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TO CUT OR NOT TO CUT?
Centralized vs. Traditional Meat Distribution System
Case Study: ICA Kvantum Lerum

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ABSTRACT

ICA AB started in 2004 a new system for distributing the meat products to its stores. The system offered ICA retailers an alternative way to obtain meat products for their stores directly in ready-to-consume cuts. This meant the possibility to eliminate the meat cutting areas from the stores with all the implied costs. ICA Kvantum Lerum (IKL) keeps considering personalized service as an asset that attracts many of its customers through the usage of a traditional system where the meat is cut and packed in the store. The goal of this thesis will be to study both systems, compare them, analyze the processes performed in each of them and conclude with possible improvements. Starting from the study of IKL´s customer demand profile the meat department performance will be assessed based on the service level provided to them and the processes' efficiency. The study will show that it is advisable to use both systems to address different segments although there are, from a supply chain management perspective, inefficiencies and incorrect service levels offered. Finally, strategies to improve the channel's performance are provided.

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1. INTRODUCTION

1.1 Background

The procurement processes and the in-store activities in a retailing store constitute the inputs applied for the creation of the output offered to the final customer. The relation of the inputs needed in the performance of the store and the outputs offered is what is called efficiency or productivity. The way chosen for performing its activities will determine the level of efficiency of the store. The analysis of these activities considering the relation of the retailer with other members of the distribution channel and the customers might show up possible improvements in the performance. In the case of grocery retailing, the analysis of the processes varies from one department to another since the goods handled have very different characteristics and the need of resources is different from one department to another. Specially those products which characteristics make them sensitive to temperature conditions and which life spam is short, should be handled in a more controlled way than others less delicate. Perishable products have a fast inventory turnover and require more labor in the handling.

The meat department is one of the perishable departments in a supermarket and contributes extensively to the reputation of the whole store. The value added in the meat products through the cut and packaging is higher than that offered in products that are simply received, stored and displayed in the store. Hence, the image of the meat products might be linked more directly by the customers to the image or concept of the store than with other goods. Store loyalty can be built and retained by an outstanding meat department. As Johan Frodell, manager of the meat department in ICA Kvantum Lerum (IKL) states, *"there are many customers who definitely choose our store due to our meat products and the service we offer"*. Many shoppers base their choice of a supermarket on their feelings for, and experiences with, this department[1].

As mentioned before, the handling of goods in the meat department is more complex if we compare it to the "dry grocery" departments due to the short life characteristics of the product and also to the process that is required until the meat is in the final cut ready for the customer. This makes it an important challenge for any store manager to run the most effective and suitable processing system for the meat department in a specific store. The supermarket manager has to decide how much of the meat cutting process he wants to have within the walls of his store. Through the traditional meat processing way the store receives bigger meat parts and the retailing cuts are performed by the store personnel in a more personalized way for the customer. It might be interesting for managers for several reasons: the processes within the store are considered to be less costly than those offered outside the store, the manager feels more secure having more control over the cutting of the meat, or as it happens in the case that will be studied in this thesis work, the manager perceives a preference from his customers for local cutting and packaging.

[1] Peak, Hugh S. et al. (1977) Supermarket Merchandising and Management.

But moving such work out of the supermarket can also provide some advantages. A central meat-processing plant (CMPP) can be more efficient than the traditional way. It would make use of economies of scale with a higher utilization of the resources installed that can be the state-of-the-art in processing and packaging such as it is in the case to be studied. One of the most important advantages of the centralized pre-packaged meat processing system is that it provides the stores with higher speed in handling the meat required in the shelves of the store when they become empty. This is due to the fact that the store receives meat cut in the final retailing piece that is going to be displayed in the shelves. Also a central processing will offer the store the possibility of buying only those smaller cuts that are better sold instead of having to buy the whole quarter or primal cut with parts that are not sold as easily.

These and other reasons that will be described later on are what encouraged ICA AB to open a central meat-processing plant for its stores. ICA's organizational system allows store managers to decide whether to use the new system, to keep the traditional way or to use a combination of both systems for different products. **The goal of this thesis will be to study both systems, compare them, analyze the processes performed in each of them and conclude with possible improvements.**

1.2 Problem Discussion

When dealing with the meat department in IKL, the products that are being merchandised have 2 origins, local and centralized, which imply that they have different distribution systems.

As explained by IKL's meat department manager, Johan Frodell, the traditional system has a supplier named Färskvaruhuset that delivers its products directly to IKL. This supplier is located in Kungälv, approximately 50 km from the store so the lead times and transport costs are really low, considering the proximity to it. Once the products arrive to the store they will be stored for 2 or 3 days before they will reach the final customer. These products will be cut and packaged by the meat department employees in front of the customer's eyes and then will be placed in the shelves.

In the centralized system, ICA AB Sverige has established in Västerås a central meat processing plant known as KPK (Konsumentpackade Kött) system, 107 kilometers west from Stockholm. In these centralized facilities, there are up to 300 employees in charge of cutting and packaging the different products so as to be distributed on a national basis to the different ICA stores all along Sweden.

It is important to describe and understand both systems because the problem arose from the implementation of the centralized system. In 2005 ICA AB Sverige suggested to the ICA retailers to use this system because labor costs, which were the highest, could be cut down even though distribution costs would increase. Furthermore, there were some ICA stores that did not have either enough machines or the required sanitary standards in their meat departments to provide the cutting and packaging service demanded by the customer. Also shrinkage levels obtained by the centralized system were proved to be lower in an official report sent by ICA AB to its retailers. However, these shrinkage levels are different throughout the stores based on labor

experience level on cutting skills. Summing up, the benefits that ICA central described to the retailers were bigger than the drawbacks that adopting this system could bring.

IKL decided to fully implement the centralized system and the problems began from the customer's perspective. From one day to the other, the changes were implemented in the stores and all the "traditional" trays were replaced by the "centralized" ones. The customers immediately perceived the difference in the products and even some of them had a negative reaction towards the new system. Moreover, the clients were not satisfied by the new products that were merchandised by the store, because they were still demanding to have a more personalized service through the cutting and packaging at sight.

IKL's manager then decided to gradually shift to the traditional system and try to solve the situation generated by the usage of a new centralized system in response to the customers' preferences. As Owe Krook, IKL's manager and Johan Frodell stated: *"the customers prefer the traditional system. They can have the meat cut according to their needs such as size, weight, number of pieces, etc. Also they like more the traditional package than the one done by the centralized center that has preservation gases in it"*. Customers were satisfied once again but the net margins generated by the meat department, in some products, were too low or even non-existent. This situation has been the main concern of IKL's manager, since the customers have to be satisfied so as to make them continue buying in the store, not only meat but also other products. On the other hand, IKL regarded as a business that is supposed to generate money, has to try to increase the profits by reducing its costs. Nowadays, approximately 80% of the meat comes from the traditional system and 20% from the KPK, according to Frodell.

It can be seen that this situation presents several challenges in terms of decision making and management. However, the problem should not be regarded only as an in-store matter but more from a holistic approach. IKL as a retailer is the one who receives information from the customer and it should be the link between the final customer and the distribution system which involves the suppliers and distributors. Therefore, IKL must take a whole supply chain approach to solve the problem at hand so as to be able to find the improvements that might not only be done within the store but also in coordination and cooperation with the suppliers. This should be done in order to integrate and involve all parts in the merchandising of the goods. Furthermore, the customers' opinion is of high importance to this matter, because taking into account their perception of the meat department would enable IKL to understand better their shopping behavior.

Supply chain management is defined as follows: *"a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize system-wide costs while satisfying service level requirements"*[2]. According to the given definition, when analyzing a problem from a supply chain perspective, the benefits that could be found at a certain point within the chain would be spread out to the different parts of it so as to satisfy the end customer on a higher level. Narrowing the problem down to have only a store

[2] Simchi-Levi, David; 2003; Designing and Managing the Supply Chain.

perspective could, very likely, provoke a sub optimization of the final improvements that otherwise would be maximized in order to have positive consequences all along the process.

Moreover, a supply chain management approach will take into account all the logistic activities that are involved in the manufacturing, handling and distribution of the product or service, which would enable a more complete analysis to find where in the chain these activities could be improved and how costs could be reduced. A closer integration with the other chain members will help the companies to work and cooperate better as the information flows will become more efficient so as to analyze the situation from different perspectives.

It is not an easy task to integrate all the puzzle pieces in an effective way, but there are examples in retailing in which taking a supply chain perspective has been an efficient tool to improve some companies' performance such as Wal-Mart, Home-Depot, Carrefour, etc. If these big worldwide known companies have found solutions to some of their problems through supply chain management and are regarded as success examples, why would not IKL want to do some benchmarking with these best practice companies so as to be more successful?

If IKL wants to be more competitive within its regional market, in terms of its meat department efficiency so as to increase customer satisfaction, it has to analyze its logistical functions with the suppliers to be more efficient than the other supermarkets that are operating in the Lerum area. *"The context of an integrated supply chain is a multiform collaboration within a framework of key resource flows and constraints. Within this context, supply chain structure and strategy results from efforts to operationally align an enterprise with customers as well as the supporting distributive and supplier networks to gain competitive advantage"*[3]. Not only should IKL include its suppliers in this analysis but also its customers, who are its most valuable asset, because by integrating their opinion and perception of the meat department service level, a more complete, complex and informed decision making process will be performed so as to continue being perceived as a highly customer oriented store.

1.3 Purposes and Objectives

The purpose of this study is to analyze the traditional meat processing system and the centralized pre-packaged meat processing system in IKL from a supply chain perspective. Therefore, by having this perspective the supplier, the retailer and the final customer's points of view will be important in order to consider possible improvements in the flow of information and goods for a better demand satisfaction. Through this analysis, the objective will be to find possible improvements in IKL´s procurement and in-store activities. The goal is to offer an optimal merchandising strategy for meat products in IKL in the attempt to fully satisfy final customers' interests. This optimal alternative will be studied in terms of customers' interests but also in terms of productivity and efficiency. According to the perceptions of the store managers interviewed, customers clearly prefer the meat to be cut in the store facilities since they perceive

[3] Bowersox, Donald, 2007, Supply Chain Logistics Management

it as fresher, less industrial and more personalized than that coming from a central processing plant.

The study will be developed trying to follow the next steps as sub-objectives:

- Describe the traditional meat processing system in IKL in which the last cutting steps take place in the store. In this description, not only the flow of goods but also the flow of information between the customer, the store and the supplier will be taken into account. Also, to analyze the advantages and disadvantages of this system.
- Describe the new centralized pre-packaged meat processing system presented by ICA AB to all of its store managers in 2005 with which the meat is served in the retail final cut in a sealed package with preserving gases. The store managers are free to decide whether or not to use this system or to partially use it. Study the advantages and disadvantages.
- Study the customers' interests in order to see if the actual mixed solution which includes two distribution systems is the best from the demand perspective.
- Is the group of activities performed throughout the centralized and traditional distribution systems by the store and its distribution channel partners performed optimally in terms of costs? Are both systems offering what the customers demand from each one of them? An insight analysis will be performed considering all the relevant activities done by each one of the members of the distribution channel so as to find an ideal efficient channel structure.

1.4 Research Questions

Throughout this thesis work the main and most relevant questions to answer will be the following:

1. How do both systems, the traditional and the centralized, work? What are their advantages and drawbacks?

2. What is the customers' opinion about the products and services offered by IKL? Which kind of products and services do they prefer (centralized over traditional or vice versa) and why?

3. Are there any improvements that could be made in the store processes to make the department activities more efficient and to offer the service level demanded to keep the customers' needs satisfied?

These questions will guide the researched topic and will be answered throughout the thesis work.

