leaving full responsibility to the suppliers. This differs from Alpha's approach, where a large part of the responsibility is placed on the suppliers without a clear control function. While the theory does not explicitly advocate insourcing as a universal solution, the empirical comparison indicates that a higher degree of internal management can, in some cases, be an effective way to regain control over complex logistics flows.

Level of Information Visibility

Furthermore, theory highlights that the level of control is also influenced by the level of information visibility. According to Kalaiarasan et al. (2023), visibility refers to the ability to access correct, complete, and up-to-date information in real time. To achieve this level of transparency, technological investments in real-time data and transparency between actors in the value chain are required (Sodhi & Tang, 2019).

From a technical perspective, the empirical data shows that Alpha, despite existing EDI solutions, lacks real-time monitoring of critical parameters such as transport status and fill rate in the outsourced part of the supply chain. This makes proactive management difficult in a vulnerable and global logistics environment where Wagner and Postel (2022) argue that without digital technology, transparency is hindered. However, theory confirms that implementing such systems is often particularly complex in large and diversified organizations (Mentzer et al., 2001). This may explain why Alpha sees this as a challenge. In contrast, the empirical data shows that several B2C companies have implemented digital monitoring systems that increase flexibility, delivery precision, and decision-making capability, in line with the theory that technological investments strengthen supply chain visibility and thus control (Kalaiarasan et al., 2023; Sodhi & Tang, 2019). C1 has real-time visibility across the entire chain, while C2 and C3 use carrier-updated systems that allow for some monitoring. Through control over the choice of 3PL providers, they can also standardize data systems, which strengthens visibility and control.

Theory emphasizes that transparency in the supply chain also requires trust, collaboration, and mutual confidence (Bala, 2014; Kalaiarasan et al., 2023). A common challenge, however, is the lack of information sharing, which can hinder transparency (Bala, 2014). This is confirmed in the study's empirical findings, where Alpha's outsourced structure and limited selection of 3PL providers complicate control over material flows and processes. According to Johansson and Spångberg (2007), outsourcing can lead to poor

communication and limited visibility, especially when suppliers are part of complex networks, sometimes resulting in changes occurring outside of the company's control.

In Alpha's case, where the business is integrated into such a complex network, this becomes particularly evident and explains the limited transparency. In contrast, the study shows that B2C companies with more insourced logistics are better able to avoid these challenges and achieve better oversight and information flow.

However, the empirical data challenges the theory's assumption and suggests that C1 has established systems where high levels of information sharing are maintained without the need for close collaboration. Instead, a strong market position and bargaining power substitute for mutual trust. For Alpha, where supplier dependence is higher and product specialization is greater, these alternative routes are harder to apply. The company is more reliant on long-term partnerships rather than strict demands, as it cannot easily replace its suppliers like C1 can. This aligns with the theory, which suggests that dependency situations reduce bargaining power and create fear of conflict, where switching suppliers entails high costs (Crook & Combs, 2006; Gassenheimer & Manolis, 2001). This means that the work of improving overview and control for Alpha requires the development of both technological solutions and incentive structures that promote openness and trust.

In summary, this can explain the gap in control between Alpha and B2C companies, partly due to differences in sourcing strategy and also due to differences in access to information about the inbound supply chain. Key takeaways from this chapter are presented in Table 5.2.

Table 5.2: Key takeaways from Chapter 5.1.2

Where	<ul style="list-style-type: none"> Alpha has limited control over its long-distance inbound supply chain, partly due to a partially outsourced structure without control of the supplier's choice of 3PLs. Alpha's lack of real-time data and limited transparency from suppliers hinders control.
How	<ul style="list-style-type: none"> B2C actors maintain control by largely insourcing logistics or imposing strict requirements on outsourced logistics. B2C actors leverage technology and/or market position to achieve control, rather than relying on close partnerships. Alpha may need to focus on building trust and creating incentives for information sharing to achieve similar transparency.

5.1.3 Supplier Dependence

One of Alpha's biggest challenges is its dependency on suppliers, which mainly stems from low supplier interchangeability, limited bargaining power, and internal challenges in reaching agreement on supplier changes. B2C companies use more flexible strategies with multiple sourcing and supplier interchangeability, which also strengthens their bargaining power with suppliers. This is illustrated in Figure 5.3.

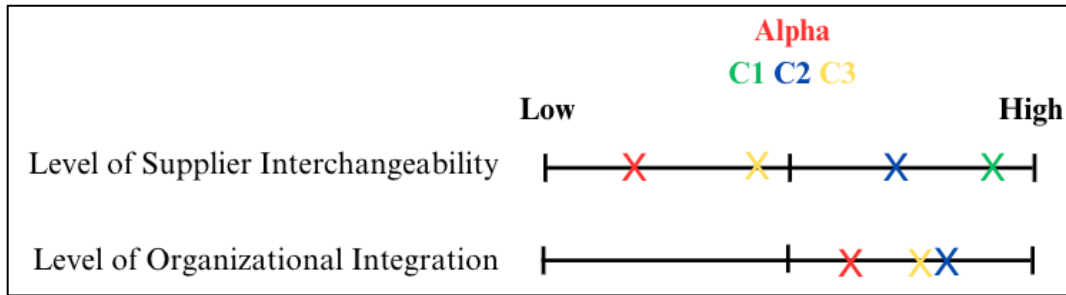


Figure 5.3: Gap of supplier dependency in the supply chain between Alpha and B2C companies

Level of Supplier Interchangeability

Alpha faces significant challenges when it comes to supplier interchangeability, as a high level of technical competence is required to manufacture its advanced components. The empirical data shows that Alpha is thus heavily dependent on its suppliers and may struggle to implement a multiple sourcing strategy, which according to theory increases vulnerability (Namdar et al., 2018; Treleven & Bergman Schweikhart, 1988).

This reasoning is confirmed by the empirical findings, which show that Alpha has limited ability to pressure its suppliers, in contrast to B2C companies with higher supplier interchangeability. This aligns with the theory of asymmetric dependencies, where bargaining power decreases when a company is heavily reliant on a few highly specialized suppliers (Crook & Combs, 2006). Alpha's low level of supplier interchangeability means that placing too many demands on suppliers could risk important partnerships, a risk that is not as high for more flexible B2C companies.

In contrast to Alpha, empirical examples from B2C companies reveal a different dynamic. These companies have more standardized products, a larger number of alternative suppliers, and can therefore more easily switch suppliers, giving them a stronger bargaining position.

C1 demonstrates a high degree of interchangeability, with a vast and global supplier base, enabling strict demands and quick supplier replacement. C1 can easily replace suppliers that do not meet strict requirements related to quality, sustainability, and delivery performance. This, in combination with their strong market position, makes their interchangeability high.

C2 has a flexible and diversified supplier strategy, including backup suppliers in case of disruptions, and can switch materials to increase supplier interchangeability. However, there is still some dependency, as empirical data shows that C2 aims to feature specific brands on its platform, limiting its ability to fully leverage supplier interchangeability.

C3, on the other hand, is not dependent on specific brands and therefore has the structural possibility to switch suppliers more easily. However, in practice, C3 emphasizes building long-term, trust-based partnerships with its suppliers, often working together on shared goals such as sustainability, quality, and human rights. This relationship-focused approach

means that while supplier interchangeability is possible, it is not actively pursued as a bargaining tool. Instead, C3 relies on mutual commitment and dialogue to influence supplier behavior. This challenges the idea that greater supplier interchangeability always leads to stronger bargaining power (Crook & Combs, 2006) and shows that power can also stem from well-managed, collaborative relationships.

