

CHALMERS



A market-oriented analysis of logistics services and perspectives on sustainability of a global manufacturer

En marknadsorienterad analys av logistiktjänster och perspektiv på hållbarhet hos ett globalt tillverkningsföretag

Bachelor's Thesis in Industrial Engineering and Management

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Göteborg, Sweden 2019

Bachelor's Thesis TEKX04-19-15

Preface

This study was written during the spring of 2019 at the Department of Technology Management and Economics at Chalmers University of Technology, Gothenburg.

First and foremost, we want to express our deepest gratitude to our supervisor Per Medbo, lecturer at the division of Supply and Operations Management. Throughout the work process, Per has been very helpful with his commitment, quick feedback, knowledge, and guidance. We especially want to thank him for the support and help we received during uncertain periods.

Furthermore, we would like to thank our supervisors at Husqvarna Construction, Ann-Marie Nygren and Sinziana Manitiu. We also express a special thanks to all the sales locations who have taken the time to answer the survey that was sent out, which has constituted the majority of data collection.



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Abstract

In today's global marketplace, customer expectations are high and expected to rise. Due to the increasing globalization and openness of markets, advanced and strategically sound logistics operations have become a necessity for companies wanting to remain competitive. Husqvarna Construction, a global distributor of light construction equipment, is subject to such a complex environment. They are currently facing problems regarding its logistics operations with high levels of inventory, a large number of backorders, and unsatisfied customers.

The aim of this study is to identify the current and future demand for logistics services and perspectives on sustainability of Husqvarna Construction's customers along with similarities and differences across the market.

A thorough theoretical framework was created by a literature study of relevant fields. It covers theory regarding market orientation, market research, sustainability, logistics, and various trends within the field of study. Data was collected by both interviewing the supervisors at Husqvarna Construction and by distributing a survey to Husqvarna Construction's customers within the European, Middle Eastern and African region. The main focus of the survey was to investigate the customers' demand for logistics services within customer support, order management, warehouse, and transportation as well as their views on sustainability. Further, an analysis model was developed to act as a framework for the upcoming analysis.

Husqvarna Construction's customers showed similarities by placing the most value upon e-mail, e-commerce, and tracking as well as the importance of sustainability. The differences in demand between the customers were largely in terms of chat-support, kitting, bundling, drop shipment, and merge-in-transit. In terms of future demand, the customers were largely uncertain. The conclusion is that Husqvarna Construction should consider offering the services that show homogeneous patterns in terms of providing a high value and further investigate the potential benefits of providing the uniquely requested services.

Sammandrag

På dagens globaliserade marknad har kundens förväntningar och behov ökat markant. Detta ställer höga krav på alltmer avancerade och välfungerande strategier inom logistik, vilka har blivit en grundförutsättning för företag att behålla sin konkurrenskraft. Husqvarna Construction, som är en global distributör av produkter inom byggbranschen med flera, är verksam i denna komplexa miljö. De upplever för närvarande stora problem i deras logistik verksamhet med höga lagernivåer, stort antal restorder samt missnöjda kunder.

Syftet med studien är att identifiera nutida och framtida behov för logistiktjänster och syn på hållbarhet hos Husqvarna Constructions kunder samt identifiera likheter och skillnader.

Genom en litteraturstudie av relevant forskning sammanställdes ett teoretiskt ramverk. Detta ramverk innefattar teori om marknadsorientering, marknadsundersökning, hållbarhet, logistik samt trender inom dessa områden. Data samlades in genom intervjuer med handledarna på Husqvarna Construction samt en enkät som skickades till Husqvarna Constructions kunder i Europa, Afrika och Mellanöstern. Studiens huvudfokus var att undersöka kundernas behov för logistiktjänster inom kundsupport, orderhantering, lager och transport samt deras syn på hållbarhet. Vidare utvecklades en analysmodell som kom att ligga till grund för den kommande analysen.

Husqvarna Constructions kunder uppvisade likheter i att de värderade e-mail support, e-handel och spårning av ordrar högt. Skillnader i behov bland kunderna visade sig däremot främst finnas inom tjänsterna; chat-support, kitting, bundling och merge-in-transit. Vad gäller framtida behov, uttryckte kunderna osäkerhet. Slutsatsen är att Husqvarna Construction bör överväga att erbjuda de tjänster som uppvisar homogenitet i en hög värdering samt vidare undersöka potentiella fördelar med att erbjuda de tjänster som värderades högt av ett fåtal kunder.

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1 Introduction

The ever-increasing interconnectedness of markets and globalization of logistics operations bring greater challenges in meeting supply and demand. Coupled with growing consumer expectations, imbalances in supply and demand become a key challenge that companies must overcome to succeed in the global marketplace (Varzandeh et al., 2016).

A consequence of the globalization of supply chains is a greater level of complexity (Creazza et al., 2010). Large geographical distances not only increase transportation costs but also further complicate different decisions such as the trade-off between lead times and inventory costs. At the same time, differences in cultures and languages provide additional difficulties in creating an effective global supply chain for competitive advantage (Meixell & Gargeya, 2005). The rising globalization and complexity also highlight a concern within logistics, namely sustainability. According to Evangelista et al. (2017), the importance of environmental sustainability has become a key focus for many companies.

To overcome this vast complexity and thus utilize their resources in the most efficient way possible, companies must listen to their customers (McKinsey & Company, 2016). Wirtz and Daiser (2018) argue that by focusing on the customer, companies can greatly enhance their competitive abilities and Morgan et al. (2009) goes on to emphasize its connection to increased return on assets.

In order to transform an organization into being customer-oriented, Woodruff (1997) argues that there is first a need to learn extensively about the target customers. Understanding the customer's perspective, however, is not a one-time effort. Changing customer preferences may be a continuous process and a strategy developed a decade ago might not suit the needs of today's customers. Markides (1999), thus argues that the development of a successful strategy is a never-ending effort. A company needs to remain flexible and continually reevaluate its customers' preferences in order to adjust its strategy.

Once the customers current and future demands have been mapped, the organization must adapt its practices and supply to be able to meet the market (Jüttner et al., 2007). When it comes to the alignment of supply and demand, the framework of demand chain management (DCM) can be employed. Selen and Soliman (2002) define DCM as "a set of practices aimed at managing

and coordinating the whole demand chain, starting from the end customer and working backward to raw material supplier” (s. 667). DCM thus argues that a company’s fulfillment processes should be based on the demand of the market. Fulfillment processes that do not correspond to a known market demand should therefore not be utilized as they break the alignment between the market and the supplier. DCM concerns the alignment throughout the entire value chain, from sourcing of materials to delivery to the customer (Jüttner et al., 2007). This vast scope, which becomes even greater for global actors (Creazza et al., 2010), complicates a potential transformation of the value chain to align efforts throughout as it involves many different processes and parties.

This study has therefore chosen to focus on part of the value chain to initiate efforts of aligning supply and demand. The chosen scope concerns the activities from once the customer places the order to when the order has been received by the customer. As advocated through being customer-oriented, everything should be a response to a known market demand. A clear starting point for a transformation of the value chain is, therefore, to begin by looking at the operations that are closest to the customer. Meaning the activities with which the customer directly interacts with and the operations that connect them. This is done through an analysis of the current and potential future market conditions that in subsequent work can act as input to the supply function to align its activities with demand. To provide a real example, the study has been conducted by looking at the supply function of Husqvarna Construction.

1.1 Husqvarna Construction

Husqvarna Construction, one of three divisions of Husqvarna Group, is a global distributor with leading positions within several of its product areas (Husqvarna Group, n.d.). Husqvarna Construction manufactures light equipment for grinding, drilling, demolishing, polishing and sawing concrete, steel, and other hard materials. The products are exclusively used by professional customers, primarily in the construction and the natural stone industry (Husqvarna Group, n.d.).

All of Husqvarna Construction’s sales are made through 75 sales locations that are distributed globally (*Products and markets construction*, Internal document, Husqvarna Construction, 2019). Some of the sales locations only sell products from the Construction division while others also sell products from Husqvarna’s two other divisions. The sales locations are part of

Husqvarna Group but are viewed as customers by the Construction division, with which they will also be referred to in this study (A. Nygren & S. Manitiu, Personal Communication, February 6, 2019). The sales locations maintain a local inventory and manage sales to Husqvarna Construction’s three different sales channels; end-users, rental companies, or local dealers and distributors (*Warehouse Footprint*, Internal document, Husqvarna Construction, 2019). Figure 1 shows the design of the distribution channel, from Husqvarna Construction to its customers.

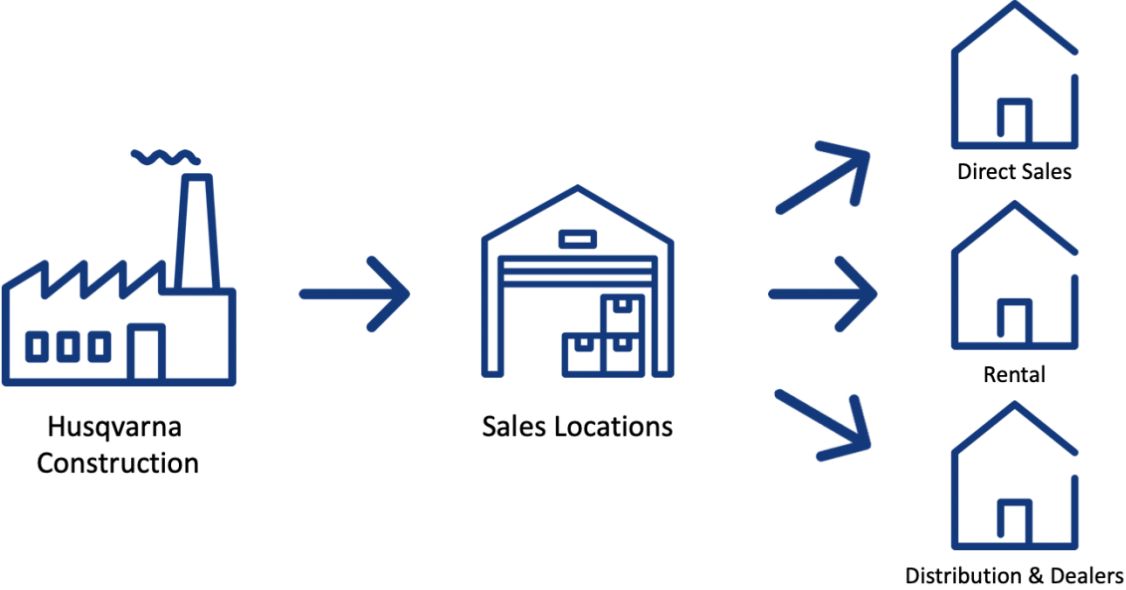


Figure 1: The design of Husqvarna Construction’s distribution channel.

A. Nygren and S. Manitiu (Personal Communication, February 6, 2019) state that the current performance of their logistics operations has resulted in that Husqvarna Construction is today experiencing record high levels of inventory while still carrying a large number of backorders. In addition, Husqvarna Construction made three acquisitions in 2017 which added complexity and even further challenged their logistics operations. Feedback given from its sales locations indicate that the delivered services currently provided are not in line with the requirements of the market (A. Nygren & S. Manitiu, Personal Communication, February 6, 2019).

In order to combat its low performance, along with Husqvarna Group’s *Strategy 2020*, which entails becoming a more customer-oriented organization (Husqvarna Group, n.d.), Husqvarna Construction has begun to evaluate their global warehouse and distribution structure. So far,

plans have been set to locate the headquarters for the distribution network in Europe (S. Manitiu, Personal Communication, April 24, 2019).

According to Onstein et al. (2018), there are a great many factors that influence the design of a distribution network. Product characteristics, land and availability, laws and regulations, costs, and demand are some examples of more comprehensive factors that influence the decision. The last one, demand factors, is what this study will seek to analyze. More specifically this includes aspects besides the product itself which pertains to the market's demand. These aspects will collectively be treated under the notion of logistics services. This will be elaborated on in greater detail in the theoretical framework but can briefly be explained as all the services that can occur during the process from placing an order until the order is delivered to the customer, and that aims at providing additional value.

An aspect that is of increasing importance to customers is sustainability (Lozano & von Haartman 2017). Additionally, environmentally sound strategies have become of great interest to companies (Gotschol et al., 2014). Sustainability can be used both as means of driving revenue growth (Isaksson et al., 2018) and to increase longevity (Sahut et al., 2012). Companies may thereby strengthen their operations by investigating the market's views on sustainability to thereafter incorporate into the business to increase stakeholder value.

As advocated through being customer-oriented and additionally, demand chain management, when designing the supply network, it is important to capture the specific demand expressed by the customers. Thus, ensuring that resources will not be wasted on efforts that do not provide customer value (Jüttner et al., 2007). Additionally, in order for companies to achieve longevity, they must also be vigilant for emerging demands and shifting market conditions (Day, 1998). There is thus value in investigating the current and future demand of the market.

Distinct customers may respond differently to a value proposition prompting the supplier to, therefore, produce different strategic approaches. If properly identified, the variations and conformities in market demand can guide resource allocation. This can thereby ensure that all resources within the organization are utilized into serving customer requirements (Vishwanath & Krawiec, 2007). Mapping unique and common demands can, therefore, provide valuable insights which can guide future efforts.

2 Aim

The aim of this study is to identify the current and future demand for logistics services and perspectives on sustainability of Husqvarna Construction's customers along with similarities and differences across the market.

3 Specification of issue under investigation

Husqvarna Construction wants to extend their knowledge of their customers to create offerings that meet the needs of the market. This has been a result of a company-wide strategy to become a customer-oriented organization, current problems in the logistics operations, and an effort to redesign the distribution network.

As a part of Husqvarna's aforementioned *Strategy 2020*, the company strives for a more customer-oriented focus. There is thus a need to investigate what their customers value in terms of logistics services. Flint et al. (2005) state that customers choose the product or service based on how well the supplier creates value for them. Business customers in particular, pay more attention to logistics services and are often concerned with different trade-offs, such as between the level of service and monetary sacrifices. Slater and Narver (1994) argue that a supplying company can create value to its customers in any point of the value chain and Flint et al. (2005) further emphasize logistics services as a means of creating considerable value. A supplier can thus deliver superior value to its customers by aligning its services with the customer in mind. Thus prompting the first question of the study.