1.5 Scope and Limitations

The scope of this thesis work is to assess the performance of the meat department in IKL in terms of the systems that are being used to merchandise the meat products. There are 2 types of meat products that have to be distinguished: the ones that are cut and packaged inside IKL facilities and the ones that are cut and packaged in the KPK. Any other pre-packed meat products coming from other suppliers different from the centralized plant will not be taken into account to narrow the study down and have a deeper insight into the problem.

According to the information given by IKL, during the period September 2005 to February 2006 there was a total meat department sales drop in some products due to the system shift. From this particular assortment of products, the decision was made to change back to the traditional system although the net margins were low or even non-existent in some of the products mainly due to shrinkage levels and labor costs. This decision was made upon the idea that the customer preferred the traditional way. This group of products is mainly beef products. Therefore these are the specific products that will be studied during this thesis work, in order to determine whether they should be cut and packaged in the store in terms of costs and activity efficiency, and if so, to find alternatives to make them more productive. These products were chosen because among those with low or non-existent margin, these have the highest sales, labor costs and shrinkage and also due to the preference they have among the customers in IKL. The practical application of the findings on these products could be extrapolated to other products with similar processes and characteristics.

The suppliers' opinion will be taken into account so as to find possible improvements in communication and cooperation with IKL. The supply chain members that will be considered will be the 2 main suppliers from both systems: Färskvaruhuset, which represents approximately 95% of the purchased meat goods from IKL in the traditional system, and ICA's KPK. Moreover, the end customers' perception and opinion will be extremely relevant so as to define whether they are more attracted to buy products coming from one or the other system.

The study will focus on dealing with logistic activities such as transportation, handling, warehousing and some other activities related to the meat department that could be improved in order to be more efficient. The costs of the activities have been estimated based on the observations during the visits to the actor's facilities. This situation arose because of the impossibility found in the collecting of data on the costs caused by the mentioned activities, due mainly to the reluctance of the actors in disclosing information. The estimation was carried out with the help of Johan Frodell, perishable goods manager in IKL and validated by the respective members of the channel through corrections suggested over a draft that was sent to all of them. The most accurate analysis would have been performed if activity based costing data was

available from each of the members and the whole costs of the channel could have been added up.

1.6 Thesis Outline

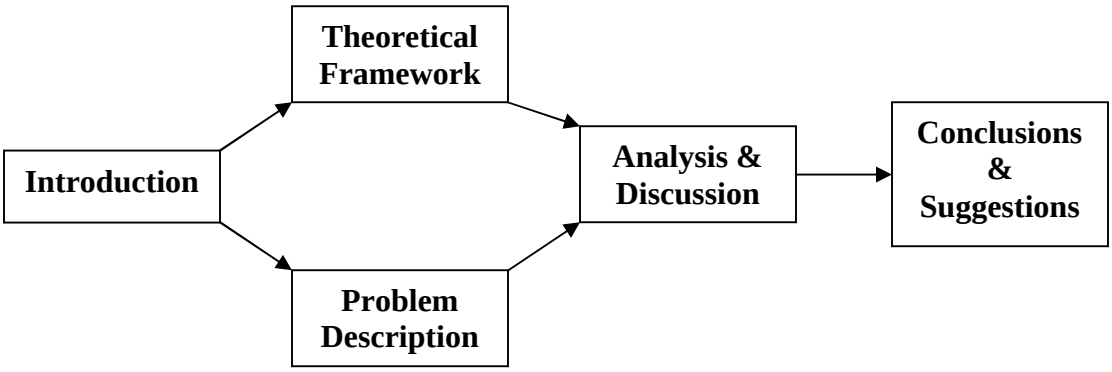

Figure 1.1 Thesis Outline

2. RESEARCH METHODOLOGY

In order to carry out a thesis project, it is very important to determine the research methodology in which the study will be conducted. Choosing the appropriate method to address the situation that is being studied is critical so as to know which path to follow to be able to draw better conclusions and obtain better results.

2.1 Research approach

When doing a research work, there are two main approaches that could be chosen to perform it, the theoretical and the empirical approach. On one hand, in the theoretical method an extensive literature investigation will take place so as to find relevant books and articles with theories that could help to understand the study problem in a better way. On the other hand, the empirical approach is based on the interaction with people, company and the situation itself so as to get a closer contact with the "real life" situations that are faced by companies and all the circumstances around them. Since the thesis topic is a practical issue, the best way to address it is

the empirical approach because most of the information will be collected from the supply chain members that interact to provide the meat products that will be offered to the end consumer in the store. Nevertheless, a relevant theoretical framework will support the empirical knowledge that will be obtained from a close and practical insight to the problem. The combination of an empirical approach and a literature review will provide the necessary tools that will lead to more accurate problem understanding and conclusions & suggestions' formulation.

2.1.1 Templates

In order to analyze the gathered information two templates have been used: gap and efficiency templates. Both of them have been fully explained in the theoretical framework chapter. They were found a good tool to explain both distribution systems and to compare them and also as a method to analyze the processes' efficiency.

2.2 Case study

The rationale behind using a case study approach is to take a "smaller universe" that will be easier to access that if the whole is taken into account. In this particular case, it is more convenient to study the situations faced by a single store (IKL) than to extend the study to ICA AB Sverige. In fact, not only a particular store is used for the study but also a specific assortment of products (beef) in the meat department will be studied so as to narrow the problem down even more. The intention is to have a deeper insight into these specific products and understand better their behavior, so that the conclusions and recommendations could then be extrapolated so more benefits could be achieved by the store while implementing the improvements that will be found. The case study should be an example that could help the store to improve their performance in the meat department so that the customers could be pleased and their needs satisfied in a better way. Furthermore, the variables (actors) that will be studied in this particular case are the ones that are directly connected to the situation at hand in the distribution systems studied, the traditional cutting system and the centralized prepackaged cutting system. These circumstances give the proper framework to assess the problem with the necessary depth to avoid a sub-optimization of the system.

2.3 Data collection method

For the data collection, several activities were conducted according to the nature of the information that will be needed. Basically, there are two kinds of information that could be gathered: primary and secondary data. Primary data refers to that one that can be collected in a more interactive way with the problem environment and its circumstances and that could be obtained through observations, interviews and surveys. Secondary data will be taken from written documents such as reports, websites, statistics and books that are relevant to the study at hand. Throughout this thesis work both types of data will be used.

2.3.1 Primary data

The 3 tools that were used to gather the primary data will be the following: observations, personal interviews and customer surveys. All of these activities did not only help to have a

better understanding of the problem and its circumstances but also to draw a better process description.

Observations

Several observations were done within the store, specifically in the meat department, to see how things are done “in situ” and be able to describe with more accuracy the type of service that is offered to the clients. A total access to the meat department facilities was granted by the store manager to take into account all those aspects that affect the kind of products that are cut and packed within the store. The most important part that was obtained from the observations is the description of the process in which all the activities that are performed by the meat department staff were taken into account to be able to define what steps were followed in order to have the retail cuts in the shelves. Since the moment when the products are received in the store and all the steps that are done in the middle until the final product is cut and pack for the customers. Moreover, visits to the wholesaler and producer facilities were conducted to make a complete description of the supply chain. Their roles in the chain were defined and better understood after observing the activities that they performed that impact the product itself and its distribution. The visits in their facilities were guided by their own staff.

Personal interviews

A set of personal interviews was conducted with different members of the supply chain so that the aspects that were not well understood in the beginning could be clarified by the people that have to deal with them in their daily job. A set of questions were prepared before the interviews took place to have a guide to direct it towards the information that was needed from the interviewees. However, due to the fact that the interviews were done at the interviewee’s facilities along with a site visit, more questions arose as the visit was performed. Interviews with perishable goods department managers, which include meat, in other ICA stores were conducted in order to investigate which system they were using and the reasons why. With this information, different opinions could be gathered so as to define their position towards the usage of any of the systems. Moreover, the specific circumstances surrounding the store’s market and its customers’ profile could be addressed. A very important fact that was obtained was the information about what the customers were demanding in those stores and what they experienced towards their acceptance to the products that were offered by the store.

In order to find out how were the wholesaler and producer working in the supply chain, interviews were done with them at their own facilities. Questions regarding the cooperation and collaboration, in terms of information and activities, were posted to try to find out if they will be willing to have a closer cooperation with the other members on the chain.

Survey

A survey was conducted during two days from 10:00 hrs. to 13:30 hrs. at IKL's meat section of the store to all the customers that picked goods from the meat shelves. The purposes of the survey were the following:

- To identify regular customers among those asked
- To analyze the origin of the average customer in terms of area of residence
- To identify customers' preferences and proceed to a segmentation of the market based on service outputs demanded
- To see how sensitive the gas was preserved meat to the customers
- To see what percentages of the regular customers also buy in Alingsås, that is the main competitor in the area.

Different segments among the customers were defined based on the different level of importance given to the service outputs specified in the survey. This was done with the goal of best describing end users' service output demands and purchasing patterns. "Ideally… an initial, small-scale research program should be initiated based upon personal interviews… The purpose of these interviews is to elicit in the language of the customers, firstly the importance they attach to customer service vis-à-vis the other marketing mix elements such as price, product quality, promotion, etc., and secondly, the specific importance they attach to the individual components of customer service"[4]. To identify customers' preferences and define different segments in the marketplace a number of relevant dimensions were chosen based on the main services provided by the two different distribution systems (KPK and Traditional system). The factors chosen were the following service outputs: (1) Existence of meat cut in the store facilities, (2) Product life, (3) Customer personal service and (4) Price. For the purposes of the study "price" is included among the service outputs in order to identify those possible customers that are mainly sensitive to final total cost and less sensitive to real service outputs and to see how important customer service in relation to price was. Customers were asked to order by level of preference these service outputs.

The model used to identify relevant segments of the marketplace in this thesis is inspired in the constant-sum scale model by Anne T. Coughlan 2006, Marketing Channels, 7th Ed. In order to disturb as little as possible the customers of the store, the questionnaire was designed to be brief and a constant-sum model would have taken much longer for the customer to answer. For that reason, the four more relevant features were asked to put in order instead. The definition of the segments will be done through the analysis of the first preference as a discrimination attribute and the second preferences within each segment. The service outputs were used for the creation of four different segment groups based on which of the four service outputs they chose as the first preference. For example a segment was "lowest price segment" created with those customers that chose lowest price as the first preference. Within each segment, the second alternative was also important in the considerations of the study.

[4] Martin, Christopher. (2005) Logistics and Supply Chain Management.

2.3.2 Secondary data

In this case, the secondary data that was used were textbooks and articles, from magazines and newspapers, on related topics to the thesis such as retailing, logistics, supply chain management and customer service. These references were mainly obtained from Gothenburg University's library. Furthermore, official information from IKL's annual and internal reports was consulted regarding the performance of the store in terms of costs and sales, among some other indicators. The meat department data was consulted in a more detailed way so as to be able to identify the economic factors that were affecting it. Moreover, ICA's price database was revised so as to have the data from KPK's product prices.

2.4 Validity & reliability

2.4.1 Validity

The internal validity of this thesis work is given by the real connection that exists between the situation itself and how it is related to what some other authors have already written about it. There has been some research about the retailing and in-store logistics, reason why there are some specialists and experts that have been investigating about this kind of problems. Furthermore, the people that were interviewed have been working within this given supply chain for several years, which provides them with several years of experience. They are the responsible of the product from the moment it arrives to their respective companies until it goes to another channel member. Their experience also adds validity to the information that they have given to perform the study.

While dealing with the external validity of the study, this thesis work's findings can be used to be applied in a bigger perspective. The conclusions drawn could be applied to other meat departments in other ICA stores that could have a similar situation. Moreover, the results ought to help the manager to a more efficient decision making in terms of how to handle the meat department within IKL. Due to the lack of real data resulting from the information disclosure policies found in the sources, the study has been based on estimations that have been verified, corrected and confirmed by the managers of the involved areas within each channel member.

