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LOGISTICS CUSTOMER SERVICE AND THE EFFECT OF DISTRIBUTION DECISIONS ON THIS IN A CASE COMPANY

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LOGISTINEN ASIAKASPALVELU JA JAKELUPÄÄTÖSTEN VAIKUTUS SIIHEN ESIMERKKIYRITYKSESSÄ

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Tämän opinnäytetyön tarkoituksena oli tutkia esimerkkiyrityksen logistisen asiakaspalvelun tasoa ja erityisesti sitä, kuinka jakelupäätökset vaikuttavat siihen. Tutkimuksen tavoitteena oli selvittää kuinka asiakkaat haluaisivat parantaa esimerkkiyrityksen logistista asiakaspalvelua ja tämän perusteella pohtia auttaisiko logistiikkakeskus parantamaan esimerkkiyrityksen asiakaspalvelua ja logistista suoritusta. Tarve tälle tutkimukselle juontuu esimerkkiyrityksen halusta paikantaa asiakkaidensa mielipiteet ja toiveet parantaakseen logistista suoritustaan ja asiakastyytyväisyyttään.

Tämän tutkimuksen teoriaviitekehys rajattiin käsittelemään logistista asiakaspalvelua ja jakelupäätöksiä. Ensimmäinen osa esittelee logistisen asiakaspalvelun perusteet ja sisällön sekä käsittelee myös sen tärkeyttä yrityksille. Lisäksi esitellään erilaisia metodeja mitata logistista asiakaspalvelua. Toinen suurempi kokonaisuus teoriaosassa koskee jakelupäätöksiä käsittäen laajasti aiheeseen liittyvät keskeiset asiat toimituskanavista toimitusmetodeihin.

Tämä tutkimus toteutettiin käyttäen kvalitatiivisia tutkimusmetodeja. Kvalitatiiviset tutkimusmetodit valittiin, jotta pystyttäisiin saavuttamaan laadukasta ja syvällistä tietoa suoraan niiltä henkilöiltä, joiden näkemykset esimerkkiyritys halusi saada selville. Tiedon keräämiseen käytettiin kvalitatiivista teemahaastattelua, jossa haastateltiin esimerkkiyrityksen asiakkaita. Esimerkkiyritys valitsi haastateltavat asiakkaat, joiden mielipiteet selvitettiin henkilökohtaisessa haastattelussa. Haastatteluissa käytettyä teemalomaketta käytettiin myös tiedon organisoimisen sekä analysoinnin pohjana.

Tutkimuksen tulokset osoittivat, että asiakkaat kokivat yhteneväisesti esimerkkiyrityksen epäonnistuvan tai tarvitsevan parannusta useissa logistisen asiakaspalvelun elementeissä. Elementit joihin kaivattiin eniten parannusta ja kehitystä olivat kommunikointi ja tiedon jakaminen, tuotesaatavuus, toimitusvarmuus ja luotettavuus sekä kuljetuspakkaus. Asiakkaiden tarpeiden täyttämisen epäonnistuminen näillä alueilla johti asiakkaiden tyytymättömyyteen sekä merkitsi myös lisätyötä ja stressiä asiakkaille. Lisäksi asiakkaiden kyky palvella omia asiakkaitaan, kuluttajia, heikkeni. Tutkimuksen tulokset antoivat myös suuntaa antavia todisteita sille, että logistiikkakeskus todennäköisesti parantaisi esimerkkiyrityksen suoritusta logistisessa asiakaspalvelussa.

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This study was conducted in order to research the case company's level of logistics customer service and in particular how the distribution decisions of the case company affect on the customer service. The objectives of the study were to identify how the customers would like to improve the case company's performance, and to give some guidance and direction whether or not a distribution centre would facilitate in improving the delivery performance. The need for this study was originated from the case company due to the fact that the case company wanted to know their customers' opinions and feelings about their performance before beginning to make any decisions how to make their operations more efficient.

The theory framework of the study was limited to logistics customer service and distribution decisions. The first part begins by introducing the concept and content of logistics customer service as well as the importance of logistics customer service for companies. The measurement and methods of measuring logistics customer service were also discussed. The second larger entity in the theory part discussed distribution decisions in a company from channel selection to the alternative delivery methods.

The research methods that were used in this study were qualitative. Qualitative techniques were chosen in order to receive in-depth information directly from the people, who the case company wanted to be heard. The respondents were chosen on the basis of the key informant technique. The key informants were chosen by the case company. Qualitative and semi-structured interviews were used in the data gathering, and an interview guide was used to form a structure for the interview as well as to function as the basis for data organising and analysis.

The results of the research proofed that the same problems and improvement points were identified by all of the customers to some extent. The main elements that were considered needing improvement were communication, product availability, delivery accuracy and reliability, and transportation packaging. Problems in fulfilling the customer needs in these areas resulted in additional work and stress for the customers as well as decreased the customers' ability to serve their customers properly. The results of the research also gave some supporting evidence that acquiring a distribution centre would in fact improve the case company's logistics customer service performance.

TABLE OF CONTENTS

BIBLIOGRAPHY

APPENDICES

1 INTRODUCTION

The subject of this thesis is logistics customer service and how distribution decisions impact on this. In today's world the customers are more and more valuing service over brands and in order to remain competitive and to keep loyal customers companies need to consider the service and logistics aspect. Logistics and distribution actions have an impact on the level of customer service and customer satisfaction and thus the relation between these two has to be considered.

The need for this thesis is derived from the case company of this thesis. The purpose of this thesis is to research the perceived level of logistics customer service among the chosen business-to-business customers, and on the basis of the results, to give suggestions and recommendations on how to develop the logistics customer service in the case company.

The case company is very customer-oriented organisation and wants to explore their customers' opinions on their distribution efficiency before making any decisions on whether it needs to be developed or changed somehow. The aim of this research is to explore the distribution from the customers' point of view and draw conclusions on how the customers prefer to receive deliveries from the case company. The research was conducted with qualitative methods, and a semi-structured interview was used in interviewing the key informants from the customer organisations chosen by the case company.

The case company is a large organisation with international operations. This thesis is however limited to domestic distribution activities. This research is limited so that it includes only the distribution of product Z, product X and product Y of the company. This limitation was agreed due to the fact that these product groups have similar kind of distribution where as the distribution of the company's other products differ to some extent. Due to the fact that this thesis is confidential on the request of the case company, the names of the case company's products or customers will be replaced by different codes.

2 LOGISTICS CUSTOMER SERVICE

2.1 Definition

Logistics is the function of the flow of materials from suppliers into a company, through operations in the company and finally out to the customers. In other words, logistics is the management of business operations in the way that the right products are delivered to the customer at the right time, at the right quantity and quality and to the right place in the most efficient way. The end goal is to provide good customer service through well-managed logistics operations. (Rushton, Oxley & Croucher 2000, 4-5; Waters 2003, 5.)

Outbound logistics covers all the operations that take place after the manufactured products are produced and ready. It includes the management of warehousing the finished products and delivering them to the customers with high level of customer service and in a cost-efficient way. This requires planning, organising and decision-making in such areas as inventory planning, distribution strategies, and transportation.

Outbound logistics decisions determine in what way, from which place, at what time and with which service quality the customer orders will be delivered. These functions include for example order picking, warehousing, inventory control, channel decisions, transportation and packaging. It also includes the actions that take place after the customer has received the orders, such as handling the complaints and possible returned products. (Coyle, Bardi & Langley 1996, 5.)

Customer service in logistics is to be distinguished from customer service in marketing. Logistics customer service is restricted to activities that take place during an individual order cycle where as customer service in marketing occurs outside the order cycle, for example creating awareness of product. Customer service in logistics is based on the effectiveness and efficiency of outbound logistics activities. It defines the effectiveness of logistics in the channel of distribution and is concerned with making the product available for the customer.

Of course customer service is also affected by inbound logistics and production activities. For example, if there is something wrong with the production and there is not enough stock to deliver customer orders, it will naturally affect on the level of customer service. Mainly logistics customer service affects in business-to-business relations, for example manufacturer and retailer, however it also has an affect on the final consumer as well. If the logistics customer service is of poor quality, it will also show in the customer service that the retailer or wholesaler will provide to their customers. (Collins, Henchion & O'Reilly 2001.)

During the past few decades the concept and definition of logistics customer service has changed. Logistics customer service in the 1970's and 1980's was only attached to the reactive response to the customer complaints. Only on late 1980's companies oriented to the concept of that logistics customer service can actually add value. Although, even then the emphasis was on setting customer service standards that were internally derived and based on what the company could do and not by what the individual customer actually wanted. Only recently the concept has changed towards the attitude that identifying and exceeding the customer's expectations in a value-added way is the way, how companies can remain competitive and gain benefits. (Collins et.al. 2001.)

There are various different definitions for logistics customer service. Logistics customer service can be defined as the chain of activities from order entry through the delivery of the product to customers and finally ending to post-delivery actions, like maintenance and installation. Another way to define customer service is to use the "seven R's rule". Outbound logistics creates customer service by delivering the right product, in the right quantity, in the right condition, at the right place, at the right time, for the right customer, and at the right cost. This requires for all the functions in outbound logistics from order picking, through warehousing to transportation to work properly. (Bloomberg, LeMay & Hanna 2002, 80-81.)

A very simplified definition describes logistics customer service through the attributes or elements attached to it. For instance, logistics customer service can be defined as order cycle time; consistency and reliability of delivery; inventory availability; ordering convenience; packing and labelling accuracy; delivery times and flexibility; ability to substitute; invoicing procedures and accuracy; claims procedure; condition of goods on

arrival; post-sale support for the product; product tracing; and order status information. The different logistics customer service elements will be discussed in more detail in chapter 2. (Collins et.al. 2001.)

2.2 Importance

Customer service is a critical success factor for companies. Nowadays, when products are becoming more and more equal in their characteristics and quality, the differentiating factor will be the quality of customer service. The trend is moving from brand and product focus into customer value focus. Companies have realized the power of customers and are now forced to pay attention to customer service quality. This requires customer-oriented philosophy from the entire company. The competition between suppliers is hard and those companies that are able to provide good customer service can gain competitive advantage. Researches have indicated that nowadays customers rank customer service even above the price and the product quality. This means that customers are valuing accurate deliveries and delivery speed more than low prices. This requires companies to focus more on their logistics customer service.
(Bowersox & Closs 1996, 75; Christopher 1996.)

Logistics customer service also affects on the end-consumers. If a company is providing poor logistics customer service for their customers, it will also affect in the level of customer service that the customer provides for the end-consumers. Therefore, it is important that logistics customer service is of adequate or above adequate level. This due to the fact that, if the end-consumer is not satisfied it is likely that he will buy the product from some other supplier, which will result in loss in sales for the retailer. And, if the retailer is not selling as much as before it will also lead into decrease in sales for the manufacturer as well.

Logistics customer service functions as the link between logistics and marketing. Marketing has done its job and reached its goal when customer has placed an order, however if logistics does not deliver products as promised, the customer will not be satisfied. Therefore logistics customer service adds value to the product and has a direct affect to sales. If customer service is not functioning properly, the customer will be

dissatisfied and is likely to change the supplier. This means a loss in sales. On the other hand, if logistics is performed efficiently and in a customer satisfying way, the customer is likely to purchase again, which results in an increase in the sales. (Coyle et.al. 1995, 109.)

Logistics customer service will to great extent affect on customer satisfaction. Customer service is the way, how companies can add value to their products and gain the competitive advantage. To be able to keep the customers satisfied, companies need to provide superior value in their customer service compared to competitors. When companies are able to fulfil their customers' needs and expectations the customers will be satisfied. On the contrary, if they are not satisfied, it is very likely that they share their dissatisfaction with other people as well. It has been researched that customers will convey their feelings and experiences of dissatisfaction to greater amount of people than they do when they experience excellent customer service. Satisfied customers are also likely to keep on purchasing and stay loyal. In the end, what companies want is to keep the customers satisfied and loyal, and through that make profit. (Lambert & Burduroglu 2000.)

Customer service level also has an affect on customer loyalty. It is important to maintain customers because it is more expensive to acquire new customers than it is to keep the existing ones. The profitability comes from the loyal customers. If the customer is not satisfied with the level of customer service he is receiving, it is easy for him to switch the supplier to someone who provides such a customer service that fulfils his needs. The challenge of logistics is to provide superior value for the customer and this can be achieved by offering excellent customer service, which matches or exceeds customers' expectations and needs. (Ballou 1992, 91-92.)

As it has been discussed, logistics customer service has a big impact on sales, customer profitability and customer loyalty. Another issue that increases the importance of logistics customer service is its expenses. Serving customers can be expensive, yet it is something that companies have to invest in order to remain competitive. This is due to the fact that without service there would not be customers yielding the money. As said earlier, it is now the service quality that differentiates suppliers from each other.
(Heskett 1994.)

2.3 Targets

The overall target of customer service is ultimately to gain profit and to keep the customer. This can be achieved by satisfying the customer's needs and expectations by providing good service quality and value for the customer. All customers are unique in their needs, wants, expectations, perceptions and requirements. Therefore, the goal of logistics customer service is to be able to respond to those and by that to retain the customers. To understand the target of logistics customer service we need to define customer satisfaction, service quality and customer value, and their relation to each other. (Maltz, A.& Maltz, E. 1998.)

Customer satisfaction can be defined as the extent, to which product's or service's perceived performance matches a buyer's expectations. In general satisfaction is a person's feelings of pleasure or disappointment from comparing product's perceived performance to his or her expectations. Service quality can be defined as how consistently the product or service delivered meets or exceeds the customers' expectations and needs. (Lovelock & Wright 2002, 80-81.)

The aim of logistics customer service is to provide such a level of service quality that matches or exceeds customers' expectations and creates value for the customer. Value can be defined as perceived benefits divided by total cost of ownership. Total cost of ownership is more than just the price; it encompasses all other costs associated with buying the product as well. Perceived benefits mean the benefits that the customer perceives as receiving from the product or service. Customer value can be created when customer perceives that the benefits from the transaction are more than the total costs for the customer. Customer service level should be high but in balance with the costs and at the same time offering customer value. In other words, companies have to provide good customer service in the most economical way and yet in a way that fulfils customer needs.

The level of logistics service quality has a direct impact on customer value and hence customer satisfaction. Customers are expecting certain level of service quality from their suppliers on the basis of for instance previous experience, word of mouth or comparison to other suppliers. If the expected level is not reached the customer will be

dissatisfied resulting also in that customer value is not being created because customer value is only created if the customer perceives the benefits being more than costs. (Mentzer, Flint & Kent 1999; Christopher 1997, 49.)

2.4 Costs of customer service

The challenge of logistics is how to meet the customer requirements and needs in a service and cost competitive way. As stated already, the level of customer service has to be in balance with the costs of providing that service. The balance can be defined as the point, in which the additional revenue for each increment of service is equal to the additional cost of providing that increment (see figure 1).

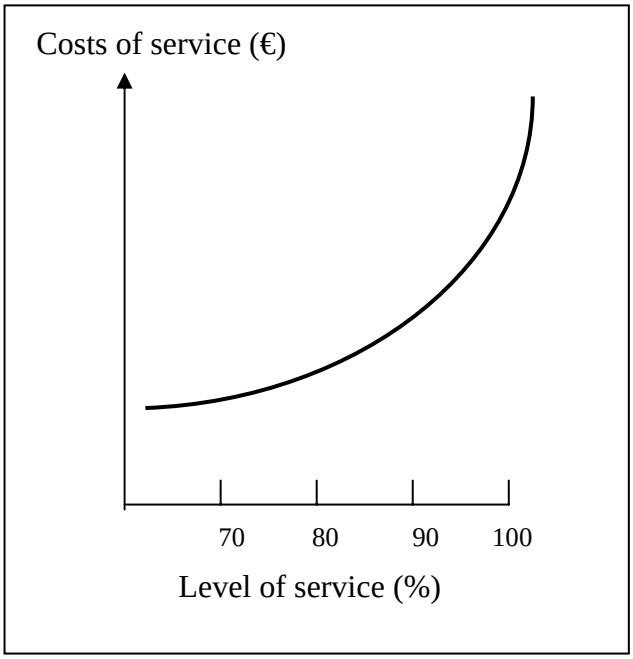

Figure 1. Relationship between costs and service level (Rushton et.al. 2000, 44.)