According to theory, however, not all asymmetric dependency relationships are negative (Caniëls et al., 2018). Problems primarily arise if the dominant party abuses its power. If power is handled carefully, the relationship, despite an imbalanced dependency, can still be perceived as positive for both parties. Therefore, it is not solely the degree of dependency that determines the quality of the relationship, but also how power is exercised in the relationship. Treleven and Bergman Schweikhart (1988) also argue that single sourcing, despite increased dependency, can improve quality and delivery precision through stronger supplier relationships. Based on this, it could be questioned whether Alpha’s dependency necessarily constitutes a weakness in comparison to B2C companies. However, the empirical data shows that Alpha itself views the dependency situation as a challenge, suggesting that the relationships should be further evaluated.

Level of Organizational Integration

Another challenge identified in the empirical results, which makes Alpha more dependent on its suppliers, is the internal difficulty justifying a supplier change between different departments. This is due to a high fragmentation of departments in the company. Theory confirms this, arguing that siloed structures and low internal coordination reduce the ability to change in large organizations (Christopher, 2016).

In contrast, C2 has a more agile internal structure with close collaboration between functions, enabling quick decision-making. C3 has also improved its internal communication through shared reporting systems, providing a unified view of the situation and simplifying the decision-making process. This supports the theory that internal collaboration and data sharing are crucial for effective supplier management (Kalaiarasan et al., 2023). The empirical data further validates this perspective, as the higher level of organizational integration within these companies leads to more aligned perspectives. Consequently, challenges such as departmental resistance during supplier transitions are not perceived as significant.

In summary, the gap between Alpha and B2C companies can be attributed to differences in supplier interchangeability, bargaining power, and internal difficulties, which limit flexibility and the ability to make quick decisions. Key takeaways from this chapter are presented in Table 5.3.

Table 5.3: Key takeaways from Chapter 5.1.3

Where	<ul style="list-style-type: none"> Alpha has supplier dependency due high technical specificity and specialized products making opportunities for multiple sourcing and supplier interchangeability reduced.
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	<ul style="list-style-type: none"> Negotiating power is weakened in asymmetric dependencies, especially when Alpha cannot switch suppliers without significant risks. Internal fragmentation and a slow organizational structure complicate decisions regarding supplier changes.
How	<ul style="list-style-type: none"> B2C actors work with standardized products, multiple sourcing, and backup suppliers to reduce dependency and increase negotiating power. Cross-functional decision-making and shared data platforms create internal alignment and enable quick supplier changes when needed.

5.1.4 Weak Incentives for Supplier Resilience and Environmental Sustainability

Alpha faces challenges in creating strong incentives for environmental sustainability and resilience with its suppliers, partly due to cultural differences and a weak negotiating position. In contrast, B2C companies such as C1 and C3 use more flexible and reward-based strategies. This is illustrated in Figure 5.4.

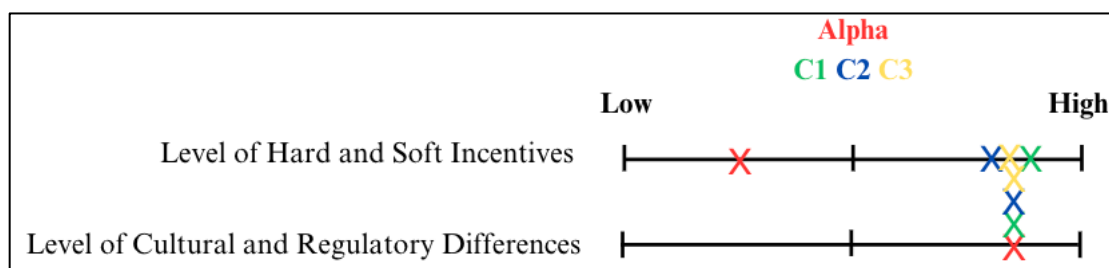


Figure 5.4: Gap of weak supplier incentives in the supply chain between Alpha and B2C companies

Level of Hard and Soft Incentives

A significant difference is the greater bargaining power of B2C actors, referring to hard incentives for suppliers. C1 has strong negotiating power due to its market position and supplier independence, which provides suppliers with strong incentives to comply with the company's demands in order to remain their partners. Alpha, with its greater dependence on suppliers, lacks the same negotiating position and therefore struggles to create such hard incentives without risking its business relationships (Caniëls et al., 2018).

At the same time, theory suggests that power is not the only route to incentives. Bala (2014) emphasizes that incentives can also be created through open communication and a shared understanding of the consequences with the supplier. Here, the empirical data aligns better with B2C actors like C3 and C2, who build trust, educate suppliers, and collaborate long-term to achieve environmental and resilience goals. This without risking relationships through the threat of supplier changes. At the same time, these B2C actors also leverage their negotiating power, meaning they do not entirely follow this theory. C1, C2, and C3 also use strategies where suppliers are rewarded for performing well, referring to soft incentives. For example, through increased visibility on platforms via environmental certifications, joint training, or exclusive collaborations. These efforts not only create compliance but also loyalty and long-term partnerships, without losing flexibility.

Alpha, on the other hand, has not yet established the same balance. Their dependence on a few suppliers limits the ability to implement hard incentives, while efforts to strengthen soft incentives seem to be not fully developed in line with the B2C companies.

Level of Cultural and Regulatory Differences

Theory suggests that cultural and regulatory differences in global networks create coordination problems, making it difficult to implement shared strategies (Bala, 2014; Shailendrakumar, 2007). This is confirmed by the empirical data, where Alpha struggles to motivate suppliers in different regions to align with the company’s environmental sustainability goals. Differences in priorities and business culture lead some suppliers to place less emphasis on environmental impact or resilience than Alpha aims for. Furthermore, it is highlighted that large and complex companies often struggle to ensure strategic coordination between various actors in the supply chain (Levi et al., 2014; Serdarasan, 2013). This difficulty explains Alpha’s challenges in creating effective incentives for suppliers who do not share the company’s overarching vision of environmental sustainability and resilience. However, the empirical data also shows that other global B2C actors experience similar challenges, where their suppliers in different parts of the world also have varying standards and business strategies.

In summary, cultural and regulatory differences in global networks are seen as a shared challenge in creating incentives for suppliers. The differences between Alpha and B2C actors can instead be explained by variations in soft rewards and negotiating power. Key takeaways from this chapter are presented in Table 5.4.

Table 5.4: Key takeaways from Chapter 5.1.4

Where	<ul style="list-style-type: none"> • The company's weak negotiating position and dependence on specific suppliers limit the ability to impose requirements and hard incentives without risking relationships. • Alpha has a reduced level of soft incentives. • Alpha has challenges to create incentives due to different cultural and regulatory conditions with the supplier.
How	<ul style="list-style-type: none"> • B2C companies use hard incentives to strengthen supplier motivation. • By using soft incentives such as educating suppliers, building trust, and creating a shared understanding of environmental sustainability goals, compliance and long-term collaboration increase. • B2C actors face limitations in creating incentives in global networks with different cultural and regulatory conditions.

The gaps between Alpha and B2C actors provide an initial indication of Alpha's potential for improvement. However, to understand how these challenges impact the business in practice, a deeper analysis of how they are interconnected is required.

5.1.5 Interrelation of Challenges

The empirical analysis shows that the challenges Alpha faces in its inbound supply chain are not isolated but are strongly interconnected in a complex network of both internal and external factors. These factors influence each other and amplify the problems, making a change in one area often creates effects in other parts of the business. A key

insight from the theory on complexity in supply chains is that multiple dependencies and flows of materials, information, and capital create a dynamic where one weakness tends to reinforce other problems (Serdarasan, 2013). The empirical data also suggests that external factors often have a more direct and overarching impact on the entire system. This indicates that it may be the external factors that Alpha should primarily focus on in the continued investigation to identify *where* improvement areas should be made.