2.4.2 Reliability

In order to make this thesis work more reliable, different sources with high levels of expertise, either theoretical or practical, were consulted so as to have several opinions and approaches. An objective approach was given to the gathered information so as not to include personal opinions that could have biased the study. The tools and theories used to conduct the analysis and discussion of the problem were chosen according to the relevance and importance in the field being researched so as to be able to get good solutions and suggestions. The most important source has been the customers' opinions obtained through a survey conducted next to the shelves in the meat department of IKL.

3. THEORETICAL FRAMEWORK

3.1 Retailing from a supply chain management perspective

"Retailers were once effectively the passive recipients of products, allocated to stores by manufacturers in anticipation of demand. Today, retailers are the active designers and controllers of product supply in reaction to known customer demand. They control, organize and manage the supply chain from production to consumption. This is the essence of the retail logistics and supply chain transformation that has taken place"[5]. Nowadays, the retailers have a more important role in designing the product flows from their allies and that is why they need to be closer to them. However, the retailer could take the position as the "boss" in the supply chain because in order to achieve better results, a channel leader has to arise and try to lead the way to a beneficial goal for all the members. IKL's manager must consider that his store has a privileged position within the chain because is the one that is closer to the end-consumer and this situation provides him with a lot of influence over the other members in the chain so as to work together and try to achieve better results for everyone.

"Regardless of sector or industry, supply chain integration can only be achieved through greater collaboration and coordination of functions across supply chains. This means partnerships, alliances and networks that are created within and between organizations. Traditional functions can no longer be viewed in isolation or silos independent from the workings of other parts of their own and other businesses. Cross-functional teamwork and inter-organizational co-operation will therefore hold the key to the future developments in supply chain management"[6]. It is not an exclusive trend in retailing because most of the big companies in the world have been applying this SCM concept in their operations and they have been moving forward in their business areas. There is enough evidence to demonstrate that taking into account the whole supply chain can bring more benefits than if the parts are considered as isolated entities working on their own

A new approach towards retailing has been adopted according to the evolving needs of the market. "In a retailing context, supply chain management is the delivery of economic value to customers through the management of the flow of physical goods and associated information from vendors to customers. Thus, supply chain management is a set of business activities that manages the movement of products to retail distribution centers and stores and the exchange of information between retailers and vendors"[7]. All the efforts from all the members of the chain, in this case linked to the meat department, will be directed towards enhancing customers' satisfaction levels by fulfilling their needs with a more attractive product. It has been stated by several experts and specialists in this study area that competition in today's world is not only

[5] Fernie, John et al; (2004); Logistics and retail management.
[6] Idem.
[7] Levy, Michael et al; (2007); Retail management.

between isolated companies but between supply chains. The more structured the supply chain is the more competitive and successful it will be.

"Supply chain collaboration can deliver some powerful advantages to participating organizations, and the collaboration process is worthwhile, with coordination efforts and investments leading to enhanced profit performance and the realization of competitive advantages over time"[8]. These benefits that could be reached by the actors are mainly directed to deal with a more accurate demand forecasting. The more information about the customers' behavior the actors can have, the more connected and closer to what the market is demanding they will be. The advantage that could be obtained throughout time, against the competitors, is that since better information will be gathered, a better understanding of the market and the needs that have to be fulfilled could be achieved.

For instance, with a more efficient information flow the inventory costs could be reduced because if the demand forecast is more accurate it would be unnecessary to have a lot of stock in the meat department. "By gaining visibility into consumer demand and available inventory, retailers have the opportunity to take merchandise and costs out of the supply chain"[9]. As a consequence, inventory levels will be reduced and so will the costs for the meat department. From this perspective, there will be fewer costs that have to be assigned to the final product and the client will be paying a cheaper price to get the same product. Another benefit that could be obtained from applying the SCM perspective to the processes in IKL's supply chain is that labor costs could be reduced if the activities that are performed could be better coordinated.

Several SCM strategies could be applied by IKL, as Schonberger describes, that could be used in retailing as well as in other industries and that could bring improvements into the business that is being developed. "…a raw listing of practices for dealing with chronic delays and wastes in the supply chain. These are not particular to any one industry or type of company, but should apply widely—to companies in basic metals, plastics, glass, medical devices, foods, chemicals, paper, furniture, appliances, automotive, metalworking of all kinds, and so on.

- Internal and external collaboration—internal multifunctional teams face to face with counterpart supplier and customer teams.
- Joint inventory—as a performance metric aimed especially at managers in purchasing (raw materials) and marketing (finished goods).
- Vendor-managed inventory—with your inventory records open to suppliers.
- Continuous replenishment—fed by your daily usage data.
- Synchronization via advanced scanning and tracking systems.
- Squeezing out the middleman—unless the middleman is a 3PL.
- Direct shipment—bypassing others' or your distribution centers.
- Cross-docking at distribution centers.
- Breaking free of ingrained vertical integration to source noncore items from lower-cost suppliers more expert than you.

[8] Sheu, Chwen et al; (2006); Determinants of supplier-retailer collaboration
[9] Amato-McCoy, Deena M; (2006); Crossing channels.

- For any product line involving large numbers of component parts, establishing modular suppliers to assume subassembly responsibilities for logical groups of parts"[10].

It is a matter of deciding what kind of strategy could work better for IKL and the specific situation of the performance of its meat department and how they can collaborate with its suppliers. "When the suppliers have access to more data, they are better able to plan ahead. And when the retailer has a better idea of where its suppliers' manufacturing output is vs. their capacity, the retailer can manage its marketing and promotions more effectively. If retailers and their suppliers work more closely together, it's easier for them to develop an idea of what works"[11]. Since IKL has a very close bound with its suppliers, several joint strategies could be applied so that, through aligning the goals they want to reach, they could be more cost efficient and could satisfy the customer to a greater extent. With a better planning the procurement procedures could be enhanced in order to be more accurate while determining the amount of goods that would be required from the suppliers.

3.2 Optimizing distribution: channel design

In order to maximize sales and profit, the activities and processes carried out throughout the distribution channel to bring the product to the end-user have to be well adapted to the necessities and preferences of such end-users so their demands are satisfied in the best possible way. This will be only possible through a careful research on the customers' service demands, an identification of the activities in the distribution channel that create those service demands and through the development of those that create the demanded services and have minimum performance costs.

3.2.1 Customer-oriented retailing

The most important thing in retailing is the customer and in IKL's case it is not the exception. In order to satisfy the customers' needs in the grocery retailing business, it is extremely important to be able to build an effective network that will help to achieve this goal. If a good partnership is formed within the members of the supply chain, the customer service could be enhanced in a bigger proportion. "Indeed it could be said that ultimately customer service is determined by the interaction of all those factors that affect the process of making products and services available to the buyer"[12].

[10] Schonberger, Richard; (2006); Supply Chain: Tightening the links.
[11] Cowan, Joe; (2005); Supply Change.
[12] Christopher, Martin; (2005); Logistics and supply chain management

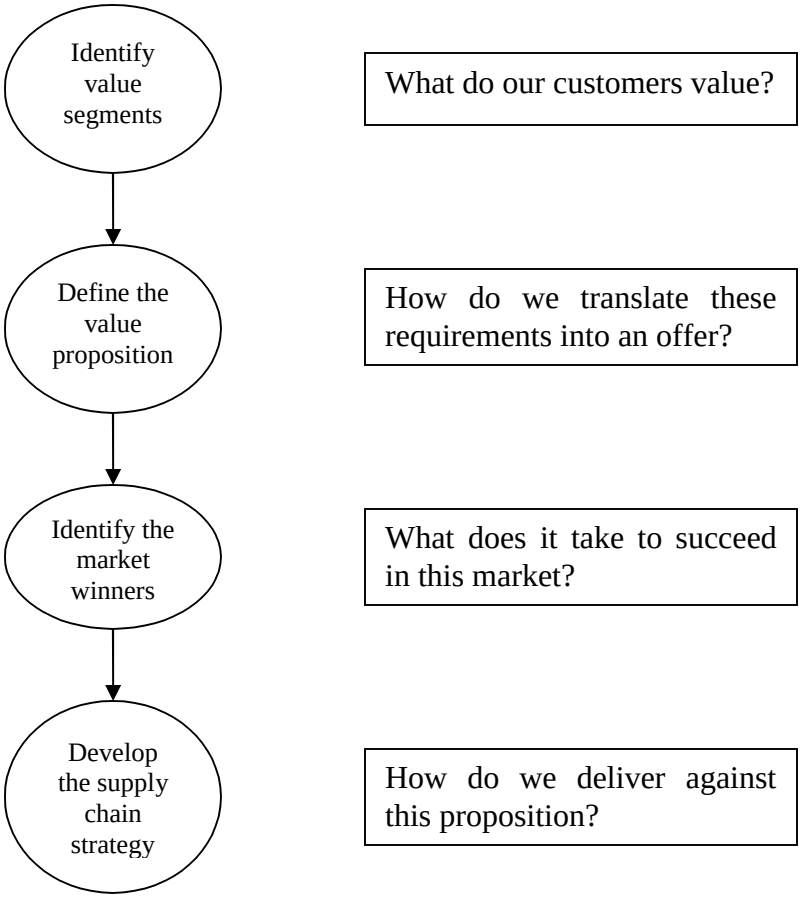

Figure 3.1 Linking customer value to supply chain strategy. (Christopher, 2005)

In grocery retailing, the business is "driven" by the market because what the customer is demanding is what needs to be accomplished. The retailer must never look for his benefits over the ones from the customer, because he will be taken out from the market by those who have a more customer oriented philosophy. This perception change has created what now is known as "demand chain management" where the customer is being placed at the beginning instead of in the end as it is shown above in Figure 3.1.

Nowadays, the retailer has a more important role as an actor in the supply chain because it is the one that is in a more direct contact with the customers' needs. The retailer should not regard only his performance but take into account the rest of the chain's performance so as to enhance the final customer's experience. "Logistics is all about integration, not only within a company, but also increasingly outside the business with suppliers, logistics service providers and customers. Partnership is a strong component of modern retail logistics, and an ability to work with other individuals and other companies is fundamental to success"[13]. Through cooperation, collaboration and integration with the other members of the supply chain, the results that could

[13] Fernie, John *et al*; (2004); Logistics and retail management.

be achieved not only by IKL but also by its "colleagues" could be maximized as well as the customer satisfaction levels.

"The buying process is triggered when consumers recognize they have an unsatisfied need. An unsatisfied need arises when a customer's desired level of satisfaction differs from his or her present level of satisfaction"[14]. The end customers have demands that need to be satisfied; this is where IKL must enter and try to fulfill them in a better way than its competitors could.

However, it is not an easy task to try to fulfill the customers' needs in a good way due to the fact that there are different kinds of people that will come to the store and buy products. On one hand, if a customer's expectations are low and the retailer offers a higher service level then this customer will be pleased and will, definitely, come back. On the other hand, if the expectations are too high and somehow the retailer is not able to cope with what the customer is asking for, the store could lose this customer forever. "Every educated retailer understands that it is virtually impossible to satisfy the needs of everyone on his or her trading area. No matter how attractive the merchandise might be, how value-oriented the product mix is or how complete the assortment might be, it is simply a matter of fact that not everyone will be motivated to buy in one store"[15].

Not only the customers look for different things when they are buying in a store, but also their behavior has changed over the years and the approach they had has been modified. The consumers can be gathered within specific groups called segments that have a certain similar buying behavior looking for characteristics that might not be looked for by other customers in other segments. This is why when it comes to grocery retailing, customer oriented strategy that is offered, which is precisely IKL's approach, might be the greatest competitive advantage that a store could create in order to be different from its competitors.