It is clear that there is a relationship between costs and service level. The higher the level of service is, the higher are the costs of providing it. It should also be noticed that an increase of for example three per cent in service level would cost much more between 95 and 98 per cent than between 70 and 73 per cent. However, still the service increase may have very little impact in the customer's perception even though it is a big improvement in the form of costs. (Rushton et.al. 2000, 43-44; Cooper 1990, 29-30.)

It is not simple to allocate costs that are involved in customer service. Total costs can be divided into administration costs and operational costs. Administration costs are those costs associated with supporting the line distribution functions, for example order processing costs. Operational costs can be defined as those costs dealing with the functional areas in logistics operations, for example transportation costs. (Lancioni 1991.)

Total costs of logistics customer service are concentrated on the distribution costs and mainly include order processing and information costs, inventory-carrying costs, lot quantity costs, warehousing costs, and transportation costs. Meaning that when discussing about logistics customer service we need to keep in mind again the fact that marketing and logistics customer service must be distinguished. Total costs of logistics customer service greatly depend on the channel of distribution, meaning that through which channels the products flow from the production to the customer. (Coyle et.al. 1996, 109-110.)

Companies should focus their logistics customer service into profitable and loyal customers. As discussed earlier, it is the long lasting customer relationships that ultimately bring the profit. The costs of serving customers derive from both marketing and logistics service operations. A customer profit and loss account indicates all the costs of serving a customer. Logistics customer service costs are the distribution costs in the customer profit and loss account. These costs are formed of order processing, storage and handling, inventory, transportations, packaging, credit financing and returned products and handling of those. (Pearson Education, Prentice Hall PTR 2006.)

Customer profitability matrix indicates the profitability of customers by dividing them into four groups according to the costs of serving them and the sales received from them. According to the group where each customer belongs to, companies should adjust their customer service level and costs in relation to the customers' profitability. If the customer is not a profitable one, then either the costs of servicing the customers should be reduced or the level of sales should be increased. (Christopher 1997, 67-68.)

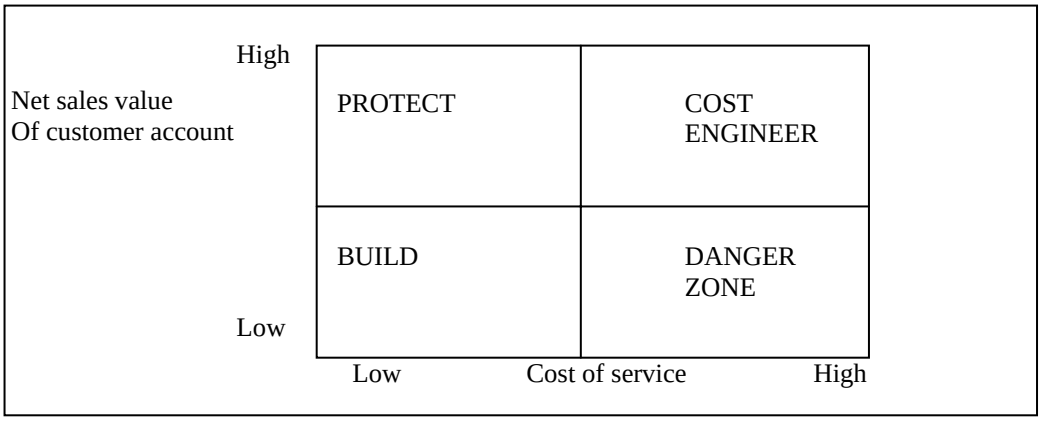

Figure 2. Customer profitability matrix (Christopher, M. 1997, 68.)

Customer profitability matrix can be used to categorise customers into groups according to their profitability. Customers that fall into the category build are the ones that are inexpensive to service. However, also their sales value is low, which means that they are not strategically important customers. This customer group's sales volume should be tried to increase without very big increase in the service costs.

Customers in the danger zone category are the ones that do not contribute much to the sales volumes, yet the cost of serving them is proportionally big. These customers are not profitable for companies and therefore companies should either reduce the cost of servicing them or somehow make them buy more.

The customers that are situated in the two upper line boxes in the matrix are the ones that bring the most sales. Cost engineer customers could be more profitable for companies if the costs of serving them could be reduced by for example consolidating deliveries or improving the efficiency of order processing. The protect customers are those customers that are of great importance and value for companies. They are buying a lot and yet the cost of serving them is not high. Therefore, companies need to retain these customers because they are the ones contributing the most profit. (Christopher 1997, 66-68.)

Reducing costs of servicing a customer is one way of enhancing the profitability of customers and improve the overall efficiency of logistics customer service. As already discussed, value of customer service is defined as total perceived benefits divided by

total cost of ownership. Total cost analysis is used for identifying the total cost of ownership in order to minimize the costs. It can be used to measure internal or external costs. It can be used to identify costs of doing business with a company's supplier or cost of doing business with a company's business customer. Total cost analysis can also be utilised in comparing the costs of doing business with the company to the costs of doing business with the competitor and that way show the customer the financial benefits that he receives from the company. (Lambert et.al. 2000.)

3 ELEMENTS OF CUSTOMER SERVICE

Logistics customer service can be presented in various ways. This chapter will introduce two different ways to classify them. The first one is dividing customer service into transactional elements and those into three categories according to the nature and timing of the service requirements. The second one classifies customer service into multifunctional dimensions in order to evaluate the different components across the whole variety of company's logistics functions. Due to the fact that it is important to know what kind of service the customers want and appreciate, this chapter will also introduce a five-step approach of identifying customer needs.

3.1 Transaction elements

Transaction elements of customer service can be divided into three categories, which are pre-transaction, transaction and post-transaction elements. Categorising is done according to the nature and timing of the customer service components.

3.1.1 Pre-transaction elements

Pre-transactional elements of logistics customer service are the elements used to describe actions that occur before the delivery. They are factors that facilitate customers in ordering.

Providing a written customer service policy allows the customer to know what level of service can be expected and thus informing whether it matches with the level of service that the customer is at the minimum expecting. Customer service policy includes information about for instance delivery terms, procedures for handling returns and complaints, methods of shipment, and backorder deliveries. Information in customer service policy lets the customer know what kind of service to expect. (Bloomberg et.al 2002, 65-66.)

Pre-transaction elements also include the organizational structure and especially how it affects on the accessibility of the personnel. Thus, how easy is it for the customer to contact the right person when there are problems or questions. This may also affect on the method of ordering and how easy that is for the customer. Ordering should be made as easy and fast as possible for the customer and available in the form that the customer prefers.

Ordering methods can vary to great extent depending on, which kind of systems are used, how close the relationship is, and how often and regularly orders are placed. If the orders are placed very rarely there is no point of having a technical and automated ordering system for instance through ERP systems (Enterprise Resource Planning). However, if the orders are very regular and frequent, like for instance in the grocery industry, it could be even that the vendor takes care that there is certain amount of goods delivered always when the inventory level reaches a certain level. This is called vendor managed inventory.(Ballou 1999, 80-82.)

3.1.2 Transaction elements

Transactional elements are the actions that occur during the delivery process, in which the order is being transferred to the customer. Order cycle is perhaps the most important

transaction element. It is the time between order placing and delivery to customer. Order cycle time will be further discussed in the context of multifunctional dimensions.

Inventory availability means the ability of the seller to respond to an order. This means that is there enough products in the inventory to deliver the order or does a part of the order need to be produced and delivered as a backorder. This is important not only for the sake of the customer service level but also concerning the costs because backorders increase the total costs of the delivery.

Concerning the delivery, there are many elements that will affect on the customer service level. Customers appreciate suppliers that are willing to be flexible in delivery alternatives in terms of how frequently and at which volumes the supplier is able and willing to deliver. For instance, is it possible to order only a small amount of goods or do you have to order a full truckload.

As discussed earlier, it is the time that is crucial in deliveries. Customers want to have their orders with quick delivery times or with regular and reliable schedules. Especially, if the product is easily substitutable, the customer will purchase from the supplier that is able to deliver it the fastest.

In addition to quick deliveries, customers will also appreciate reliability and accuracy in the deliveries. Customers want to know for sure that deliveries will arrive on time and to the right place, and that the order is filled accurately; right goods, in the right amount, in the right condition and in the agreed quality. If there are damages in the goods, it will cause costs for both sides and the credibility and reliability of the supplier will suffer. Therefore also the packaging of the goods is important. Customers appreciate packaging that is easy for them to unload, however still protecting the goods during the transportation. (Bloomberg et.al 2002, 66-67.)

Most products are distributed in packages. The challenge for logisticians is how to pack the goods in the way that it protects the goods during the transportation and takes as little space as possible so that more goods can be transported at the same time. Packaging planning and designing must also take into consideration the order sizes, so that it will not cause problems and delays to unload the goods at different customers’

facilities. Customers will also value packaging that it easy to unload and store in the warehouse and that takes as little space as possible in the warehouse as well as in the store's shelves.

Packaging is a part of the customer service level, because it affects on the unloading of the goods, as well as the quality and condition of the goods. Thus, the more efficient the packaging is, the less there will be damages during transportation and even bigger amounts can be delivered at once.

Nevertheless, packaging also generates expenses. Packaging facilitates storage and handling of the goods and it allows for better utilization of the transportation vehicle's capacity. Packaging also protects the goods during the delivery and may even change the product density so that more products can be put into smaller space. This can be done for instance with vacuum packaging. With proper packaging, companies can reduce the amount of damages during delivery as well as claims and returns due to the poor condition of the products. (Ballou 1999, 66-67.)

During the transaction of the order good logistics customer service provider will also enable and allow their customers to track their orders. Customers want to know exactly where their order is at the moment and when will it be delivered. Especially if there are some changes or problems in the delivery it is crucial to inform the customer about it, because it will affect on his operations as well. Tracking can be available for instance on-line or through common EDI (Electronic Data Interchange) or ERP systems between the supplier and the customer.
(Gattorna 1996, 66-67.)

3.1.3 Post-transaction elements

Post-transactional elements of logistics customer service are the actions taken after the customer has received the delivery. They are issues concerned with using, maintaining or returning the product, in other words it is after-sales service.

Logistics customer service process does not end when the customer has received his order. After delivering the order, the customer checks that the order contains what was agreed, in the right amount, condition and quality. If there appear some problems, the customer has to contact the seller. Post-transaction elements at this point include company's availability of spares and replacing products, as well as how long does it take and how easy it is for the customer to reach the right person in the company to handle possible problems with the delivery.

Post-transaction elements in some cases can also include installation of the product, if it is some device that needs to be installed. Usually, with devices and perhaps other products as well, there is or can be a guarantee given for a certain period after delivery. The length and terms of the guarantee are also a part of post-transactional elements.

Company's ability and procedures to handle possible problems with the delivery as well as handling complaints and returns, is also an element of logistics customer service. The easier it is for the customer to return for instance damaged products and the faster the company is able to replace the damaged goods, the better is the level of customer service. Naturally, the less there appear damages or other problems the better it is for the overall customer satisfaction and service quality.

After the customer has received the order, there will be an invoice sent to the customer. Post-transaction elements at this point include the method and procedures for invoicing as well as the accuracy of invoicing. This means, how well the company takes into consideration customers' preferences in invoicing, for instance how long time is given for payment, what kind of payment terms there are and in which form is the invoice sent. Since, this part is concerned with money and a possibly large amount of it, there is no place for mistakes here. However, since there is always a possibility for the human error, mistakes in invoicing must be corrected and compensated.

Post-transactional elements form an important part of the logistics customer service. The sale is not closed when the order is delivered to the customer, and therefore companies have to take care of the after sales actions as well. (Ballou 1999, 82.)

3.2 Multifunctional dimensions

Multifunctional dimensions are formed from the company's logistics functions point of view. Four dimensions have been identified; time, dependability, communications and flexibility.

3.2.1 Time

Time in logistics customer service usually refers to order cycle time. Order cycle time is the time from customer order to the time that the customer receives the goods. Order cycle time consists of four primary components, which are order transmittal, order processing, order preparation and order shipment. These components have to be managed so that the time elapsed at each stage is of reasonable length and preferrably as short as possible. (Collins et.al 2001.)

Order transmittal is the time from order placement from the customer to order receipt by the seller. The duration of order transmittal can vary from nanoseconds to many days. Technology has enabled order transmittal time to be faster than it was a couple of decades ago. There are five most common methods of ordering used. The two slowest methods of ordering are via a sales representative or through mail. If the ordering is done via a sales representative, the sales representative physically delivers the order either in person or by telephone. If the order is done through mail, it usually takes at least a day until it is delivered and in addition it may take time for the order to reach the actual receiver in the company. The third method of ordering is by telephone, which is rather fast way. However, the fastest methods to order nowadays are through the Internet, by fax or through an EDI system.

Companies need to bear in mind their customers when they design the way, how customers can place an order. Companies need to enable a method of ordering that is preferred by the customer. It should be easy, fast and simple for the customer to place an order. If the ordering method is dependent on technology, for instance EDI application, the company has to make sure that there will not be any technical problems. (Bloomberg et.al. 2002, 67-68.)

Once the seller has received the order from the customer, the order needs to be processed. Order processing is the set of activities that need to be done to make the correct goods ready for the delivery. Processing the order includes activities such as checking the customer's credit, transferring information to sales records, ensuring product availability, preparing necessary shipping documents, and transferring the order to the inventory area. This stage in order cycle time does not necessarily take a long time nowadays, due to the developed technology that enables some of these processes to be performed simultaneously. (Coyle et.al. 1996, 115.)

Order preparation time begins when the order is given to the warehouse and ends when the goods are on the warehouse dock ready to be transported. Activities performed in the preparation time are such as picking the right products and packing them for the transportation. Preparation time can vary a lot according to which sort of system is used. Some companies use a simple and rather slow manual system where as some companies use highly automated picking and packing systems. Order preparation time also depends on whether the necessary amount of goods is ready in the inventory or do the products need to be produced first.

Order shipment time is calculated from the time that the seller places the goods to the transportation vehicle to the time that the buyer receives and unloads the goods at his premises. The order shipment time varies according to which transportation mode (air, sea, road, rail, pipes) is used, and how long the distance between the seller and the buyer is. Usually, the order shipment time is the most time consuming phase of the order cycle time. It is also the phase that the seller does not necessarily control because most often the transportation is outsourced.

Order cycle time as a whole vary significantly depending on order transmittal system, level of automation in order processing and order preparation and distance from the customer. Factors that also affect to the order cycle time are importance of the customer to the seller, and the nature of the production process and field of business. For instance, the order cycle time of a daily product like milk, and a huge investment like an airplane, are very different.

The old saying, “time is money,” describes order cycle time well. Fluctuations and variability in order cycle times affect the inventory, warehousing, packaging, and transportation costs of a company. Therefore, the order cycle time is a crucial part of logistics customer service, not just in order to provide good customer service but also to keep the costs low. (Bloomberg et.al. 2002, 68.)

3.2.2 Dependability

Dependability refers to the seller’s ability to deliver undamaged goods with fixed and accurate delivery times. It basically concerns the reliability of the seller to deliver the customer orders at the right time and at the right condition and agreed quality. To some customers, dependability is even more important issue than order cycle time. Therefore, the customer is so to say dependent of the seller.

The ability to ensure that delivery time is always for example 10 days reduces the need of safety stock of the customer. Through this, the customer is able to reduce the inventory costs. Also, the ability to always deliver the right goods, with the right quantity and undamaged, is highly appreciated among customers. If companies are not able to do so, the customer is likely to face a stock out. In addition it will cause extra costs for the customer for example in the form of lost sales or time lost in filing a complaint. This results in dissatisfaction of the customer as well as the end-consumers. (Coyle et.al. 1996, 116-118.)

3.2.3 Communications

Communication with customers is essential in monitoring the service levels relating to dependability. The communications process must be a two-way process with the seller and customer transmitting information to each others. Communication should be made as easy as possible, especially for the customer to communicate with the seller in the matters of ordering, deliveries, complaints and many others. The communication should be always available and possible in the way that the customer prefers, whether it is by telephone, by e-mail or some other.

Without communication between the seller and the customer it is impossible to know what the customer actually wants and expects. Companies need to be open in their communication concerning customer enquiries about delivery times, products, order status, invoicing and many others. Companies also need to be open in receiving feedback and complaints because that way they can learn what is being done wrong and what they can improve. (Collins et.al 2001.)

3.2.4 Flexibility

Flexibility is a key issue in logistics customer service. Customers' needs and requirements often differ and companies need to be able to respond to those accordingly. Logistics customer service flexibility or convenience means that the operations must be flexible to meet the non-homogeneous requirements of customers. The logistics manager must balance the unique requirement each customer has with the ability to meet these requirements economically. At this point, also the profitability of the customers should be considered. If a company has many customers, it should focus more customer service resources to the profitable customers.