The identified challenges can be discussed as having an external impact. Lack of control is a consequence of outsourced logistics and dependence on external suppliers' lack of transparency, which further reduces overview and complicates risk identification. Since external suppliers have control over a large part of the chain, it becomes difficult to implement rapid changes when problems arise. This creates a complex situation where companies like Alpha become vulnerable to external disruptions and unforeseen events. Supplier dependence, another external factor, means that the company has limited ability to enforce changes or improvements with its suppliers. This becomes particularly problematic when the incentives from suppliers to invest in long-term environmental sustainability and resilience are weak. These external factors lead to greater vulnerability both in the short and long term, negatively impacting the company's operational efficiency and environmental sustainability.

Internal challenges, such as lack of internal visibility and coordination, also play a role but can be discussed as reinforcing the effects of external factors to a greater extent. Internal organizational barriers and complex structures hinder coordination and access to information, further complicating the creation of overview and control in the supply chains. The absence of coordinated governance further amplifies operational risks in complex logistics chains (Levi et al., 2014; Serdarasan, 2013). However, these internal factors are often less visible and can be addressed at a later stage through internal process improvements and structural adjustments. Key takeaways from this chapter are presented in Table 5.5.

Table 5.5: Key takeaways from Chapter 5.1.5

Where	<ul style="list-style-type: none"> • The challenges are closely interconnected and can reinforce each other, making changes complex. • External factors such as outsourcing and supplier dependency lead to greater vulnerability both in the short and long term, negatively affecting the company's operational efficiency and sustainability. • Internal factors, such as weak coordination, complicate the management of external disruptions. • Measures should begin by reducing external risks, while internal adjustments can be made gradually.
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This leads to the question of how these external challenges can be managed more effectively, and whether methods from successful B2C actors could be relevant to transfer.

5.2 Gap Transferability

The gap analysis in section 5.1 suggests that many of Alpha's challenges can be linked to strategic differences between the company and successful B2C actors. These differences, or gaps, highlight areas where there is potential for development and improvement. According to Marra et al. (2017) and Kim & Ji (2018), gaps in a gap analysis can signal development potential, where benchmarking methodologies often aim to identify how to implement good examples for leading actors in one's own organization.

At the same time, it must be considered that B2B and B2C companies operate in different contexts, with distinct business models and customer logic, which affects strategy and feasibility (Pozzebon et al., 2019; Vesci et al., 2021). Although direct transfer may not always be possible, theory shows that inspiration can be drawn across industry boundaries through expanded benchmarking and analogical thinking (Balm, 1996; Enkel & Mezger, 2013). This means that one should not dismiss what B2C actors do; instead, through lateral thinking and analogical problem solving (De Bono & Zimbalist, 1970; Gick & Holyoak, 1980), parallels from other industries can provide valuable insights into which parts can be adapted and applied in a B2B context.

However, it is important to question why these gaps exist and whether it is always desirable or reasonable to bridge them by letting B2B actors imitate B2C actor's best practices. The comparison between Alpha's challenges and the practices used by B2C actors reveals several differences, but these may be explained by fundamental structural differences between the B2B and B2C sectors. The theory particularly highlights three dimensions that distinguish these types of business models - products, orders, and receivers (Giannikas et al., 2017). These are visualised in Figure 5.5. This challenges the notion that B2C practices can easily be transferred to a B2B context.

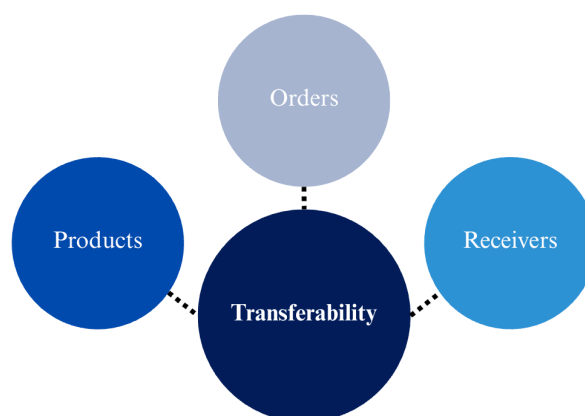


Figure 5.5: The three dimensions that differentiate business models

5.2.1 Products

Alpha's complex and customer-specific products create a strong dependency on a small number of specialized suppliers, which reduces flexibility and increases vulnerability in

the event of disruptions (Gassenheimer & Manolis, 2001). In contrast, B2C actors often manage more standardized products, making them less dependent on individual suppliers (Giannikas et al., 2017) and more prone to switching in the event of disruptions. This difference explains why the dependency is greater for Alpha and is seen as a larger challenge than for B2C actors. The study shows that the mutual dependence between Alpha and its suppliers sometimes leads to a power imbalance where the supplier gains the upper hand. When alternative suppliers are lacking, this can lead to opportunistic behavior (Gassenheimer & Manolis, 2001), something that is also observed in the empirical data, where the cost structure sometimes benefits the supplier without Alpha having control over the situation.

Furthermore, it can be discussed whether the power balance and dependency situation affect the incentives of Alpha's suppliers compared to those in the B2C sector. B2C actors, such as C1, have a strong negotiating position and can impose strict requirements on suppliers, partly due to the ability to easily switch suppliers through multiple sourcing. This creates incentives through supplier interchangeability (Crook & Combs, 2006; Namdar et al., 2018). Alpha, on the other hand, does not have the same opportunity for multiple sourcing, making it harder to dictate requirements. Instead, their relationships are characterized by cooperation and trust, which limits the space for making ultimatum. This may explain why B2C actors do not perceive hard incentives for change as a major issue, while for Alpha, active efforts and support are required.

Alpha's product complexity demands high control over the material flow, which is less critical for B2C actors. The empirical data shows that Alpha needs visibility across the entire supply chain to ensure quality and delivery accuracy. Giannikas et al. (2017) also point out that B2B products require more resources and technical adjustments. This can thus explain why Alpha perceives control as a greater challenge than B2C actors, as B2B products often require more to keep track of.

5.2.2 Orders

A key structural difference between Alpha and B2C actors lies in the order patterns within inbound logistics. B2C companies handle small, frequent orders with greater demand variation (Giannikas et al., 2017), which means they have naturally developed high flexibility and short lead times. This enables faster supplier changes and greater reactivity. Alpha, operating in a B2B context, on the other hand, handles larger and less frequent orders (Giannikas et al., 2017), meaning that each individual delivery is critical and difficult to replace. Thus, reliability and foresight become more important than speed. This increases the demands for transparency in the material flow, as a lack of visibility can have significant consequences. Therefore, transparency may be a greater challenge for Alpha than for the more flexible B2C actors, which is also confirmed by the empirical results.

Despite this, the empirical findings show that B2C actors succeed in creating good transparency through data driven approaches such as real-time monitoring. Here lies a

potential lesson from B2C: although Alpha cannot replicate their supplier mobility, data-driven approaches like real-time monitoring can inspire improved information management.

5.2.3 Receivers

Another key difference between B2B and B2C is how the type of customer and their requirements influence supplier relationships and incentives. In B2C, the demands are directed directly from the end customer, often with high publicity and visibility, for example regarding sustainability and traceability (Hoejmose et al., 2012). This external public pressure can lead to a self-regulating incentive system where suppliers proactively adapt, which reduces the need for the buyer to drive change. This could explain why B2C actors do not see incentives as a major challenge.