The grocery retailer has to be aware that applying a customer oriented strategy could make its business grow in a higher rate that if it takes an attitude only towards the cost reduction and efficiency they have within the store. The goal for the whole staff in IKL must be to focus on ways in which they could satisfy the customer everyday in a better way. It is not an isolated activity that has to be performed only by those who are in front of a counter or at the cashier; everybody from top to bottom in the hierarchical organization has to cooperate to achieve the desired performance towards the customer. "Customer strategy is not a fleeting assignment for the marketing department; rather it is an ongoing business imperative that requires the involvement of the entire enterprise. Organizations need to manage their customer relationships effectively to remain competitive in the interactive era"[16].

Because IKL does not want to create a benefit only on the short run but on the long one, the perception that it could create in the customer is extremely important to have the clients constantly coming to the store. If customer loyalty can be reached through the activities performed at IKL and the customer service offered, the best idea is to keep and improve on doing things the same way. However, are the customers really aware of those value-adding activities

[14] Levy, Michael; (2007); Retail management.
[15] Diamond, Jay et al; (2003); Retailing in the new millennium.
[16] Peppers, Don et al; (2004); Managing customer relationships: a strategic framework.

IKL is offering them? What is the real reason why the customer keeps on coming and buying in the store?

In order to know who the customers are and what they are looking for, it is really important to conduct a customer study or analysis. "Customer analysis can be usefully partitioned into an understanding of how the market segments, an analysis of customer motivations, and an exploration of unmet needs, as it is shown in Table 3.1"[17].

SEGMENTATION

- Who are the biggest customers? The most profitable? The most attractive potential customers? Do the customers fall into any logical groups based on needs, motivations, or characteristics?
- How could the market be segmented into groups that would require a unique business strategy?

CUSTOMER MOTIVATIONS

- What elements of the product/service do customers value most?
- What are the customers' objectives? What are they really buying?
- How do segments differ in their motivation priorities?
- What changes are occurring in customer motivation? In customer priorities?

UNMET NEEDS

- Why are some customers dissatisfied? Why are some changing brands and suppliers?
- What are the severity and incidence of consumer problems?
- What are unmet needs that customers can identify? Are there some of which consumers are unaware?
- Do these unmet needs represent leverage points for competitors or a new business model?

Table 3.1 Customer Analysis. (Aaker, 2007)

Once the grocery retailer has found out what the customers are looking for, the next step to move on is: how to do it? It is a big challenge to be able to convince the customer that the best option to buy his/her products is in a certain retailer store. Obviously, the quality of the products is a basic requirement, but since the kind of products that are being sold in supermarkets are the same, then IKL has to find a good formula that could be more appealing to the end customers than that one from their competitors. Within this "magic potion", each retailer decides the aspects that will give its store the advantage over the rest of the options in the market. For example, a good customer service could make a great difference that the customer might appreciate above other characteristics. In some other cases, the way in which the store is designed could motivate the client to come and shop again in the store.

This trend on satisfying the customer and trying to adapt the distribution system to what they are looking for is not new, it has been going on for a while, but little by little is gaining more

[17] Aaker, David; (2007); Strategic market management.

importance among grocery retailers. “The 1990’s showed, rather more clearly than preceding decades that the retailers are genuinely trying to meet consumer needs, whether in reducing queuing times, in providing more helpful labeling, or in setting up crèches. In a competitive market, they know that, to use Tesco’s slogan, “Every little helps”. From their point of view, every little improvement helps to differentiate their offer, at least for a time”[18]. If all IKL’s efforts are directed towards enhancing customer satisfaction levels and some small specific actions are taken in the opportunity areas that could make a difference for the customers, big rewards could be achieved only by modifying some details.

3.2.2 Retailer positioning in the marketplace

As mentioned before, the competitive advantage is obtained through finding a good formula that differentiates the store from other competing stores and attracts those customers addressed. This formula is defined by positioning the activities in the market place, which is done by establishing not only *what* the retailer is going to sell but also *how* it is going to sell it to its customers. This is done through making choices on cost side and demand side characteristics of their business. On the cost side, retailers commonly focus on margin and inventory turnover goals. On the demand side, the retailer chooses what services to provide to its shoppers[19].

On the cost side the “high service” systems have been traditionally characterized as model with high-margin and low-turnover operations. The “low-price” systems on the contrary are characterized as low-margin, high inventory turnovers and low level of service models. There are some examples of retailers that are able to achieve a mix of the two profiles through different advanced strategies combining high inventory turnovers and low margins with high levels of service. The combination of margin, level of inventory turnover and the level of service decided to offer will depend on the interests of the customers targeted and their preferences.

On the demand side the characteristics of the output provided, including in this output not only the products but also the services offered is what will determine the sales level in the chosen target market. “It is true that customer service is a costly benefit to provide but retailers continue to invest in customer service because it can bring substantial benefits, particularly when it is well targeted”[20]. Different end-users have different demands and it is of high importance to understand the end-user preferences in what they want to buy and how they want to buy it.

Identification of end-user interests and preferences

One of the first steps taken in the analysis of customers’ interests and preferences is the evaluation of the demand in the location where the supermarket will be situated. The location of the store is of great importance and it will be a decision that will affect the sales throughout the store’s life. There are many factors that can be studied in order to understand the end-users demands in a specific location. These factors usually studied are the tangible factors of the community and the social traits of the community[21].

[18] Seth, Andrew et al; (2001); The grocers: the rise and rise of the supermarket chains.
[19] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.
[20] Idem
[21] Peak, Hugh S. et al. (1977) Supermarket Merchandising and Management.

Among the tangible factors studied we can find the physical environment of the community, the complementary business in the nearby, the density of the population and the moving flows of people in the area. The existence of highways or important roadways close to the store will affect the affluence of customers to the store and also the services demanded. With an easy and fast access to the store from a highway, shoppers from the surrounding areas can be attracted to do their shopping in that store for example for a fast stop on their way home from their working places. These customers may live far from the area where the store is located and have different preferences than those of the local customers.

Complementary businesses can be of great value for the establishment of a new store because they attract potential customers to the vicinity. The type of complementary business could dictate the type of purchases that potential customer might perform. For example, if the nearby businesses are in the entertainment sector, the main sales will probably be carried out in the weekend which will translate in that the shopping type will be of a longer time and of supplies for the whole week. In our case there is an important competitor situated in Alingsås that benefits from the number of different types of boutiques in Alingsås for increasing the weekend sales in great proportion.

The density of the population is another important factor to consider when studying the demand in an area. "People in neighborhoods tend to be somewhat alike: families with children at home attract other families with children at home. A neighborhood with young married couples and large number of children has more potential customers than a community of older couples without children. However the communities that the older couples live in often make more intensive use of the land-for example, homes are smaller and closer together. Streets are narrower, and there is much less open space in the community"[22]. These different types of neighborhoods have different necessities and the services offered have to be adapted to each type. Smaller homes have for example less space to stock groceries and therefore the purchases will be smaller and more frequent than the ones in less dense areas.

The tangible factors of the community are very relevant for the study of the demand in a certain area, but there are other factors that affect even more directly the type of output demanded in that community. These factors are the social characteristics of the community. This type of information deals with people's interests, attitudes, habits, traits and the like that serves to segment the population in an area. The wages of the population in the community determines in great measure the life-styles and is an important consideration. The different occupations of the population will for example determine the number of meals eaten outside the home and the importance given to the home prepared meals. "The lifestyle of the people in a community is used to further refine an evaluation of the expected volume of food purchases. Lifestyle refers to the way people live. Long time residents of a community, as opposed to its more mobile members, have a different way of life. For example, long-time residents are usually more "store loyal" than those residents that move more frequently. Long time residents are also typically less innovative: they are less likely to try new products and new stores"[23]. The age structure of the population is a relevant parameter to study population's behavior. Younger people usually select

[22] Peak, Hugh S. et al. (1977) Supermarket Merchandising and Management
[23] Idem.

a narrower range of products than the average shopper and the older people are more conservative in their purchases. Therefore, the most attractive age segment would be the middle aged individual avoiding extremes of age. This is exactly the age profile of the area where IKL store is located; there is a large proportion of the population between 30 and 50 years old. The needs and tastes of ethnic groups must also be considered in order to optimize the tailoring of the outputs and maximize the sales.

From the analysis based on both tangible factors and social characteristics should derive the information required for the definition of the bundle of services and products most valued by the potential customer in the area studied. This will serve to segment the market into groups of end-users that will ease the decision on what services are more important to offer than others. According to Martin Christopher (2005) the approach to service segmentation follows a three-stage process[24]:

1. Identify the key components of customer service as seen by customers themselves. In this thesis' case the key components were given forehanded in a conducted customer survey for the research interests.
2. Establish the relative importance of those service components to customers. The main advantages offered by each of the two distribution systems used by IKL were the service components asked in the conducted survey to be ordered by the customer. By this, answers about customers' service preferences will be more directly related to one or another distribution system studied.
3. Identify "clusters" of customers according to similarity of service preferences.

3.2.3 Service outputs

"A framework for codifying and generalizing how the end-user wants to buy a particular product was proposed by Bucklin as a basis for determining channel structure. Bucklin argues that distribution channel systems exist and remain viable through time by performing duties that reduce end-users' search, waiting time, storage and other costs. These benefits are called the service outputs of the channel. Other things being equal (in particular, price and physical product attributes), end users will prefer to deal with a marketing channel that provides a higher level of service outputs. Buckling specifies four generic service outputs: (1) *bulk-breaking*, (2) *spatial convenience*, (3) *waiting or delivery time*, and (4) *product variety*. We add two other service outputs to this list: (5) *customer service* and (6) *information provision*"[25].

The action of dividing large lot sizes into smaller units more adapted to the retail offering is called *bulk-breaking*. This is a service offered to the end-user that reduces its necessity for carrying inventory and the handling of big quantities of product. Thus, the more bulk-breaking the retailer offers to the final customer the more adapted is the quantity of the product to its final consumption. This is a service that increases the final price of the product and it can be observed for example in the lower prices per kilo that bigger retailing cuts of meat in a grocery store can

[24] Martin, Christopher. (2005) Logistics and Supply Chain Management.
[25] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

have compared to other smaller cuts of the same type of meat. In this case the cutting process offered has a labor cost that is reflected in the final price of the tray.

Spatial convenience refers to the service offered to the customer in order to reduce transportation and search costs. The better or worse location of a grocery store in relation to the residential areas around will determine the level of spatial convenience offered. Physical attributes of the area where the store is located will also affect this service output.

Waiting time is the time that the customer has to wait between the moment of ordering a specific product and the time it is received. If the customer has to wait longer, the service output will be lower. The availability of goods in the store allows less waiting times but it derives in higher inventories and therefore higher costs of the final product.

Breath of *variety* and depth of *product assortment* also bring more inventory costs because it means having more products in-store. Breath of variety means the number of different types of products offered. Depth of product assortment means how far the store goes offering different types (style, sizes, prices, classes, etc...) of goods within the same product types. "Not only is the extent of the product array important, however; *what* assortment of goods is offered to the target consumer is also important"[26]. As said before different end-users have different tastes, and these have to be addressed with "depth" in the assortment if the desire target is to be attracted.

Customer service deals with the activities performed by the retailer for making the shopping and purchase easier for the end-consumer. Good customer service can bring greater sales but this service must be sensitive to the targeted end-consumer. This is again another reason that reinforces the importance of determining the interests of the addressed end-consumer.