1. What are the current demands for logistics services of the sales locations?

However, demand may be ever changing, and the supply of services must, therefore, be periodically reevaluated to capture the emerging trends of the market (Markides, 1999). There is a great danger for companies in only focusing on meeting the current demands and Day (1998) goes on to argue that for a company to be completely driven by its market they must recognize that the currently served market is merely a part of the total market. Companies must therefore also be vigilant for emerging trends to identify future opportunities. This provides the foundation for the studies second research question.

2. What are the future demands for logistics services of the sales locations?

According to Porter and Kramer (2006), efforts within corporate social responsibility, which include the sustainability aspect, should not be considered as a cost or constraint but rather as means to gain competitive advantage. Gotschol et al. (2014) further strengthens the importance by stating that sustainability is becoming an increasingly important aspect of business models

and business strategy. Evangelista et al. (2017) further argues that customers' demand for sustainable products and services are on the rise. The above reasoning concludes the need for companies to study the market's views on sustainability.

3. What are the sales locations current and future perspectives on sustainability?

To expand on the foundation of having identified the market demand, similarities and differences across the market can be studied. Similarities in demand may be studied in order to increase resource utilization by serving groups of customers with jointly developed offerings (Vishwanath & Krawiec, 2007). By investigating the entire market, as advocated by Wind and Bell (2014), opportunities for achieving economies of scale and of scope may appear. Furthermore, differences may be studied to identify the unique demands expressed by the customers. The cost of the unique requirements placed by customers can in subsequent efforts be weighed against the revenue for which they bring. Companies should thereby identify unique demands. Thus, prompting the question if there are any similarities and differences in demand.

4. Are there any considerable similarities and differences in the demand for logistics services across the market?

4 Theoretical Framework

The theoretical framework was developed to serve two main purposes. First, to gather the required information for approaching the problem and to gain a greater understanding of the scope. Second, the theoretical framework aimed at providing the necessary information for developing a model of how to analyze the research questions posed by the study.

To achieve the purposes of the theoretical framework, the following areas were covered; market research, market orientation, demand chain management, sustainability, logistics and logistics services, green logistics, and lastly emerging trends and market conditions.

Market orientation suggests that companies must study the market. These efforts may be achieved by performing market research. As advocated by demand chain management, the input gained from the market is then to be contextualized in order to align supply to the demand expressed by the market. To ensure that the market demand can be put into context, an understanding of the supply function, or in terms of this studies scope, logistics services must be provided. To leverage the increasing importance of sustainability, it is important to bear the aspect in mind during the alignment process by highlighting its business potential, and through green logistics, acknowledging ways of becoming sustainable. It is however also important to recognize how demand may be changing and therefore review emerging trends and market conditions.

4.1 Market orientation

The focal point of what is needed for companies to excel in their performance and achieve competitive advantage has shifted over the years (Slater & Narver, 1994). Where once the emphasis laid in achieving structural aspects such as economies of scale and a wide line of products, the focus has instead changed to developing capabilities to supply a superior value offering (Slater & Narver, 1994). Slater and Narver (1994) further argue that a culture founded in market orientation creates the basis for gaining such capabilities. However, to achieve a market-oriented culture, the organization must be committed to a continuous effort of gathering information about customers, competitors, and other market actors of significance in order to create superior value offerings.

There are several advantages of sustaining a market-oriented culture within the organization (Day, 1998) First of, a market-driven firm is able to identify and deliver on the demand of the most profitable customers. Second, greater employee satisfaction, as both a cause and consequence of achieving greater customer satisfaction. Third, price premiums, through being better at capturing the precise customer demands, companies can charge a premium. Fourth, it has also been shown to be an effective means of erecting switching barriers, thus further strengthening competitive abilities. Lastly and highly important, companies that have market-driven culture are much more capable of anticipating emerging shifts in the market and are thus able to act ahead of competitors and capture those opportunities as well as steering clear of challenges.

Slater and Narver (1994) suggest that there are three components to market orientation; customer orientation, competitor focus, and cross-functional coordination. The customer orientation aspect means the supplier must understand the customer and their value chain along with how it evolves over time. A company must also take a competitor focus to understand the capabilities and weaknesses of its immediate competitors. Lastly, there must be cross-functional coordination throughout the organization to create value offerings.

The activities associated with, primarily, the first component of market orientation, customer orientation, are the ones that typically fall under the marketing department. However, a market-oriented approach extends far greater than any one single department. As best demonstrated through the third component, cross-functional coordination. To capture the advantages of market orientation, information must be shared across and employed throughout the organization. For example, information from customers pertaining to the distribution of goods should be shared with the logistics operations (Slater & Narver, 1994). For a company to excel, the processes for demand creation and fulfillment must work together (Jüttner et al., 2007). An integration model for the specific alignment of these two vital functions is presented through demand chain management.

4.1.1 Demand Chain Management

There are several definitions of Demand Chain Management (DCM). According to Vollman and Cordon (1998), DCM aims at having the customer as a starting point from which everything in the supply chain is derived. This means that every action in the chain is a response to a known

customer requirement. Similarly, Selen and Soliman (2002), as previously stated, define DCM as “a set of practices aimed at managing and coordinating the whole demand chain, starting from the end customer and working backward to raw material supplier” (s. 667). Jüttner et al. (2007) argue that the aim of DCM is to integrate demand and supply processes where demand processes are activities that typically fall under the marketing department. A conceptual framework, as developed by Madhani (2015), for how DCM relates to supply chain management (SCM) and marketing can be seen in figure 2.

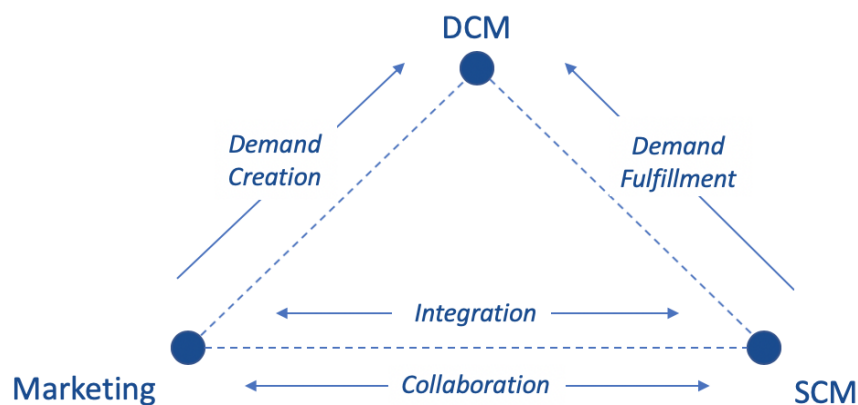


Figure 2: Madhani's (2015) conceptual framework for DCM.

There are many advantages to employing the framework of DCM. Madhani (2015) states that DCM, through enhancing SCM's ability to respond to the market, provides a competitive advantage to the firm. Further, Jüttner et al. (2007) expand on this by claiming that companies which have successfully employed the framework of DCM increased profitability as a result of product availability, delivery accuracy, responsiveness, and flexibility.

4.2 Market Research

The purpose of market research is to gather information regarding markets or customers (McQuarrie, 2006). McQuarrie (2006) argues that when markets become more complex and the uncertainty in demand grows, market research play an important role and the payoff of conducting market research can be considerable. Customer satisfaction has become increasingly important in modern businesses. Due to large amounts of information available to customers, it is now easier to change brands, suppliers or services (McQuarrie, 2006).

Price et al. (2015) state that there is a need to change the view of the customer as someone passive in the business and in the product or service development process but rather let the customer have a more active role. An active role means that the customers are sharing their requirements with the supplier. This could, in the end, create more customer value and therefore greater success for the company (Price et al., 2015).

As mentioned above, the purpose of market research is to collect data (McQuarrie, 2006). According to Sarstedt and Mooi (2014), all data belong to one of two categories; primary or secondary data. Sarstedt and Mooi (2014) further state that secondary data should preferably be used whenever possible as it consumes fewer resources. However, when the necessary data is not readily available, primary data must be gathered. There are two main approaches for gathering primary data for market research; subjects can either be observed or asked. When observing the market, there are two techniques that may be used. Either through traditional observational studies or test markets. Observation studies aim to increase the understanding of *how* a phenomenon occurs rather than *why*, meanwhile, test market is a method where the company tries a new product or service on a small scale rather than worldwide. This provides insights into how the market responds to different offerings and pricing (Sarstedt & Mooi, 2014). The second approach to gather data is to ask the targets directly through for example surveys or interviews. Sarstedt and Mooi (2014) argue that surveys provide great opportunities for gathering qualitative and, especially, quantitative data if properly designed. The design of the survey is an aspect that they stress to be of great importance. Great consideration must, therefore, be put into the design step to ensure that the data gathered is valuable. Interviews, on the other hand, provide the possibility of obtaining deep insights into a topic. However, it remains a costly means of gathering information and therefore the advantages of using it must be weighed against its cost. One set of circumstances when the technique may be employed as advocated by Sarstedt and Mooi (2014) is as an initial step to a research project as it lays the foundation for subsequent efforts.

4.3 Sustainability

In the Brundtland report (1987), sustainable development is famously defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. The aspect of sustainable development can also be defined as comprising of three dimensions; social, environmental, and economic (KTH hållbar utveckling hållbar utveckling,

2019). Although there is some overlap between the three areas, they address various disciplines. The social dimension focuses on people's wellbeing and their rights (KTH social hållbarhet, 2018) (KTH social hållbarhet, 2018) while the environmental dimension encompasses all aspects of the earth's ecosystem (KTH ekologisk hållbarhet, 2018). The economic dimension can be defined as growth in economic capital without making compromises to social or environmental capital (KTH ekonomisk hållbarhet, 2018). The three dimensions, along with how they are connected, are shown in figure 3.

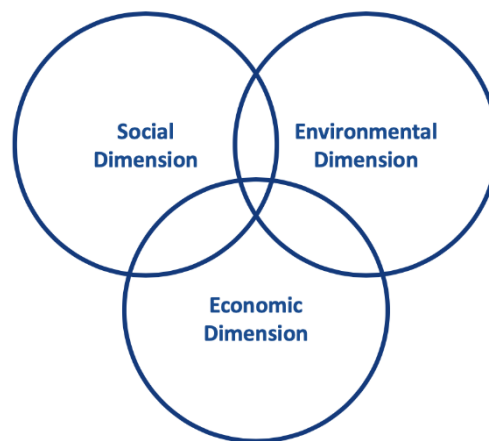


Figure 3: Three dimensions of sustainable development as described by KTH, Royal Institute of Technology.

Many global companies are today generating huge revenue streams from products or services that have been developed with sustainability as one of the main focal points. To further exemplify this, Dangelico et al. (2016) raise Whole Foods, Ikea, and Toyota among others who have generated more than one billion dollars in revenue by putting sustainability at its core for new products and services. Isaksson et al. (2018) also raises how sustainable innovations have been positively linked to profitability. This implies a large and profitable market potential for more sustainable offerings in a wide range of industries.

The growing importance of sustainability does not only provide opportunities but also challenges. Companies must tackle their contribution to climate change, rising costs of critical materials as well as stricter regulations (Isaksson et al., 2018). To avoid these challenges, Isaksson et al. (2018) argue that companies can not only focus on incremental changes to meet continuously updated regulations. They must also seek to achieve more fundamental improvements.

4.4 Logistics

Lummus et al. (2001) describe logistics as a process that involves planning, implementing and controlling the material flow as well as the services and information provided from the supplier to the end-customer. The mission of a firm's logistics management is to serve its customers in order to be competitive, but also to serve the customers in the most cost-efficient way (Christopher, 2016).

It is important to remember that the logistics operations of a company deal with a lot more than the physical transport (Blinge & Svensson, 2005). Additional value may be provided to the customer through the offer of logistics services. The following section will discuss the different parts of logistics services.

4.4.1 Logistics Services

Logistics services refer to all the services offered from the process of placing an order until the order is delivered to the customer. In this section, first, the goals that the logistics services aim to achieve, and support are presented after which the services that can be offered during various parts of the logistics operations are introduced.

4.4.1.1 Goals of Logistics Services

According to Jonsson and Mattson (2011), there are five goals that the logistics services aim to excel at. These elements are service level, delivery dependability, delivery reliability, delivery time, and delivery flexibility (Jonsson & Mattson, 2011). In order to develop and improve the logistics services, the company should strive to reach the highest possible level of these elements. All the elements will be defined using the definitions of Jonsson and Mattson (2011).

4.4.1.1.1 Service Levels

Service level refers to the extent that the stocked articles are available at the supplier when requested by the customer. Thus, it can be described as the probability of being able to deliver directly from stock to a customer.

4.4.1.1.2 Delivery Dependability

Delivery dependability refers to the extent that a delivery arrives at the agreed delivery time. Which means how reliable the deliveries are. It can be described as the number of deliveries at the estimated delivery time, set in relation to the total number of deliveries. It is important to note that it is not only delayed deliveries but also early deliveries that contribute to a low delivery dependability.

4.4.1.1.3 Delivery Reliability

Delivery reliability refers to the quality of the delivery in terms of correct products being delivered in the right quantities and in the agreed level of quality. This is usually described by setting the number of orders, without remarks from the customer, in relation to the total number of orders delivered.

4.4.1.1.4 Delivery Time

This refers to the time required from placing an order until the delivery can take place. This includes administration and order processing times, delivery times and transport times. When designing or manufacturing an order, design and manufacturing times are also included. The same definition is used to describe lead time.

4.4.1.1.5 Delivery Flexibility

Delivery flexibility refers to the ability to adjust to and accommodate changing customer requests to agreed and already ongoing orders. For example, by allowing changes in delivery times, order quantities, material etcetera. The flexibility can be divided into flexibility before placing the order and flexibility after placing the order.

4.4.1.2 The four areas for providing Logistics Services

In this study, the logistics operations have been divided into four areas where companies can offer services to increase customer value. Willersdorf (1990) states that companies can differentiate themselves by using value-adding services in order to achieve a competitive advantage. The four areas used are; customer support, order management, warehouse, and transportation. These were chosen because they provide a comprehensive and exhaustive view

of the scope while still offering a distinct and function driven division. Each area will describe how the goals are affected by the services.