Alpha, on the other hand, operates in a B2B landscape with complex, long-term relationships and no direct contact with the end customer. Here, the demands are diluted through several layers, which may reduce incentives for suppliers. The relationship is based more on trust and collaboration than on market-driven demands (Hoejmose et al., 2012). The empirical results show that Alpha itself must initiate and drive change with its suppliers, which is identified as a significant challenge. Therefore, incentives present a greater challenge for Alpha than for B2C actors, as differences in customer base and market logic limit the transferability of incentive models. Unlike B2C, Alpha cannot rely on suppliers spontaneously adapting to the end customer's demands through negotiating power. However, Alpha can learn from how B2C actors communicate and anchor their demands, for example, through soft incentives.

Furthermore, B2C actors manage greater demand variability from their customers and use insourcing to maintain control. While Alpha has other priorities, the empirical results show that they also seek control to ensure stability. This demonstrates two different approaches but a shared goal of creating control. Therefore, there is some transferability where Alpha can apply certain strategic principles from B2C, such as insourcing, without losing its B2B-specific requirements.

5.2.4 The Potential of Transferability

Based on the goal of identifying *where* and *how* the heavy vehicle industry can improve its inbound supply chain for long-distance suppliers, the study shows that the strategy gap between Alpha and successful B2C actors should not merely be understood because of inefficiency. Rather, the gaps reflect the fundamentally different logics that prevail in B2B versus B2C environments.

Thus, the B2C sector can serve as a source of inspiration rather than a model to be totally followed, in order to identify how improvements in inbound logistics can be achieved within its own, unique context. One such tailored approach is insourcing, regaining control

over strategic external parts of the inbound supply chain, particularly in relation to long-distance suppliers.

In summary, methods from B2C have limited transferability to the B2B context, but certain principles can be adapted and contribute to improvement. This highlights how Alpha can improve its inbound supply chain based on best practices from B2C actors, as shown in Table 5.6.

Table 5.6: Key takeaways from Chapter 5.2

	Limited transferability from B2C to B2B	Potential transferability from B2C to B2B
Where and How	<p>Stronger negotiating power Hard incentives Reduced supplier dependence</p> <p>Explanation: Due to factors such as higher product complexity and a narrower supplier base in the B2B context, strategies to strengthen negotiating power, using hard incentives or reduce supplier dependence from the B2C context cannot be easily applied in Alpha's situation.</p>	<p>Higher transparency Increased soft incentive Insourcing</p> <p>Explanation: Certain principles from B2C, such as real-time monitoring, collaboration-based incentives, and increased responsibility through insourcing, can be adapted to the B2B context. The key is to apply these ideas based on the specific needs and complexity of the automotive industry, rather than copying B2C models directly.</p>

As shown in Section 5.2, the transferability from B2C to B2B is not obvious, but certain principles, such as insourcing, have the potential to be adapted and create value even in a B2B context. This relates to the study's purpose of *how* improvements can be made. At the same time, Section 5.1 emphasizes the importance of focusing efforts on external factors, which addresses the question of *where* improvements should be made.

In this context, insourcing emerges as a strategy to regain control and reduce reliance on external actors. It is something that can be inspired by B2C companies yet remains an external factor itself.

Thus, insourcing unites two central perspectives in the study, *where* and *how* improvements can be achieved, it offers inspiration from successful principles in B2C while addressing one of Alpha's external challenges. This raises the question of whether insourcing could be the key to managing these challenges and reducing the strategy gap compared to B2C actors.

5.3 Impact of Insourcing on the Gap Analysis

Maelah et al. (2010) highlight insourcing as a growing trend as global conditions change. Insourcing can therefore be a relevant strategy when traditional outsourcing no longer delivers the desired results (McKenna & Walker, 2008). This is supported by section 5.1 and 5.2 which suggest that the outsourcing strategy could be a contributing factor to several of the identified challenges. Thus, insourcing appears to be a justified alternative, in line with previous research.

In line with the study's aim to investigate *where* and *how* the heavy vehicle industry can improve its inbound supply chain for long-distance suppliers, insourcing emerges as a potential answer to manage and improve Alpha's logistical challenges. Insourcing here represents a shift in responsibility, from external logistics partners to the company itself managing control and coordination. The execution can still be done through 3PLs that the company selects. The suppliers thus become solely manufacturing suppliers.

Further, the discussion in this chapter will examine how the factors behind Alpha's challenges will shift through insourcing, ultimately providing an understanding of how the challenge evolves.

A new visual comparison is presented to illustrate how the points from the gap analysis in Section 4.4.1 could shift because of both direct and indirect effects of a fully insourced strategy. These differences, now between Alpha before insourcing, Alpha after insourcing, and the B2C companies, are visualized on scales indicating each actor's position and strategic approach along a low-to-high continuum.

5.3.1 Limited Supply Chain Overview

Alpha's global and complex structure makes it difficult to maintain an overview of logistics. While insourcing does not reduce complexity in itself, it enables standardization and improved control, provided that the right internal tools are in place. The changes in Alpha's underlying factors of the challenge after insourcing are visualized in Figure 5.6.

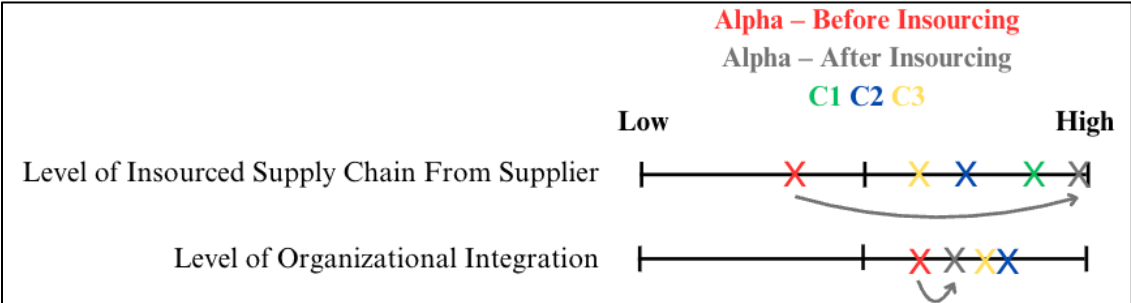


Figure 5.6: Gap of supply chain overview between Alpha and B2C companies after insourcing

Level of Insourced Supply Chain

Although insourcing does not directly reduce complexity, it creates conditions for internal standardization and improved oversight, provided that the right tools and processes are in place, which also is presented in the empirical findings. By taking responsibility of the logistics flows, Alpha can oversee resources, processes, and their supply chain better (Hartman et al., 2017), thus gaining a better overview. The empirical analysis from Alpha suggests that by insourcing its logistics flows, the company can standardize supply chain management and create a unified structure, in contrast to outsourcing, where each supplier independently manages its logistics. Moreover, insourcing allows for consolidation directly at the supplier's facility, simplifying processes and reducing the number of separate

supply chains. This aligns with the empirical findings from B2C companies, which have been able to achieve similar benefits through insourcing.

However, if the internal volume is too low, insourcing may lead to lost economies of scale and higher unit costs, which is an important factor to consider (Andersson, 1998). Additionally, insourcing may eliminate the supplier's ability to coordinate volumes across multiple customers, increasing costs if internal volumes are insufficient (Andersson, 1998). Grela and Hofman (2021) argue that in such cases, outsourcing is favored. This is something that should therefore be taken into consideration.