In the meat department an example of combined insights into demands for waiting time, depth of product and customer service can be observed if, for example, a customer wants a specific type of meat that is in the displaying shelves but in thinner or thicker slices. If the store has cutting facilities and stored meat ready to be cut, the staff in the meat department can attend to the customer inquiry and cut the meat in that very moment.

The last service output is the *information provision* and refers to the education of end-users in relation to the product characteristics or usage capabilities. This information provision is used by some retailers as a mechanism to generate new sales and increase those already existing. A good example of this, in the grocery industry, is the offering of recipes that encourage the use of new grocery products or new ways of utilizing traditional ones.

All the information gathered concerning the definition of the end-user preferences should be used to define and assess population segments attractiveness, target a subset of the segments identified, and customize the distribution channel system solution used to sell to each targeted segment. The analysis of different segments in the market where IKL acts will be performed later on in order to help draw conclusions about the customers' preferences.

[26] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

The price is not considered a service output but instead what is paid for the group of service outputs and the product itself. The end-user compares service outputs, product characteristics and prices offered by different competing retailers and make trade-offs among them in order to choose their best alternative[27].

3.2.4 Price-based vs. service-based strategies

Grocery retailers, like IKL, have to decide what kind of strategy they will use in order to provoke some changes in their stores. They could choose either a price-oriented or service based strategy. On one hand, if the retailer wants to implement a price-oriented strategy it will try to emphasize the competitive advantage that they have in terms of low prices or special promotions against their competitors. The price-oriented customer will feel attracted to the store, because what matters to him/her is to find good products at low prices. "There are three ways to communicate low prices to a price-oriented consumer:

1. Everyday low pricing (EDLP): these supermarkets have low prices all the time, and therefore generally do not offer many deep-discount promotions. This is the strategy that helped make Wal-Mart the retailing success it is today.
2. High-low pricing: key low-priced items in the store are featured in local newspaper advertising, on store coupons, or on distributed flyers. Other items in the store continue to be priced at their regular, higher (than discount or than EDLP-pricing) price.
3. Retail promotions: a third way for grocers to attract price-conscious shoppers is to offer general retail-based promotions, rather than featuring discounts on for shopping in the store"[28].

On the other hand, if the retailer decides to please their customers with a better service instead of a price strategy, then it will try to offer, for instance, longer opening hours, bigger assortment of products and some other activities that are directed to improve the whole shopping experience for the buyers. "Service based-strategies focus on providing high-quality products, or interesting assortments of products, to lure consumers into the store. Some stores try to make the trip to the supermarket an adventure, where discoveries of interesting products or new ideas can be found"[29].

No matter what strategies the grocery retailers or supermarkets are using to attract more consumers to their stores, it is a fact that people will continue buying groceries because that is part of their daily life. In these terms, being a grocery retailer is not a difficult thing because there will always be a need to be satisfied. The factor that concerns the retailers, IKL included, is that they want to be the best option to fulfill those needs of as many customers as they can. "The supermarket groups have done extremely well for themselves. They provide for shoppers a broad range of products in a pleasant, safe environment. Their food is safe and hygienic, and generally thought by shoppers to give value for money. They respond to, and lead, changes in taste; they

[27] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.
[28] Kahn, Barbara E. et al; (1997); Grocery revolution: The new focus on the consumer.
[29] Idem.

help to educate consumers (eg, in wine); they try to be responsible (in offering healthy eating options)"[30]. It is also important for the retailers, to take into account the different kind of competitors that they need to "confront" because of the varied options that they are offering the customers. Not only do they have to be aware of the traditional competitors such as supermarket chains but also of the internet based retailers that have already entered this marketplace.

As the strategies, for the retailers to assess the marketplace, evolve, also the kind of customers that need to be satisfied is constantly changing. It is critical for IKL to understand that the new end-consumers are more knowledgeable, more demanding and more difficult to please. However, as the marketplace is morphing there are new tools and strategies that could be adopted by the retailers in order to address the changes that are appearing everyday as new things are being demanded by the customers of the new millennium.

3.2.5 Distribution channel analysis: efficient adaptation to demand

"The whole purpose of supply chain management and logistics is to provide customers with the level and quality of service that they require and to do so at less cost to the total supply chain".

Christopher Martin (2005)

A distribution channel consists of a group of activities performed by different members of the channel. All the activities performed contribute to the offer of the service outputs before mentioned and each of them has an associated cost. If for reducing costs it might result necessary to eliminate any of the members of the channel, then the activities performed by the eliminated member could not be eliminated, otherwise the service output provided would risk being affected. The list of activities done in different points in time by different channel members that create the service outputs was formalized by Anne T. Coughlan et. al[31]. They proposed eight universal activities that they called *channel flows* which might work in a given distribution channel containing a producer, a wholesaler, a retailer and a final consumer as it is the case studied in this thesis. The activities proposed are shown in the following figure:

[30] Seth, Andrew et al; (2001); The grocers: the rise and rise of the supermarket chains.
[31] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

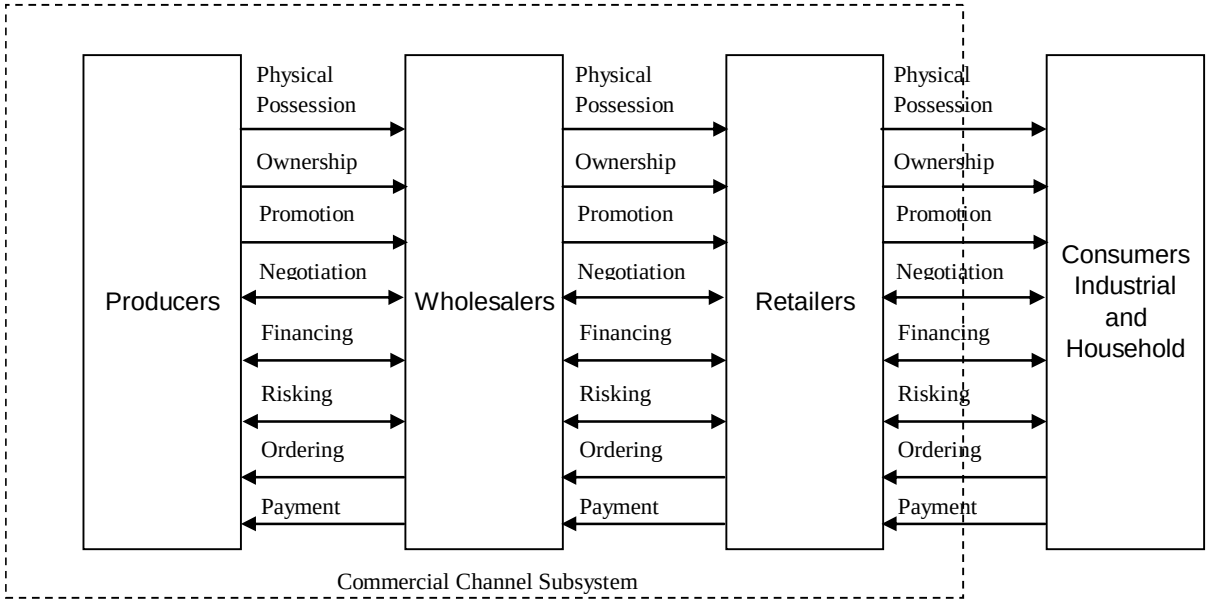

Figure 3.2 Activities performed in the channel flow; Coughlan Anne T. et al. (2006)

The identification of these channel activities is important in order to account for all the relevant costs of producing the service outputs demanded by the end-user. A specific actor of the system might perform some of the activities and not perform others at all or perform all of them. In this thesis' case, there are two distribution systems that are going to be analyzed. In such analysis the activities performed in each one of the distribution systems are going to be identified and then the distribution of costs for those activities over the channel members will measured. This will be done through an analyzing tool called *the efficiency template* introduced by Anne T. Coughlan et al. *(Marketing Channels)* which also will show the value added by each channel member to the final service output provided. This analysis will provide a better perspective of both systems in order to draw any conclusion on their functioning.

The activity called physical possession refers to the activities performed when storing and transporting goods from one channel member to another and it has all the costs of running the warehouses and delivering the goods.

Ownership activities are performed when the channel member incurs in inventory carrying costs because of becoming owner of the goods. In this thesis' research such is the case for all the members of the channel, but it could be that a member performs physical possession of the goods but not ownership activities. A broker for example can provide warehouses and carriers for the distribution of the goods but do not own them. Physical possession and ownership activities are usually performed together and there is a term referring to the common costs of both activities and this is the *inventory holding cost*.

"From an inventory perspective, the ideal situation would be a response-based supply chain… While a zero-inventory supply chain is typically not attainable, it is important to remember that

each dollar invested in inventory is a trade-off to an alternative use of assets"[32]. According to Simchi-Levi, D. et al.[33] the four main reasons for holding inventory are:

- Unexpected changes in customer demand. Uncertainty in customer demand has increased in the last few years due to
  a. The short life cycle of an increasing number of products. This implies that historical data about customer demand may not be available or be quite limited.
  b. A proliferation of products that makes increasingly difficult to predict demand for a specific model.

- The presence in many situations of a significant uncertainty in the quantity and quality of the supply, supplier costs and delivery times.

- Even with no uncertainty there is always a need of inventory due to the known delivery lead times.

- Economies of scale offered by transportation companies that encourage firms to transport large quantities of items and therefore hold large inventories.

The level of inventory will vary depending on the uncertainty of the demand, the company's level of service attempted to achieve and the costs of ordering and storing. The EOQ (economic order quantity) is a mathematical model that considers those costs and determines the batch size of the orders that minimize the total cost.

Promotional activities are those that advertise the product being sold, giving information to the end-user about all the characteristics of the products, telling about the possible benefits of consuming them and in short convince the customer to buy the product.

Negotiation refers to the activities performed in order to set the conditions of the transactions between members of the channel. It is measured in the cost of labor time spent in such activities and also the cost of legal counsel.

Financing costs are those opportunity costs held by any member of the channel when it finances another member of the channel. "Typical financing terms on a business-to-business purchase require 30 days… the key issue is that the seller bears a financial cost-the cost of the foregone income achievable by putting that money to use in an alternative investment activity"[34].

Risking results from the transactions and transaction terms that members of the channel do between them. For example long-term contracts between a wholesaler and a retailer may force the first to sell at a specific price for certain period of time. Other sources of costs referring to risking activities are after-sales activities such as handling returns or insurance services.

[32] Bowersox, Donald J. et al. (2007) Supply Chain Logistics Management
[33] Simchi-Levi, D. et al. (2003) Designing and managing the supply chain
[34] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

Ordering and payment activities costs are the costs inherent to the functions performed for the purchase and payment of the product. There are many innovations today for reducing costs on these topics based on new IT technologies such as EDI or automatic replenishment.

As Anne T. Coughlan et al. *(Marketing Channels)* point out, it is important to customize the list of activities to the particular channel analyzed. For example in the case that is treated in this thesis, the physical possession activities and the ownership activities are always together and they will be treated as one. With this purpose, after the two different distribution processes studied in this thesis are described and analyzed (chapter number 3), a new list of customized activities that are performed will be given in the analysis (chapter number 5). The activities numbered in the new customized list will help producing the service outputs demanded by IKL's customers.

"Because of the cost associated with performing channel flows (channel activities), it is important not to perform unnecessary high levels of any of the flows. Thus, knowing which service outputs are demanded by target end-users and at what intensity helps the channel manager control the total cost of running the channel through the performance of only those flow levels that create valued service outputs"[35].

3.2.6 The efficiency template

The efficiency template is as said before an analyzing tool which helps in describing the activities performed along a distribution channel and the percentage of the work performed by each of the members over the different activities. This will be helpful for the study of whether the activities are being performed efficiently or not in the production of the service outputs. The efficiency template also measures the level of importance of each one of the activities in the channel for the production of the service outputs demanded by the customers. The final information thrown by the template is the level of profit that each channel member should yield from the activities based on the level of importance its activities have in the production of the service outputs and on how much they cooperate in these activities.