4.4.1.2.1 Customer Support

Customer support is described as an ongoing assistance that a company provides the customers regarding products and services (Fleischer & Read, 2002). There are several ways that customer support can be provided, such as by phone, email, and chat. Customer support is often a challenging but very important part in any company as there is a great challenge in ensuring satisfied customers. Having satisfied customers is vital to a company (Fleischer & Read, 2002). In terms of logistics, the customer support function typically handles situations such as when goods are delivered to early, if they are delayed, and if the shipment contains wrong materials or quantities (Jonsson & Mattson, 2011) thereby managing when shortcomings occur in terms of the goals of logistics services.

As the marketplace becomes more global and service-oriented, customer support becomes more critical to a supplier's competitiveness (Negash et al., 2003). Customer support is described as an essential element in making the marketing of most products successful (Goffin & New, 2001). The people that work with customer support must possess extensive knowledge about the products and services supplied by the company in order to be able to help the customers in the best way possible (Fleischer & Read, 2002).

4.4.1.2.2 Order Management

Order management handles the process of placing an order and how the supplier can facilitate the process by responding to the customer's wishes regarding order routines (Jonsson & Mattson, 2011). E-commerce, EDI (Electronic Data Interchange), email, and phone are examples of ways to manage the order process. According to Jonsson and Mattson (2011), to create good customer service, it is important that the supplier is flexible and able to change the orders according to the customer's wishes, as long as it does not consume too much of the supplier's resources.

Flexibility can be offered by the ability to change the order after placing it, for example in terms of quantity and delivery date. Additionally, the ability to customize the quantity of the order

beyond standard batches prior to placing it, can further increase flexibility. The services thereby provide means of achieving delivery flexibility both before and after the order is placed.

4.4.1.2.3 Warehouse

There are several ways of providing value-adding services within the warehouse operations (Willersdorf, 1990). These include adjusting picking patterns and consolidating according to customer demands (Jonsson & Mattson, 2011). Other examples of how value can be added are through kitting and bundling. Kitting is here referred to as delivering jointly used spare-parts in a product as a kit. Bundling on the other hand, means that several orders are bundled together and delivered as one (LogisticsGlossary, n.d.). Further, Jonsson and Mattson (2011) provide the following additional examples of warehouse services. First, assembly which means delivering assembled products. Second, customized coloring of a product. Third, customized labeling by providing specific documents or barcodes. Lastly, customized packaging by tailoring to limitations in height or width of the pallet or pack the goods in a certain way.

Common among several of these services are their ability in providing flexibility which Willersdorf (1990) states is becoming more and more important. Offering warehouse services thereby provide means of achieving a high level of delivery flexibility.

4.4.1.2.4 Transportation

A well-functioning transportation system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality (Tseng et al., 2005). The transportation activities often have a major impact on lead time. Transportation also affects delivery dependability since the transportation time may be longer or shorter than expected (Jonsson & Mattson, 2011). Examples of a transportation services are tracking of the goods, ability to choose transportation company, co-delivery, deliveries on specific days, and fast deliveries as express or overnight deliveries. Other examples are drop shipment and merge-in-transit. Drop shipment means that the order is delivered directly to a buyer from the manufacturer without going through a distributor or retailer (BusinessDictionary, 2019). Merge-in-transit means that orders that are placed to different providers are consolidated on route to the customer (Croxtton et al., 2003).

4.4.2 Green Logistics

Lummus et al. (2001) describe logistics as all the activities required for moving a product from the supplier to end-customer. Thus, green logistics can be defined as the environmental effects of all these activities (Santén, 2016). Green logistics is about solving environmental problems which cannot be ignored but which, on the contrary, are becoming increasingly larger over time (Blinge & Svensson, 2005).

In line with the development of logistics and the use of it in order to be competitive, the requirements for shorter lead times and faster deliveries have increased, while at the same time, order sizes have decreased (Blinge & Svensson, 2005). Blinge and Svensson (2005) explain that the centralization of production, which means longer distances for transports, reduction of local inventory levels, and time restrictions have further increased the number of transports needed. Blinge & Svensson (2005) argue that this leads to an increased negative environmental impact for the same amount of goods as before.

In the past, cost has been defined in purely monetary terms, but as concerns for the environment rises, companies must consider the external costs of logistics associated with the environmental effects such as air pollution, noise, vibration, and climate changes (Blinge & Svensson, 2005). Green logistics provides ways to reduce these externalities and achieve a greater balance between economic, environmental, and social objectives (Green Logistics, 2010). By using green logistics, the logistics operations can reduce their carbon dioxide emissions and adapt to environment-related problems by making *green* decisions regarding storage, material handling, transport, location of facilities, inventory control, and packaging (Behrmann & Lundqvist, 2016).

Transport activities are considered to have the largest environmental impact on the logistics operations (Santén, 2016). Green logistics strives to utilize the most suitable methods of using logistics resources and techniques to minimize the negative environmental impact (Behrmann & Lundqvist, 2016). Blinge and Svensson (2005) give some examples of how to maximize the utilization of the transports, including fixed delivery days, co-deliveries, optimization of delivery routes, filling rate, intermodal transport, etcetera, in order to avoid unnecessary transports. By using the above-mentioned practices, the negative environmental impact can be reduced.

Blinge and Svensson (2005) state that there is still much to be done regarding logistics activities in order to make resource utilization more efficient, which is beneficial for both the environment and for the company's finances.

4.5 Emerging trends and future market conditions

As argued by Day (1998), companies must be aware of trends and future market conditions in order to stay competitive. According to Uphill (2016), knowledge regarding the customers' future demands will require research, data, and trend analysis. In this section, a brief overview of current research in terms of major emerging market developments is presented. First is a look at future market conditions. This is followed by an introduction of emerging trends within customer service and order management. Lastly, there is an overview of the future impact on sustainability.

4.5.1 Future market conditions

As leading practitioners such as Amazon continue to raise the bar of what is possible to achieve in providing a personal experience, customers are starting to expect the same level of service from all providers (McKinsey & Company, 2017). Similarly, the rapidly increasing service expectations of consumers in business-to-customer industries as argued by Batra (2018) and Michelman (2018) is mirrored in the business-to-business industries (Salesforce research, 2018).

4.5.2 Customer service and order management

In Gladly's survey of Customer Service Expectations (Gladly, 2018), they highlight that "Today's consumers expect zero repeats, one answer, and multiple channels" (p. 1). Customers, just as in their personal lives, expect to use several means of communication. Gladly (2018) also emphasize personalization as of paramount importance in how customers today have come to view the business interactions, with current expectations only set to grow according to Shipton et al. (2017).

According to Leung et al. (2017) one of the most prominent trends within order management, and more specifically consumer purchases, is e-commerce, which has become a crucial part of order management due to digitization. Robinson (2016) explains that e-commerce is continuing

to increase in importance for manufacturing firms. Companies are using e-commerce more and more as a response to meet the growing customer demand of digital solutions.

4.5.3 Sustainability

Arvidsson (2017) argues that there is an increased focus, within companies, on sustainability that has long persisted, and which seems to continue. The way of looking at sustainability has changed from being a separate area to instead being an integral part of several operations (Arvidsson, 2017).

Lozano and von Haartman (2017) add that the awareness of sustainability among customers has increased, making it an increasingly more important aspect to customers. Lozano and von Haartman (2017) believe that as this awareness will continue to rise, the demand for logistics products and services that are produced bearing sustainability in mind will increase. Furthermore, Lozano and von Haartman (2017) believe that future managers will come to view sustainability as an important aspect of the decision-making process.

5 Methodology

This chapter covers the methodology of the study. The study has been divided into three phases; initial phase and literature study, data collection, and data analysis. Each phase has had a predefined set of deliverables which the phase intended to result in, all of which are shown in figure 4. Within each phase, smaller revisal's were made to account for changing circumstances that emerged during the study. The first phase resulted in the aim and specification of issue as well as a theoretical framework. Data collection was the second phase of the study. During this phase, the survey was first developed and then used to collect data. The third phase, data analysis, provided answers to the research questions. Each phase will below be explained further in detail. Lastly, there is a thorough review of how the chosen phases affected validity and reliability, which was a continuous effort during the study.

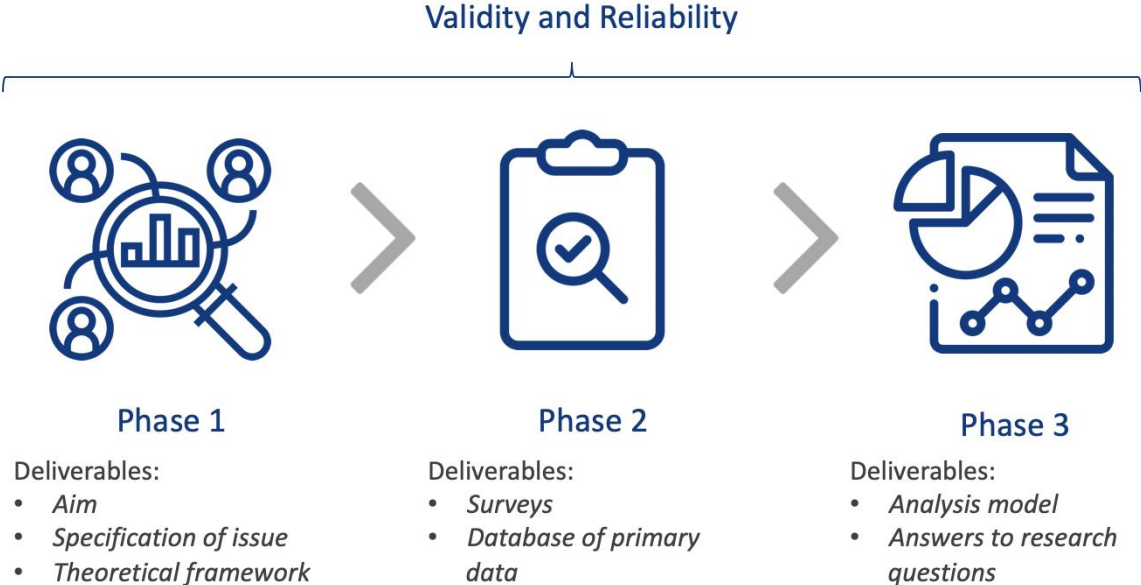


Figure 4: The three phases of the study along with the deliverables of each phase.

5.1 Initial phase and literature study

The first phase of the study intended at providing an overview of the current state of Husqvarna Construction’s logistics operations, in terms of how they work and the problems they are experiencing. After gaining a greater understanding of Husqvarna Construction’s situation, the aim could be created which thereon provided direction. The aim was broken down into the

specification of issue under investigation which gave four questions that the study intended to answer.

A literature study was necessary to gain knowledge of how logistics services can be used to create customer value and the value of aligning supply and demand by gathering information from the customers. This knowledge was used when developing the survey.

In order to ensure that the collected articles were relevant and reliable, assessment has been done using the four source-critical criteria: Time, bias, dependency, and authenticity (Eriksson & Wiedersheim, 2014).

5.2 Data collection

There are two basic approaches to research; a quantitative and a qualitative. The quantitative approach allows for more formal and rigid analysis while the qualitative research approaches concern subjective assessments and are not subject to quantitative analysis (Kothari, 2004).

The data collection for this study used a qualitative approach along with some quantitative elements as it was deemed appropriate for achieving the goals of the study. The qualitative approach served to allow the customers to express their opinions (Kothari, 2004). Meanwhile, the quantitative approach aimed at collecting distinct assessments of the value placed on different logistics services. The quantitative element was limited to the data collection efforts to allow for the data to be easily assessable and mapped in graphs as the subsequent analysis was qualitatively performed.

To capture the views of different actors, the data collection efforts have focused on gathering primary data. Krishnaswami and Satyaprasad (2010) argue that using primary data allows the researcher to design the data collection efforts to meet the explicit directions of the research project. However, it comes at the disadvantage of it typically requiring a lot of additional resources as opposed to relying on secondary data. Designing and carrying out the data collection can be costly and require a great amount of time (Krishnaswami and Satyaprasad, 2010).

There are several ways of collecting primary data. Some of these include; interviews, surveys, observations, and diaries (O’Gorman & MacIntosh, 2015). The first two, interviews and surveys, being the main choices of data collection method for this study.

Data collection through interviews carries several advantages such as; more information at a greater depth, greater flexibility, and that the language and educational level can be adapted to each individual. However, as it is an expensive method, it is ill-suited for when the sample is large and dispersed widely geographically (Kothari, 2004). As the scope of the study covers vast geographical distances, this is also the foremost reason why interviews were not the main method chosen for the data collection. However, informal interviews with the supervisors at Husqvarna Construction have been done in order to gain a better understanding of how the company functions and what problems they experience.

Surveys are a widely employed method for data collection in various business and economic research contexts. It offers a great geographical reach at low cost and the respondents can enjoy a fair time to answer the questions. However, it comes at the expense of reduced flexibility, risk of low response rate, and misinterpretation if not designed properly (Kothari, 2004). Despite some of its demerits, the use of surveys was deemed an appropriate means of gathering primary data through two primary qualifications; the ability to reach a wider audience and possibility for respondents to quantitatively assess the value of the services. To overcome the previously mentioned shortcomings of using surveys, special attention was paid to the design. This is, along with how the quantitative assessments were achieved, further elaborated on below in the section; Design of the survey.

The use of surveys was additionally advocated by Husqvarna Construction, largely based on its aforementioned ability to produce quantitative assessments of the value placed by the customers.

5.2.1 Interviews

According to Lantz (2013), interviews are categorized into different forms based upon their level of structure; open interviews, semi-structured interviews, and structured interviews. Open interviews are used to create an understanding of a phenomenon and what is considered significant in the description of the context. Interviews of this form are flexible, and the

questions are not necessarily predetermined. A structured interview contains well-defined questions that are asked in a specific order. An interview in this form expects short answers with a low level of variation making it easier to compare and analyze different interviews. Lastly, Lantz (2013) describes the semi-structured form which combines the previously mentioned forms, allowing for more flexibility compared to the structured form where questions and order can be adjusted.

The study initially used open interviews to gain an overview of the problem as well as to gain a greater understanding of the situation. These interviews were held with the supervisors from Husqvarna Construction. After gaining an understanding of the situation, more semi-structured interviews took place with personnel from Husqvarna Construction. This allowed for the flexibility of questions to be slightly adjusted while still using the previously gained knowledge about the situation to guide all further investigative efforts.