Level of Organizational Integration

Alpha is already a global and complex organization, which in itself presents a fundamental challenge for oversight. This complexity cannot be solved solely through a sourcing strategy, as Alpha's logistical flows are spread across various geographical and functional units, making it difficult to maintain an overview regardless. Notably, the complexity may increase if Alpha chooses to bring logistics in-house, introducing new coordination demands on internal processes.

However, Ödling and Täfvander (2017) argue that a higher level of organizational integration, supported by insourcing, can strengthen internal collaboration and communication. For Alpha, this means that increased control over logistics enables departments to align more effectively, reducing information gaps. As a result, the organization can achieve a more coherent and shared overview of its operations, despite its structural complexity.

Key takeaways from this chapter are presented in Table 5.7.

Table 5.7: Key takeaways from Chapter 5.3.1

Insourcing impact
<ul style="list-style-type: none"> ● Insourcing can enable improved internal standardization and consolidation, which can increase oversight. ● The internal volume should be taken into consideration to avoid losing economies of scale. ● Insourcing does not impact Alpha's challenge with a global and complex organization. ● Insourcing can enable increased internal collaboration and communication improving overview.

5.3.2 Lack of Control in the Supply Chain

Through insourcing, Alpha can increase control over its processes and gain direct access to critical logistics data. This reduces dependence on external actors but still requires continued collaboration and a certain level of transparency with suppliers to avoid new risks. This is illustrated in Figure 5.7.

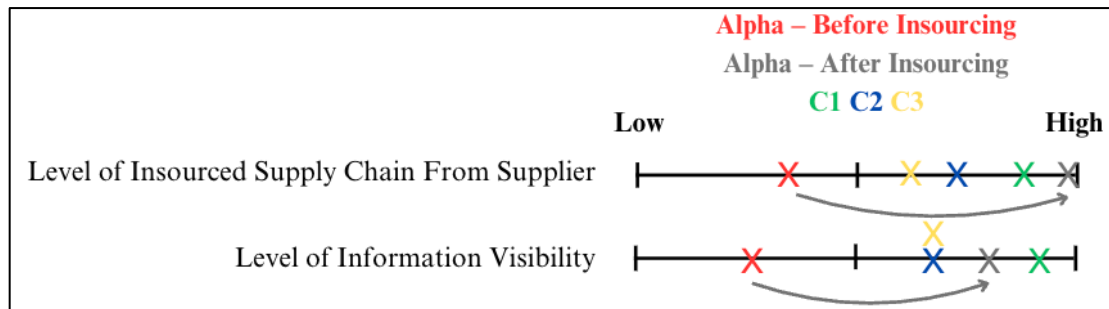


Figure 5.7: Gap of control in the supply chain between Alpha and B2C companies after insourcing

Level of Insourced Supply Chain

Insourcing can provide companies like Alpha the opportunity to increase control over their processes, resources, and costs, which is supported by both theory and empirical evidence. McKenna and Walker (2008) emphasize that insourcing provides strategic control over critical functions, which is central for Alpha, a company that previously had limited control over its supply chain.

By insourcing the supply chains, Alpha can reduce dependence on external actors (Shah, 2014) and gain better control over activities and costs. This provides direct access to critical information and data, reducing the risk of principal-agent problems where suppliers act on Alpha’s behalf (Selviaridis & Spring, 2010; Shah, 2014; Ödling & Täfvander, 2017). Nakhaei et al. (2010) also highlight that insourcing leads to increased control, giving the company the ability to choose how resources should be managed and allocated. This gives Alpha direct access to critical information, data, and cost structures without dependence on external parties (Selviaridis & Spring, 2010; Ödling & Täfvander, 2017).

Level of Information Visibility

Insourcing leads to Alpha taking greater responsibility for the flow of information and gaining direct access to all relevant data about transportation and material handling (Johansson & Spångberg, 2007; Ödling & Täfvander, 2017). This is because they are no longer dependent on external suppliers and their information sharing and logistics flow management. By managing the flows themselves, the need for external transparency is reduced, allowing disruptions to be handled more quickly and proactively (Johansson & Spångberg, 2007). The empirical analysis supports this, noting that internal logistics management creates a more transparent and predictable process, reducing dependence on suppliers’ information sharing.

Even though insourcing reduces dependence on suppliers' information flows, the need for transparency remains to ensure delivery quality and punctuality. Alpha still needs access to relevant information to maintain operational efficiency (Whitten & Leidner, 2006; Ödling & Täfvander, 2017). At the same time, insourcing can alter the dynamics of the relationship between Alpha and its suppliers, which in some cases may reduce suppliers' willingness to share critical information, especially if they perceive insourcing as a threat

to their role in the value chain. This can, in turn, hinder transparency and complicate collaboration (Ödling & Täfvander, 2017).

Whitten and Leidner (2006) emphasize that the quality of relationships is crucial when deciding on insourcing, as deteriorating collaborations can negatively impact both the company's reputation and financial performance (Ödling & Täfvander, 2017). Despite insourcing reducing the need for external transparency, a certain level of information sharing is still required. This means that these aspects must also be carefully considered, as poorly executed changes risk exacerbating rather than reducing existing gaps.

However, with outsourcing, there are risks of opportunism and hidden costs (Hartman et al., 2017; Johansson & Spångberg, 2007), where suppliers do not always share fair information, such as cost breakdowns. By insourcing activities, the empirical findings mean that Alpha gains better control over costs, making it possible to ensure that they are fair and that they know what they are paying for. By taking control of profit margins that previously belonged to external suppliers (Grela & Hofman, 2021), Alpha achieves a more structured and predictable cost structure.

Key takeaways from this chapter are presented in Table 5.8.

Table 5.8: Key takeaways from Chapter 5.3.2

Insourcing impact	
•	Insourcing increases Alpha's control.
•	Insourcing does not significantly affect the transparency from suppliers; instead, the dependency for supplier transparency may decrease.

5.3.3 Supplier Dependence

Through insourcing, Alpha can strengthen certain internal processes and signal reduced dependency, which in theory may improve its bargaining power. However, the reliance on specialized suppliers remains, meaning that insourcing does not directly resolve the challenge of low supplier substitutability. As a result, bargaining power is not significantly affected, as illustrated in Figure 5.8.

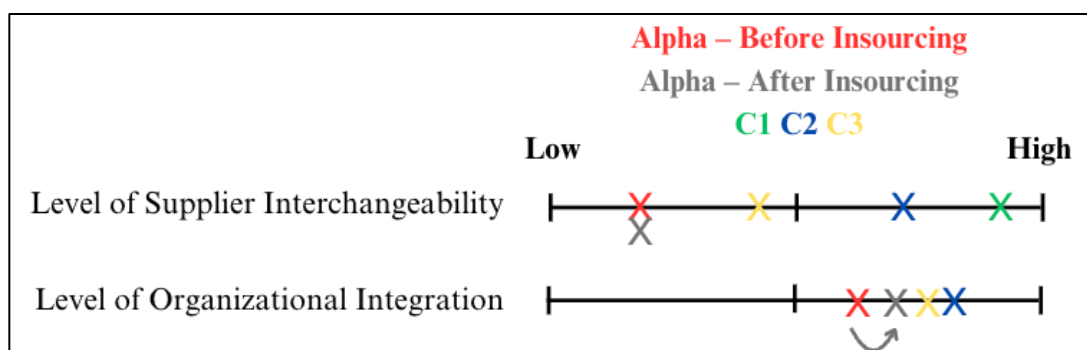


Figure 5.8: Gap of supplier dependency in the supply chain between Alpha and B2C companies after insourcing

Level of Supplier Interchangeability

According to Xu (2009), the resource dependence that arises from sole or single sourcing is closely linked to so-called asset specificity. The more specialized the production resources are, the more limited the options become for switching suppliers without incurring high transaction costs. This is a central factor as to why companies like Alpha, despite implementing insourcing strategies, remain dependent on their suppliers and the expertise they possess. Therefore, an insourcing strategy cannot directly impact the dependency challenge that Alpha currently faces, as there is still a limited number of alternative suppliers available. According to the empirical findings, it is also evident that Alpha itself does not believe that a more insourced strategy would have impacted supplier dependency.