Customer can also be segmented according to their customer needs, which usually differ according to the size, market area, and the product line the customer is buying. They differ in their needs concerning for instance ordering method, communication methods, frequency and amount of orders, desired delivery time, paying and many others. Therefore, companies need to identify what their customers want from them. The next chapter will introduce the process of identifying customer needs in more detail. (Coyle et.al. 1996, 119.)

3.3 Identifying customer needs

In order to be able to provide good customer service companies need to identify their customers' needs and what they are expecting from them. Customers may have very different view of what is good customer service to them than what companies think is good customer service. Therefore, it is important to know what customers perceive as being good customer service.

It is not enough if a company itself thinks that they are providing good customer service, they have to operate in a way that they provide the kind of customer service that their customers want and expect. For instance, if a company believes that good customer service is gained by providing high level of complete order deliveries the customer may value more fast delivery times than completeness of orders. (Gattorna 1996, 71-74.)

To be able to identify the customer needs, companies need to go through a process of identifying customer needs. Process consists of five steps. The first step is to identify the competitive area, in which a company is competing. The second step is to understand the key elements of customer service following with the third step of ranking the service elements into importance order. The fourth step in identifying the customer needs is to segments the customers according to their service needs, because not all customers want the same kind of service. And last, companies should measure their customer service against the one that customers perceive as being "the best in class."

Before starting to research the actual elements of customer service companies need to realize their competitors. They are the ones, to which against companies need to compare their own service level. Companies should position themselves in their customers' minds and figure out who are the ones that customers compare our service against. The competitors may often not be the actual competitors of the company in the markets but rather they are suppliers that customers do business with. When considering logistics customer service, the other suppliers of customers are the competitors.

In order to understand customers' needs regarding logistics customer service companies have to identify relevant and most important elements of customer service. These differ according to each customer or customer segment. Without knowing the relevant and most important factors it is impossible for companies to concentrate their resources on the relevant and most affective issues. To identify the relevant elements companies need to ask directly from their customers.

The first issue to consider is to determine the right persons who to ask for this kind of information. The person can vary from customer to customer, however the person

should be the one who is involved with decision-making and buying in the company and has first hand information about their ordering and receiving deliveries.

After finding the right persons to ask what want, expect, prefer and value in customer service the following step is to conduct the research. This can be done in various ways. The most often used methods are different kind of interviews, group discussions or focus groups. The possible methods will be more deeply discussed in chapter 4. The importance in this step is to identify the relevant elements of customer service perceived by the customers, not by the company itself. Identifying the relevant elements will also facilitate the overall measurement of logistics customer service, which will also be discussed in chapter 4.

The following step is to identify the relative importance of the selected and relevant customer service elements. This is important in order to be able to concentrate and focus resources and improvements to the right issues. After identifying competitive area, relevant service elements ant their relative importance the next stage is to segment the customers according to their service needs and requirements. Segmenting will allow for targeting different kind of service strategies for various segments. Using targeted service strategies for each segment will enable more precise, customized and accurate customer service for each customer.

The last step in identifying the customer needs is to measure the customer service performance against the best in class customer service provider. Measuring customer service performance against the best ones will allow for competitive benchmarking and development of customer service levels. Perfect order and competitive benchmarking will be further discussed in the following chapter. (Christopher 1997, 38-40; Rushton et al. 2000, 38-43.)

4 THE MEASUREMENT OF CUSTOMER SERVICE

When measuring customer service, it is important to realize that it needs to be measured from two different perspectives; from the company's perspective and from the customers' perspective. Companies can gather quantitative information of their customer service level from their own databases, however in order to learn and develop their customer service they need to research customers' opinions as well. This chapter discusses the importance of measuring logistics customer service as well as introduces the most common metrics used in measuring it and possible methods of measuring customer service levels.

4.1 Importance

Measuring customer service quality is important for companies mainly for two reasons. Firstly, without measuring company's performance in customer service, it would be impossible to develop the company's service quality. Measuring service quality by metrics of the key elements of customer service enables companies to identify the things that are being done well and most of all things that need to be improved. If the internal analysis of customer service indicates that there is a remarkable increase in for example the number of returned products, the company needs to analyse the reason for that. Otherwise, if the poor quality of service continues it is likely that customers will switch their supplier. Measuring can also enable companies to benchmark their customer service against the service of competitors.

The second reason why measuring and evaluating customer service is important is the fact that without measuring customer satisfaction on company's customer service it would not be possible to satisfy customer needs. Therefore, it is crucial to ask from the customers what they want and have they been satisfied with the service that they have been receiving. This means finding out what kind of service elements the customers appreciate, which elements are the most important ones, to which elements of service have they been satisfied, to which not and why not. This information is essential in

being able to achieve the ultimate target of logistics customer service, which is, as mentioned earlier, retaining the customer. (Mentzer, Rutner & Matsuno 1997.)

4.2 Metrics

In order to measure the logistics customer service, companies need to determine metrics that will be used in the measurement. Metrics should be relevant, meaning that measuring only the issues that are relevant and useful and not concentrating on choosing metrics that will give nice results for the company.

Most common metrics used in measuring logistics customer service are percentage of orders delivered on time, percentage of orders delivered straight from the inventory, percentage of orders delivered undamaged, percentage of orders filled accurately, order cycle time (days), time to response to customer enquiry and many others. These metrics are easy to measure because the information can usually be found from the company's own databases. The following table illustrates a few customer service elements and examples of the metrics that can be used to measure them.

Table 1. Metrics to measure customer service in logistics (adapted from Coyle et.al. 1996, 120.)

Element	Metric
Product availability	% availability of products in stock, e.g. 95 %
Order cycle time	Time elapsed from order placement to order receipt by the customer, eg. 5 days
Delivery reliability	% of orders delivered on time from total amount of orders delivered
Error free orders	% of error free orders delivered from the total amount of orders
Order completeness	% of orders delivered complete (right amount of right products on-time) from total amount of orders
Post sale product support	Response time (days,hours) to customer contact, e.g. 1 day

In order to fully measure logistics customer service, companies will also need to measure their customers' satisfaction concerning logistics customer service. Metrics to be used are chosen from the customer service elements introduced in chapter 3. Essential is to select elements that are relevant. Therefore companies need to conduct a survey concerning the relative importance of logistics customer service elements.

(Rushton et.al. 2000, 44-46.)

4.3 Methods

A vast number of methods to measure logistics customer service can be found. The methods that are described in this chapter are mainly focused on measuring customers' attitudes, satisfaction and opinions as well as the performance of a company's logistics customer service.

4.3.1 Customer surveys and questionnaires

In order to improve and develop a company's logistics customer service companies have to communicate with their customers. Without asking from the customers it is impossible to know for sure what should be improved. There are various surveys and questionnaires that can be used to identify customer needs, relative importance of different service elements, level of customer satisfaction and company's customer service performance against the competitors'.

Customer surveys can be done face-to-face in an open interview or they can be conducted as a quantitative questionnaire through mail, e-mail, telephone or Internet. Depending on the number of desired respondents and the nature of the business, each method has its pros and cons. Personal interview is suitable if there is relatively small amount of customers and usually if they are important business-to-business customers. Questionnaires are more suitable in case there are many customers and the relationships are not very intense and close.

Quantitative questionnaires are most useful when the relevant customer service elements need to be identified and when the relative importance of those elements has to be determined. These sorts of questionnaires or trade-offs can be conducted separately and alone or in connection and beforehand to a qualitative interview with the customers. Questionnaires can then function as a background and supportive information for the interview and a tool for recognising the most important issues to cover in the interview. Especially, identifying the relevant customer service elements can be easily found out by asking directly from the customer, which logistics customer service elements they

consider important. The survey can be conducted face-to-face or by mail, e-mail or by phone. (Holloway 1997, 12.)

4.3.2 Relative importance of customer service elements

Finding out, which elements of customer service are important and in which relation to each other is crucial. Not all customers value same elements in the same way. Every customer has their unique needs and they value different things. Companies need to provide customized and unique service to each customer. Therefore, companies need to research what is the importance order of the most important customer service elements to be able to measure the right elements in measuring their performance on logistics customer service. There are various ways of measuring the relative importance of customer service elements. The most practical and commonly used are a trade-off analysis and various surveys based on ranking and rating scales. (Gattorna 1997, 73-74.)

A simple way to measure the relative importance of customer service elements is to conduct a customer survey. Survey can be a questionnaire that asks the customer to rank selected customer service components in a scale from most to least important or for instance rank the elements from 1 to 6, in which 1 would be the most important factor and 6 would be the least important factor. In practise this is very difficult especially if there is a large amount of elements. Another method is to ask the respondents to place weights from 1 to 10 to each service element according to how much importance they attach to each element. The problem with this method is that respondents tend to rate most of the elements as highly as possible so it does not really give answers to which element is important and which not so important

As a solution to the above mentioned problems a trade-off analysis is a technique that identifies the weights that each individual customer places on each relevant aspect of logistics customer service. It provides a more sophisticated way of measuring the relative importance of different customer service elements rather than just scoring them. It provides crucial information about how important customers perceive different service components in relation to other components. In a simple trade-off analysis respondents are asked to rate chosen customer service elements for instance on a scale of 1 to 6, in which 1 indicates as being not at all important and 6 as being extremely

important. The problem with this is however that you need rather large amount of respondents in order to get reliable information, and the respondent can easily rate each element as being extremely important. (Rushton et.al. 2000, 40.)

4.3.3 Perfect order

Perfect order is achieved when all critical service goals are met in the way that it satisfies the customer needs. It means that goods are delivered on time, at the agreed amount, undamaged and error-free in invoicing and other documentation. Being able to achieve absolute 100 percent results in all these areas at each delivery is challenging even for the best organisations. For the perfect order analysis, the critical and relevant elements of customer service should be chosen. Three or four most important elements are enough. For instance on-time delivery, order completeness and returned products.

The overall level of service performance is actually determined by the combination of each separate element of the perfect order. Therefore, perfect order calculated by multiplying each chosen element together. Analysis of the perfect order figure can be done for each customer separately by different distribution channels, by regions or any other level. The formula for calculating the perfect order in the case, in which on-time delivery, order completeness, and error and damage free delivery, is as follows:

% of on-time deliveries x % of complete orders x % of error-free orders

The objective of each company should be to be able to reach the level of perfect order as frequently as possible. This requires monitoring and controlling all the processes that affect of the logistics customer service elements. By utilising perfect order analysis, companies can determine the level of their logistics customer service and realize how close or far to the best possible performance it is. (Christopher 1997, 40-42; Hoffman, 2002.)

4.3.4 Fish-bone diagram

Companies are not always able to fulfil their customers' needs and requiremenst concerning logistics customer service in the way that it would be totally error-free.

When errors occur, it is essential to analyse the reasons behind them and correct the failures for the next time. A fishbone diagram, also called cause- and effect diagram, is a tool for identifying the critical failure points in logistics customer service.

The fishbone diagram is based on the 80/20 rule. In logistics customer service it means that 80 percent of the problems in customer service are the result of 20 percent of the causes. In other words, only a few issues go more often wrong and cause the most of the failures. For instance, if the frequent problem is not being able to deliver the orders in the requested delivery date there can be a number of reasons behind it, for example product non-availability, poor performance of the carrier and so on. However, there are also reasons causing the product non-availability and others. It could be for instance that there are problems in the procurement of raw materials.

Identifying the original points of failures is then essential in order for the management to focus their attention to the real reasons causing the problems. Without reducing or eliminating the original cause of problems, the problems will not vanish. Therefore, systematic and regular monitoring of the critical failure points is important. The figure below, illustrates a simple cause and effect diagram. (Christopher 1997, 42-43.)

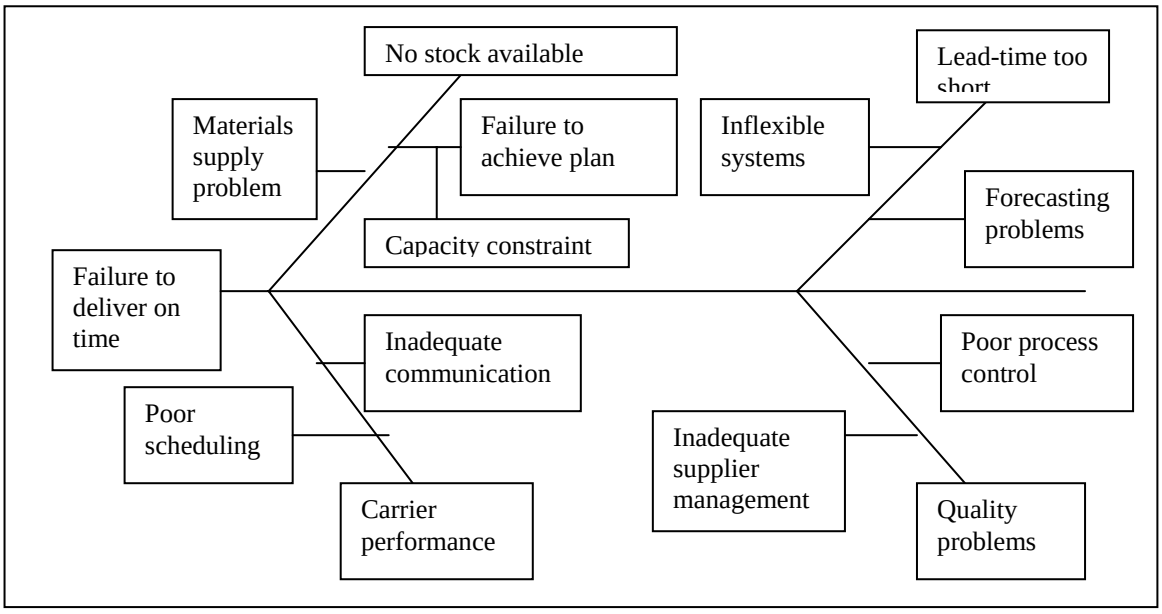

Figure 3. An example of a fishbone diagram (Christopher 1997, 43.)

4.3.5 Customer service benchmarking

In order to be able to compete with and create value with the logistics customer service companies need to measure their service performance against the competitors. Service benchmarking can be done with a simple questionnaire asked from the customers. Service elements to this questionnaire can be taken straight from the list of relevant customer service elements, which can be known by asking from the customers. In the questionnaire, the respondents are asked to rate the service elements and more precisely how the company and its competitors have succeeded in those. The rating scale is usually from 1 to 5, in which 1 indicating very poor performance and 5 being excellent performance. And, since this questionnaire is used to evaluate and benchmark, the respondents are asked to fill the questionnaire for each of their supplier that the company sees to be their competitor.

The results of this questionnaire can be combined to the relative importance questionnaires and trade-off analysis results and a customer service profile can be drawn. The customer profile indicates the importance of the service element in the customer's eyes and the extent, to which the company and their competitors have been able to perform each element. From this service profile, companies can see their customer service performance in relation to competitor's performance. It can also indicate how well company has been able to perform in the areas perceived the most important and the least important. (Christopher 1995, 202-203.)

5 DISTRIBUTION DECISIONS

One of the most crucial factors that influence on customer service quality is the distribution policy of companies. Although, distribution is often seen as merely a source of cost, it is important to realize that distribution decisions have a big impact on customer service quality. Therefore, by improving the efficiency of distribution by for instaance vehicle utilization, warehouse throughput times, and materials handling methods, companies can achieve reduction in distribution costs as well as gain

improved customer service quality and customer satisfaction. Due to the fact that distribution is a huge factor affecting logistics customer service this chapter discusses different kind of distribution channels, location decisions, and ways of physical distribution, and the role of warehouse decisions in the distribution. (Gattorna 1997, 69-70.)

Location decisions, transportation and warehousing are crucial factors in the process how logistics creates customer value. The three factors are interrelated and a decision in each one of the factors will have an effect on each. And, each element will somehow contribute in creating the customer service and thus customer value. Therefore, the issues need to be considered in the context of logistics customer service. Figure 4 illustrates the relationship between the three factors.