5.2.2 Survey

As previously stated, surveys were deemed an appropriate choice of method for the data collection efforts. This section covers the selection of survey respondents and the design aspects of constructing the survey.

5.2.2.1 Selection of respondents

The scope covers the European, Middle Eastern, and African (EMEA) region but is mainly focused on the European market. The EMEA-market is one of the three major markets as divided by Husqvarna Construction. Husqvarna Construction chose to start their efforts by mainly focusing on EMEA for two main reasons. First, because the headquarter for the logistics operations will be based in Europe. Second, several of Husqvarna Construction's largest customers in terms of revenue are located in the EMEA-market. Husqvarna Construction has 26 countries with sales location in the EMEA-market.

The selection of countries was done by Husqvarna Construction based on the criteria of how large revenue the sales locations contribute with. Likewise, the role of the respondent at each sales location was set by Husqvarna Construction.

5.2.2.2 Design of the survey

The survey was designed through an iterative process. The initial questions and format were first developed from a theoretical standpoint and by analyzing what information was needed to answer the research questions. The questions were then twice refined after workshops with the supervisors at Husqvarna Construction.

The survey questions were designed to not convey any bias, be clear, and worded at an appropriate educational level. To achieve this, the examples and solutions as provided by Cowles and Nelson (2015) on how to avoid bias, be clear, and use appropriate language were used to guide the efforts of framing each question.

The survey questions aimed at achieving a high degree of quantitative assessments through close-ended questions across the respondents while simultaneously providing some open-ended questions for the respondents to provide additional means of value creation through logistics services. Questions which were too open or had a high risk of being misinterpreted were revised after input from Husqvarna Construction. The questions which could be misinterpreted were altered by defining the logistics services that was asked about. An example of this is the question concerning lead time where lead time was subsequently defined in the question. In other cases, examples of what aspects the service may impact were given. According to Sreejesh et al. (2014), close-ended questions bring the advantage of allowing for a higher level of control and greater ease of answering which provides a basis for increased response rate. Meanwhile, open-ended questions provide means of capturing the true feeling of the respondent.

The survey was divided into six sections, sustainability, e-commerce, and the four areas of providing logistics services; customer support, order management, warehouse, and transportation. The four sections about logistics services had the same layout, first close-ended questions were asked, then open-ended. Taking customer support as an example, the close-ended questions were asked in the following manner; *How do you value the following services?* Services within customer support were then listed and the respondents could answer on a scale with the following steps; *Not at all important, Not so important, Somewhat important, Very important* and *Extremely important*. The open-ended questions were formulated as; *Are there any other customer services that would benefit your operation? If yes, please provide an explanation/example?* Thereafter, questions about the change in future demand were asked, the logistics services for each area were listed under a title; *Change of demand for customer support*

services in the coming 1-5 years. The following question was then asked; *For which services will the demand change and how?* The section concerning e-commerce only had close-ended questions. The respondents were asked to rank service within e-commerce as well as to answer; *Do you see the importance of e-commerce change in the coming 1-5 years?* For the latter, answer options were given. Lastly, in the section concerning sustainability, all questions were close-ended except for the last one. An example of a close-ended question asked is; *How do you view the trade-off between lead time and sustainability?*. The last question was formulated as; *Are there any logistics services that Husqvarna Construction can provide in order to improve your sustainability efforts? If yes, please provide an explanation/example.*

All of the close-ended questions described above enabled, through the use of scaled answering alternatives, a quantifiable assessment of the value placed by the respondents.

In terms of the general design of the survey, development efforts were also guided towards achieving a survey which did not contain a large number of questions. Having many question would result in a time-consuming effort for completing the survey, thereby conceivably reducing the number of responses or completion rate of the survey. The final version had an estimated completion time of 25 minutes and contained 42 questions. This was deemed to have achieved an appropriate trade-off between the span and depth of the collected data on one side, and on the other, the risk of a long survey negatively impacting the size of the sample collected.

5.2.2.3 Distribution of the survey

Due to restrictions set by Husqvarna Construction, they were responsible for sending the survey to all of the respondents. However, the surveys were sent out along with a brief description which was made by the research group. The description included a short introduction to logistics services and the structure and scope of the survey along with estimated completion time.

Due to various circumstances, the survey was sent out later than planned and after two weeks, when the primary deadline to submit the survey was reached, the response rate was too low for data analysis. The deadline was therefore extended by one week. This resulted in that four additional responses were collected. During the entire data collection period, reminders for completing the survey were sent out twice. Once before the deadline extension and once after.

5.3 Data analysis

In order to establish a systematic approach of how to analyze the data that was collected during the study, an analysis model was developed. By employing the analysis model, the current and future demand for logistics services of Husqvarna Construction's customers could be identified. In addition, the customer's perspectives on sustainability as well as similarities and differences in demand within the EMEA-market could be established. The analysis model, which is elaborated on in the following section, was thereby able to answer the research questions posed by the study.

5.3.1 Analysis model

This section aims at applying the theory that has been presented in the theoretical framework by producing a model for analyzing the data. The model was developed as a part of the study and is based on the theory that has previously been presented. The model served to map the demand of the market by simultaneously providing it in a context to guide subsequent efforts of aligning supply and demand. It is divided into four steps, each shown in figure 5. There is a one-to-one correlation between each step of the analysis model and the research questions.

The first step, "Mapping of current demand", was designed to answer the first research question:

What are the current demands for logistics services of the sales locations?

The second step, "Mapping of future demand", aimed to answer the second research question:

What are the future demands for logistics services of the sales locations?

The third step, "Identify perspectives on sustainability", provided answers to the third research question:

What are the sales locations current and future perspectives on sustainability?

The fourth step, "Identify similarities and differences across markets", aimed at providing answers to the last research question:

Are there any considerable similarities and differences in the demand for logistics services across the market?

During step one, two, and three, the data collected in the survey was mapped by treating each sales location separately. However, during the fourth step, they were viewed together. Below, each step will be elaborated on further, before they are applied to Husqvarna Construction in chapter 6.



Figure 5: The four steps of the analysis model

5.3.1.1 Mapping of current demand

The data concerning the current demand for logistics services was analyzed using qualitative measures. The data was gathered from both close-ended and open-ended questions.

To investigate which logistics services the customers currently value, the survey used a five leveled scale ranging from *Not important* to *Extremely important*, along with the option of *Don't know*, thereby supporting the data to be directly mapped. This allowed for the perception of value held by the customers to be captured while simultaneously offering the possibility of easily identifying how the value placed compared among the different services.

To investigate if there are any logistics services that the customers are missing, open survey questions were asked. To do this, significant words that were used in the answers were first identified, as well as how often they occurred. Significant words are here referred to as any words that are associated to logistics services.

Based on the two techniques presented above, the data was compiled and a resulting summary showing the services as highlighted by the respondent could be produced. Thereby concluding step one.

5.3.1.2 Mapping of future demand

When viewing the future demand for logistics services, the time frame that was set were any changes in the coming one to five years. The time frame was jointly set with Husqvarna Construction and aimed at capturing both imminent changes in demand and some that may be perceived as a few years out.

The analysis of future demand was performed using qualitative measures. With the exception of e-commerce, questions for capturing future demand exclusively used open-ended questions. To analyze the open-ended questions, the same technique described in step one was employed; analysis of significant words. However, for e-commerce, a three-leveled scale along with the option of *Don't know* was used to capture whether or not the respondent perceived it as having an impact on future order management processes.

The data from the close-ended question and the open-ended questions were thereafter composed into a resulting summary showing the most important features of the future demand by the sales locations.

5.3.1.3 Identify perspectives on sustainability

The analysis of the customer's perspective on sustainability focused on the second dimension of sustainable development as described in the theoretical framework; the environmental dimension. The social dimension was deemed to lie outside of the scope of the data collection since an analysis of social aspects was considered to be a subsequent step to the study. Similarly, economic sustainability was asserted as to be viewed in a subsequent analysis to the study. Instead, the data collection emphasized on capturing the market's perspective on environmental sustainability.

Other than a three-leveled scale for assessing if the respondents perceived sustainability as having an impact on future operations and a quantitative trade-off between lead time and sustainability, the survey exclusively used open-ended questions to capture the perspectives of

the sales locations. The close-ended scaled questions and the open-ended questions were analyzed using the aforementioned techniques of direct data mapping and significant words. The trade-off between lead time and sustainability, however, was used to produce a visual aid for capturing the respondents' perspectives.

After all of the data had been compiled, a resulting summary of step three was produced.

5.3.1.4 Identify similarities and differences across markets

The fourth and last step aimed to identify similarities and differences in demand across the geographical markets. Current and future demand were viewed separately to create an understanding of whether the market is homogeneous or not in terms of both respective time frames. The perspectives on sustainability were, equivalently, divided into their associated timeframe; current or future.

During each of the two timeframes, the data was split into the four areas of logistics as presented in the theoretical framework as well as sustainability. Within each subsection, the resulting similarities and differences are first presented before the results of a further analysis are given.

To facilitate efforts in comparing data across respondents, all the options for the questions that employed the previously discussed five leveled scale and the option of *Don't know* was subsequently mapped out in a graph. The graphs were constructed by showing each of the logistics services along the vertical axis and the level of importance on the horizontal axis. Each of the sales locations were then placed on a horizontal line based on how they perceived the importance of the services. The graphs provided a visual aid for identifying the similarities and differences. Similarities and differences were identified by analyzing the proximity of the responses on the scale. For example, if the respondents stated a service as *very* and *extremely important*, the market for that service was viewed as homogenous, therein showing similarities in demand. If the answers, however, were for example scattered across the scale, the demand was viewed as divergent, suggesting that the market expressed differences.

As before, the answers from the open-ended questions had to be analyzed qualitatively. When applicable, greater significance to an expressed opinion was inferred using manual sentiment analysis. This meant that if the respondent used language to bestow greater importance in a

service, it was associated with carrying a greater value to that customer. Using the graphs and the database, the data was analyzed thus producing a resulting comparison in current and future demand for logistics services of the sales locations. Thereby concluding the final step of the analysis model.

5.4 Validity and reliability

Efforts of achieving validity and reliability were continuously employed in the study. In terms of the studies initial phase, the sources used for developing the theoretical framework were assessed using the previously mentioned four source-critical criteria. On important subject matters, the results and conclusions made were compared to those of other authors to assert that the stipulations made by the author were well founded. One example when this was performed was when researching future market conditions and emerging trends.

During the second phase, several aspects of which relates to validity were regarded, all of which have been continuously introduced in the previous section; Survey. The use of surveys provided additional means of achieving reliability in the data collection. By employing one method for collecting all the data, which additionally carried no varying conditions of how the questions were asked, a greater reliability was achieved. Contrary, if interviews would have been performed, variations in how the questions were posed by the interviewer may have arisen thereby conceivably yielding varied responses.

In the last phase of the study, the data from the surveys and the insights given from analyzing it were continuously compared to the results of previous research. The results gathered from having employed the analysis model could thereby be validated by the use of current literature and research. Additionally, the instances where the results may have diverged could equivalently be identified, thus prompting a discussion.

6 Results

The following chapter covers the results of applying the analysis model to the survey data. The chapter is divided into two sections. The first part covers a synthesized view of the results from steps one, two, and three of the analysis model. The second section shows the results of the fourth step.

6.1 Mapping of Sales Locations

Below, an overview of the data collected from each sales location is presented, highlighting the key insights gained from having applied the analysis model to the database. Each review of the sales locations is divided into the first three steps of the analysis model; first covering the current demand and thereafter emerging future demands. Lastly, aspects relating to sustainability are presented. Each section starts by stating the role held by the person who answered the survey. Each sales location, which also corresponds to a country, is placed in alphabetical order.

6.1.1 Belgium

Role of respondent: Manager.

6.1.1.1 Current demand

The Belgian sales location place great value in the ability to receive support via email, phone as well as chat. They also express the value of having a common resource planning system with that of their supplier and the use of e-commerce. Within transportation, the services of overnight delivery, tracking, drop shipment, and the ability to receive deliveries on specific days are all expressed as being *extremely important*. As for warehouse services, kitting, bundling and packaging are all highly valued.

The lead time requirements are two days for standard delivery and one day for express.

6.1.1.2 Future demand

They see the already great value of using e-commerce and it is believed to increase in the future. However, they are unsure as to how it will explicitly impact demand.

6.1.1.3 Sustainability

Sustainability is viewed as highly important and of growing importance. The ability to choose a sustainable mode of transportation is deemed to provide great value. Additionally, providing co-delivery to decrease environmental impact is expressed as valuable as they are currently receiving orders in multiple packages split up in several transports over one or more days. The trade-off between lead time and sustainability is shown in figure 6.



Figure 6: The lead time and sustainability trade-off for Belgium.

6.1.2 Denmark

Role of respondent: Country manager.

6.1.2.1 Current demand

The sales location in Denmark states that the most valued services fall within customer support, order management, and transportation. In customer support, they highly value phone- and email-support, while in order management they state the importance of the ability to change the order after placing it along with the ability to customize the quantity. Services within transportation that are highlighted as *very* or *extremely important* are; tracking, drop shipment, overnight delivery, and the ability to receive deliveries on specific days.

Their lead time requirements are two days for standard delivery and one day for express delivery.

6.1.2.2 Future demand

E-commerce is perceived to change future demand. More specifically, they believe that all purchases will be made through e-commerce in the future. Compared to what is offered today, they require a greater selection of web order functions as well as the ability to more easily choose between various delivery options.

6.1.2.3 Sustainability

Denmark views sustainability as *very important* in today's marketplace and it is considered to be of growing importance. To become more sustainable, they would like to utilize fixed delivery days.

On the other hand, when compared to lead time, the importance of sustainability fades in comparison. In the trade-off between lead time and sustainability, Denmark unilaterally value lead time. The trade-off between lead time and sustainability is shown in figure 7. Also, when asked about the importance of a sustainable transport alternative, it was considered as *somewhat important*.



Figure 7: The lead time and sustainability trade-off for Denmark.

6.1.3 France

Role of respondent: Logistics manager.

6.1.3.1 Current demand

The sales location in France primarily addresses the importance of customer support, transportation services, and warehouse services. When it comes to customer support, phone and email support are considered *very important*, while in transportation, delivery on specific days and tracking of the shipment are seen as *very* or *extremely important*. Regarding warehouse services, packaging and bundling are stated as *extremely important*.