Hartman et al. (2017) argue that insourcing can potentially give a company a stronger negotiating position by reducing dependence on external actors. By bringing more functions in-house, the company signals its ability to manage these internally, which reduces dependence and thereby strengthens its bargaining power with suppliers. This can be used strategically to pressure suppliers for better costs and terms, with the risk of losing business if they do not meet the requirements (Hartman et al., 2017). However, empirical evidence shows that insourcing does not have a major effect on bargaining power in Alpha's case, especially regarding sourcing strategies for components. Bargaining power is more determined by factors such as the supplier's market position and the availability of alternative suppliers, meaning that insourcing logistics functions does not automatically strengthen Alpha's bargaining position with its suppliers.

Level of Organizational Integration

Although Alpha's complexity as a global organization is not easily changed, the level of organizational integration still plays a crucial role in reducing internal resistance during supplier transitions.

According to Ödling and Täfvander (2017), insourcing can improve internal processes and collaboration between departments. When the company gains greater control over its logistics solutions, it can better align its processes with internal needs, improving both flexibility and communication between departments. This can facilitate the identification of when a supplier switch would be both necessary and economically justified. Also, according to the empirical findings, it is evident that when internal data is utilized, the information gap is reduced, which can strengthen the foundation for decision-making. This could make it easier to justify a change between departments.

Key takeaways from this chapter are presented in Table 5.9.

Table 5.9: Key takeaways from Chapter 5.3.3

Insourcing impact

- Insourcing does not significantly affect supplier substitutability and thus does not impact Alpha's supplier dependence.
- Insourcing can improve internal processes and collaboration between departments, which can facilitate internal justifications when a supplier switch is relevant.

5.3.4 Weak Incentives for Supplier Resilience and Environmental Sustainability

Insourcing provides Alpha with greater control over environmental sustainability initiatives and alignment with internal objectives. However, it does not address the suppliers' underlying incentives, nor does it eliminate regulatory or standard differences across the supply network.

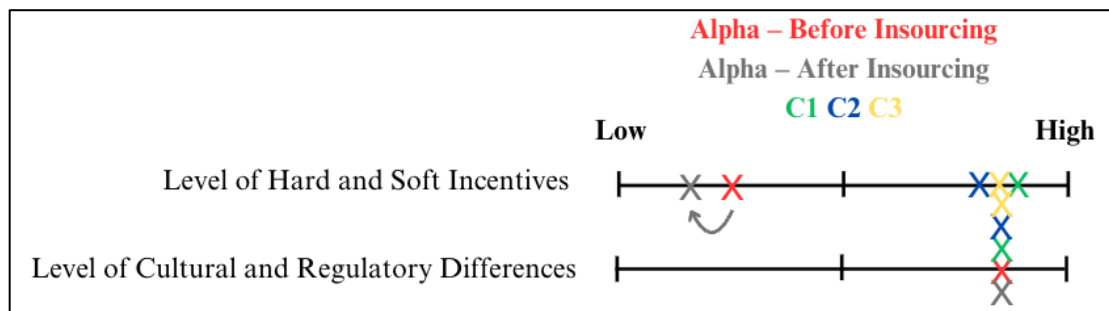


Figure 5.9: Gap of weak supplier incentives in the supply chain between Alpha and B2C companies after insourcing

Level of Hard and Soft Incentives

When Alpha insources its inbound logistics, the company gains greater control over its logistical decisions, making it easier to align operations with its own environmental sustainability goals and regulatory requirements (McKenna & Walker, 2008). By managing transportation and flows internally, Alpha reduces its dependence on creating incentives for suppliers', enabling optimization of the supply chain in line with the company's operational, financial, and sustainability objectives. As insourcing shifts the responsibility for logistics internally, the empirical findings suggest that Alpha only needs to focus on maintaining incentives for resilience and environmental sustainability within its own operations.

Despite these advantages, insourcing does not change the underlying incentives of the suppliers. For example, suppliers' lack of long-term investments and differences in their standards persist, which reduces their motivation to improve these areas even after an insourcing decision. Alpha taking over the responsibility for logistics may instead diminish suppliers' incentives to enhance resilience and environmental sustainability, as indicated by the empirical findings. When suppliers have less visibility into and responsibility for the supply chain, their direct connection to the long-term effects of their decisions is weakened. This results in reduced motivation to invest in environmental sustainability and resilience measures, as suppliers perceive they have less control over the outcomes of the chain and therefore fewer immediate incentives to make improvements. Thus, insourcing risks weakening suppliers' commitment to these important areas, which in turn could negatively impact Alpha's long-term sustainability goals.

Level of Cultural and Regulatory Differences

Insourcing does not change the location of Alpha’s suppliers, meaning cultural and regulatory differences will remain. These differences, including environmental standards, and business practices, still need to be managed, even with increased internal control over logistics.

Key takeaways from this chapter are presented in Table 5.10.

Table 5.10: Key takeaways from Chapter 5.3.4

Insourcing impact
<ul style="list-style-type: none">• Insourcing makes it easier to align operations with the company’s own sustainability goals and regulatory requirements, thereby reducing the need to create incentives for the supplier around these aspects.• Insourcing can reduce suppliers' incentives by giving them less visibility, thereby decreasing their motivation to invest in environmental sustainability and resilience measures.• Insourcing does not affect the cultural and regulatory differences

5.3.5 Other Considerations and Consequences of Insourcing Inbound Supply Chain

An insourcing strategy can potentially address challenges within a company's inbound supply chain. However, a broader and more holistic perspective is required to fully understand the consequences of such a decision (Levi et al., 2014). The larger and more integrated the system is, the more variables must be considered, meaning that a gap analysis alone cannot constitute a sufficient basis for decision-making. Chan (2003) and Chibba (2007) further argue that both financial and non-financial metrics should be considered. For Alpha, this could include costs, risk, and internal competencies. For example, variable costs will be converted into fixed costs, which brings new consequences for the company (Hartman et al., 2017). This can therefore be seen as a new obstacle.

Insourcing introduces a new set of challenges, particularly for large and globally integrated companies like Alpha. According to Chapman and Andrade (1998) and Hartman et al. (2017), taking over complex logistical functions increases risk, as the company assumes full responsibility for managing flows, disruptions, and delays. This shift alters Alpha’s risk profile, especially since greater internal capacity and expertise are required to manage uncertainty across multiple supplier tiers (Hartman et al., 2017; Whitten et al., 2010). Additionally, as Kremic et al. (2006) and Somjai (2017) point out, insourcing reduces Alpha’s ability to place liability on external suppliers. These concerns are reflected in the empirical findings. When Alpha manages logistics internally, risk is no longer shared with suppliers, and the company must independently handle consequences of disruptions. This increases pressure on internal operations and makes Alpha more vulnerable to external shocks, particularly if in-house capabilities are not fully developed to absorb these responsibilities.

According to theory, companies should focus on their core competencies to strengthen competitive advantages, while activities outside these areas are more suitable for outsourcing (Quinn & Hilmer, 1995). Empirical evidence shows that Alpha's core competence lies in production rather than logistics, where the company currently lacks sufficient internal resources and time to effectively manage global and complex supplier flows internally. This supports the theoretical view that logistics, in Alpha's case, should be outsourced to avoid major investments and obstacles to focusing on the core activities (Grela & Hofman, 2021; Heikkilä & Cordon, 2002).