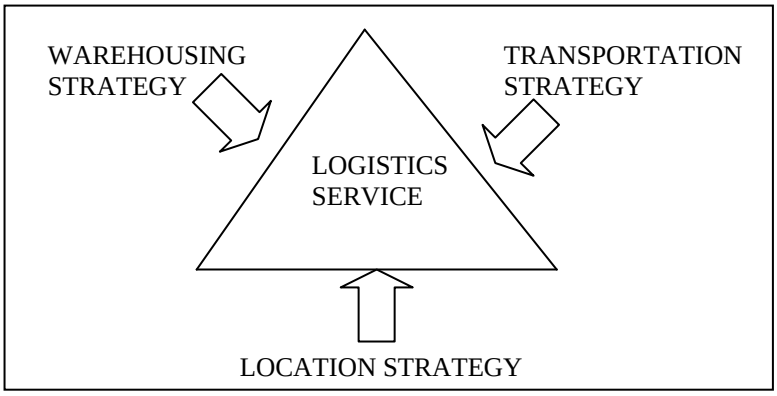

Figure 4. Relationship between logistics customer service, transportation, location decisions and warehousing (Ballou 1999, 80.)

5.1 Channel of distribution

Channel of distribution is the journey that a product takes between the point of production and the end consumer. There are two aspects of distribution channel, which are marketing attached and logistics attached aspect. This chapter discusses distribution channel with the logistics aspect. Logistic aspect of distribution channel is concerned with the physical movement of the product when it is being transferred from the manufacturer to the consumer. (Fawcett, McLeish & Ogden 1992, 19-20, 23-27.)

Channel selection is aiming at maximizing the sales opportunities as well as achieving high level of product availability. The overall aim is to achieve high level of customer

service with logistics moving the goods from the production point to the end customer through one or more intermediaries depending on the length of the distribution channel. It is important for companies to realize the affect of channel decisions on customer service levels as well. The whole distribution channel affects the level of customer service, and therefore it is essential to consider channel decisions in relation to logistics customer service as well. (Tucker 1994.)

Product and market characteristics have an impact on the choice of the channel as well as on the length of the channel. Long channels are needed if the product market is very wide and geographically spreaded. Short channels are used if there are only few buyers in a limited area.

Short channels include only a few different points through which the product goes through the end customer where as long channels may include up to 10 different channel members. Short channels can also be called direct selling if the products are being sold directly from the manufacturer to the end customer. Complex and high priced products are usually sold directly via a short channel because high profit margins can more easily cover higher distribution costs that are common for short channels. Also new products may have to be marketed directly because traditional retailers may be reluctant to sell the product. Different most common alternatives for the physical distribution channel can be seen from the figure 5.
(Rushton et.al. 2000, 56-57.)

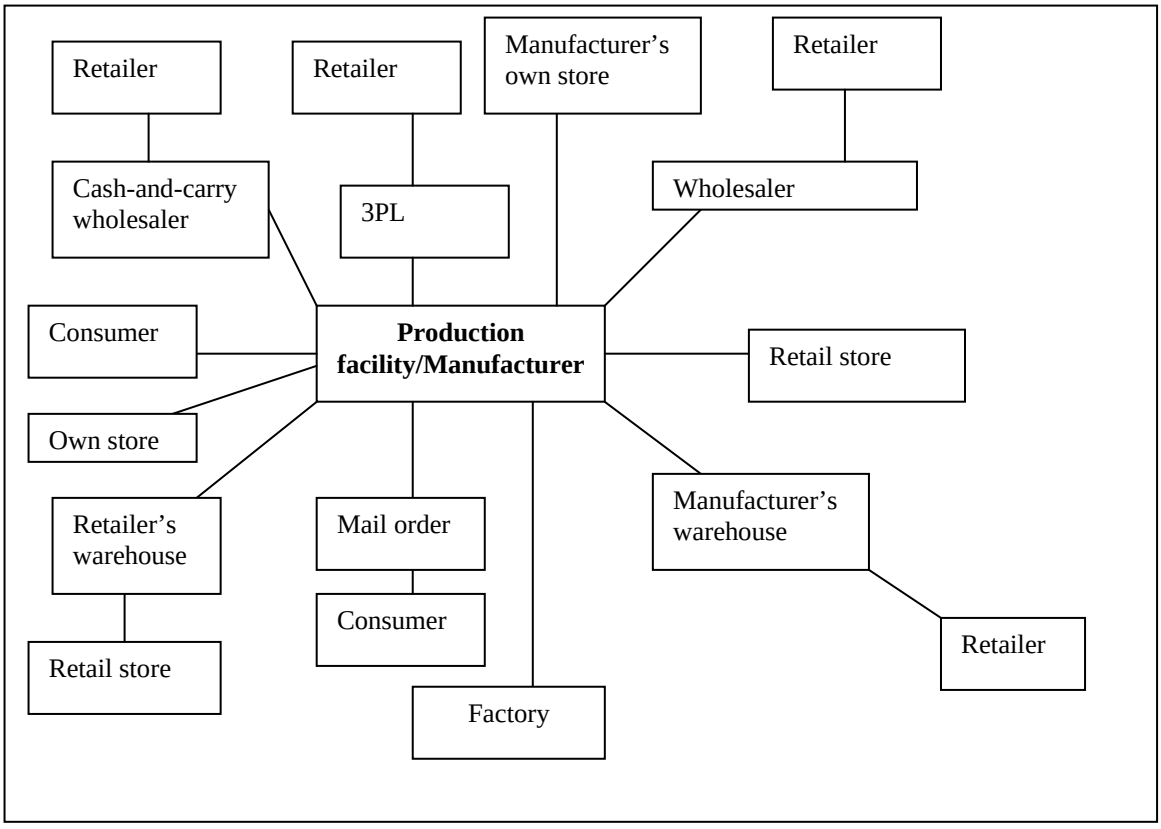

Figure 5. Alternative distribution channels (adapted from Rushton et.al. 2000, 50; Coyle et.al. 1996, 138.)

There are four very short distribution channels. Goods can be delivered straight from the production point to the retail store. This channel is usually used if a full truckload can be delivered. If the manufacturer has its own store, where it sells its products, it is also an alternative to distribute the goods directly to the store. Another very short channel is delivery from the production point to the end consumer directly. These kind of channels are very rare and usually used with very special and unique products such as goods that are specially made and do not need to be stocked in order to provide good customer service. This kind of direct channel can also be used in for instance daily newspaper deliveries.

The fourth short channel of distribution is from manufacturer's factory to customer's factory. It is an important channel alternative for industrial products, raw materials, components, semi-finished products and many others that are needed in industrial production. (Rushton et.al. 2000, 51-53; Coyle et.al. 1996, 138-139.)

Along and as a result of the development of technology, catalogue and Internet shopping has also become popular. Therefore, one channel alternative is from manufacturer through mail order to the end consumer. Goods are ordered through Internet, by telephone, e-mail, mail or fax and good are delivered to the nearest post office of the customer and through the post the goods are delivered or the customer picks his order himself from the post office.

Depending on the nature of the product as well as the location of a company's facilities and markets, longer distribution channels may be needed. Often the manufacturer has to store products in its own warehouse, distribution centre or regional depots. Therefore the goods are first transferred from production to the manufacturer's own warehouse and through that to the retailer who finally sells it to the end consumer. It can be even so that the goods are first moved from production to finished goods warehouse, then to manufacturer's own distribution centre and finally to retailers. Another option is to transfer the goods from production to retailer's regional or central warehouse and

furthermore to retailers stores. Retail depots will then act as consolidation depots, in which products from various suppliers are consolidated and furthermore delivered by retailer's own vehicles.

Wholesalers act as a link between manufacturers and small retail shops. They enable price advantages for smaller retailers by buying goods in large quantities and combining different products in smaller quantities to be delivered to retailers. In this alternative distribution channel goods are delivered from manufacturer to wholesaler and finally to the small retailer.

Channel that also includes wholesalers as a link between the manufacturer and retailer is to use a cash-and-carry wholesaler. Cash-and-carry wholesalers are built around wholesale organizations and their task usually includes collecting orders from regional wholesalers. The use of cash-and-carry wholesalers has been increasing due to the fact that many suppliers are unwilling to deliver small quantity orders.

Third party operator (3PL) in distribution means that a company outsources some or all of its distribution functions to a firm that is specialized in providing distribution services. It can be for instance that the goods are transferred from the manufacturer to a warehouse managed by a 3PL service provider and by them delivered to the retailer. The advantage of using a 3PL is that the company itself does not have to focus on distribution but it can concentrate on its core functions. (Rushton et.al. 2000, 50-53; Coyle et.al.1996, 138-139.)

5.2 Location

Location decisions in distribution include determining the number, location, and size of the facilities to be used. Facilities to be located are points in the supply chain such as factories, warehouses, retail outlets, service centres and vendors. Location decisions are essential for companies because usually there are big investments involved. Therefore, the locations need to be carefully decided and planned in order to avoid mistakes and financial losses.

Location decisions also affect on customer service and transportation. Transportation costs are directly affected by the location of facilities and their distance to customers. Customers on the other hand demand quick deliveries, which are dependent on the efficiency of distribution as well as transportation from the production place to the customer. The greater the distance to customers the slower the delivery time is. Thus, location decisions affect customer service levels and customer satisfaction as well. (Ballou 1999, 483.)

When starting a new business it is inevitable to plan the whole network of facilities from the beginning to the end, and in a way that it will enhance and at least guarantee the success of the business. Besides starting a new business there can be other reasons for having to consider location furthermore. If the existing facility is leased and the lease time is ending the company has to consider whether to continue leasing or to buy or lease another facility somewhere else. Enlarging operations to new geographic areas or other changes in operations will also require location decisions. Furthermore, if there are changes in the location of suppliers or customers it is inevitable to consider locations of facilities again. Also, changes in transportation modes or possibilities will affect on the locations as well, which requires companies to rethink their location strategies.

When choosing the regions, in which operating would be most profitable there are various issues to consider. First of all, companies will have to consider where their customers and suppliers, and other parties of the whole supply chain, are located. Being close to the customers is important for being able to deliver with short lead times. However, being close to the suppliers is as important in order to receive raw materials for production as fast as possible. Long distance to customers or suppliers will also increase transportation costs. (Cooper 1990, 109-111.)

When starting a business or enlarging companies also have to consider the market situation in each potential area. Meaning, how much competition and competitors are on that area and is the buying behaviour of the customer the same. Other factors besides that are the availability of buildings, land or labour force as well as accessibility to the facility. If there is no existing infrastructure; roads, railways, airports, that enable the

accessing to the facility, there is no point of opening a business there because the customer could access the business. (Karakaya & Canel 1998.)

Last but certainly not least, are the costs involved with the location decisions. Companies have to consider the direct costs such as operation costs, wages, materials, and equipment. Then there are also indirect costs involved, such as local taxes, social insurances, pension and social costs, and currency exchange. All these need to be calculated and estimated to the total costs of each possible location. (Waters 2003, 111-113.)

There are three basic alternatives for choosing a location. They are near to customers, near to suppliers, and a compromise position. Each of these three strategies has its pros and cons. If a company chooses to locate its facility near to customers and further away from suppliers it provides for a chance to high customer service level and low transportation costs to the customers because they are close to the facility. However, the inward transportation costs from the supplier to the facility will be higher.

Second alternative is to locate facilities near to suppliers, which will enable fast movement of raw materials, components and others needed in the production and low inward transportation costs. However, as the facility would be of longer distance to the customers, the outward transportation costs would be higher and the delivery times to the customers would be longer. The following figure illustrates the variation in transportation costs with the two options; near to customer and near to suppliers.

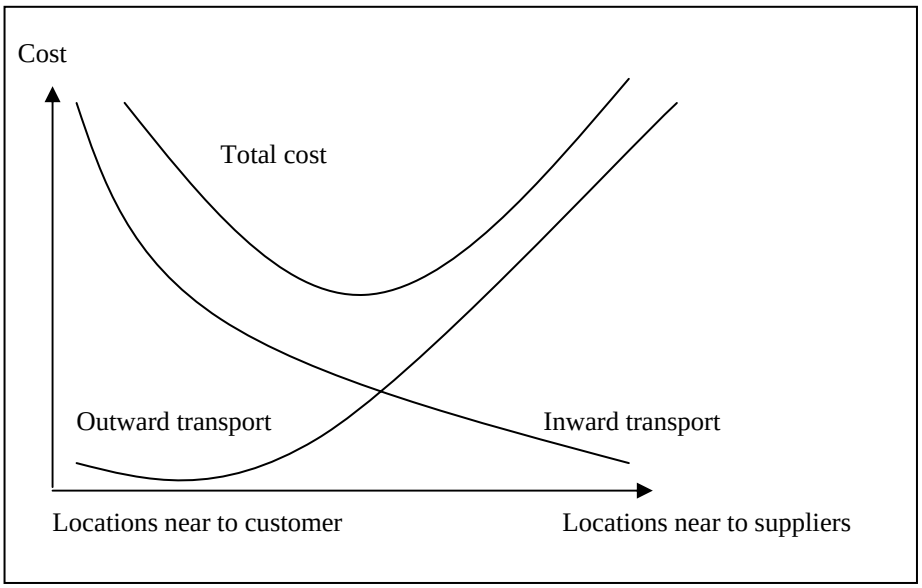

Figure 6. Variation in transport cost with location (Waters 2003, 115.)

The figure indicates the fact that when a facility is close to customers the outward transportation costs are lower, where as inward transportation costs are higher. On the other hand, if the facility is closer to suppliers the inward transportation costs will be lower but outward transportation costs will be higher because the customers are located further away. (Waters 2003, 114-115.)

The third option is to locate facilities somewhere between suppliers and customers. This would allow for a compromise and balance with reasonable service level and lower costs. A simple method of calculating the best compromise location is the centre of gravity method. It is done by calculating co-ordinates of each customer and supplier and the expected demand and expected supply by those customers and suppliers. On the basis of this calculation a compromise location that is in the reasonable distance to suppliers as well as to customers.

All these options are based on infinite set approach to location decision, which means that there are no restrictions on the availability of possible locations. In reality, this is not always the case because there may be limited amount of possible locations available. Another issue that should be kept in mind in location decisions is that it is not that straightforward as merely calculating the most suitable place by coordinates of suppliers and customers. You also have to consider the other factors, such as the ones mentioned in the beginning of this chapter. Thus, basing the decision only on mathematical calculations does not give the best possible answer. (Grewale & Thai 2005.)

Finding and deciding on suitable locations for facilities includes also the decision of how many facilities are needed. Again, costs are an important factor affecting the decision. Therefore on option is to calculate total variable costs for each attractive and available location and compare them. Total costs in this case account for operating costs, inward transport cost and outward transport cost. The problem with this approach is however, that it is difficult to estimate the actual costs and you may not be able to know beforehand the amount of demand by the customers.

The same approach can be utilised in deciding the number of facilities needed. If the decision is to focus on few key locations inward transport are formed of large deliveries made to those few locations. Thus the inward transport costs are low. However, outward transport costs will be higher because on average the locations would be further away from the customers.

The other option is to have more facilities that are spread around. Then inward transport costs are smaller deliveries to more destinations, which would cause higher costs. On the other hand, the facilities would be nearer to customers and thus the outward transport costs would be lower. The same conclusions can be made from the figure below. It illustrates the relation of number of facilities and costs associated. The optimal number of facilities can be found from the centre of the figure. (Waters 2003, 119-122.)

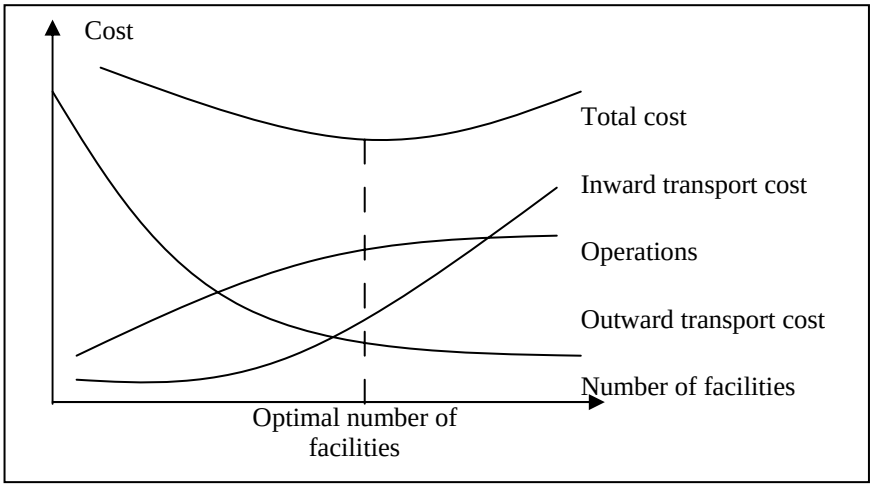

Figure 7. Finding the optimal number of facilities (Waters 2003, 122.)