When asked about their lead time requirements, France states that the requirement for standard delivery is two days and for express delivery is one day.

6.1.3.2 Future demand

The possibility to make purchases online, e-commerce, is believed to impact future demand. However, they are uncertain as to how.

6.1.3.3 Sustainability

France considers sustainability as *very important* and values a sustainable transport alternative as *very important*. However, they do not believe that the importance of sustainability will increase in the future, indicating a continued level of importance. In the trade-off between sustainability and lead time, they favor lead time. The trade-off between lead time and sustainability is shown in figure 8.



Figure 8: The lead time and sustainability trade-off for France.

6.1.4 Hungary

Role of respondent: Country manager.

6.1.4.1 Current demand

Customer support provided by email and chat is expressed as *extremely important*. As for order management, the ability to change the order after placing it along with the ability to customize the quantity are both viewed as highly valuable. Order placements by EDI and through e-commerce are expressed as the most important. As for transportation, tracking, delivery on specific days, overnight delivery, drop shipment and merge-in-transit are all viewed as offering great value. Additionally, demand for small spare parts to be sent by post is also raised as important. Within the area of warehousing, a high value is placed upon the services for labeling, kitting, and bundling. Especially, a demand for a bar code system is expressed in order to more quickly register received orders and to reduce mistakes.

Their lead time requirements are two days for standard delivery and one day for express delivery.

6.1.4.2 Future demand

The Hungarian sales location expresses the belief that all future purchases will be made through e-commerce.

6.1.4.3 Sustainability

Sustainability is viewed as *extremely important* and that it will become more important in the coming 1-5 years. To improve sustainability efforts, demand for sustainable transport alternatives as well as the ability to have fixed delivery days are expressed. The trade-off between lead time and sustainability is shown in figure 9.



Figure 9: The lead time and sustainability trade-off for Hungary.

6.1.5 Italy

Role of respondent: Country manager.

6.1.5.1 Current demand

Customer support functions provided through email and chat are viewed as *extremely important*. As for order management, great value is placed on the ability to change the order after placing it as well as to be able to customize the quantity. To manage order placements, EDI (Electronic Data Interchange) and email are valued higher than e-commerce and phone-based services. Within transportation, tracking, drop shipment, and overnight delivery are all considered to be *extremely important*. As for warehouse services, labeling, kitting, and color customization are viewed as providing great value.

The lead time requirements are five days for standard delivery and one day for express.

6.1.5.2 Future demand

The Italian sales location expresses an understanding that e-commerce will increase in importance in the coming 1-5 years. They also suggested a general increase in the expectations within lead time performance and tracking support.

6.1.5.3 Sustainability

They express that sustainability is not of significance today. However, they believe it will become more important in the coming 1-5 years. To meet future requirements, they view a sustainable transport alternative to be *extremely important*. The trade-off between lead time and sustainability is shown in figure 10.



Figure 10: The lead time and sustainability trade-off for Italy.

6.1.6 Poland

Role of respondent: Sales manager.

6.1.6.1 Current demand

Poland considered customer support, order management, transportation, and warehouse services to be of great importance. In customer support, they believe that phone, email, and chat-support are *very* or *extremely important*. They also express the need for receiving support about transportation lead times, costs of delivery, and other related issues almost immediately. They further express the importance of receiving correct information about the product, such as the year of manufacturing.

Regarding order management, the ability to change the order after placing it is *extremely important* while the ability to customize the quantity of the order is *very important*. Additionally, they state e-commerce as an important function, where there is a need for improvement. They also address the need for their distributors to be able to place their order directly to Husqvarna Construction in order to save time and to more easily make changes.

In transportation, they addressed the importance of tracking, delivery on specific days, and drop shipment. When it comes to warehouse services, labeling and packaging are considered *extremely important*. In terms of packaging, they emphasize a need for improvement as machines are often being scratched during transportation.

Their lead time requirements are four days for standard delivery and two days for express delivery.

6.1.6.2 Future demand

The sales location in Poland believe that the importance of e-commerce will increase in the future, but they are not sure of how.

6.1.6.3 Sustainability

Sustainability is seen as *very important*. However, they do not perceive its importance to change in the future, indicating a continued level a importance. A sustainable transport alternative is viewed as *very important*. In order to improve their sustainability efforts, Poland believes that shipping routes and warehouse structures can be planned more efficiently, positively impacting sustainability measures and costs. The trade-off between lead time and sustainability is shown in figure 11.



Figure 11: The lead time and sustainability trade-off for Poland.

6.1.7 Russia

Role of respondent: Country manager.

6.1.7.1 Current demand

The sales location in Russia considers customer support, order management, transportation, and warehouse services to be of great importance. When addressing customer support, both chat and phone support are seen as *very important* and email support as *extremely important*. Regarding order management, the ability to customize the quantity is seen as *very important* whilst the ability to change the order after placing it is considered *extremely important*. When it comes to transportation services, tracking, ability to choose transportation company, delivery on specific days, and merge-in-transit are all considered *very important*. When considering

warehouse services, labeling, packaging, and color customization are all considered as *extremely important*.

When asked about lead times, the requirement for standard delivery is 30 days while for express delivery it is 15 days.

6.1.7.2 Future demand

They believe that in the future, all purchases will be made through e-commerce.

6.1.7.3 Sustainability

The sales location in Russia considers sustainability to be *very important* and of growing importance. The use of a sustainable transport alternative is seen as *very important*. They also think that they could use co-delivery in order to become more sustainable. The trade-off between lead time and sustainability is shown in figure 12.



Figure 12: The lead time and sustainability trade-off for Russia.

6.1.8 South Africa

Role of respondent: Procurement administrator.

6.1.8.1 Current demand

South Africa state the importance of services within customer support, order management, transportation, and warehousing. Regarding customer support, email is considered *extremely important*. In order management, they consider the ability to change the order after placing it to be *very important*. In terms of transportation services, tracking, delivery on specific days, merge-in-transit, and overnight delivery are seen as *extremely* or *very important*. When it comes to warehouse services they address the labeling and packaging as *extremely important*.

They mention that they are experiencing long lead times and that their operations would benefit from a warehouse located in the Southern Hemisphere. Their lead time requirement for standard delivery is ten days and for express delivery five days.

6.1.8.2 Future demand

The sales location in South Africa believes that in the future, all purchases will be made through e-commerce, but are unsure of other trends.

6.1.8.3 Sustainability

South Africa considers sustainability as *extremely important* and believes that its importance will rise in the future. They also consider sustainable transport alternatives as *extremely important* and would use fixed delivery days to make their operations more sustainable. The trade-off between lead time and sustainability is shown in figure 13.

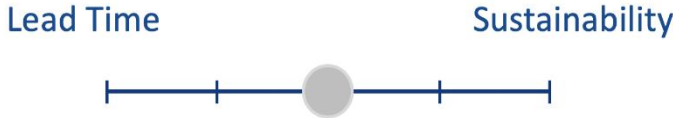


Figure 13: The lead time and sustainability trade-off for South Africa.

6.1.9 United Arab Emirates

Role of respondent: Regional director.

6.1.9.1 Current demand

The United Arab Emirates (UAE), regards services within customer support, order management, transportation, and warehousing to be of great importance. When addressing customer support, email support is considered as *extremely important* and phone support as *very important*. They also express an explicit demand for improvements in terms of digital services. Within order management, the ability to customize the quantity of the order is seen as *very important*. Concerning transportation services, tracking, ability to choose transportation company, drop shipment, merge-in-transit, and overnight delivery is seen as *very* or *extremely important*. Regarding warehouse services, only labeling is considered to be *extremely important*. They state that better labeling will more easily fulfill import requirements.

When asked about their lead time requirements, for standard delivery it is seven days and for express delivery, it is two days.

6.1.9.2 Future demand

In the future, they believe that chat support and digital services will play a greater role in customer support. They also address that the demand for shorter lead times and live tracking will increase in the future.

6.1.9.3 Sustainability

When asked about sustainability, the United Arab Emirates considers it to be of *somewhat importance* but believe that the importance will increase in the future. They would use co-delivery in order to become more sustainable but do not believe that sustainable transport alternatives are of importance. The trade-off between lead time and sustainability is shown in figure 14.



Figure 14: The lead time and sustainability trade-off for the United Arab Emirates.

6.1.10 United Kingdom

Role of respondent: Director of sales and marketing.

6.1.10.1 Current demand

The United Kingdom (UK) sales location highlights services within each of the four operational areas to be of importance. Within customer support, they emphasize email but also phone support. The ability to customize order quantity and to change the order after it has been placed are both greatly valued. Additional support by providing inventory availability and order status is also expressed. The ability to order through a web page and an improved system for doing so is highlighted as the greatest means of providing value during the order process. Labeling and packaging are viewed as highly important within warehouse operations. In terms of transportation, tracking, drop shipment, overnight delivery, and the ability to receive delivery

on specific days are all highly valued with an extra emphasis on tracking. Additionally, proof of delivery is viewed to be of great importance. The UK location expresses a demand for the ability to choose the mode of transport when ordering express.

The lead requirements are five days for standard delivery and one day for express delivery.

6.1.10.2 Future demand

The UK sales location indicate increased customer expectations in the future especially in offering flexibility during the order management process. E-commerce is believed to be of growing importance, however, they did not express in what way.

6.1.10.3 Sustainability

Sustainability is viewed as *very important* and of growing importance. As a means of increasing sustainability efforts, they express a demand for a sustainable transportation alternative when placing orders. The trade-off between lead time and sustainability is shown in figure 15.



Figure 15: The lead time and sustainability trade-off for the United Kingdom.

6.2 Identify similarities and differences across markets

The following section shows the results of step four in the analysis model and aims to connect the various demands laid out above to identify similarities and differences. In terms of both current and future demand, the answers from each sales location will be compared to one another in terms of the four different logistics areas as described in the theoretical framework as well as their perspectives on sustainability. The comparison of current demand is visualized in graphs where each sales location has been assigned a color. Closing the section is a summary of step four.

6.2.1 Comparison of current demand

To present the data of the comparison of current demand, each of the four logistics areas will present graphs which show how customers value different logistics services on a scale with the following options: *Not at all important*, *Not so important*, *Somewhat important*, *Very important* and *Extremely important* along with the answer *Don't know*.

6.2.1.1 Customer support

Figure 16 shows that phone support is located in the upper layer of the scale while chat support is spread across the entire scale. What is most salient in the graph, however, is that almost all sales locations find it *extremely important* to have customer support by email. The sales location in France, however, does not value it as much as the others. The market is thus moderately to decidedly homogenous in its valuation of phone and email support while the opinion of chat support is divergent across the market. The homogenous demand for phone and email support may suggest opportunities of economies of scale by developing and maintaining such support functions (Wind and Bell, 2014).

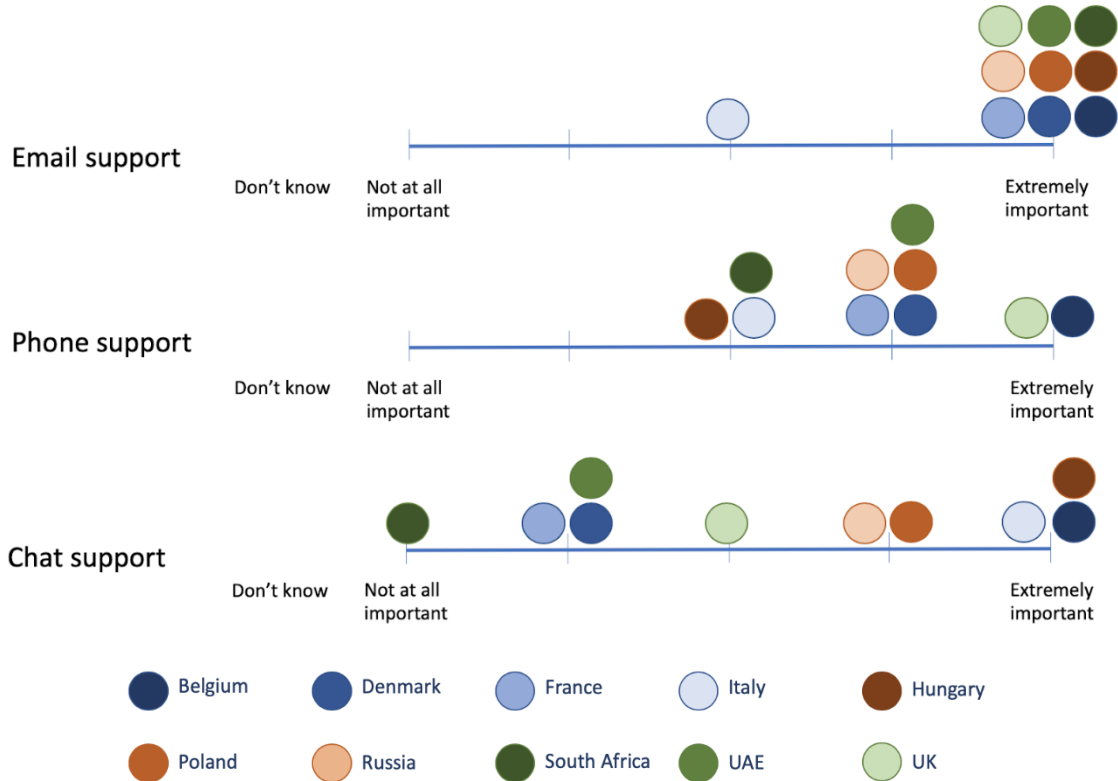


Figure 16: Comparison of customer support services by the sales locations.

As stated by Negash et al. (2003), today’s marketplace is becoming more service oriented and customer support becomes more critical to a supplier’s competitiveness. This goes in line with the valuations by the sales locations of customer support services. Additionally, as shown in the results of Gladys study (2018), customers want several channels of communication. This is similar to the data collected in this study wherein, the data largely suggests that the customers value multiple support functions highly rather than any single service.

6.2.1.2 Order management

Figure 17 shows that both the ability to change the order after placing it and the ability to customize the quantity of the order are located in the upper layer of the scale. With the exception of France and Belgium, all of the sales locations state that these services provide somewhat or greater value. This correlates with the results of Gladly’s study (2018), where they found that customers greatly demand personalization.