The template consists of a number of rows which are the activities performed in the distribution channel and two groups of columns: the first group of columns is called *weights for flows* which gives the importance of each of the channel activities in the production of the service outputs considering their costs and the value added to the final service output; and the second group is the *proportional flow performance of channel member* which gives detail of the amount of work performed by each of the channel members in the production of those service outputs.

Within the first column group that measures the importance of each channel activity we find first a column where the performance cost for an activity along the whole channel is given a percentage based on the weight it represents over the total performance cost of the channel. For example, if the total cost for physical possession along the whole channel is 70% of the total costs for all the members of the channel, then a 70 will be on the physical possession row and the costs column. To be able to specify the percentages of those costs over the total cost, all the costs

[35] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

of every member of the channel have to be measured. This can be done using activity based costing (ABC) which will require high amounts of cost data from all the members of the channel and such quantitative measure can be difficult to be performed. A more qualitative measure such as a Delphi-type research technique can be applied in such case. This will consist in consult from experienced managers of each of the members of the channel their opinions on the cost distribution over the whole channel. The second column it is in the first group of columns is the benefit potential of that activity in the production of the service outputs valued by the customers. The measure is more subjective in this case and it measures the activities high, medium or low potentially beneficial. For example if we consider IKL's case one could argue that physical possession has a high benefit potential for the customized meat cutting procedure due to the need of having high inventories of different meat primal pieces in the store for being able to offer different cuts than those displayed in the shelves. The cost of an activity can be low in some cases; however the importance given to it can be high due to the high contribution in the production of the service output. That is the case in those channels where spatial convenience is important for the customer with the consequent high importance of physical possession activities but that resulting from the small size of the goods those activities have a low cost. This could make necessary to create a different template for each customer segment due to that each segment prefers different service outputs. Some activities that are important for producing a service output might not be so important in the production of other services outputs. The importance given to each one of the channel activities modifies the cost weight of all of them. The final weights add up to 100, so if some weights are increased, others have to be decreased *(see table 3.2)*.

The second column group shows the distribution of the total cost of the activities over the different members of the channel and again the cost proportions have to add up to 100. Some members can have no contribution in the performance of some activities which will make them to have a 0% on that activity row in the second column group.

The end-user is also a member of the channel which can contribute in the performance of some activities of the channel like physical possession when they buy more products than they are going to consume in the short term. In the last case, if the customer is also paying at the time of the purchase, then he is also performing financing activity because
of early payment.

With all the information given by the weight assigned to each activity's contribution to the service output production and the percentage of those activities performed by each member, then the weighted average measuring the contribution of every member to the cost borne and value created in the channel can be calculated. The template is exemplified in *table 1* with a numerical example for illustrating the method:

	Weights for Flows			Proportional Flow Performance of Channel Member			
	Costs	Benefit Potential (high, medium, or low)	Final Weight	Manufacturer	Retailer	End-user	Total
Physical possession	30	High	35	30	30	40	100
Ownership	12	Medium	15	30	40	30	100
Promotion	10	Low	8	20	80	0	100
Negotiation	5	Low-Medium	4	20	60	20	100
Financing	25	Medium	29	30	30	40	100
Risking	5	Low	2	30	50	20	100
Ordering	6	Low	3	20	60	20	100
Payment	7	Low	4	20	60	20	100
Total	**100**	N/A	**100**	N/A	N/A	N/A	N/A
Normative profit Share	N/A	N/A	N/A	28%	39%	33%	**100**

Table 3.2 The Efficiency Template; (Coughlan, Anne T et al. 2001)

The contribution to the value created by the whole channel for every member is calculated as the weight times cost proportion for each flow, summed across all the flows. In the example given in *table 1* the manufacturer's contribution to the cost-value will be given by:

$$[(.35\times.30)+(.15\times.3)+(.08\times.2)+(.04\times.2)+(.29\times.3)+(.02\times.3)+(.03\times.2)+(.04\times.2)]=28\%$$

This result means that the activities performed by the manufacturer are responsible for 28% of the channel contribution for selling the product. In other words, the activities performed by the manufacturer create 28% of the value added to the product by selling through that distribution channel. These percentages are called the *normative profit shares*[36] of each channel member.

"One should really create a separate Efficiency Template also for each market segment that buys through each channel, because multiple segments may patronize one channel, but in different ways"[37].

It has to be emphasized that if financial data on the costs borne by the members of the channel are not at disposal, then exact participation of each channel member on the activities along the channel cannot be seen. In such a case, an approximation over the intensity of costs of each channel member's activities and an approximate ranking of cost incurring in each activity among all the members could be used for a rough estimation of value created. But as Anne T. Coughlan et al. *(Marketing Channels)* argues: "…the approximations are often much better than no consideration at all of the relative value added by each channel member."

In cases where there are products sold through different channels as it is the case in this thesis, then the efficiency templates of each channel (the centralized system and the traditional system)

[36] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.
[37] Idem.

can be compared to see differences in costs of running both channels and draw possible improvements in the performance.

The results obtained from the efficiency template, the normative profit shares, should be used as a measure of the reward that each member should receive for the value created along the distribution channel. This is called the *equity principle* and it is an important concept to consider when every member of the channel is to keep motivated and long term relationships between members in the channel are beneficial.

The study of the costs along the channel flow and over the channel members through the efficiency template could be used to create the perfect channel for a specific market segment. This is what is called the *zero-based channel*. "A zero-based channel design is one that (1) meets the target market segment's demands for service outputs, (2) at minimum cost of performing the necessary channel flows that produce those service outputs[38]". But in the case studied in this thesis there is an already existing channel and the problem will be to define an ideal channel structure (the closest to a zero-based channel as possible) from an already existing one. This is going to be done through the identification in the already existing channel any of the following situations:

- Possible non-value-adding activities which can be reduced or removed without damaging the service output provided. It could be for instance activities which are performed by several members in a redundant way which could be eliminated.
- Possible alternative design of activities (redefinition or combination) performed by different members in order to make them more time and cost efficient. Can the speed of the product be accelerated through the channel flow?
- Acceptable automation of activities that reduce variable costs.
- Information Systems which reduce the costs of certain activities.

Any difference between the zero-based channel and the channel studied in this thesis will be considered a *channel gap*. Channel gaps are described in the next point.

3.2.7 Channel Gaps

Gaps in the channel design can come from errors in the understanding of the customers' profiles and the services by them demanded which would be called demand-side gaps and they can also come from errors in managing the costs of running the channel which would be called supply-side demand gaps. However, gaps can also appear due to factors not inherent to the performance of the channel manager. These factors are bounds that limit the manager strategies for getting closer to a zero-based channel. Anne T. Coughlan et al. *(Marketing Channels)* give two examples of external limitations: the environmental bounds which are characteristics of the marketplace environment in which the distribution channel is that create gaps; and the managerial bounds which are limitations that arise from the company's own rules.

[38] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

A demand side gap exists when the service output supplied is less than the service output demanded (SOS<SOD), or when the service output supplied is bigger than the amount demanded (SOS>SOD). The first case would occur in IKL's case if for instance the customers asked for a specific cut of beef steaks that was not available on the display shelves and there was no one to attend that demand or not even the facilities to do so. In that case the customer would demand more customer service and assortment than that is was offered in the store. If the service outputs offered are higher than the level demanded by the customers, either the price of the service outputs results to be too high for the customer or the profit margins are under the optimum level. In the last of the cases it can happen that competitors that offer a more optimized level of services yield a higher profit and place them in a better position in the market.

It can happen that there are gaps in different service outputs offers. It can also happen that there is an excess of a service output that is considered a compensation for a shortfall of another. But in some cases the excess of a service output does not compensate for the lack of the other and then the channel manager has to consider a redefinition of the activities that produce the service outputs. It is important to point out that the study should be done "*service output by service output* and *segment by segment*"[39]. What could be a shortfall of service output (gap) for a segment of the customers it can be the appropriate amount of service output for another. In the meat department case, the assortment of products provided with preserving gases which enables the customers to have the meat more time in their fridges, can be short for the segment that prefers the centralized system and more than enough for the segment that appreciates the traditional system. Segmentation serves as a tool for the channel manager to identify for which group of buyers it exists a demand side gap and to determine the scope of the problem. If it is a large segment of the potential buyers that is affected by the gap, then the measures for closing the gap should be more drastic than if it was about a small segment of the potential customers.

A supply side gap exists when there is a possible lower-cost way of performing the activities throughout the channel in such a way that the service outputs produced do not become altered. It could be that one or several activities are performed in a high-cost way and could be reconsidered. "One manager for National (Semiconductors) at the time it began its partnership with Fed-Ex noted that National did not even know exactly how much logistics was costing before it set out to improve the system. This is not an uncommon situation and suggests that the first step in closing a supply-side gap is to understand the actual costs of running the channel"[40].

Supply side gaps can lead to demand side gaps when inefficiencies on the performance of the activities cause deficiencies in the service outputs offered. For instance, in IKL meat department's case excessive inventories throughout the centralized system can lead to deliver meat trays to the stores with very short shelf-life. In this case not only the physical possession activities will be higher, but also the service output expected by the segment that demands product life will be unsatisfied. However, it might happen that existing supply side gaps occur with no demand side gaps, the levels of service outputs offered are correct. In this case it is very likely that currently available distribution information systems can help reducing the costs of producing those service outputs. It could be that large investments in a specific activity are required in order to minimize the total cost. For instance, the development of an automatic

[39] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.
[40] Idem.

ordering system can require a high initial investment but in the end the total costs for ordering will be reduced if less labor hours are needed to place orders. Nevertheless, it could be the case of a supply side gap where the customers considered the price as correct. In such a case it is very likely that there are some channel members that are not receiving a fair compensation for the value created in the channel by its activities.

According to Anne T. Coughlan et al. *(Marketing Channels)* the study of the demand side and supply side gaps shows six possible situations only one of which is a no-gap situation as shown in table 2:

Cost Performance Level	Demand-Side Gap (SOD>SOS)	**No Demand-Side Gap (SOD=SOS)**	Demand-Side Gap (SOS>SOD)
No supply-side gap (efficient flow cost)	Price-value proposition = right for a less demanding segment!	**No Gaps**	Price-value proposition = right for a more demanding segment!
Supply-side gap (inefficiently high flow cost)	Insufficient SO provision, at high costs: price or cost too high, value too low	High cost, but SOs are right: value is good, but price or cost is high	High costs and SOs = too high: no extra value created, but price or cost is high

Table 3.3: Types of gaps; *Coughlan Anne T. et al. (2001) Marketing Channels; 6th Ed.*

The table shows that there is an equilibrium that has to be achieved when any kind of channel gap is to be closed. If the source of the gap is only in the supply side, then it is necessary to control that the level of service output is not altered (not increase nor decrease it) when modifying the activities performed that cause the supply side gap. In the case that both supply side with too high performing costs and demand side gaps with too low service offered it might happen that the approach to solve the problem is by reducing service provision for reducing costs in the channel. This approach will affect negatively the service outputs and the efficiency of the activities will not be improved. Hence, the source of the problem has to be identified in order to not end up in a worse situation than before trying to close the gaps.

Adapting the channel to its environment: Elimination of Channel Gaps

The strategy approach for offering what the customer wants and at the lowest cost as possible has to be taken in order to solve the demand side gaps and the supply side gaps so the resulting channel design is the closest to a zero-based channel. With this approach, both types of gaps require their own type of solutions.