5.3 Warehouses

In general, warehouses are places, in which goods are kept before they are needed in the production or before they are being transferred to the customer. A warehouse is any location where stocks of goods or material are held on their journey through the supply chain. Usually there are warehouses for raw materials, waiting to be needed in the production, and finished goods warehouses or distribution centres for goods waiting to be delivered to customers.

Warehouses are not just for storing goods, raw materials, spare parts or consumables. They are also used for inspecting, sorting materials, order picking, breaking bulk and other related jobs. The main function of warehouses is to facilitate the movement of goods in the supply chain. They provide buffer to smooth fluctuations in supply and demand and they also enable savings in procurement because they allow large purchases to be stored. Warehouses can often be also used for packaging the goods and assembling the orders and loading them to the transport vehicle. The overall trend is to try to utilise warehouses for many purposes so that they would not mean merely costs for the organisation. The efficiency of warehouse operations also affects on the level of customer service and therefore companies can increase the level of customer service by making warehouse operations work more efficiently. (Waters 2003, 283-284.)

Warehousing is costly. It requires human resources as well as facilities and equipment. A lot of capital and cash is tied up in the warehouses. According to researches, warehousing accounts for 30 to 40 percent of the total distribution costs. This is considerably high expense for any company. The most costly factor in warehousing is the staff working there. It accounts up to 50 percent of the total warehousing costs, where as facilities account for approximately 25 percent, services in the warehouse (maintenance, insurance etc.) for 15 percent and equipment in the warehouse for 10-15 percent.

Not only because warehousing is important factor affecting the level and performance of logistics customer service, but it is also a considerable source of costs for companies. Therefore, nowadays the trend has been towards keeping very little stock in the warehouses. Lead times have to be shorter because the customers want to have their orders as soon as possible and therefore the goods do not stay long in the warehouses. It is also expensive to keep high inventory levels in the warehouse. However, warehouses are still a necessity for most of the companies producing goods. (Rushton et.al. 2000, 229-232.)

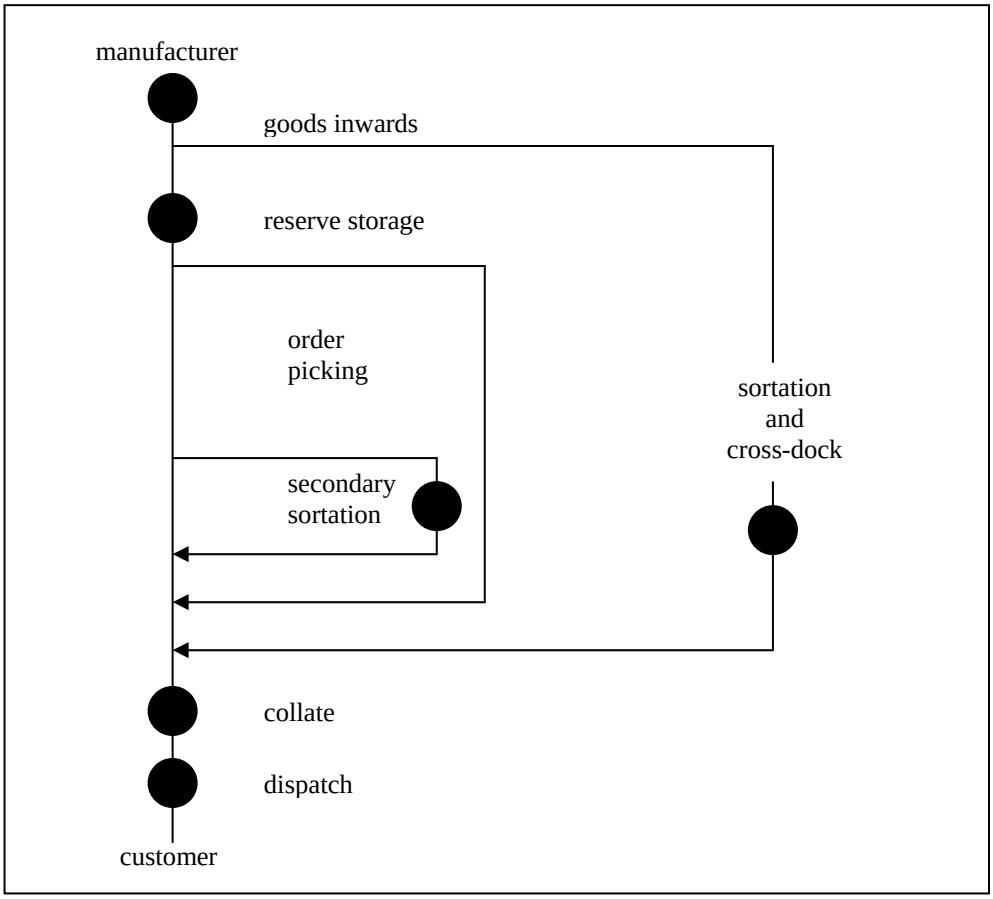

Figure 8. Warehouse functions and material flows (Rushton et.al. 2000, 236.)

The main function of warehouses is to store the goods. However, the activities that take place in the warehouse are much more. The figure above illustrates the material flow and functions that occur in warehouses.

The first function of a warehouse is to receive goods into the warehouse. This includes the physical unloading of the goods, checking them, and deciding where the goods shall be put. Sometimes, activities such as unpacking and repacking and quality controls can be warehouse's duty. Also all necessary documentation and recording is a part of warehouse's functions.

After the goods are received and handled as described above, the goods go either straight to sortation or they go through a longer process. In occasions where the goods´ final destinations are already known, the goods can be directly sorted and collated. Collation means gathering the goods to be forwarded and consolidating them according to orders. This includes packing the goods into dispatch units, labelling, wrapping for

transportation protection and stability. The last function of a warehouse is then to dispatch the orders, which means that packed goods are assembled for loading them into transport vehicles.

It can be also that the final destination of goods is not necessarily yet known or there are various different goods in an order. In these cases warehouse's task is order picking and sortation. Order picking includes selecting the required amount of goods, which may require breaking bulk into smaller units. If the order is of very small size it may be necessary to batch several orders together and handle them as one bigger order until the secondary sortation, in which the combined batch will be sorted again to the individual orders before dispatch. If the order is a larger unit, like for instance a full pallet, the amount is taken straight from reserve storage. If the order is smaller than for instance a pallet, the required amount is taken from a full pallet and broken to the smaller amount. After order picking, the goods are collated and dispatched similarly as in the shorter version. (Rushton et.al 2000, 236-237; Waters 2003, 285-287.)

Besides all these functions, warehouse's task is to control the material flow and all communications inside and out of the warehouse. All warehouse functions have a crucial affect on the level of customer service because much of the total order cycle time is spent in warehouse operations. Thus, the faster and efficiently warehouse operations function and are performed, the better is the quality of logistics customer service. (Coyle et.al. 1996, 249-251.)

5.4 Physical distribution

Physical distribution is the process, in which goods are physically transferred from the finished goods warehouse to the customer. Depending on the distribution decisions, the process can include various different go through points or it can be as simple as direct delivery from the warehouse to the customer. Physical distribution channel depends on the nature of the product, frequency of the deliveries and number and location of the customers. In designing physical distribution companies need to consider, which delivery method would be the most efficient and economic alternative. Meaning, how

the order can be delivered with good customer service and with as little costs as possible.

Costs of physical distribution are formed of various. Depending on the length of the channel, the level of costs may vary. Costs include movement and storage of goods in the production plant, transportation costs of transferring the goods to each channel depots, operating costs at the depot (e.g. a warehouse), inventory costs, depot to customer costs and also possibly customs duty, insurances, terminal handling charges, and interests. (Benson, Bugg & Whitehead 1994, 187-189.)

Transporting goods from manufacturer to the consumer through the distribution channel has a large impact on the level of customer service. Even though the channel is well planned, the customer does not receive the goods until they are being physically transferred from the production point to the customer. There are various alternatives how to do this. This chapter will discuss transportation in the context of logistics customer service.

5.4.1 Transportation

Transportation is the movement of goods or people from place A to place B so that goods or services become available for those who require them. The main function of transportation therefore is to bridge the geographical gaps between goods and services, and customers. (Benson et.al. 1994, 11.)

In general there are four main ways to transport goods; by road, by rail, by sea, and by air. When choosing, which transportation way is the most suitable; companies need to consider the cost of each transport method as well as the customer. For logistics customer service, transportation decisions are important because they affect on the delivery time very crucially. Thus, companies have to consider also the speed of the transport method as well as the location of customers and the distance to the customers. Customers want to have their orders as soon as possible and therefore, very often, slow methods of transport are not possibile.

However, if the customers are located of a long distance and the goods are not of high value it is not profitable to transport the goods by an expensive but fast transport method because it would increase the price of the goods so much that the customer would not be willing to pay for that anymore. Thus, the nature, value and characteristics of the product also affect transport decisions. Especially if the product has special features, for instance if it is hazardous, fragile or perishable, the features of the product itself can determine the transport mode. (Rushton et.al. 2000, 337-339.)

Batch sizes are important decisions related to transportation. Consolidating orders means that smaller orders are collected to form a larger quantity in order to achieve lower transportation costs. This is due to the fact that often the vehicle owner charges a minimum fee from the transportation regardless of the amount of the order. Thus transporting smaller quantities may actually be more expensive than transporting a full truckload. Consolidating orders can also facilitate competition in enabling the marketer to utilize lower transportation costs to consumer prices. Thus, consolidating orders can support competitive prices. (Coyle et.al. 1996, 354-355.)

Consolidation of orders may require delaying some customer orders in order to be able to consolidate various orders into one single delivery. This will allow for lower transportation costs because instead of several small shipments one big shipment would be made. However, concerning customer service consolidation of orders is not always the best possible alternative. Customers need to have their orders as soon as possible and at the date that is agreed. Therefore it is not always possible for suppliers to consolidate orders at the expense of customer service suffering. However, if it is possible to manage it in the way that customer service expectations are being able to meet, consolidation of orders is a good alternative. (Ballou 1999, 214-215.)

There are four alternatives of delivering customer orders; direct delivery, delivery through distribution centre, merge-in-transit, and cross docking. The figure below illustrates three of the methods. All the four methods will be furthermore discussed in the following chapters.

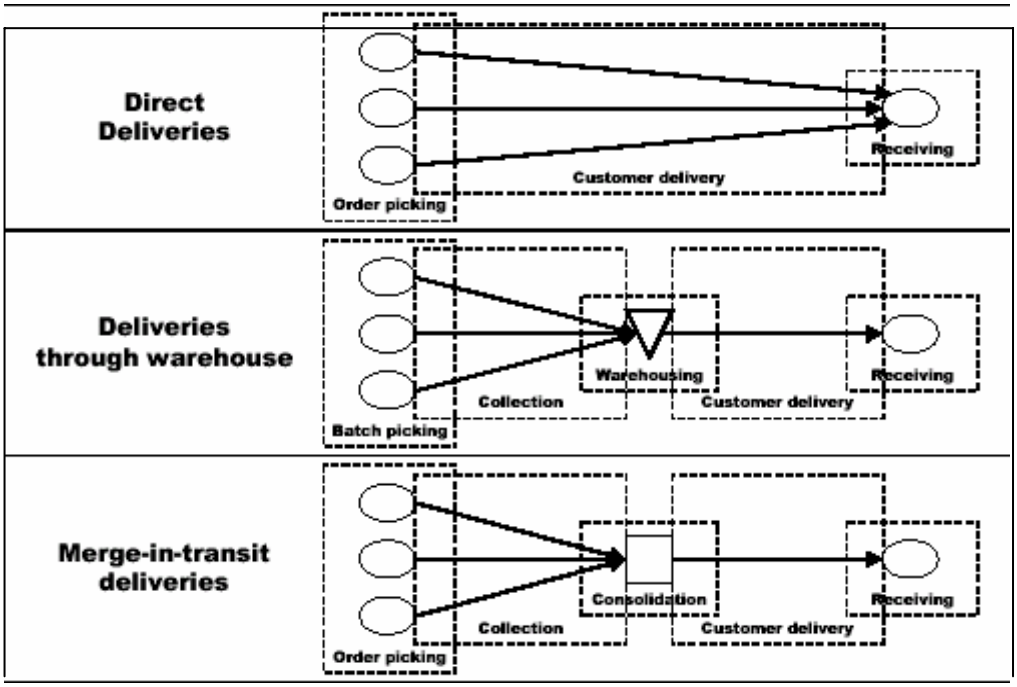

Figure 9. Different delivery methods (Kärkkäinen et.al. 2003.)

5.4.2 Direct delivery

In direct delivery, orders are delivered straight from the manufacturer to the customer without any go-through points or warehousing. The advantages of direct delivery are its speed as deliveries are not dependent on delivery schedules of other products in the same order, and the fact that warehousing is not needed between the manufacturer and the customer. Thus the cost of keeping a distribution centre can be avoided. (Kärkkäinen et.al. 2003.)

Direct deliveries are useful when products are ordered in full or near to full truckloads from one supplier. That allows for full truckloads to be delivered and thus, cost of transport is not high. However, if small orders are placed irregularly, full truckloads are not possible to deliver and the cost of transport is higher as several small shipments have to be delivered. Also invoicing and materials handling costs increase because several shipments have to be handled and invoiced. In such situations, delivering through distribution centres would be a better solution. Direct deliveries are also a necessity when time is a crucial factor, for instance in the grocery industry as products are perishable and do not have time to be stored in a warehouse before reaching the store shelves. (Simchi-Levi, D., Kaminsky & Simchi-Levi, E. 2000, 112-13.)

5.4.3 Distribution centre

Distribution centres are warehouses that store and sort goods by using warehouse space so that full truckloads of products can be sent to customers as they have ordered. The advantage that distribution centres provide is that full truckloads can be delivered and orders can be consolidated. This will decrease transportation costs. On the other hand transportation costs from factory or factories to the distribution centre may increase.

By delivering through a distribution centre customers will receive fewer deliveries as distribution centres can consolidate various orders into one delivery, which can reduce transportation costs to customers. This will reduce also costs in the customer's side because fewer deliveries need to be unloaded and handled. However, transportation costs from factories to the distribution centre will be increased and additional costs will be generated. Also the maintenance of the distribution centre will increase costs. (Kärkkäinen et.al. 2003.)

5.4.4 Merge-in-transit

Merge-in-transit is a delivery method, in which several shipments from different origin points are consolidated into one customer delivery without inventory at the consolidation points. It removes the need for distribution warehouses and allows customers to receive complete deliveries. Thus, for instance a company producing various products at several production plants could deliver customer orders of each product at one delivery to the customer. This is important for the customer because it allows for decrease in costs for the customer, as he does not have to receive, unload, and handle various deliveries.

In a merge-in-delivery orders are picked and collected at each manufacturer's facilities, after which they are transported to the consolidation point. At the consolidation point, deliveries from each manufacturer are consolidated according to customer orders in a way that customer orders are complete. Goods do not stay in the consolidation warehouse for long but only for the necessary time that it takes to consolidate the orders. However, if necessary, deliveries can be delayed at the manufacturer's place so that complete orders can be combined at the consolidation point. After the merge-in

phase, complete orders are transported to the customer. (Kärkkäinen, Ala-Risku & Holmström.)

Merge-in-transit is useful delivery method in situations where company is enlarging to new geographic areas, in which the current distribution network is not serving the customers very efficiently. Thus, by starting with merge-in-transit would be a safe and low risk option to choose. This is due to the fact that opening a merge-in point does not require big investments, as the purpose of the merge-in point is merely to consolidate the orders and not to store them. (Cole & Parthasarathy 1998.)

5.4.5 Cross-docking

Cross docking is a delivery method that delivers loads containing optimal amount of products daily. Products are transferred from the production plant to the cross-docking warehouse in large batch sizes so that transportation costs can be minimized. Warehouses function rather as an inventory coordination points than inventory storage points. Goods arrive at the warehouse in big quantities and are fast loaded into vehicles transporting the orders to retailers. Goods spend very little time in the warehouse. Cross docking thus reduces inventory costs and decreases delivery times by reducing warehousing time. (Simchi-Levi et.al. 2000, 113-114.)