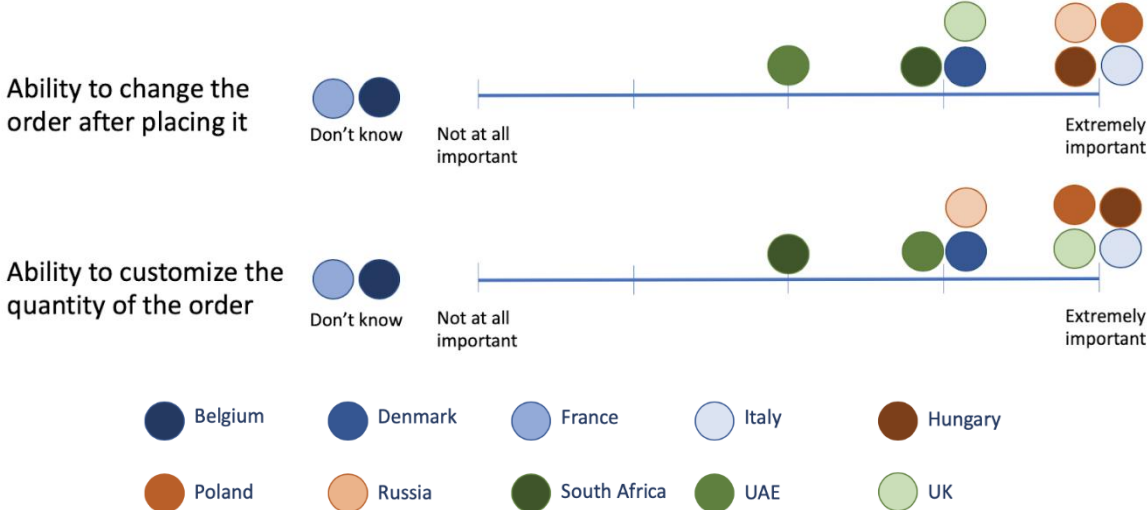


Figure 17: Comparison of order management services by the sales locations.

In figure 18, the most preferred methods of placing an order are presented. The majority of the sales locations replied E-commerce. France and Poland, however, stated EDI, and UAE answered email. Figure 18 therein highlights one of the prominent findings of the study, which is the great value placed by the customers on digital solutions, and more predominantly, e-commerce. This goes well in line with current research within order management that describes the growing demand for e-commerce solutions (Robinson, 2016).

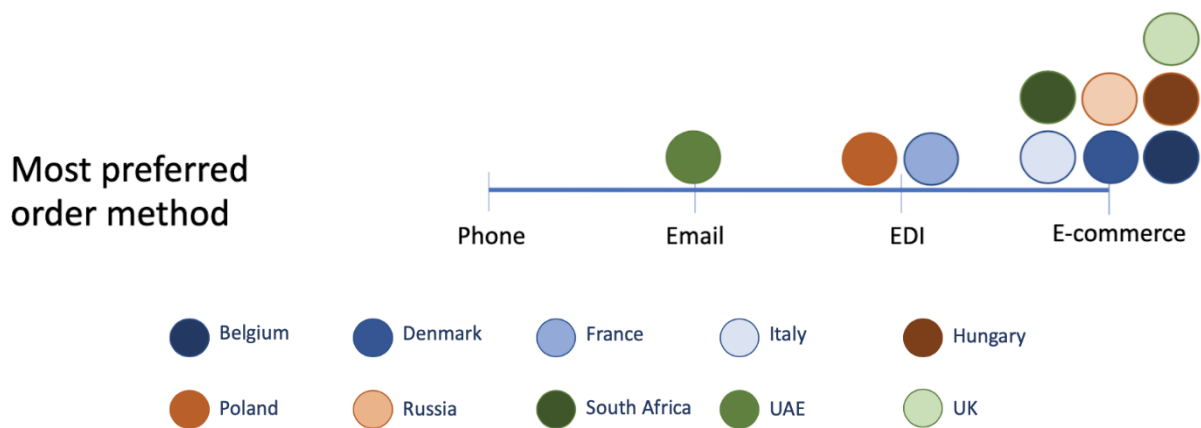


Figure 18: Preferred method for placing orders by the sales locations.

As shown in figures 17 and 18, the vast majority of the market expresses a demand for flexibility and customization as well as the use of a digital solution for managing the order process. The opportunities for economies of scale (Wind and Bell, 2014) can provide means of offsetting the costs that may be incurred as a result of developing and maintaining such solutions.

6.2.1.3 Warehouse

Figure 19 shows that the sales locations in Hungary, Italy, and Belgium, value kitting as *extremely important*. UAE and Denmark value, it as *somewhat important* and South Africa are unsure of how it brings value. The rest of the locations value kitting as *not so important*.

Regarding assembly, the sales locations' answers have an average in the lower layer, however, 50 percent of the sales locations value it as *somewhat important*.

Figure 19 further shows that most of the sales locations placed color customization in the lower layer of the scale. Russia and Italy, on the other hand, have valued the service as *extremely important*.

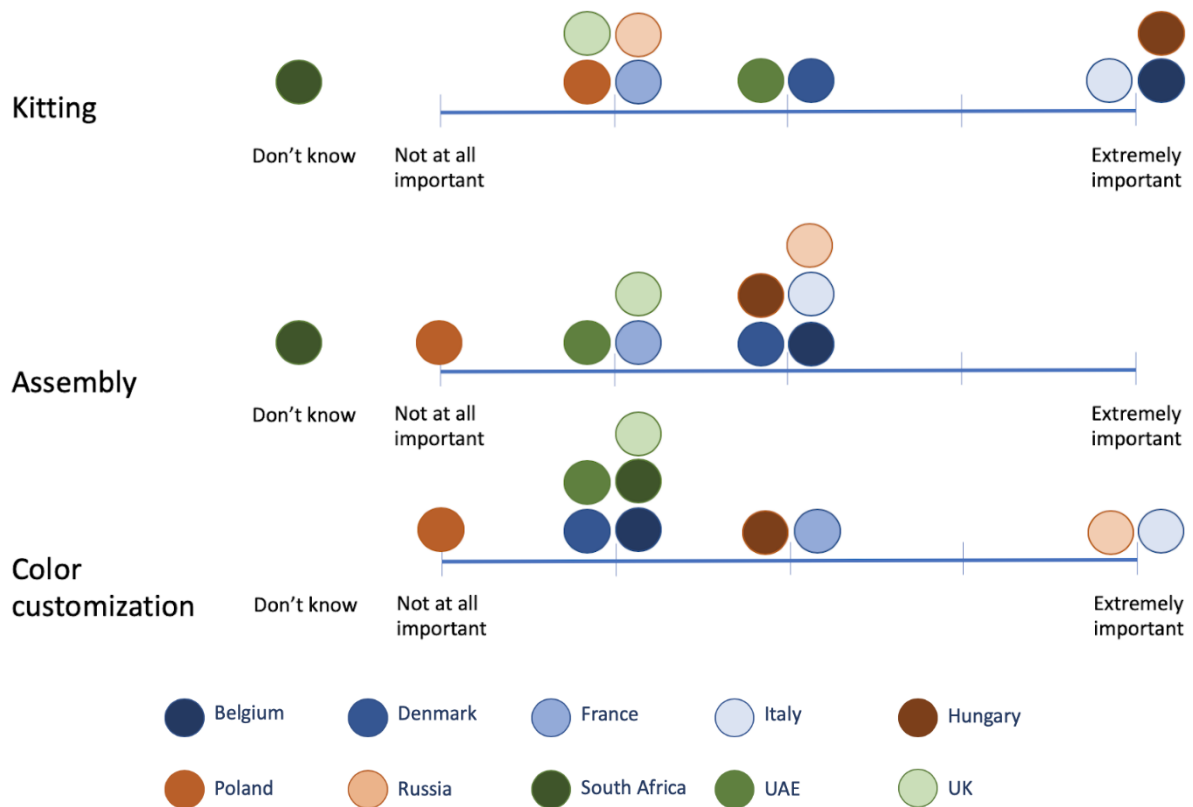


Figure 19: Comparison of the warehouse services; kitting, assembly, and color customizations by the sales locations.

Figure 20 shows that labeling is valued as *extremely important* by most of the sales locations. However, France, Denmark, and Belgium value labeling as *somewhat important*. Packaging is also valued by the majority as *extremely important*. The sales locations in Denmark, UAE, Hungary, and Italy differ by ranging from *somewhat* to *not at all important* in their responses. Further, figure 20 shows that bundling is valued as *somewhat important* by the majority of sales locations. However, Russia values bundling as *not so important* while Hungary, France, and Belgium value it as *extremely important*.

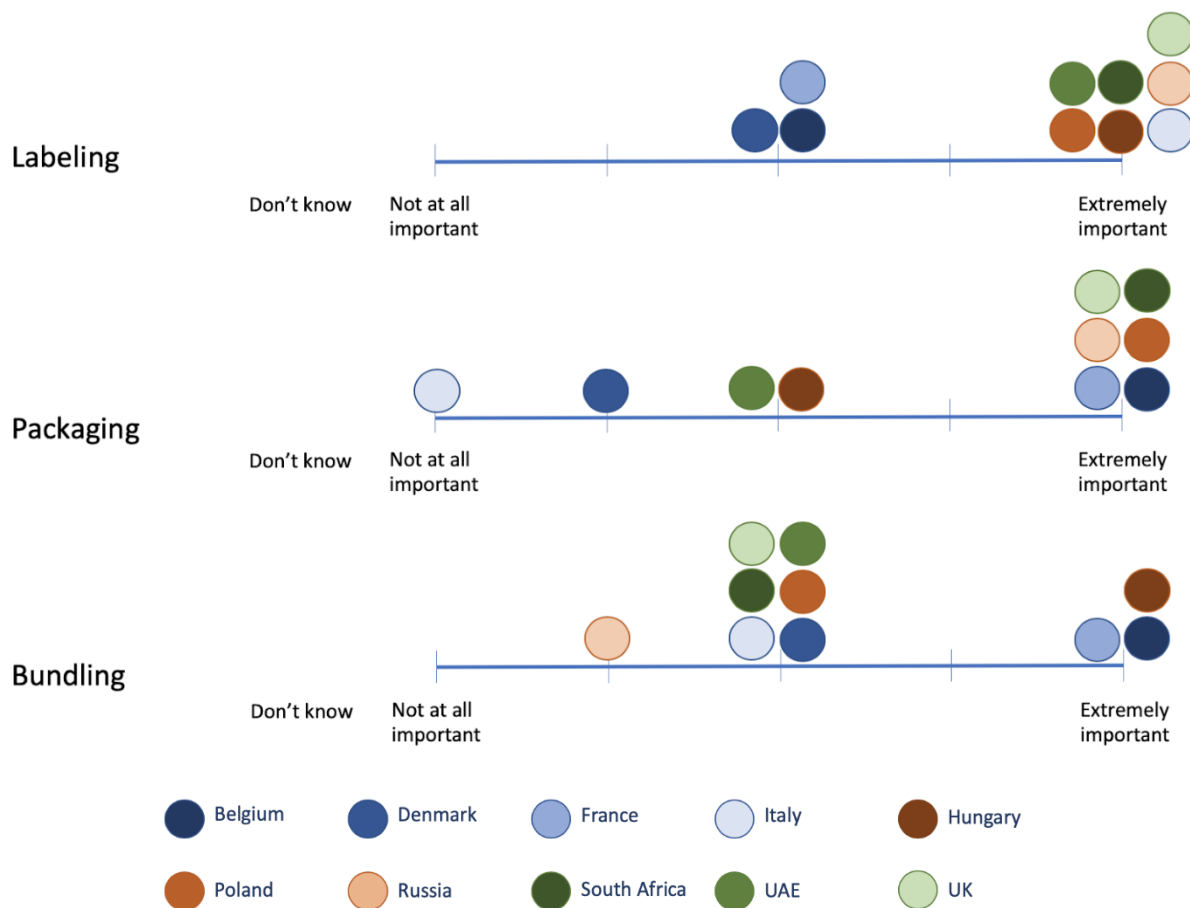


Figure 20: Comparison of the warehouse services; labeling, packaging, and bundling by the sales locations.

The valuations placed by the sales locations differ quite greatly across the six services shown in figure 19 and 20. Kitting, assembly, and color customization are generally not valued highly, therein suggesting unique requirements by those who valued the services as *extremely important*. The same could be said for bundling which generally had a modest valuation except for by Hungary, France, and Belgium who all valued it highly. Offering the services of kitting, assembly, color customization, and bundling thereby does not provide means of catering to the masses, however, they do provide opportunities for creating great value for a small number of customers.

In terms of labeling and packaging, however, a clearer pattern emerges. The high value placed on these services suggests opportunities for greatly increasing customer value to a large part of the market. Thereby, as argued by Wind and Bell (2014), providing means of further strengthening the financial gain through economies of scale and scope by meeting the demand.

6.2.1.4 Transportation

Figure 21 shows that tracking is valued as *extremely important* by all sales locations, except Russia and France who value it as *very important*. The ability to choose the transportation company is valued by almost all sales locations as *somewhat important* while the UAE and Russia value it as *very important*.