Despite this, SCM is increasingly being viewed as a strategic core function that leads to competitive advantage (Mentzer et al., 2008). Abrahamsson et al. (2003) argue that even SCM can be strategically important and thus risky to outsource. This creates tension between theory and practice. Even though logistics is not a differentiating capability for Alpha, the function may be strategically central. At the same time, examples such as C1 show that it is possible to successfully develop capabilities outside one's original core business, indicating that insourcing can be a strategic choice even when logistics resources are not yet fully developed internally, an aspect from which Alpha can draw lessons. Alpha should therefore carefully consider whether the inbound supply chain should be developed into a strategic asset or continue to be managed externally. What is crucial is not only the status of the function, but its future role in the company's competitive strategy.

Ultimately, the decision on insourcing depends heavily on the company's specific context. Empirical data show that factors such as supplier location, infrastructure, and the criticality of components are decisive. Insourcing is primarily suitable for high-volume components with geographically clustered suppliers, whereas outsourcing may be more efficient for low volumes or when the supplier has strong logistics capabilities. This is supported by Ödling and Täfvander (2017), who emphasize that sourcing decisions should be tailored to each individual situation. This challenges generic sourcing strategies for all supply chains and highlights the need to apply a flexible, context-specific assessment - something this study only partially addresses.

Given the various consequences and perspectives regarding insourcing and outsourcing, particularly within a complex network such as Alpha's, a continued application of a partial outsourcing strategy may be the most rational option. The theory suggests that neither full insourcing nor full outsourcing are optimal solutions; instead, it claims that balance provides the greatest business value and minimizes risk (Kotabe et al., 2008; Nitschke, 2005; Moretto & Rossini, 2012). Alpha's current strategy, which combines internal and external resources, also provides greater adaptability to changing market conditions and shifting core competencies, which is critical in a global, dynamic environment (Axelsson, 1998).

By applying a flexible partial outsourcing strategy, Alpha retains operational agility and the ability to adapt in line with changing core competencies. This is therefore aligned with the theory that suggests the balance between strategies is dynamic and requires continuous

adaptation for long-term competitiveness (Hwang & Kim, 2019). Moving to full insourcing would be a limitation of the current flexible model, which is not optimal in a rapidly changing global business environment. Success requires a deeper understanding of how outsourcing strategies evolve over time and across industries, meaning that outsourcing and insourcing should not be viewed as opposites, but as complementary tools. Key takeaways from this chapter are presented in Table 5.11.

Table 5.11: Key takeaways from Chapter 5.3.5

Insourcing impact
<ul style="list-style-type: none"> ● Insourcing requires a broad perspective that includes both financial and non-financial factors to fully understand its consequences. ● Insourcing leads to higher fixed costs. ● Insourcing entails greater responsibility and risks for the supply chain, which can negatively impact the company’s risk profile. ● Although logistics is not Alpha’s core competence, insourcing can be a strategic choice to develop competitive advantages if the right resources are in place. ● A balance between insourcing and outsourcing (partial outsourcing) offers greater operational flexibility and the ability to adapt to changing market conditions, which is crucial for long-term competitiveness.

6. CONCLUSION

The purpose of this study was to explore *where* and *how* a heavy truck manufacturer can improve its inbound supply chain for long-distance suppliers in order to better manage their challenges within this area. By identifying logistical challenges in Alpha's case, comparing these with established best practices from successful B2C companies, and evaluating insourcing as a potential strategic measure, several important insights have emerged.

The analysis shows that inbound logistics constitutes a strategic key area for a heavy truck manufacturer's competitiveness, particularly in relation to long-distance suppliers. For Alpha, specific challenges emerge related to limited supply chain overview, lack of control in the supply chain, supplier dependence and weak incentives for supplier resilience and environmental sustainability. This answers the study's first research question: *What are the logistical challenges in the inbound supply chain of a heavy truck manufacturer when dealing with long-distance suppliers?*

Furthermore, it should be emphasized that the challenges are deeply interconnected in a mutually dependent system, where problems in one area tend to enhance issues in others. Since the most fundamental challenges are of an external nature, they appear particularly urgent to address first. This helps clarify *where* the potential for improvement within inbound logistics is greatest and motivates a closer examination of *how* external challenges are handled by other actors.

Against this background, the gap analysis in relation to the B2C sector becomes especially relevant for exploring *how* other companies address the areas corresponding to the challenges faced by a heavy truck manufacturer, with the goal of imitating similar solutions to improve Alpha's inbound supply chain. At the same time, the differences between B2B and B2C are to some extent structural rather than operational, for example, regarding product complexity, order patterns, and customer requirements, which limits direct transferability. Despite this, the study demonstrates that analogical thinking and expanded benchmarking can provide valuable insights, where B2C companies' models can serve as sources of inspiration for B2B companies rather than templates for direct imitation. This is particularly true for methods aimed at increasing control and transparency, such as insourcing, which is also considered external in nature. This answers the study's second research question: *How can B2B companies learn from the practices of high-performing B2C companies to address the challenges identified in long-distance inbound supply chains?*

Insourcing can thus be seen as a potential strategic tool to answer the study's questions of *where* and *how* inbound logistics can be improved. The study emphasizes that insourcing operates within a system of mutual dependencies that can also indirectly affect other challenges. For example, insourcing can reduce dependency on external suppliers' transparency. Even if actual visibility is not necessarily improved, the company's

vulnerability to lacking transparency is reduced, which in practice mitigates the impact of the problem. This illustrates that insourcing should not be viewed as an isolated solution, but rather as a strategic component within a complex network. While it may help manage some of Alpha's logistical challenges, it is no guarantee that underlying systemic issues are resolved. Therefore, decisions regarding insourcing require a broader strategic perspective than what a gap analysis alone can offer. Issues concerning suppliers and resource availability must be considered, and the gains in control and transparency must be weighed against the costs and risks. The study shows that these resources are often substantial and that the potential gains are not always sufficient or secure enough to justify a full insourcing strategy.

Finally, the study shows that insourcing, despite certain potential benefits, does not represent a clear-cut solution to the complex challenges that characterize inbound logistics of a heavy truck manufacturer. While a lack of control and overview can be addressed directly, contributing in some cases to managing the challenges, there is also a risk that insourcing introduces new barriers. Theory suggests that neither full insourcing nor full outsourcing are optimal solutions. Instead, each logistics flow should be analyzed in context, with consideration for strategy, risk, environment, cost, and capacity, and solutions should be adapted accordingly. Insourcing can be an effective tool, but only as part of a balanced and differentiated strategy. Empirical findings also reveal differing views on insourcing within Alpha, further underscoring the importance of grounding insourcing decisions in context-specific analysis. Insourcing should therefore not be seen as a universal solution, but rather as a selective strategy in which each supplier relationship and logistics flow must be evaluated individually. *This answers the study's third question: How can insourcing help a heavy truck manufacturer manage the logistical challenges of a long-distance inbound supply chain?*

6.1 Recommendations

Based on the study, the following recommendations can be made:

Evaluate Insourcing as a Strategic Measure - Not a General Solution

Insourcing should not be viewed as a general solution but as a strategic tool to be applied based on each individual situation. Decisions should be grounded in context-specific analyses of each logistics flow, considering factors such as internal capacity, risk, criticality, and geography. Implementing insourcing without such analysis risks creating new problems rather than solving existing ones. Therefore, a heavy truck manufacturer should adopt a differentiated strategy where each sourcing decision is based on the strategic importance of the component and the supplier.