Cross docking is more concentrating on the efficiency of delivery process rather than focusing on the customer. That is the difference between merge-in-transit and cross-docking. Merge-in-transit delivers smaller customer orders by, if necessary, delaying the earliest shipment, where as cross-docking is delivering large quantities regardless of which customer order each products belong to and delivers the consolidated orders immediately at the next delivery going to that destination. Thus, cross docking is a suitable method for perishable and fast moving products with predictable and high demand, and frequent and regular orders. (Kärkkäinen et.al. 2003.)

6 PURPOSE AND OBJECTIVES OF THE STUDY

6.1 Purpose of the study

The purpose of the study is to research whether the case company's clients are satisfied with the level of logistics customer service that they receive. The aim is to analyse the results and find out how distribution decisions on logistics affect customer service level. From the basis of the study the goals is to give recommendations on whether the current distribution system is efficient enough or should there be made some changes in order to improve the customer service in the case company.

6.2 Objectives of the study

Objectives of this thesis can be identified into four research questions.

1. What are the elements of logistics customer service and what are the factors affecting it?

2. How to measure logistics customer service?

3. What is the relation of distribution decisions and customer service?

4. Give recommendations concerning the case company's logistics customer service.

7 CONCEPTUAL FRAMEWORK

The conceptual framework of this thesis is built around four main concepts; logistics customer service, value, measurement, and distribution. The main concepts form four bigger boxes in the figure, and the four boxes contain the process and the different parts associated to them.

The upper box in the figure describes the logistics customer service, and the process in which the value is created. Throughout the value creation process the elements of the

process can be expressed with four customer service dimensions; time, dependability, communications, and flexibility or by transactional elements.

The logistics customer service process with the value that it creates, and the measurement of it, affects on the distribution decisions. By analysing logistics customer service and the value that customers perceive of receiving, the company is able to identify failure, and success points in the process, and finally make distribution decisions that improve and develop the process.

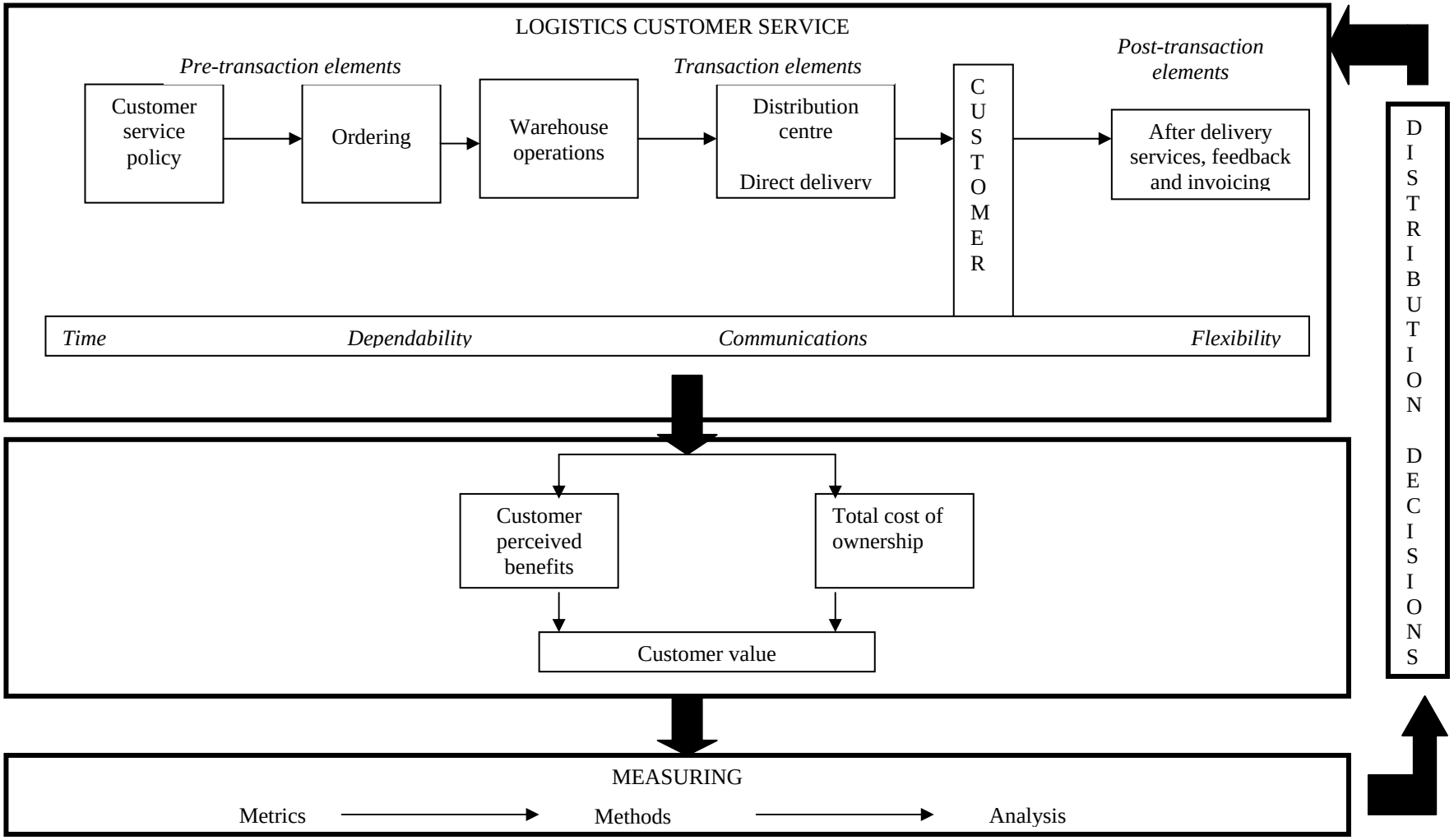

Figure 10. Conceptual framework: Logistics customer service and the measurement of it

8 RESEARCH METHODS

8.1 Qualitative research

The research can be conducted with two different research approaches. Researcher can choose to use either qualitative or quantitative method, or both of them. In the quantitative research the researcher is independent from the research subject where as in a qualitative research the researcher is subjective and personally involved with the research subject. Quantitative research areas are usually previously studied by other researchers and existing theories are available. In the contrary qualitative research is usually exploratory, variables are unknown and theory base might not exist. (Creswell 1994, 4-5, 9.)

A qualitative research is the examination, analysis and interpretation of observations for the purpose of discovering underlying meanings and patterns of relationships. It does not include mathematical models unlike quantitative research may. It is based on interpretivism, which means that the research is subjective and the researcher interacts with the research subject. The primary concern of qualitative reseacher is process rather than the outcome of the process.

Qualitative research is often inductive. Inductive study means that you start with the empirical data gathering after which you develop a new theory or model on the basis of you research. Categories often arise from the informants rather than being identified beforehand by the researcher. Also the research methods differ from quantitative research. (Creswell 1994, 4-7.)

In qualitative research the researcher himself is the most important research instrument rather than questionnaires and surveys. Useful methods in qualitative research are observational techniques, and different kind of interviews. In qualitative research the sample size is usually smaller and narrower than in quantitative research. Respondents are often chosen with non-probability sampling method. This means that the respondents are chosen because of their characteristics, demographics or because they

hold crucial and relevant information concerning the study area. (Crabtree & Miller 1999, 17; Saunders et.al. 2003,170-171.)

8.2 Data gathering

The empirical research of this thesis is a case study of four different the case company's customer organisations. The research was conducted with qualitative methods. In order to receive a comprehensive understanding of the case company's current situation and to identify the relevant issues to be researched, a discussion with the case company's logistics director was made. Information was also gathered by e-mail and telephone discussions from a few other employees in the case organisation.

Qualitative research was chosen because it allows for more in-depth information than quantitative questionnaires. It was also a more natural choice due to the fact that the sample size was small and thus qualitative interview was possible to do with the limited resources. The interview was conducted with a semi-structured interview. Semi-structured interview's interview guide was done on the basis of this thesis' theoretical framework. Thus, deductive approach was used in the research and results analysis process.

A semi-structured interview was used as a research method for the empirical part. A semi-structured interview is an informal interview technique that uses an interview guide as a tool for directing the conversation with the interviewee. The amount of respondents is usually rather small due to the fact that the interviewing takes time. The topic and the themes to be discussed have been determined in advance, however no exact questions have been formulated. The discussion is free, and the interviewer only directs the discussion according to the interview guide. Even the order of discussing the chosen themes may vary according to the situation and flow of the conversation. Chosen issues in the interview guide are based on the theoretical model of the study. (Saunders, Lewis & Thornhill 2003, 246-247.)

Semi-structured interview was chosen because of the small amount of respondents and the nature of the respondents. Semi-structured interview allows for in-depth information from relevant key informants gathered in a way that it is possible to discuss freely

without predetermined questions and yet receiving information about similar issues from each respondent. A quantitative questionnaire would not have been sufficient enough to provide reliable and valuable information, which in this case is essential in order to be able to draw conclusions and give recommendations to the case company. Also the analysis of the results is easier than for instance in conversations and in-depth interviews because the main themes have been determined in advance and thus the results are already structured to some extent and can be easily categorised or compared. (Holloway 1997, 95-96.)

The themes for the interview guide were taken from the theoretical framework of this thesis. Four main themes were selected, which are the three transactional customer service elements in logistics. In addition the fourth theme was chosen to be distribution, which is also directly from the theory part. Relevant sub-themes were added under each main theme in order to receive comprehensive and multiple information about the themes. The interview guide can be found in Finnish and in English from the appendices 1 and 2.

The respondent sample was chosen on the basis of the key informant technique. Key informant technique uses key informants as respondents. Key informants are persons who have special knowledge and experience of the study field. They are influential and well-informed people who have expertise in the research area and whose insights can help the researcher in understanding his research area better. Through informal conversation key informants can fill the gaps in the researcher's knowledge, and give information that other people would not be able to give. (Marshall & Rossman 1995, 83-84.)

The advantages that the key informant technique allows is that the researcher is given the access and possibility to gain very in-depth and essential information that would not be able to gain through for instance quantitative methods. Also the sample size in key informant technique is small and the discussion time is not very long either. The disadvantages if key informant technique is that key informants are usually busy people and may not be as interested in the study as the researcher himself, and may not be willing to share all information. The danger in interviewing key informants is that the researcher looses sight of the fact that key informants' perspectives are limited,

selective and biased. Thus, the researcher should not rely too much on the key informants' views. (Patton 2002, 321-322.)

Key informants that were chosen in this thesis were professional product managers, purchasers and logistics managers in the customer organisations. There were four key customers, which are wholesaler organisations and the case company's key customers in Finland. From each company one or two key informants were interviewed. Interviewed customers were predetermined by the case company organisation. They were interviewed with a semi-structured interview guide. Key informant technique was chosen from the case company's request as the case company specifically wanted to have their key customers' point of views and opinions. The desired information and results would not have been able to be gained with any other sampling method.

8.3 Data analysis

Data analysis is the process of organizing, structuring and understanding the collected data. It is the process, in which the researcher sorts out the relevant data out of less relevant data organises them and tries to understand the meaning of the research results. Qualitative data analysis searches for general statements among categories of data, and it is built around the theoretical framework. (Marshall et.al. 1995, 111.)

Depending on which data gathering method is used, the data analysis and categorising can be based on the theoretical framework of the research or the researcher identifies and determines the emerging themes from the research data after the data gathering. In this thesis, the interpretation analysis method was chosen. Interpretation method means that the researcher utilises the theoretical framework of the study and uses it to organise and categorise the information received in the research. In this case it means that the interview guide was used as the base of categorising the information according to its themes. The benefit that the interpretation method gives is that it links the research into the existing knowledge of the subject area and it provides the initial analytical framework for analysing the data. (Saunders et.al. 2003, 388-389.)

Interpretation method was chosen because it is the clearest and easiest way of organising, classifying and comparing the research results because the data was

gathered by semi-structured interviews. Thus, the interview guide itself provided a good framework for the analysis. The analysis process in interpretation method consists of the following phases: data gathering, data reduction, writing narratives of each case, data organising, data categorising according to predetermined themes, drawing conclusions and making recommendations.

The data was gathered by conducting six semi-structured interviews. The data received in the interviews was manually written during the interviews, and the initial data reduction was done already in the interviewing moments. Thus, main points and relevant issues were written and irrelevant issues were left out. After the interviews a narrative of each interview was written in order to have the information in more clear and detailed form.

Each case was first handled separately by writing a narrative and analysing the information according to the themes. This was done from the case company's request and in order for the case company to see, which problems and what kind of comments each customer had mentioned. Thus, the case company can utilise the information in managing their customer relations and deliveries. In the conclusion and recommendations chapter the results from each customer interview will be discussed in more generalized and combined method by drawing conclusions from the most important and most commonly mentioned problems that the customers said. This was done in order to identify the biggest improvement points in the case company's logistics customer service and distribution from the customers' point of view and to give some recommendations how these problems could be improved or avoided.

8.4 Reliability, validity and quality assessment

The research must be assessed in terms of reliability, validity and quality of the research and its results. The research is internally valid as the findings of the study make sense and match with the reality. The chance of biases in the results is rather small because the research was conducted by a third-party; meaning not a person from the case company or from the customer companies. The external validity of this study is not high. The research results are subjective and the conclusions of the study are not directly transferable to other companies' conditions. However, the research methods are

applicable to any similar kind of research needs of companies. The theory framework and the interview guide are usable for any other company's purposes as well. However, the results of this research will only apply to the case company's situation and cannot be generalized to apply to all companies' situation. This is naturally because the interviewed customers were chosen purposefully and the current situation and conditions of the case company greatly impact on the results.

The research is reliable concerning the case company's situation and in specific the results apply to the interviewed customers only. The case company also has other customers, who were not interviewed in this study and thus the results are not applicable to those. The chosen research methods were selected in order to get as reliable and direct information as possible from the customers and although the sample size was rather small it was sufficient to get enough information and to draw conclusions and generalizations that the case company aimed to have.

The quality of the primary data that was received in the study is high because the information came directly from professionals in the customer organisations. Semi-structured interview allowed the key informants to speak freely and they were only directed and guided to the themes without asking any specific questions. This allowed them to speak from all possible issues that they wanted to discuss without leaving anything out. Also the analysis of the results was done in a manner that allows the case company to target specific problems and improvements to specific customers and if necessary to use different techniques with each customer. (Creswell 1994, 158-159.)

9 RESEARCH FINDINGS

9.1 Results of the research

Results of this research will be discussed on the basis of the interview guide's structure. Each customer company will be dealed separately and the results will be organised under four themes from the interview guide; pre-transaction elements, transaction

elements, post-transaction elements and distribution. In addition, a summary of each customer's answers will be drawn after the four mentioned themes.

Customer 1

Pre-transaction elements

Three different persons were interviewed from Customer 1 due to the fact that they have different product managers for each product group. Customer 1 makes orders once a week except for the Christmas time and big campaigns. During those times orders are made twice a week if necessary. Customer 1 gives forecasts of their regular and campaign orders to the case company in advance. Orders are made separately at each Customer 1 department store but they are sent to the case company through the central administration. Once a week deliveries are sufficient during normal seasons but during special and hectic seasons Customer 1 would like to have deliveries more frequently. This is due to the fact that the department stores' warehouse capacities are very low and thus cannot manage very large amounts of goods.

Occasionally there have been problems in getting correct and up-to-date information about the product availability, which has caused problems for Customer 1. For instance the availability information has not been given before Customer 1 has to make the order and thus there have been weekly problems with getting the needed amount of goods to the stores. Back orders are not welcome but Customer 1 has to accept them because it would cause even more problems if they would not approve them. If Customer 1 would not accept back orders they would have to erase the missing products from their ordering system and make the order again.

The respondents had two different opinions about the responsiveness of the contact persons. The ability to response to customer inquiries and solve problems was good from the Factory 2. Contact persons were easy to reach immediately and they responded very quickly. They also solved acute problems very well. However, concerning the contact persons of Factory 1 there seemed to be problems. Customer 1 felt that before the personnel changes everything was working perfectly where as now the accessibility, reaching the persons and their responding to inquiries has been very dissatisfying and slow. Especially with very acute problems Customer 1 has had many problems because of the slow responsiveness. In Customer 1's opinion the situation changed after the

personnel changes in the case company. Before the changes the responding time was maximum one day where as now the time is three to five days. Customer 1 is also dissatisfied because they have not received contact information of the case company's back up persons in case the contact person is not available. This would be useful information for Customer 1 since the responsiveness is so slow.

Customer 1 was also dissatisfied with the case company's flexibility. Especially during Customer 1's hectic seasons the case company's flexibility in deliveries has not been as good as required. Customer 1 demands quicker deliveries during campaigns and special seasons but the case company has not managed to response to those needs.