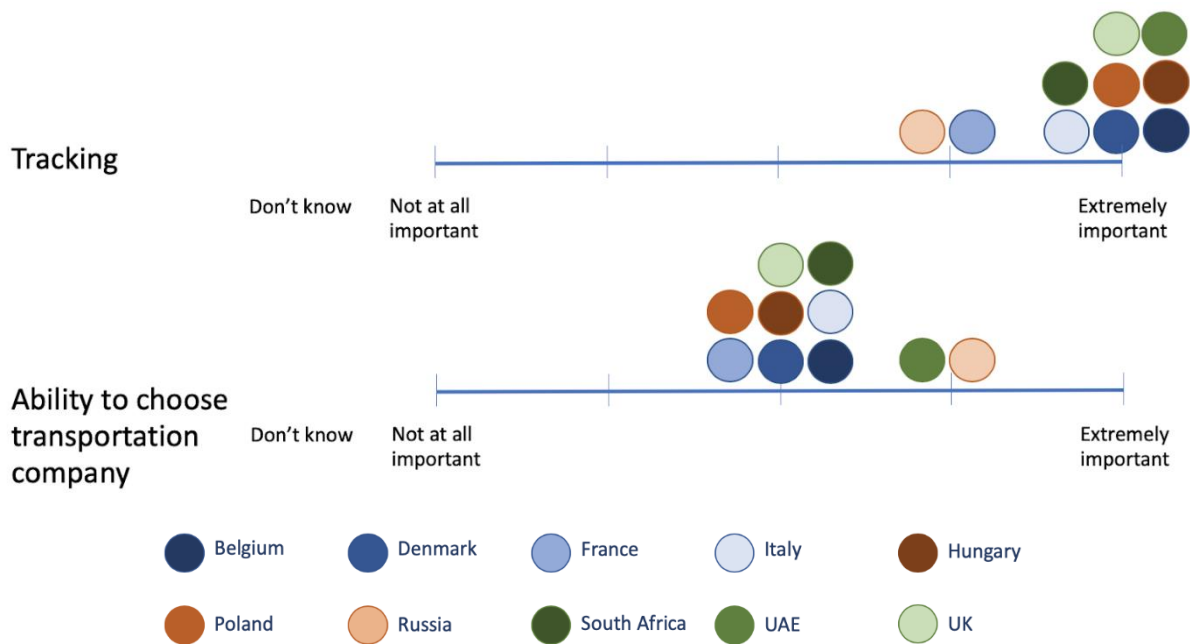


Figure 21: Comparison of the transportation services; tracking and ability to choose transportation company by the sales locations.

Figure 22 shows that the sales locations value delivery on specific days in the upper layer of the scale. Drop shipment is valued similarly although Russia values it as *not so important*. The valuations of merge-in-transit are fairly centered on the scale. However, Hungary differs by valuing it as *extremely important*.

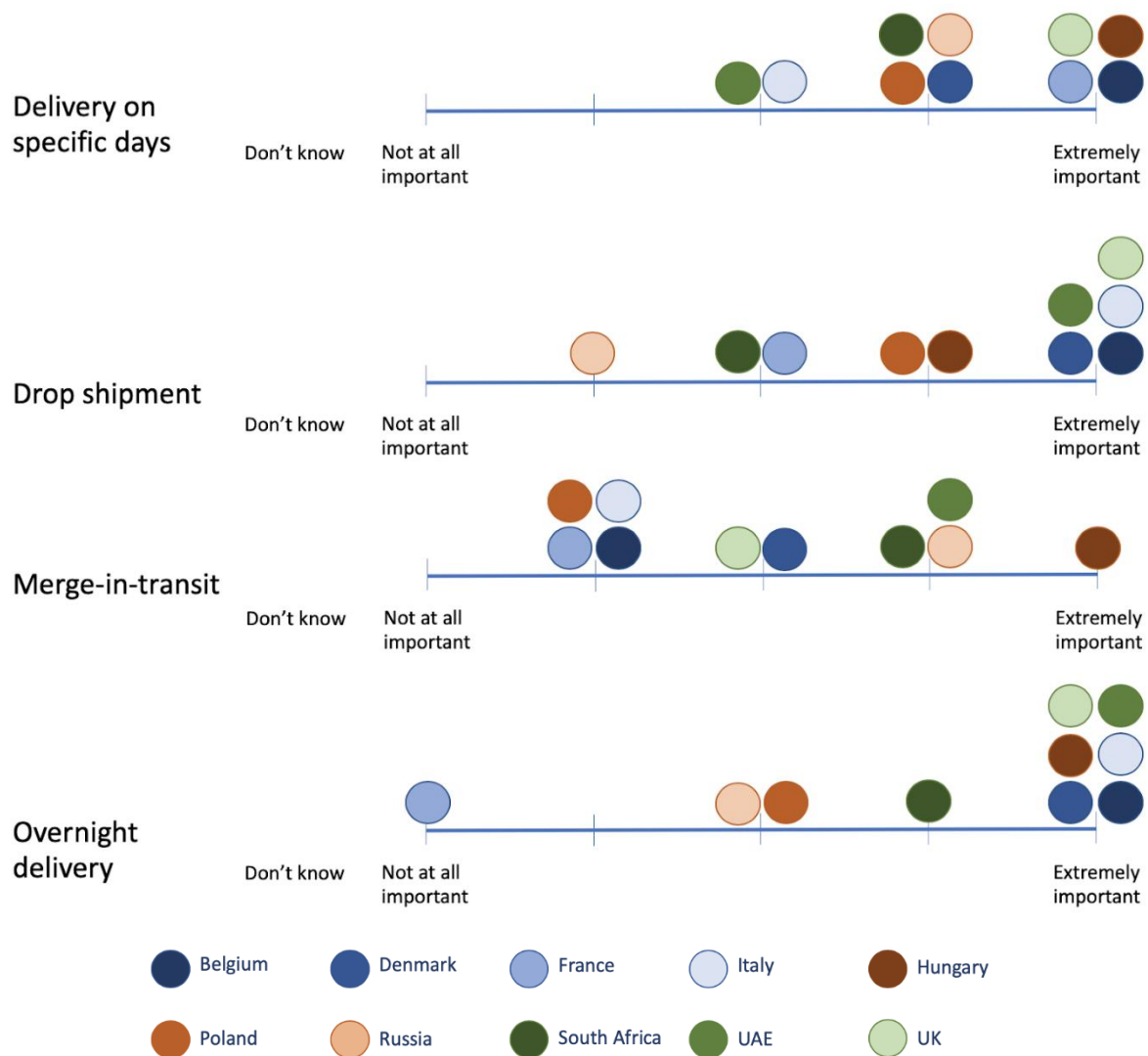


Figure 22: Comparison of the transportation services; delivery on specific days, drop shipment, merge-in-transit and overnight delivery by the sales locations.

Further, Figure 22 shows that overnight delivery is primarily viewed as *extremely important*. The responses by Russia, Poland, and South Africa ranges from *somewhat* to *very important* while France, however, differs by valuing overnight delivery as *not at all important*.

Transportation services are therein largely viewed as offering great value. This matches the argument presented by Tseng et al. (2005) who contends that transportation is an area wherein a supplier can promote service quality. The services as presented above are furthermore ways of offering flexibility to the customer. The generally high valuations are thereby also in line with Gladys (2018) assessment that personalization is greatly demanded by customers. However, with the exception of tracking and the ability to choose a transportation company,

many of the valuations by the sales locations diverge. Delivery on specific days differs slightly from this assertion in that it is fairly consistent as all of the sales locations consider it as creating somewhat or greater value. Additionally, even though the data for drop shipment and overnight delivery are scattered across the scale, a large number of customers still consider them as offering great value.

As for tracking, delivery on specific days, drop shipment, and overnight delivery, they all showed degrees of convergence and high valuations. There may therein lie opportunities for increasing the economic gain of supplying the services by leveraging the widespread demand for economics of scale. As for merge-in-transit, supplying such services could prove less beneficial due to generally low valuations by the sales locations. However, some of the sales locations valued it highly, prompting further analysis if tailoring to the unique demands may prove more beneficial.

6.2.1.5 Sustainability

Figure 23 shows that the sales locations value sustainability in the upper layer of the scale. South Africa and Hungary stand out by viewing it as *extremely important*. Italy, however, differs by valuing it as *not so important*.

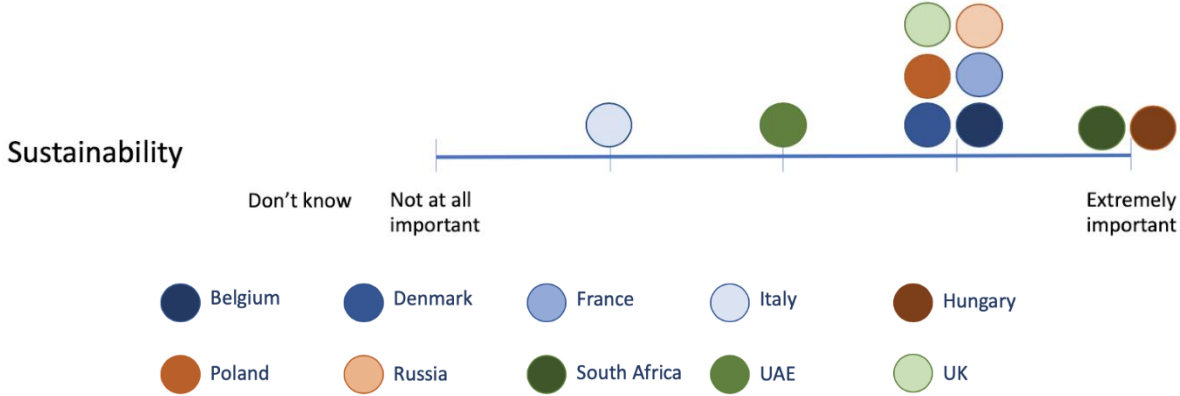


Figure 23: Comparison of the valuations of sustainability by the sales locations.

As shown in figure 24, the answers as to the value of providing a sustainable transport alternative, are spread almost evenly from *not so important* to *extremely important*.

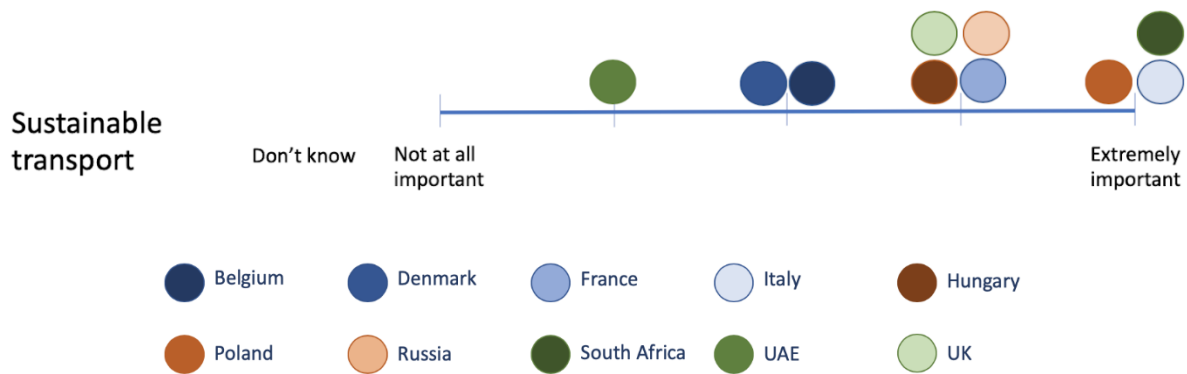


Figure 24: Comparison of how the different sales locations value a sustainable alternative when choosing transportation.

As other examples of initiatives for becoming more sustainable in their efforts; UAE, Belgium, and Russia mention an increased demand for co-delivery options.

The increased focus on sustainability as described by Arvidsson (2017), is in part also shown in the data collected. Although the market does not unilaterally impose a great importance on sustainability, it remains important to the vast majority. As is shown in figure 24, there is a market demand for offering a sustainable transport alternative. This coincides with the argument made by Dangelico et al. (2016) that companies can produce revenue growth by putting sustainability at the core of its offerings. Similarly, offering such a service may increase profitability as stated by Isaksson et al. (2018). Providing an option for the customer to become more sustainable in their sourcing strategy may offer opportunities for employing a higher price and thereby strengthening profit margins.

As stated above, a large part of the market views sustainability as an important aspect. The expressed importance does not however greatly affect the respondent's views on the trade-off between lead time and sustainability. Here, instead, the lead time is what is almost unilaterally viewed by the market as carrying the greatest importance. South Africa and Russia diverge somewhat from this assertion by placing their answer in the middle of the scale. The remaining sales locations either completely, or close to completely, emphasize lead time as more important. The data may foremost suggest that offering short lead times are viewed as providing more value than aiding in sustainability efforts and thus implying that short lead times are prioritized higher when choosing between alternatives. The market thereby suggests a demand for sustainable alternatives as long as they do not impact the lead times. As shown, the

respondents largely value sustainability as important, suggesting that they are willing to try to act more sustainable. However, when such efforts may negatively impact other aspects of the business, companies may fall short of actually acting in an according manner. The emphasis on lead time is also in line with Blinge and Svensson (2005) who state that the requirements for shorter lead times and faster deliveries have increased.

6.2.2 Comparison of future demand

To present the results of the comparison of future demand, the section is divided into the four areas of logistics and sustainability.

6.2.2.1 Customer support

The future demand for customer support is expressed as uncertain by five of the sales locations. The sales locations in France and UAE show similarities in how they both believe that the demand will change. France is uncertain of how while UAE believes that chat and digital support will play a greater role in the future. In contrast to this, the sales location in Denmark does not think that customer support will change in the future.

As stated above, the majority of the sales locations are uncertain of how customer support will change in the future. This highlights a different perspective than that of which was stated by Shipton et al. (2017), who argued for the increased expectations on business interactions. Thus, the collected data do not provide a general future direction in terms of customer support services. UAE is alone in contributing to a future perspective, however, these tendencies may not be inductive for the market as a whole.

6.2.2.2 Order management

Seven of the sales locations does not express their impression of how demand within order management will change in the following five years. The UK, however, believes it will change through increased customer expectations. Hungary believes that the demand will change but are uncertain of how. Denmark, on the other hand, does not think that the demand will change.

The impression of order management in terms of the future impact of e-commerce on demand is however consistent. All sales locations believe it will change in the following years. Four of

them believing that all purchases will be made through e-commerce while the rest does not know how it will change.

Worth noting is that the only telling future impact on the order management process is that of e-commerce. This coincides with the results of Leung et al. (2017) and Robinson (2016) who both describes the continued and increasing importance of e-commerce. As stated above, all of the sales locations believe that e-commerce will impact demand and four even goes as far as to state that all future purchases will be made through e-commerce. To meet such future demands companies must develop their digital capabilities. If unable to supply e-commerce solutions, companies may miss out on large revenue streams as the customers express an explicit demand for using them to place all future orders.

6.2.2.3 Warehouse

Similarly to the data collected within customer support and order management, most of the sales locations state that they do not know if the demand for warehouse services will change in the following years. Nine out of ten sales locations answered this way. However, Hungary believes that the demand for kitting will increase in the future.

The only similarity between the sales locations is thereby in their uncertainty in terms of future demand. The answers from Hungary coincides with the greater service expectations of customers as argued by Shipton et al. (2017). However, as the opinion was only expressed by one customer and not the market as a whole, it is unable to support a general impression such as the one stated by Shipton et al. (2017).