Anne T. Coughlan et al. *(Marketing Channels)* suggest three main methods for solving demand side gaps:

1) Offering multiple, tiered service output levels to appeal to different segments
2) Expanding or retracting the level of service outputs provided to the target market
3) Altering the list of segments targeted

The first of the options is appropriate for those cases in which a company addresses different segments which demand different levels of service outputs. In this case it might be necessary to find an alternative channel which allows the company to offer those different service levels. In IKL's case there is a large segment of the customers that demand more shelf life in the products. This required a different distribution channel that provided this characteristic at a reasonable price and that was possible through a centralization of the processes in a plant where economies of scale could be achieved.

The second method consists of eliminating excessive service outputs or increasing the level of them provided. Service outputs are produced by performing channel activities so if the level of service outputs provided is to be changed, the activities performed have to be changed. The activities can be changed via altering the intensity of them performed without altering the responsibilities over them along the channel members, or redesigning the channel activity structure. The third solution would be to consider that the most profitable alternative is to change the segment of customers addressed.

Following the study of Anne T. Coughlan et al. *(Marketing Channels)* supply side gaps can be addressed considering again three different approaches:

1) Changing the roles of current channel members
2) Investing in new distribution technologies to reduce cost
3) Bringing in new distribution function specialists to improve the functioning of the channel

The first approach is the simplest one and does not consider the inclusion of high investments or new channel members. In this case it is only through changes in the responsibilities of the channel members that the costs are attempted to be reduced. Sometimes changes in responsibilities are not enough to achieve a more efficient channel structure and investing in new technologies is required to reduce costs. A third option to reduce costs is to include members in the channel who specializes in certain activities of the channel and likely benefit of economies of scale resulting from performing exclusively those activities for several channels.

After analyzing all the inefficiencies and deviations from the zero-based channel that might be occurring throughout the channel both in the supply side and in the demand side, a number of different solutions might come up. Some kind of common analysis that puts all together is needed in order to define a global strategy which solves all the problems together. This analysis is called the Gap analysis template.

The Gap analysis template

The study of the channel activities through the gap analysis template shown in table helps identifying whether there are supply side gaps or demand side gaps for each one of the service output studied and it should be done exclusively for each one of the segments addressed. As mentioned in the channel gap point, each segment addressed has its optimum channel design. The use of the template in the study requires a summary of all the problem sources summarized

and the definition of possible managerial or environmental bounds that could constrain a solution given to the problems detected. It is necessary to specify which the outcome is to be obtained after the gap analysis. Then, the channel analyst has to decide upon the strategies to develop so as to solve the problems detected. The last step is to give a forecast of the changes expected to happen when the strategies suggested are followed. "This last step is crucial because it is vital to do more than simply catalog the problems in the current channel. The analyst needs to provide a concrete set of goals to aim for in closing the channel gaps. Ideally, after a suitable period of time, the analyst should check to see whether the predicted results have in fact been achieved"[41].

	BULK-BREAKING	SPATIAL CONVENIENCE	WAITING AND DELIVERY TIME	ASSORTMENT AND VARIETY
Level provided (low-OK-high)				
Efficiency (OK-high cost)				
Source of problem				
Environmental-managerial bounds				
Outcome desired				
Tactics to close gap				
Predicted change in channel performance				

Table 3.4: Gap Analysis Template (target segment specific); *Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.*

4 PROBLEM DESCRIPTION

4.1 ICA Kvantum Lerum

4.1.1. The store

[41] Coughlan, Anne T. et al. (2001) Marketing Channels; 6th Ed.

IKL was established in 1996 in the Lerum community situated 22 kilometers east from Gothenburg. Nowadays, it has 5050 m² area in the total store and 2925 m² as sales area. IKL employs 134 people, the highest number of hired personnel in the area, for its different departments to provide service to 25000 customers per week. These customers, in 95% of the cases, come from the Lerum community area including towns like Floda, Gråbo, Lerum, Sjövik, Stenkullen and Tollered. The sales from year 2006 reached 292 million SEK, which shows the importance of the store in the area.

Within the Lerum area, IKL is not the only retailer that is doing business in the groceries' market. A strong competition is faced by the store while competing with ICA Supermarket Servett Lerum, Willys Partille, ICA Maxi Partille, ICA Maxi Allingsås, Lid'l Lerum, ICA Supermarket Floda, Bonum Gråbo and Netto Gråbo. It is extremely important for IKL to keep on satisfying the customers because they have different options to purchase their goods. According to official statistics from the local authorities, the population in Lerum area in 2006 was around 37092 people with an average buying capacity of 23,900 SEK per year on market daily commodities, which represents a potential market of 886 million SEK per year to address.

In order to be different and develop a competitive advantage against its fierce competitors, IKL gives an important emphasis to 3 special departments that according to IKL's manager seem to be decisive when a customer decides where to buy. These departments are: bakery, meat and produce (fruits & vegetables). It has been important for the store to keep a high customer service in these departments so as to satisfy the customer providing a more personalized service. As Owe Krook mentioned: *"Retail is detail"*, referring to those small activities that the store can perform in order to please the clients can be a good to tool to develop customers' loyalty to keep them on coming not only to buy in those departments but also in the other ones.

A brief description of the meat department, the object of the study of this thesis, will be given in the next section.

4.1.2. The meat department

The meat department in IKL represents approximately the 8% of the total sales of the store. As mentioned before, this department is considered a key resource for increasing loyalty of the customer together with the bakery and the fruits and vegetables departments. The personalized service offered to the customer allows the store to differentiate more from its competitors. That is why there is a big interest in developing new ideas for this department such as the incorporation in April 2006 of a marinated meat products display where there is personnel waiting on the customers for certain periods of time and showing them the way in which they prepare the meat themselves within the store facilities.

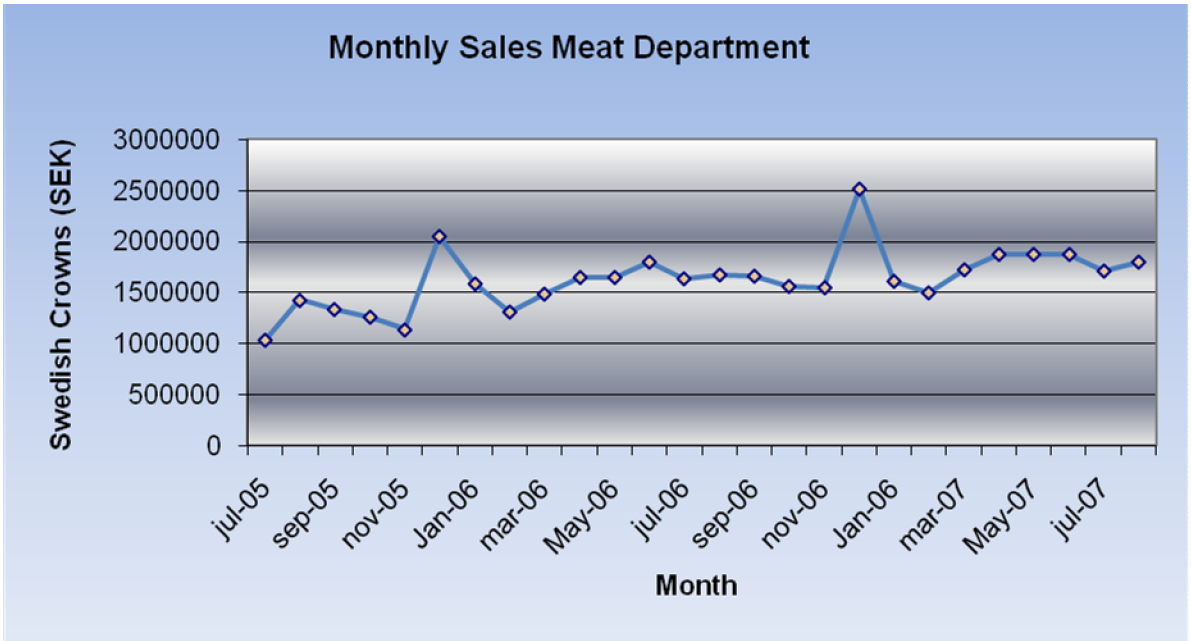

Figure 4.1 Monthly Sales Meat Department.

Over the last 2 years, the meat department has become even more important because it has been growing its monthly sales as it is shown in Figure 3.1. It has had a positive tendency, which makes it a competitive advantage against IKL's competitors.

4.2. The traditional meat cutting system

The meat cutting service traditionally offered in supermarkets is being challenged by new centralized cutting distribution systems. Here, the traditional system used by IKL will be described.

4.2.1 The retail processing system of beef meat

Before starting the description of the different distribution systems ICA stores have for their meat products is necessary to know the different stages the meat goes through from the slaughter house to the supermarket. From the moment the animal is slaughtered the meat passes through different stages in which the meat is cut progressively into smaller cuts. Beef, which is the type of meat in consideration for the study, starts the process as a carcass which is divided lengthwise later into two sides. These sides are then divided into quarters, hind and fore.

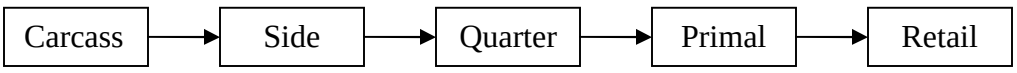

Figure 4.2 A flowchart – the breaking down of a beef carcass to retail cuts. *Hugh S. Peak (1977)*

The following step is the division of the quarters into the primal cuts, which are two rounds, two loins, two ribs and two chucks. Then the last stage is the cutting of those primal cuts into retail cuts that are the ones placed in the display shelves in the store.

4.2.2 Supply Chain members

The supply chain in the traditional system used by IKL is shown below in Figure 4.3:

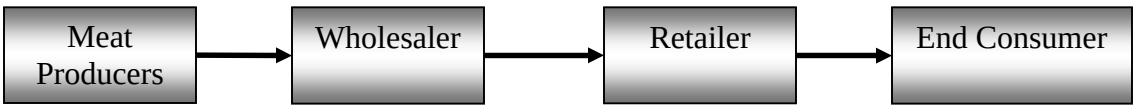

Figure 4.3. Supply chain structure in the traditional system.

Each one of the members in the supply chain studied is described below. There are several actors representing each one of the parts of the chain, but in the case of the wholesaler, which represents the 95% approximately of the volume, there is always a major actor that is going to be the one selected for the description of their activities.

The meat producers

Dalsjöfors Slakteri is a slaughter house located in Dalsjöfors, a village 10 km. to the east of Borås. Their suppliers are livestock farmers from Västra Götaland and Södra Götaland. The cattle is slaughtered in the facilities at Dalsjöfors and sent to the cutting plant in Gothenburg called Dalsjöfors Kött. The cutting plant receives the meat in quarters and there they are processed into smaller cuts that are then vacuumed packaged and sent to the customers. The cutting plant is also supplied of quarters from other slaughter houses when there are not enough quantities in their own slaughter house to attend the orders received. All the goods shipped to IKL go through the wholesaler facilities that act as a consolidating point for different types of goods. The wholesaler also buys meat from Dalsjöfors that is directed to other customers. In fact the meat directed to IKL from Dalsjöfors is only a small part of what is bought in total.

The wholesaler

Färskvaruhuset is a meat wholesaler located in Kungälv. Its facilities are merely a consolidating warehouse where different local and foreign producers supply meat pieces cut in different levels: primal cuts and retail cuts. The warehouse is located in Kungälv, 23 kilometers north from Gothenburg and 39 kilometers northwest from IKL. They store products in two kinds of

warehouses, dry and cold, for the different products that are handled there. In the dry warehouse they have products like tomato sauce, mayonnaise, mustard, pasta and snacks. In the cold warehouse they have mainly meat products coming from different countries such as Denmark, Germany, Brazil, Argentina, Spain and Sweden. They receive the products from different meat producers and store them in their warehouse and then supply IKL according to the orders they place.