Concerning the case company's product collection Customer 1 would want to have much more tailored products to Customer 1's use only. This is extremely important for Customer 1's campaigns and sales promotions because these tailor made products are less expensive and sell very well, where as the sales figures of the case company's own collection has been decreasing. Customer 1 would also like to have information about possible changes in the products so that they could inform their department stores and even end-consumers about them as well. The ordering of some of the products was also seen problematic due to the fact that the minimum volume of the order is too big. It is difficult for the department stores to handle them, because the warehouse capacity is very low, and the time to sell all the products before being able to make another order is long.

Transaction elements

The case company products' packaging was in Customer 1's opinion good and it represents the case company brand well. On the other hand the quality and outlook of some of the products packaging was seen rather poor. Customer 1 suggested that zipper bags would be more functional, and would facilitate in selling and handling the products. Transportation packaging of the case company's product Z was seen as functional and good. The transportation packaging of product X and product Y on the other hand was experienced dysfunctional especially in unloading the goods and handling them. For Customer 1 the packaging size of the product X and product Y is too big. Especially during Christmas season, when the order sizes are very big, it is time-

consuming to unload the goods manually. It is also difficult to store them in the warehouse, handle them and unload them to the shelves.

The current one-week delivery time is sufficient for Customer 1's needs during normal time. Customer 1 would not even have enough resources and time to make and receive orders more frequently. However, during campaigns and special seasons the delivery time is not sufficient and satisfying. Deliveries have often been late and incomplete, which causes many problems in the department stores. Thus Customer 1 would hope for reliable deliveries two times a week during campaigns. According to Customer 1 they give information about their campaigns and order forecasts well in advance and therefore they find it surprising that the case company does not pay attention to the information. In this case also the problem seemed to be bigger with Factory 1 than with Factory 2.

The problem that came up among all the respondents at Customer 1 was the poor availability of the case company products and especially the lack of communication about the product availability information. Weekly back orders from Factory 1 are very unfavourable and the incorrect information about the availability is causing irritation and problems. Concerning Factory 2 the availability information has previously been given weekly without asking it where as now Customer 1 has to specifically ask for the information and even then there may be some problems with the information accuracy.

The quality and condition of the case company goods is good according to Customer 1. However, Customer 1 would like to be informed about possible problems with for instance the quality of the products. Occasionally there have been problems with for instance the products information in the labels. A big problem, which Customer 1 wants to be solved, is the quality of product XY. There have been problems with for instance the pattern and often there have been lubricant splashes in the product.

Overall the reliability of the case company deliveries is evaluated to be average from Factory 2 and a little below average from Factory 1. The reasons for this are the delays in deliveries and the amount of back orders. In addition poor availability information and occasionally poor product availability decrease the overall reliability. Another issue that was brought up in the discussion was the fact that also the information about deliveries was inaccurate. Delivery times (concerning at what time during the day) were

inaccurate, which causes problems in unloading the goods. The personnel have also given feedback about delivering the orders too late in the afternoon.

Tracking of orders during the delivery process is not possible for Customer 1 besides of their own system. From their own system Customer 1 can see the time when the case company has received their order, and the time when the order has been received at their department stores. Customer 1 does not consider the tracking of orders as the main issue to be improved but they would wish to be informed about delays in deliveries or unavailability of products.

Post-transaction elements

In Customer 1's opinion the case company manages the post-transaction elements well in both factories. Returned products are handled well and compensations are made quickly. The personnel are also easy to reach and they react to feedbacks and complaints well. The only improvement point in the post-transaction elements in Customer 1's opinion is the too long response time from Factory 1. With invoicing there seemed to be very little problems but occasionally there have been inaccurate invoicing because of differences in prices. The problem was most evident in the case of discount products.

Distribution

The case company deliveries to Customer 1 department stores are direct deliveries. Distribution through central warehouses has been tried but in Customer 1's opinion in did not work well. Their warehouse capacity is so small that deliveries through central warehouse do not function and this is why they think that deliveries directly to their department stores are the most suitable and functional alternative for them. They have nothing against the case company's own distribution centre as long as the delivery times do not get longer and the reliability does not suffer. The only thing that Customer 1 would hope to be changed and improved in the current delivery method is the postal codes-system in delivery schedules. The ideal situation for them would be to always receive a delivery in the beginning of the week and during seasonal peaks the second delivery could be in the latter part of the week.

Summary

When asked, which elements of logistics customer service should be the prior improvement points; the issues that emerged were communication, availability and customer care. Communication has to be improved because the lack of communication causes problems to Customer 1 and also decreases the reliability and flexibility of the case company. Availability especially during seasonal peaks was also an issue that really has to be improved in order for Customer 1 to be able to sell the case company products and important campaign products. All in all, Customer 1 wanted to be cared for more, and being treated as a unique and important customer and not just one customer among others.

Issues that in Customer 1's opinion were well managed in the case company were the packaging of the case company's products as well as handling the returns. The case company's product collection was also seen as multiple and attractive. Customer 1's overall assessment of the case company's deliveries and customer service in a scale of one to ten was 7-8.

Customer 4

Pre-transaction elements

Customer 4 also uses EDI system as an ordering method. Different campaigns and the required amount of goods for those are informed to the case company in advance. There have been no problems with the ordering as such, however there have been problems with getting the ordered amount of goods. Thus the problem of availability emerged again. Customer 4 has the policy of not receiving back orders and with the case company they have the problem of back orders weekly, especially with product Y and product X. Customer 4 cannot and does not want to receive back orders. Instead they make the order again because the system requires so. Concerning the communication with the case company Customer 4 has been rather satisfied and no bigger problems have been faced.

The case company's flexibility in fulfilling the customer needs is of poorer level than its competitors' according to Customer 4. The problem is especially shown during campaigns when special deliveries and larger amounts of goods would be needed. Also quicker deliveries would be needed during the campaigns.

The case company's product collection in Customer 4's opinion needs some improvement and development. The product collection was seen as old fashioned and lacking innovation. Customer 4 feels that the case company's competitors have more innovation and product development than the case company and they would wish to see something new and innovative in the case company products as well. This applied not only to the products but also to the marketing and advertising of them. These factors have also had an impact on the sales volumes in a negative way. Customer 4 also raised the question of price-quality ratio of the case company products, which in Customer 4's opinion is somewhat unbalanced. However, Customer 4 is pleased that the case company provides them with tailor made products for campaigns but they would like to see some innovation in those too. In their opinion the case company is lacking the insight into retail business and consumer tastes.

Transaction elements

The problem with the lack of innovation emerged in packaging as well. The packaging of product X and product Y was considered to be good, functional and of high quality. However Customer 4 would wish for some changes in the packaging of the case company's product YZ. For instance it was suggested that the se products could be packed into banderols, which would make them easier to display and would take less space in the shelves. Concerning the transportation packaging the same problem emerged as with other customers. Cardboard boxes would be the desired packaging.

Customer 2 has calculated that picking the orders with its own truck is the most cost and time efficient way to get the goods on time. The delivery times of the case company are very fast because of this arrangement. Customer 4 picks their orders every morning from both factories and distributes the orders by themselves. For Customer 4 this is the fastest way of getting goods more frequently and delivering them with only one truck instead of having the case company delivering direct deliveries separately to each store only few times a week. Usually the ordered amounts are ready when Customer 4's trucks arrive to pick them but occasionally there have been some delays and the trucks have been forced to wait for a while. There have also been confusion and lack of information about the availability of the products.

All in all the poor availability of the case company product has decreased the reliability of the case company deliveries in Customer 4's opinion. Especially the lack of communication about availability status and changes in it has caused problems for Customer 4. For instance the unavailability of products means that they have to manually correct the orders, and the trucks have to wait at the case company factories for nothing.

Tracking of orders and being able to see the real time status of their orders is not possible for Customer 4. They would like to track their orders and especially the up-to-date information about the inventory availability. This would facilitate them in their own ordering process.

Post-transaction elements

Concerning the handling of returns, complaints and feedbacks Customer 4 feels that the case company is doing rather good job. Communication is working in both directions and problems are handled well. Invoicing is managed directly through the EDI system and it has been accurate.

Distribution

At the moment Customer 4 is satisfied with the current delivery method. They feel that the 48 hours delivery time by picking the orders directly from the factories is functioning well. Of course it would be the ideal situation for Customer 4 if the case company would have its own distribution centre because this would allow them to pick their orders from only one place instead of two places. This could provide some cost reductions for them as well.

Summary

Important issues that Customer 4 sees to be the main improvement elements are mainly related to the products and the marketing. They think that it is crucial for the case company to decide and know, in which markets they want to compete on, and how to make their products more attractive and interesting for the consumers. Also the availability issue was seen as important improvement point. Issues that Customer 4 thinks are being managed well were the packaging of product Y and product X as well

personal relationships with the contact persons. Overall evaluation of the case company's logistics customer service in a scale of 1 to 10 was assessed to be only 6-7.

Customer 3

Pre-transaction elements

In their regular orders Customer 3 uses an EDI system, in which replenishment orders are made automatically by the system when the shelf availability level reaches the re-ordering point. Campaign orders are made separately twice a month. Information and forecasted campaign order sizes are given in advance. Customer 3 is satisfied with the current ordering system.

In Customer 3's opinion the accessibility of the personnel in case of problems or questions has been rather satisfactory. However, Customer 3 feels that occasionally there are problems with reaching the person and getting answers. Contact information of the main contact person has been given however the case company has not named a back-up person in case the main contact person is not available.

The case company's flexibility in deliveries is an issue, which Customer 3 would hope to be improved. The problem concerns mainly with the case company's flexibility to Customer 3's campaigns and the ability to deliver the needed amount of goods. In campaigns Customer 3 has had difficulties with getting enough campaign products from The case company and they have even felt that The case company has not been willing to deliver the goods because they think that Customer 3 is not able to sell that much. That is why Customer 3 would hope to see more customer-oriented approach in the case company's actions and attitudes. This issue has also affected Customer 3's customers as the stores have run out of campaign products that have been advertised.

Transaction elements

Customer 3 considers the case company's product collection to be rather diverse, and is also satisfied that they are able to get tailor made products from the case company. However, they feel that the case company's own concept stores seem to be directing the overall product variety of their products too much. Customer 3 feels that the case company's own campaigns and the implementation of the campaigns are not very

adaptable and easy to apply to wholesale chain's stores. For this reason Customer 3 would hope that the case company would consider their customers when they plan and design their products and marketing activities.

Packaging of The case company products is functional and attractive according to Customer 3. Unloading of The case company product Z is easy and delivery sizes are small enough to handle easily. They are also easy to place on the shelves. However, concerning the transportation packaging of the product X and product Y DHL has given some negative feedback. The problem is the same as other customers have noticed; packaging should be changed into cardboard boxes because the plastic bags are too difficult to handle and move, and they are vulnerable to dirt and rips. However, Customer 3 also realizes the possible affects of this into costs.

Delivery times a few times per week are sufficient for Customer 3 during normal weeks. During campaigns they may have a need for more frequent deliveries and these are usually agreed when necessary. However, occasionally there are problems with the availability of products. Customer 3 would also wish to have all deliveries go through central warehouse so that there would not be so much traffic in the stores. This would require changing the packaging of product X and product Y.

Post-transaction elements

Handling returns of damaged goods etc. has an own systematical procedure at Customer 3 stores. In case of reclamations or returns the personnel will call to the contact persons of the case company, who in turn will handle the situation accordingly. There has been no problem with reaching the person and the compensations from returns are handled well and quickly. However, few problems have emerged with the invoicing. The problem arises when the prices of products have changed and Customer 3 has not been informed about this. Thus, Customer 3 would wish that the case company would inform them about price changes and would clearly mark which product prices have changed.

Distribution

Customer 3 has outsourced its logistics activities to DHL and thus all the deliveries are handled by DHL. The case company delivers the orders few times a week on agreed days and times and DHL will handle the deliveries to the stores. Sometimes if the

products need to be at the stores very quickly also the case company may deliver the goods directly to the stores. The current system satisfies Customer 3's needs. Concerning the thought of the case company's own distribution centre Customer 3 wonders about the cost-efficiency and whether or not the change would cause more work for them. Thus, they are not sure if they are ready to invest in that.

Summary

Customer 3 evaluates the case company's delivery performance in a scale of 1 to 10 to be about 8,5. They see that the most important improvement point is in the flexibility and reliability. They would hope for more understanding and customer-oriented attitude and that The case company would realize the affect of their actions to Customer 3's customers, the consumers, which are also the case company's customers. Customer 3 would hope to have all product information in one clear Excel-document. Information needed is for instance which products are new, which will be left out, what kind of campaigns will be coming, has there been any changes in the products etc. This would facilitate Customer 3's work as they would not have to read through many different papers and documents to find the information, which will affect on their ordering, selling and customer service. Issues that Customer 3 sees being managed well at the moment are the delivery system and the ordering system with EDI.

Customer 2

Pre-transaction elements

Customer 2 orders the case company products with two different methods; regular ordering of the main products is done straight from the stores through EDI system and the seasonal campaign products are ordered in advance four times a year. There have been no problems with the ordering except that Customer 2 was very surprised that the case company did not inform them about their system changes. They were amazed that the case company did not notify them about the issue even though it may have some affect on Customer 3's system as well.

Concerning the accessibility of the personnel Customer 2 has very little to complain. Usually the personnel of the case company handle inquiries and problems rather quickly but occasionally there have been problems with getting the answers immediately.

Customer 2 feels that the flexibility of the case company needs to be improved especially during special seasons like Christmas. The availability is poor during times when the sales volumes are very big and products are needed in the stores more than usually. The poor availability and flexibility is especially the problem with Factory 2 factory more than with Factory 1 factory.

The case company's product collection and marketing got some negative feedback from Customer 2. The biggest dissatisfaction was aimed to the case company's selective marketing strategy. Customer 2 feel that the products that the case company sells to them are less attractive than the ones that are only sold in the case company's own stores. Especially the patterns of the fabrics got some negative feedback and Customer 2 hoped for improvement in those. In their opinion the patterns are too complicated and so special that only a minority of the people buy them. Thus Customer 2 would like to see some compact and solid product collection with more focus on classic patterns and mass selling.

Also the advertising campaigns that the case company designs were considered very self-centred and not customer-oriented at all. Customer 2 would hope to get some alternatives in how to implement the campaign in their stores, which layout and structure differ from the case company's own stores.

Transaction elements

Packaging of the products was seen as functional and durable, and no special improvement was needed in that aspect. However, the transportation packaging was seen as a major improvement point. The packaging of the product Z was seen as relatively functional; the cardboard boxes are easy to handle and they protect the products during the transportation well. However, they would prefer receiving few bigger boxes instead of several smaller boxes as they are at the moment. The current boxes are too small and they leave a lot of waste. That is why Customer 2 would want to have bigger boxes because they would be easier to handle and get disposed of.

The biggest problem with the packaging was with the plastic bag packaging of the product X and product Y. This kind of packaging means that all the deliveries from Factory 1 factory cannot be delivered through the central warehouses because they have

to be handled manually. This is a major problem for Customer 2, as they would want to have all deliveries through their central warehouse so that the traffic in the Customer 2 stores would be minimized. Customer 2 feels that the case company has known about the problem with transportation packaging for a long time and yet they do not take it seriously and do something about it. In addition Customer 2 paid attention to the costs side and also the amount of waste from the packaging and the cost of the waste disposal. They would hope for some co-operation from the case company in order for them to calculate the costs and efficiency and to come up with a solution to the problem.

Concerning the delivery time and accuracy there seems to be some problems. Customer 2 can very accurately follow the completeness and accuracy of the case company deliveries from Factory 2 as they go through the central warehouse but deliveries from Factory 1 they cannot follow. Factory 1 delivers once a week during normal seasons and Factory 2 can deliver even five times a week if necessary. Once a week delivery from Factory 1 is sufficient at the moment but if the deliveries would go through the central warehouse they would need more frequent deliveries instead of one big delivery.

The frequency of deliveries from Factory 2 is good; however there have been problems with the completeness of the orders concerning the amount and delivery times. According to Customer 2's own statistics only 27 percent of the deliveries from Factory 2 factory have been on time, 26 percent has arrived in head of agreed time, and 27 percent have been late. In addition 28 percent of the orders are unclassified, which is probably due to some errors in the EDI message. In Customer 2's opinion these are not good figures and improvements for the deliveries are needed.