Develop a Dynamic Model for Partial Outsourcing

Alpha should build on its current partial outsourcing strategy by creating a flexible model that enables continuous adaptation. The study shows that neither theory nor empirical

findings clearly point to insourcing as the optimal solution. Although certain challenges may be alleviated through increased insourcing, the potential benefits are uncertain. Therefore, Alpha should continue with partial outsourcing and focus on developing situation-based strategies. The decision-making process should be dynamic and based on ongoing evaluation of new insights to avoid becoming locked into a static strategy.

Apply Expanded Benchmarking from B2C Companies

Although the current outsourcing strategy should be maintained, the methods used by B2C companies should be seen as a valuable source of inspiration. By analyzing how B2C companies handle similar external challenges, Alpha can gain valuable insights that can improve their inbound logistics and enhance their ability to manage external factors more effectively.

Although the current strategy is the best option for Alpha at present, this analysis confirms that the company is on the right track. By following these recommendations, Alpha can make future decisions with greater confidence and adapt its strategy in line with new insights.

6.2 Further Research

Following the completion of this study, several relevant research areas have been identified to deepen the understanding of the challenges and sourcing opportunities faced by a heavy truck manufacturer in managing inbound logistics from long-distance suppliers.

Firstly, the study is based on an overarching analysis of a specific case within a heavy truck manufacturer's supply chain, using a general perspective on articles and suppliers. However, the results indicate that the sourcing strategy is highly situational. Therefore, it would be valuable to conduct further research on a more detailed level, focusing on specific components and suppliers. It could also include a comparative study with a B2C company that has similarities to Alpha in terms of logistical complexity.

Secondly, the study shows that sourcing decisions are influenced by a wide range of factors. Thus, future research could address other aspects that may affect these decisions, for example, how warehousing operations are impacted by a strategic shift, how an internally managed warehouse should be designed, and how safety stock strategies are affected, especially if intermediate buffers like PUPs are removed. These issues require more empirical and theoretical grounding to draw generalizable conclusions regarding cost distribution, scalability, and efficiency in an insourced model.

Finally, technological development, particularly in AI and automation, underscores the need to reassess traditional views on sourcing. AI-driven logistics systems may, in the future, handle complex material flows with reduced need for manual control, which could change the cost-benefit equation of resource-efficient insourcing. Research in this area

could provide important insights into how companies should design their future sourcing strategies in an increasingly technology-driven business environment.

Furthermore, future research should also explore how digitalization in general, beyond its role in insourcing, can be used to manage complex challenges within global inbound logistics. AI also emerged during discussions throughout the study, with perspectives and opinions on how AI could help optimize logistics processes. This was not a core focus of our study, but we now recognize it as a promising area for further exploration. While we have not actively worked with AI in this research, we acknowledge its potential to significantly impact future sourcing decisions.

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Appendix A

Below are the three interview guides used in the study to collect empirical data.

Interview Guides

The questions in the template provided guidance during the semi-structured interviews.

Each interview guide was introduced with a brief background explanation at the start of every interview. The participants were informed about the project, the research team, the purpose of the report and the specific goals of each interview. Approval to record the interview was requested. All participants were also asked to describe their role within the company and how they currently perceive their inbound supply chain.

A.1.1 Interview Guide 1: Logistical Challenges in the Inbound Supply Chain of a Heavy Truck Manufacturer

1. Introduction

- How do you define an optimal supply chain within Alpha's inbound logistics?

2. Cost-efficiency

- How do you perceive cost-efficiency in Alpha's inbound supply chain? Do you have any cost-related requirements for your suppliers?
- What is the biggest challenge in maintaining cost-efficiency in Alpha's inbound supply chain?
- What are the biggest limitations in Alpha's current logistics infrastructure that prevent improvements in cost-efficiency challenges?

3. Resilience

- How do you perceive resilience in Alpha's inbound supply chain? Do you have any requirements for your suppliers to ensure resilience in the supply chain?
- What is the biggest challenge in maintaining resilience in Alpha's inbound supply chain?
- What are the biggest limitations in Alpha's current logistics infrastructure that prevent improvements in resilience challenges?

4. Environmental Sustainability

- How do you perceive environmental sustainability in Alpha's inbound supply chain?
- What is the biggest challenge in reducing the environmental impact of Alpha's inbound supply chain?
- What are the main limitations in Alpha's current logistics infrastructure that prevent you from addressing the challenges related to reducing environmental impact?

5. Balance between Key Performance Areas (KPIs)

- What are the biggest challenges in balancing cost-efficiency, resilience, and delivery precision when optimizing all three simultaneously?
- If you had to prioritize one of these KPAs, which would be the most important for Alpha's inbound supply chain and why?
- Is there any other important KPA that we have not covered but that is crucial for Alpha's inbound supply chain?

6. Closing

- Is there anything else you would like to add?

A.1.2 Interview Guide 2: Best Practices in the Inbound Supply Chain of B2C Companies

1. Introduction

- Could you briefly describe your general inbound logistics setup today for long-distance suppliers, i.e., from the supplier to your company?
- In your inbound supply chain, what is your strategy regarding outsourcing and insourcing?

2. Cost-efficiency

- What do you consider to be the main factors that make you a best practice example in terms of cost-efficiency in your inbound supply chain?
- What are the positive consequences of these cost-efficiency strategies in your inbound supply chain?

3. Resilience

- What do you consider to be the main factors that make you a best practice example in terms of resilience in your inbound supply chain?
- What are the positive consequences of these resilient strategies in your inbound supply chain?

4. Environmental Sustainability

- What do you consider to be the main factors that make you a best practice example in terms of environmental sustainability in your inbound supply chain?
- What are the positive consequences of these sustainability strategies in your inbound supply chain?

5. Balancing Key Performance Areas (KPAs)

- How do you balance the KPAs in practice without compromising too much on any of them?
- Is there any other important KPA that we have not addressed but that is crucial to the success of your inbound supply chain?

6. Outsourcing

- How have you designed your outsourcing strategy, and what are the underlying reasons for your approach to outsourcing and insourcing in your inbound supply chain?

- What is your 9 companies outsourcing their logistics operations to you as a 3PL provider?

7. Conclusion

- Is there anything else you would like to add?

A.1.3 Interview Guide 3: Insourcing as a Solution to Logistical Challenges in the Inbound Supply Chain of a Heavy Truck Manufacturer

1. Introduction

- What is Alpha's current level of outsourcing?
- What impact do you think complete outsourcing would have on Alpha's inbound supply chain?
- What impact do you think complete insourcing would have on Alpha's inbound supply chain?

2. Logistical Challenge Areas

- What are the positive and negative effects of insourcing on Alpha's *lack of control* over its inbound supply chains?
- What are the positive and negative effects of insourcing on Alpha's *limited overview* over its inbound supply chains?
- What are the positive and negative effects of insourcing on Alpha's *dependence on external suppliers*?
- What are the positive and negative effects of insourcing on Alpha's *lack of creating sufficient incentives for suppliers to be resilient and environmentally sustainable*?

3. Conclusion

- How do you perceive the potential of shifting Alpha's logistics strategy for long-distance suppliers from partial outsourcing to fully insourcing the inbound supply chain?
- Are there any factors that would prevent Alpha from transitioning to a fully insourced inbound supply chain? What would this change actually entail?
- If you were to give Alpha a recommendation on whether to outsource or insource parts of its supply chain, what would you suggest and why?
- Is there anything else you would like to add?

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