6.2.2.4 Transportation

The future demand for transportation services is uncertain among seven of the sales locations. A clear similarity is between the sales locations in Italy and UAE who both believe that the demand for real-time tracking and shorter lead times will increase in the future. Denmark also believes that the demand will increase but are uncertain of how.

The vast majority thereby expressed uncertainty when asked about the future demand for transportation services. However, the two services that were highlighted as being of growing importance, tracking and shorter lead times, can both summarized as the sales locations

expressing greater expectations. The data thereby align with the results of Shipton et al. (2017) who expressed an increase in future customer expectations.

6.2.2.5 Sustainability

In terms of the sales locations future perspectives on sustainability there is a slight difference within the market. Two of the sales locations, France and Poland, does not think that the importance of sustainability will change, however, as shown in their current demand, they consider it to be *extremely important* today. This implies that they believe that sustainability will continue to be of great importance in the future. In contrast to the responses by France and Poland, the remaining eight of the sales locations believe that the aspect of sustainability will become more important. Denmark, Hungary and South Africa mention that the demand for fixed delivery days will increase in the future.

As the data shows, a majority of the sales locations that answered the survey considers sustainability to be of growing importance. This is in line with the conclusion of Lozano and von Haartman (2017), namely that sustainability is an increasingly important aspect to customers. The data therein suggests a greater future focus on sustainability by the customers. The already great market potential in terms of generating revenue (Dangelico et al., 2016) and increasing margins (Isaksson et al., 2018), as shown in the compiled data for current demand, may thereby see further increases in the future. Sustainability efforts therein suggest a profitable future direction for companies.

It is, however, unclear if sustainability will come to carry greater importance when compared to short lead times, unlike what was shown in current demand, or if the priorities across the two will remain the same.

7 Discussion

The following chapter will contain a discussion of both the methodology and the results of this study. First, a discussion about the final design of the method and the challenges and sources of error that arose from the chosen methodology. This is followed by a discussion of the result, first in terms of what they mean for Husqvarna Construction and thereafter how they may contribute to further research within the area of discipline.

7.1 Discussion of methodology

The general outline of the methodology followed the three phases that were presented in chapter 5. Below, each of the phases will be discussed individually before concluding with final remarks.

During the initial phase, a number of unstructured interviews with representatives of Husqvarna Construction took place to create a clear picture of the current situation and the problems they were experiencing. Simultaneously, a literature study was initiated which resulted in a theoretical framework with relevant theories from previously conducted research. The primary obstacle experienced in this phase was the sometimes non-conforming schedules with the supervisors at Husqvarna Construction. This impeded efforts of delving deeper into some aspects of the scope as they pertain to Husqvarna Construction. However, an adequate assessment was deemed to have been made in order to progress with the study.

As previously stated, the data for the study was collected from ten countries out of the 26 within the EMEA-market. The results may thereby not be indicative of the entire market. Furthermore, as there exists multiple sales locations within several of the countries in the EMEA-market, opinions may also vary on such a basis.

Due to an emphasis by Husqvarna Construction on the use of surveys, along with its merits for tailoring to the scope, surveys were used as the main data collection method for the study. Even though the survey was twice revised with the supervisors at Husqvarna Construction to ensure that the logistics terms used would be understood by respondents, more precaution could have been made. An appendix with definitions of the terms that were used could have been sent out

along with the survey to the respondents. This may have to a greater extent prohibited any misunderstandings from occurring.

Additional challenges that arose and which may have impacted the answers are for example varying competencies and language barriers. First, the varying competencies of those who responded to the survey may have had an impact. As several of the respondents, as shown in the results chapter, held different positions, their associated competencies may have yielded a varying understanding. Despite the clarifications that were provided in the survey, the varying roles of the respondents may have given added cause for producing an appendix with definitions of the terms. Second, the survey was designed in English and sent out to people with varied skills in English. This proved to cause complications when the French customers requested interviews in French due to language difficulties. Due to the time and knowledge resources available, such a solution was unable to be produced therefore prompting all of the respondents to provide their answers via the survey.

The varying competencies and language barriers may thereby have imposed challenges on the study. However, as was shown in the graphs for comparing demand, the sales locations rarely employed the option of *Don't know* and it was never persistently used throughout the survey. This may indicate that the respondents thereby felt that they possessed an adequate understanding of the questions in order to provide an answer. The concerns can, therefore, be interpreted as laying in if the respondent was comfortable enough to adequately express themselves in english or if the respondents viewed the services differently due to varying definitions. An inability in expressing oneself in english may provide an answer as to why there often were brief statements in the open questions. However, a conclusive assessment can not be made as the extent of the answers showed no relationship to if the country had english as its primary language. The often-brief statements may therein rather be explained by that the respondent felt that they had already adequately expressed their demand or due to a shortage of time to complete the survey.

As previously stated, Husqvarna Construction was responsible for sending out the surveys and for managing all further contact with the respondents. Due to the survey having been sent out later than initially planned, the number of weeks for which were available to collect data were reduced. The survey was extended for a smaller period of time, however, a greater extension may have increased the response rate allowing for more sample data. Due to subsequent

deadlines, such arrangements were unable to be made once the survey had been postponed. Additionally, due to the delay, no validation by having clarifying interviews with the customers could be performed. Such interviews may have provided insights into whether the questions had been properly understood and certain topics could have been delved deeper into to create a greater understanding.

Other than the time period for answering the survey, additional aspects may have yielded a higher response rate. For example, the survey could have been shorter. A shorter survey may have resulted in a higher response rate by demanding a lesser effort on behalf of the respondent. However, such a solution would have negatively impacted the data that could be collected, thereby producing a more narrow scope, shallower insights, or a combination of the two. Furthermore, sacrifices had already been made to the amount of room given in the survey to track for example future demand. Collecting data on future demand is one aspect that had been more suited to be performed by interviews as they would have allowed for greater discussions. The sacrifices made to perform the data collection via surveys is a probable cause as to why there were insufficient data in some cases in this area.

By using interviews, both questions and answers could have been explained and clarified if there had been any confusion, and it would have been possible to have a deeper discussion. However, the main part of data collected through interviews would have been qualitative and it would have been difficult to collect as much quantitative data as when using surveys. This would thus have been a more time-consuming process both in execution and analysis, but it may have led to an increased response rate. However, the language barrier and problems with whom answered the questions would have remained.

By using the analysis model presented in section 5.3.1, the data has been analyzed in a consistent manner, regardless of sales location, which has simplified the data analysis. What should be taken into consideration is that the analysis model has been developed by the research group for this study, but since it is designed on the basis of the theoretical framework and the method, it can be considered well-founded.

The chosen method that was undertaken in the study was regarded as not carrying any major ethical concern. However, throughout the study it is advocated that all activities within the supply function must be adapted to meet the requirements of the customers, therein disregarding

any other aspects. The chosen supply offerings may thereby risk having negative implications in terms of, for instance, sustainability. However, the results show that the customers, at least to an extent, value sustainability. This may thereby suggest that the supply of services, as advocated by the study, will not carry a considerable adverse effect.

As stated above, the chosen methodology of the study produced various challenges. The main one being the level of uncertainty in terms of if the respondents had a common understanding of the logistics terms used. The challenges must be taken into consideration when viewing the results. Despite these, the method proved successful in providing insightful data, the results of which will be discussed in the following section.

7.2 Discussion of result

The purpose of this section is to discuss the results and its implications as well as proposing areas for future research. This is done by first discussing how the results impact Husqvarna Construction and thereafter how the results fit into current research within applicable disciplines.

7.2.1 Impact of result on Husqvarna Construction

The results of step one, two, and three gave a mapping of the sales locations in terms of the current and future demand as well as their perspectives on sustainability. The current demand expressed by the sales locations provides Husqvarna Construction with an overview of the services valued in the context of which they are offered. The results therein provide an explicit direction of aligning demand with supply as advocated by demand chain management, DCM (Jüttner et al., 2007). In addition, the results of mapping future demand, provide a sense of future direction, the importance of which has been stated by Markides (1999) and Day (1998). The benefits from the alignment efforts which are made possible of having mapped the current demand are thereby further strengthened by the knowledge of future directions. However, due to the nature of the data collection, as discussed in the previous section, the results on future demand were in some areas insufficient in providing a clear understanding. The sales locations largely expressed uncertainty, therein not indicating any future direction. However, as argued by Markides (1999), the market may be continuously evolving and furthermore, Slater and Narver (1994) emphasize that companies must thereby maintain efforts of studying the market

to, more specifically, in this case, capture how the uncertainties develop. This may thereby suggest a need for future efforts to be directed solely at future demand to extend the knowledge of the market.

The results of the study further suggest Husqvarna Construction to investigate where their current performance and value offerings are in relation to those demanded by the market. In order to adjust the supply to demand, the current state of how they relate to one another must be studied to identify areas for improvement and development. Furthermore, Husqvarna Construction should identify where resources may currently be employed to serve a perceived demand, which may actually not exist.

The results obtained by capturing the perspectives held by the sales locations on sustainability provide valuable insights for developing market offerings. By tailoring to these demands Husqvarna Construction may strengthen their financial performance (Isaksson et al., 2018). However, an important aspect that arose in the analysis, is that any value offerings regarding sustainability should not carry a negative impact on lead time. The high value placed on sustainability along with the views held by the sales locations on lead time may indicate future venture opportunities for Husqvarna Construction. By jointly developing operational improvements for planning with their customers, slight sacrifices made to the lead times to utilize more sustainable modes of transport may be offset by better planning, thereby preventing inventory problems. This thereby suggests Husqvarna Construction to further investigate the possibilities of such a solution, or other, to tailor to the markets demand for sustainability and operational performance.

One of the more prominent findings of the study is the emphasis made by the sales locations on short lead times. As stated in the introductory part of the study, Husqvarna Construction is currently in stages of evaluating its distribution network. The results therein provide insights into what is demanded by the future structure as solutions will need to be developed to tailor to the lead time requirements of the market. If these requirements prove to be order-qualifiers, inabilities in fulfilling them may prove dire.

As was shown in the results, a large number of the logistics services that were expressed as valuable, held similar assessments across the market, thereby implying a homogeneous demand. In the case where the demand converges, Vishwanath & Krawiec (2007) argues that

one way of increasing resource utilization is by serving groups of customers jointly. The results, additionally, suggest opportunities for Husqvarna Construction to achieve increased financial performance through economies of scale (Wind and Bell, 2014) while excelling in delivering service quality. Likewise, unique requirements which offered great value were identified. However, to capitalize on the unique demands, the cost of fulfilling them must be set in relation to the additional revenue they may add. Additionally, the gained competitive advantage of responding to customer demand argued by Medhani (2015), and the possibility of charging a price premium argued by Day (1998), should be taken into consideration. This thereby indicates future efforts for Husqvarna Construction when developing their service offerings to first; bear in mind the economies of scale that may be achieved, and second, to weigh the economic benefits against the costs of supplying unique services.

By subsequently employing the information obtained, Husqvarna Construction will come closer to their *Strategy 2020* of becoming a more customer-oriented organization. By doing so they will attain the many advantages, as stated by Day (1998), of being driven by the market.

7.2.1 Impact of result on areas of discipline

The study sought out to map the demand by customers of a global manufacturer of light equipment within the EMEA-market. The results may thereby not be characteristic of the general business-to-business market. However, a large part of the results in the study are supported by previous research in more general terms. Primarily within the areas of service expectations, e-commerce, and sustainability.

The results suggest higher service expectations through a demand expressed for a great number of services within multiple areas. Additionally, the increased expectations are also manifested in short lead time requirements. However, as shown in the results, the market largely did not place a high value on the services within warehousing. Although, a high level of importance was expressed for some of the services, there was no evidence for greater expectations in terms of the range of services offered in contrast to the other logistics areas. The results thereby predominantly coincide with Batra's (2018) and Michelman's (2018) assessment of the great expectations held by customers by showing a considerable demand for a wide selection of services. The research thereby adds to the conclusions of Batra (2018) and Michelman (2018)

by showing the same results in the specific case of logistics services within customer support, order management, and transportation.

The results of the study show strong support for the current and future demand of e-commerce solutions. This coincides with Leung et al. (2017) who argues e-commerce to be a prominent trend within order management. This shows how digitization in terms of the purchasing process, is affecting the manufacturing business. This suggests future avenues of research on how the growing importance of digitization within different areas of the manufacturing operation may be connected.

The results show the high value placed by the sales locations on sustainability. This is in line with claims of Arvidsson (2017) and Lozano and von Haartman (2017) who have both stated the already established and growing importance of sustainability. This largely coincides with what is shown both in terms of current and future demand as it relates to sustainability. However, in terms of the customers within light construction equipment, further research is suggested to identify, and better capture the underlying views.

The study provided results on initial efforts of aligning supply and demand as advocated by demand chain management, DCM (Jüttner et al., 2007). By conducting the initial efforts of mapping the market demand, the research provided insights into how these efforts may be performed. However, additional research is needed on how to continue the endeavor of alignment in supply and demand. More specifically, how supply, from a theoretical standpoint, may be adapted to the demand.

8 Conclusion

Research questions one, two, and three were answered by individually mapping the sales locations with the data collected from the survey. In terms of the second research question, future demand, the sales locations were mainly uncertain except for e-commerce and sustainability which, by a vast majority, were believed to be of growing importance.

To answer the fourth research question, distinct similarities and differences were identified. The results therein provide a direction, which if acted upon presents valuable opportunities. The most prominent similarities identified were the demand for e-mail support, e-commerce, and tracking as well as the importance of sustainability. The three aforementioned services, along with the other services that showed largely widespread, high valuations should thus strongly be considered to be implemented by Husqvarna Construction. The most prominent differences identified between the sales locations were for the services; chat-support, kitting, bundling, drop shipment, and merge-in-transit. To capitalize on the unique demands that were identified, the cost of fulfilling them must be set in relation to the additional revenue they may add.

The results of this study identified the current and future demand of logistics services as well as similarities and differences across the market. Thus, this study laid a foundation for future research on the alignment between the supply and demand, which is the key element in the Demand Chain Management framework. However, additional research is needed on how the endeavor of aligning supply and demand may continue.

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