Improvements were also needed to the availability of the products. This was especially the problem in the beginning and end of seasons during the product collections changes. Availability during those times is very poor and sometimes even a waiting time of one month is needed before The case company is able to deliver the required amount of products. This is very harmful for Customer 2's sales and to the customers, the consumers, who require the products now and are not willing to wait for a month.

Customer 2 thinks that the delivery time of the orders from the Factory 2 factory is good and it is usually informed accurately. However, delivery times from the Factory 1 are

not accurate and more precise clock time of the delivery is required in order for the personnel to be ready to unload the goods.

All in all Customer 2 sees the reliability of the case company deliveries as below average level. From Factory 1 the availability is rather good, but from Factory 2 Customer 2 really wants to have more accurate and reliable deliveries. It is not good when the deliveries come in advance or too late. They have to be on the agreed time and at the right amount. In Customer 2's opinion this is just plain negligence, which should be corrected and improved by paying attention to the customer and by being careful.

Post-transaction elements

After sales services of the case company got good feedback from Customer 2 and no bigger problems aroused. Feedback and complaints as well as returns are handled well. If there is something to improve it is the speed of answering to inquiries. In addition also the accuracy of invoicing was not always good because of the price changes. Customer 2 hopes that this problem would be fixed and price changes would be up-to-date in both parties' documents.

Distribution

In the distribution decisions Customer 2 would hope for more cooperation from the case company. Customer 2 aims at having a centralised distribution through their own central warehouse and this would require for changing the transportation packaging of product X and product Y. They would want to research the possibility of changing the packaging into cardboard boxes and to calculate the cost-efficiency of this option. The transportation packaging is a very big issue to Customer 2 and they would be willing to discuss and cooperate with The case company in order to enable the change in packaging and thus in the delivery method as well. Distribution centre would be a good alternative in Customer 2's opinion if the packaging would be changed also.

Summary

The biggest improvement point in the case company's logistics customer service in Customer 2's opinion was the packaging of product X and product Y and thus the inability to deliver the goods from Factory 1 through the central warehouse of Customer

2. Also the difficulties in availability in the beginning and end of season changes were considered a big problem. Issues that Customer 2 feels the case company is doing well are the packaging of products (not transportation packaging) and the quality of the products. Also the after sales services are handled well. All issues considered Customer 2 evaluated the case company's logistics customer service in a scale of 1 to 10 to be about 8.

10 CONCLUSION AND RECOMMENDATIONS

10.1 Conclusions

The results of this research were surprisingly homogenous. However, the results differed to some extent from the view that the case company itself had about the issues beforehand. The same problems and improvement points seemed to arise more or less in every customer interview. However, it was also clear that some customers paid more attention to some issues than others, and different customers placed the prior improvement issues differently than others. There also seemed to be an evident difference between the level of logistics customer service of Factory 1 and Factory 2. The conformity continued in the list of issues that the case company performs well. Emerging issues were handling returns, the quality and packaging of the products, and the frequency of delivering regular orders.

The main problems that seemed to arise among nearly all customers to some extent were the availability, communication, reliability, flexibility, and product and packaging related issues. Problems in these issues decreased the overall evaluation of the case company's logistics customer service and customer satisfaction. These issues resulted in problems with deliveries and the reliability, and they also caused problems and additional work for the customer. Also the ability of the case company's customers' to serve their customers, the consumers, was affected in a negative way. The mentioned problems decreased the overall level of logistics customer service to the extent that the average grade that the respondents gave to the case company was 7,5. This indicates that the case company's delivery reliability is not on the promised level of 98 percent.

Problems in the case company's availability mostly during campaigns and seasonal peaks as well as on regular orders were evident in all interviews. Availability problems also resulted in poor reliability and flexibility in deliveries. The customers felt that flexibility and reliability were two of the most important issues related to logistics customer service. Flexibility and reliability were especially needed and required during big campaigns and seasonal peaks like Christmas, which are extremely important for the wholesale organisations' sales. The general opinion however was that the case company was not able to fulfil those needs. The customers were especially wondering how this could be possible even if they give rather accurate sales forecasts in advance so that the case company could prepare for the bigger orders.

Lack of reliability and availability in deliveries was also shown in the amount of back orders and in inaccurate delivery times. There were often problems with delivering the agreed amount of products, which led into customers having to accept back orders. Occasionally orders were also delivered too early or too late, which caused dissatisfaction among the customers. What caused even more dissatisfaction was the fact that the case company did not always inform about delays in deliveries or the accurate and up-to-date availability information. Furthermore, customers felt that the case company was not flexible enough to respond to their special needs for instance getting quick extra deliveries. Some customers were also hoping to get the possibility to track their orders and to get accurate status information about their orders.

Another big improvement issue in customers' opinion was the communication between the case company and the customer, and especially responding to inquiries. Customers felt that it was difficult to reach the contact person in case of acute problems, and getting an answer and solution to the problem was very slow. Occasionally there was no answer given. This worried the customer because it caused them a lot of additional work, stress and problems in providing their customers good customer service. Some of the respondents felt that the case company did not care about them and were wondering about their attitude. More customer-oriented approach and attitude was needed.

Lack of communication was also shown in the information sharing. Customers felt that they were not given enough and accurate information about for instance product

availability, prices, changes in products, delivery times and product information. More open communication and cooperation about these issues were desired because this sort of information affects on the customers' business as well and it can be very crucial to their operations. Customers felt that the case company should position themselves to their customers' shoes and understand and care about them better. As one of the respondents said: "Customer must be number one!".

One of the major improvement and development issues in the customers' opinion was the transportation packaging of the product X and product Y. The current plastic bags are very dysfunctional and difficult to handle. They have to be manually loaded and unloaded, which requires time and human resources. It is also the reason why product X and product Y cannot be delivered through the central warehouses. This issue is a very important development point, in which the customers want to see changes made soon. Cardboard boxes are the preferred packaging and some customers were wondering why nothing has been done to this problem since also the case company's competitors are using cardboard boxes. To some extent the customers understood the cost efficiency aspect of the problem but they would still demand a change and some sort of solution to the problem.

An issue related to the product collection of the case company emerged in most of the interviews. Some customers wanted more innovation to the product design and some would like to have more tailor-made products to sell. Some also raised the question of price-quality ratio in the case company's products. Another issue related to the products was the marketing and sales promotion of the products. Customers felt that the case company did not consider their customers in planning their campaigns and advertising. What was especially criticised was the selective marketing and the way, in which campaigns were implemented. Customers felt that the case company's campaigns and the implementation of them did not fit into their stores and no alternative way of implementing the campaigns were given.

Considering all the issues that were brought up by the customers in the interviews I would recommend to discuss the option of having The case company's own distribution centre. It would improve the customer service as well as customer satisfaction to large extent because it would facilitate in solving most of the current problems. From

customers' and customer service's point of view, a distribution would be worth investing in. The other side of the coin is of course the expenses of acquiring and maintaining a distribution centre.

10.2 Recommendations

10.2.1 Communication

Before planning a distribution centre there are some problems, which cannot be solved or improved by having a distribution centre. The main issue to be improved first is the communication inside the company, and between the company and the customers. There obviously seems to be some problems in the communication between the customer service department in Helsinki and in Factory 2 and Factory 1 since before the personnel changes the communication was better in customers' opinion. Internal communication and cooperation should be firstly considered in order to improve the other problems. Also the product collection and marketing activities should be considered in order to make the products more attractive and easier for the wholesalers to sell.

The lack of communication and proper customer relationship management with some customers affect a lot in the customer satisfaction. An issue that should be taken seriously is the fact that some customers felt that the case company does not care about them and does not think about them in product design, marketing and campaigns. After all, the customers of the case company's customers are the end-customers of the case company and therefore the case company should consider how the wholesalers could better sell their products to the consumers. The customer should be number one and the customer should be listened to. The communication concerning the availability and deliveries are issues that the customer should be informed about because it affects on their operations. Also being available for the customer in case of problems with deliveries etc. and solving the problems immediately should be self-evident.

As a suggestion, how to avoid or at least decrease the customer dissatisfaction and to identify the improvement points, I would recommend conducting annual customer service evaluations. Even a written customer service policy and sticking to it could be worth a thought. This would first of all proof to the customers that the case company

cares about them and listens to them, and wants to develop their operations to more customer –oriented approach. It would also allow the case company to identify the improvement points and the reasons for them, and thus would enable the case company to start solving the problems. In addition to customer service research it could be worth considering asking customers' opinions about new products or product campaigns in advance and let them affect on for instance the implementation of the campaigns. This would allow the customers to be heard and let them state their opinion and possibly affect somehow on for instance, how campaigns could be implemented in the wholesaler chains' stores.

A useful tool, which would facilitate in identifying the underlying causes of the problems and failure points in deliveries, is the fishbone diagram (see chapter 4.3.4). This tool could be used in determining the reasons behind the problems, and in this case almost all the problems that aroused in the research are somehow connected to each other. For instance problems in delivery accuracy are resulted from product unavailability, lack of communication and lack of warehouse capacity in the factories and maybe even problems in getting raw materials from the suppliers. It is important to identify all the actual reasons that have affected to the problem in order for the problems to be solved.

The problems with the availability are the main reason for many problems that the customers faced. It results in incomplete orders, inaccurate delivery times and unawareness in the customer's side because correct information about the availability was not given to the customer. Because of the unavailability customers will also have to accept back orders, which cause problems for them. Thus the amount of back orders should definitely be reduced. Availability problems also lead into unreliability as well as inflexibility in deliveries. Customers value reliability and flexibility in deliveries very much and it is important for them to have the deliveries on time and at least to be informed about delays in deliveries. Accurate, up-to-date product availability information should be provided to the customers in order for them to plan their operations accordingly. Listening to the given sales forecasts is important and they should be taken into consideration in production planning so that necessary amount of goods would be ready. Thus, the customers should be taken more seriously in the production planning. Of course, also the suppliers of the case company and the limited

warehouse capacity of the factories affect on the product availability but still these issues should be considered.

10.2.2 Distribution centre

One prerequisite for the possible distribution centre is to change the packaging of product X and product Y. The change to cardboard boxes would also affect positively on customer satisfaction and customer service level as was stated in the customers' answers. All customers mentioned the problem with the plastic bag packaging, and the option of changing it into cardboard boxes should be investigated in detail. Whether or not the decision is made to establish an own distribution centre the packaging of product X and product Y would already greatly improve the customer service. Cardboard boxes would also be the desired option for warehouse personnel in the central warehouses as well as in the stores. It would also allow for deliveries through the central warehouses of the customers, which was the desired state of most of the customers. Customer 2 was even ready to cooperate in calculating the cost efficiency and possible affects of the change.

Distribution centre with necessary space for stocking goods would facilitate the case company's customer service in a positive way. In order for the distribution centre to solve some of the emerged problems it would have to function as a warehouse for goods waiting to be dispatched and delivered to customers. This would facilitate the availability problem because the orders could be filled from the inventory in the distribution centre and the inventory would be refilled on a regular basis from both factories. Thus, the inventory in the production factories could be reduced and the circulation of goods would be faster. Also the campaign products could be produced in advance and stored in the distribution centre at least partly.

Distribution centre would also allow for consolidating orders from Factory 2 and Factory 1, which would enable to deliver full truckloads. Savings in transportation costs from factories to customers could be achieved. Consolidated orders would also reduce the traffic in the customers' facilities or central warehouses. Even though the case company would decide to have its own distribution centre customers could still determine the place, in which they want to have the orders delivered. For instance, deliveries to Customer 1 could still be delivered directly to the department stores, as

they prefer that method. Also Customer 4 would have to pick their orders only from one place instead of the current two places, which would facilitate their work and save time.

Distribution centre would allow for better customer service and satisfaction through improved availability, flexibility, reliability and accurate delivery times. If the packaging of product X and product Y would also be changed into cardboard boxes the customer satisfaction would be even better. Cardboard boxes would be functional and would suit to the customers needs namely by being easier to unload and handle the goods. Distribution centre and new packaging could also enable delivering at more preferred frequency and volume.

The decision about the distribution centre is big. When deciding whether or not to establish the case company's own distribution centre various issues have to be considered. First of all there has to be the resources and the motive to have the distribution centre. Commitment from the company and from the customers is needed. Also open communication, trust and cooperation are needed in order for the distribution centre to function and serve everyone's interests. Information would have to be shared from both parties.

There are two aspects to consider on this issue; the customer service, and the costs. The cost efficiency of the distribution centre would have to be calculated carefully. The main extra costs would be the maintenance of the distribution centre, cost of keeping inventory, the change of plastic bags into cardboard boxes and the disposal cost of the cardboard boxes.

Also transportation costs from factories to the distribution centre and from the distribution centre to the customers would have to be calculated. On the other hand the transportation costs to the customers will be reduced but the transportation of goods from the factories to the distribution centre also generates costs. Thus, there is a trade-off to consider in the decision of the distribution centre's location. Location near the customers would allow for faster delivery times and less costs in the transportation to customers but on the other hand the transportation costs from the factories to the distribution would be higher. Location near the factories would results in just the opposite and a compromise location would be on average of the same distance to

customers and the factories. For customer service improvement the distribution centre would certainly have a positive affect if the planning, organising and execution functions well. However, establishing an own distribution centre should not happen by letting the customer service level suffer. On the contrary, the distribution centre should be based on improving the customer service.

For further research I would recommend to make the same kind of research to the case company's other wholesale organisation customers as well. Even the same research methods could be used. It would be interesting to see whether the results of this research would be similar to those of the other customers. That could also give furthermore guiding information on whether to establish an own distribution centre or not because the distribution centre would of course affect on all customers and not just the ones that were studied in this research. Furthermore, even though this study excluded the case company's other products, I would recommend that also the customer service and deliveries of these products could be studied. This would be useful in order to examine the affect of the possible distribution centre into the distribution of the other products as well.

Concerning the distribution centre further research would need to be done in order to calculate and evaluate the cost-efficiency. Costs and necessary amount of safety stock should be carefully calculated in order to achieve high level of customer service as well as cost-efficiency and balance between the two. Another issue that would be worth studying is the affects of the possible distribution centre to the case company's international activities and the opinion of the subsidiaries to the possible distribution centre.

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LIST OF APPENDICES

APPENDIX 1.

HAASTATTELUN RUNKO

Asiakas: _____ Päivämäärä: _____
Haastateltavat: _____

1. ALUSTAVAT TOIMINNOT

a) Tilaaminen
b) Henkilökunnan ja oikean henkilön tavoitettavuus
c) Joustavuus tilaamisessa ja erityistarpeiden huomiointi
d) Asiakaspalvelu toimintapolitiikka
e) Tuotevalikoima/mallisto

2. VARSINAISET TOIMINNOT

a) Pakkaus/tukkupakkaus
b) Tavaroiden purkaminen
c) Toimituksen kesto
d) Tilausten täyttäminen ja saatavuus
e) Tuotteiden laatu ja kunto
f) Toimituspaikka
g) Toimitusaika
h) Luotettavuus
i) Toimitusten koko ja toistuvuus
j) Tilauksen seuranta/tilauksen status

3. JÄLKITOIMINNOT

a) Palautteen ja valitusten antaminen
b) Henkilökunnan tavoitettavuus
c) Tapa käsitellä palaute, palautukset tai valitukset
d) Palautussysteemi (kuinka hoitavat?)
e) Laskutuksen tarkkuus, tavat ja maksusäännöt

4. JAKELU

a) Toimitustapa ja kanavat
b) Nykyisen systeemin hyvät ja huonot puolet
c) Logistiikkakeskus ajatuksena

APPENDIX 2.

INTERVIEW GUIDE

Customer: _____
Interviewee(s): _____Date:_____

1. PRE-TRANSACTION ELEMENTS

a) Ordering
b) Contacting personnel
c) Flexibility in ordering and in special requirements
d) Customer service policy
e) Product selection

2. TRANSACTION ELEMENTS

a) Packaging/wholesale packaging
b) Unloading the goods
c) Delivery time
d) Product availability and fulfilment of orders
e) Quality and condition of goods
f) Right place of delivery
g) Accuracy of delivery times
h) Reliability
i) Size and frequency of deliveries
j) Order tracking

3. POST-TRANSACTION ELEMENTS

a) Giving feedback and complaints
b) Easiness and speed of contacting personnel
c) Handling of complaints or other problems
d) Returning system
e) Invoicing accuracy

4. DISTRIBUTION

a) Method and channel of delivery
b) Pros and cons of the current system

c) Distribution centre as a thought