The retailer

IKL, the retailer, is in the grocery business providing a big assortment of products for the daily life to the customers. Some of these products include the meat products that will be received from the wholesaler. Once they arrive to the store, they will be stored in the warehouse, then cut and packed in order to be put on shelves according to customers' demand.

The end Consumer

The most important part of this supply chain is the end consumer because it is the one that creates the goal to be achieved by the supply process. To develop loyalty and preference among other options, the products that are requested by them should always be available and at a good price level. The needs of the client must always be fulfilled with quality products, especially in those that are perishable as it is the situation with the meat products.

4.2.3. Process Description

The producer (cutting plant) receives quarters twice a day from their own slaughter house in Dalsjöfors and from other slaughter houses as mentioned before. The quarters can last one week hanging in the chamber where they are stored but almost everything received in a day is processed into primal cuts in the same day. The quarters are transformed into ten different primal cuts that are then vacuumed packaged and stored in a room where they wait to be allocated to an order. Some quarters are kept in stock without cutting in order to attend special cuts demanded by some customers that differ from the ten standard ones. These special cuts include some parts of the bone for special catering uses that are usually removed.

Everything coming into the cutting facilities is sold except for some parts of the bone that represent the 10% approximately of the weight of the quarter. Those parts are grinded and sent back to the slaughter house. Later on all that waste sent back to the slaughter house is sent to an energy plant where it is used as an energy source. Apart from the ten primal cuts that are sold to wholesalers and retailers, there is also meat that is sold to the meat manufacturing industry such as meat for sausages producers or special parts of the bones also used for cooking purposes. The primal cuts vacuumed packaged have a life span of one month and they never send something that has more than 14 days in their facilities.

The meat directed to IKL through the wholesaler (Färskvaruhuset) is fully prepared (cut, vacuum packaged, boxed and loaded onto a pallet) in Dalsjöfors own facilities. The process starts when the quarters arrive to Dalsjöfors' facilities and they pass through a quality control station where

the hygienic conditions of the product are checked and approved. A chainsaw will be used to cut the ribs and some other bones of the animal, before they pass to the cutting stations. Once at the cutting station, the meat cutter will use a sharp knife to divide the product in sub-products (primal cuts). The primal cuts will be placed inside a plastic bag that will pass through the packing machine that will proceed with the vacuumed packing. Then they will be put in plastic trays and labeled with the kind of product it is. These plastic trays are recyclable containers that come and go throughout the whole chain and its cost will be included in the invoice. The plastic trays will pass to an order picking point where they will be placed in pallets according to the orders given by the customers.

The pallets prepared by Dalsjöfors Kött are only manipulated by the wholesaler if, during the period that is in the wholesaler's warehouse, the retailer modifies the order adding quantities because the reduction of quantities cannot be done as it will be explained further on. In the case the wholesaler has to add product it takes those quantities from pallets in its warehouse directed to less important considered customers. The cutting plant delivers daily to the wholesaler, but only once or twice a week something is prepared for IKL. The weekly amount of beef shipped by Dalsjöfors to the wholesaler that is later directed to IKL is 200 kilograms per week.

IKL's supplier (Färskvaruhuset) receives shipments, arriving from different producers, vacuumed packaged and stores them in a temperature controlled storage room. Then, according to the orders placed by the retailers, the goods are picked from the storage room, grouped by customer and placed in another temperature controlled room sorted by delivery routes where they will wait until next morning to be shipped. The routes are already designed and they normally have them full while distributing the goods. Mainly there are two routes that cover the distribution for IKL, one that is heading to Alingsås and another one that is directed to the Gothenburg area. Not only do these trucks transport goods for IKL but also to other 15 stores. However, the wholesaler does not own any trucks for the transportation of the goods, they outsource this service.

The locally produced meat is served in primal cuts from around six different local suppliers located in the area of Gothenburg and also in Stockholm. The meat served by producers located abroad, from countries like Denmark, Brazil, Spain or Argentina is served in retail cuts vacuum packed which preserves the meat for around two months. Of the local produced beef meat that IKL orders for its traditional cutting way, Färskvaruhuset serves around 95% of it. This wholesaler acts as a consolidating point for the local suppliers who process the meat from the carcass and prepare the pallets in their facilities exactly in the quantities and packaging requirements that IKL needs. Those suppliers are located in the nearby areas of Gothenburg and transportation costs and lead times are short. However, sometimes the wholesaler does not receive what they ask from the slaughter houses, because they might receive a denial from the farmers because the animals do not weight enough or are not ready to be slaughtered. On this locally produced beef, which is what the study of this thesis will be focused on, Färskvaruhuset does not apply any other process apart from the mere consolidation and delivery activities.

Johan Frodell, meat department manager in IKL, perceives an interest in buying local beef meat by customers due to environmental reasons and affinity with the local industry. But the main reason for him to choose those local suppliers is the good prices offered by them. The offers are given due to the need from the producers who have to sell all the parts of the carcass and not

only those that sell the most. To achieve this, they offer special discounts to their customers if high variety of parts is ordered. The consolidating activity of the wholesaler helps satisfying the producer need by ordering bigger amounts and more varied parts than a single retailer would ask for.

The distribution process of the beef products begins with the inventory revising by the meat department manager every three or four days and order placing on the wholesaler. There are daily deliveries for other types of meat, but the locally produced beef is only delivered twice a week. This is due to 2 main reasons. On the one hand, quantity demanded for two deliveries brings better transportation costs from the local producer to the wholesaler. On the other hand, the meat department manager likes to have several units in the cold storage room to choose from when showing the product to the customer.

There is a template of pre-orders that the meat department has designed on which the final orders are based adding or diminishing quantities. The wholesaler as well as the producer has a template in order to help order planning by the wholesaler and cutting planning by the producer. Beef is delivered on Mondays and Thursdays. The manager of the meat department analyzes the stock and sales on Tuesday and on Friday afternoons and call the wholesaler to place the order, adding or diminishing quantities from the pre-order. Then the wholesaler transfers this order to the producer the same day he receives it, Tuesdays and Fridays. The producer ships the order loaded in a pallet that will arrive in the wholesaler warehouse the day after, Wednesday afternoon and Saturday afternoon. This pallet stays in the wholesaler's warehouse that night and is sent to the retailer store the next morning or next Monday in case of Saturdays' deliveries.

As mentioned before, the pallet made and sent by the producer remains like that without any manipulation all the way to the retailer store. For this reason, the wholesaler is not able to reduce quantity from the pallet once it is shipped to its warehouse. If the manager of the meat department considers that the quantity has to be diminished from the pre-order, he has to call the wholesaler before the pallet is prepared by the producer two days before it is received in the store. This is due to that if the products which have to be removed are in a crate that has to be withdrawn from the bottom of the pallet it will require a lot of work to do it. On the opposite case, if IKL needs extra quantities to be added to the order and the wholesaler does not have enough products from the local suppliers, then they could take it from someone else's order and try to provide at least a minimum quantity because of IKL's preferential customer nature.

When the pallet is received in the store every Monday and Thursday, it is stored in a temperature controlled room which is the stocking room (cold chamber) for the meat department. It is located next to the area where the meat is processed (cut and packaged) which is at customers' sight. Every morning before the reception of new goods, the meat department manager picks from the shelves in the stocking room what he thinks is going to be sold for the half of the day and puts it on a cart located inside the same room. The meat that the department staff will cut during the day will be taken from that cart. This is done every time there are empty display shelves in the store that they think they need to be replenished or when a customer asks for a special cut.

Every time a piece of primal cut is taken from the cart to be processed in the cutting area, the piece is fully cut and packaged in retail trays. This process is usually done in batches of four

primal cuts at a time which is one crate in most of the cases. When the meat has been packaged in trays it is placed in rolling shelves. The rolling shelves are taken to the display shelves from where the customer picks the trays. Those trays that do not fit in the display shelves are taken to the cold chamber again in the rolling shelf to be taken later when required.

4.3 The Västerås centralized meat processing plant (KPK)

Centralized meat processing is a practice that has been gaining importance lately because it seems to be more efficient than following the traditional way in terms of higher volumes of production to a more extent number of retail stores to be served at the same time. The rationale behind this system is that through the achievement of economies of scale a better cost efficiency can be obtained because of having the same product assortment that will be demanded by the different stores.

In a centralized system, basically there is one central processing plant in which all the meat is processed and then all the products are distributed to the different stores that belong to the network.

4.3.1 Supply chain members

The supply chain in the centralized system that serves IKL is shown below in Figure 4.4:

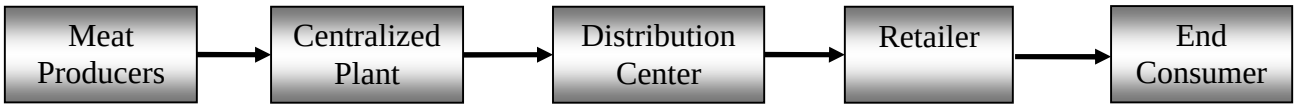

Figure 4.4 Supply chain structure in the centralized system.

Each one of the members in the supply chain studied is described below. A brief description will be given to define what their role in the channel is and how they contribute to add value to the final product received by the end consumer.

The meat producers

There are several meat producers in the centralized system from which primal cuts are bought for the different retail cuts that are cut and packed in Västerås. According to official data given by the central meat processing plant their main suppliers are the following:

- Swedish meats (HK Scan) 48%
- Ugglarps 21%
- KLS 21%

- Dalsjöfors 7%
- Others 3%

All these suppliers send their products to Västerås in primal cuts, some of them in a vacuumed package and some fresh. In the case of the beef products, all the products received are pre-packed in a vacuumed package so as to make them last longer.

Centralized plant

KPK is a centralized pre-packaged distribution system resulting from the joint venture established by Hilton Food Group (HFG) and ICA AB. HFG is a leading specialist meat-packing business supplying major international food retailers, primarily Tesco, Ahold, Albert Heijn and ICA, from state of the art facilities located in the UK, Ireland, the Netherlands, Sweden and Poland. The Hilton Food Group is a 51% private owned company which also acts in the stock market in its 49% and its mother plant is in London. It is the largest dedicated packer of red meat in Europe based on revenue. The facilities are large scale, modern central meat packing plants for onward distribution by third party haulers or customers' own transport fleet[42].

In Sweden it operates from the Västerås facilities exclusively for ICA with an undefined period contract and it is supplied 84% by Swedish suppliers as a condition given by ICA resulting from the Swedish market demand profile. Negotiations started in 2001 when ICA contacted HFG to create the meat processing plant. The plant in Västerås was opened in September 2004. The complicated part of the situation was trying to convince the retailers, which took around 2 years to be accomplished. According to official data from HFG, during 2006, 42, 2% of the Kvantum stores were buying from them; during this year (2007) it has reached a 58.6%. Today around 1312 ICA stores along Sweden are connected to this distribution system. Beef sales to ICA stores have been constant during the last two years and this can be due to the fact that if the stores decide to keep on cutting meat in their own facilities, it will very likely be beef meat.

The potential capacity of the facilities in Västerås is 1300 tons/week and the actual capacity used is 650-750 tons/week with a production peak of 815 tons/week on week 28 in 2007. The personnel in the facilities is 318 employees, it has a total surface area of 15.000 square meters and 17 production lines installed. The turnover during year 2006 was around 1.7 billion SEK. The products worked in the facilities are beef, pork, veal, lamb and deli meat; the number of different articles produced are 151. Västerås facilities are opened seven days a week, but in a normal situation there are only six production days every week and Saturdays are used exclusively for cleaning.

The suppliers used by HFG in Sweden are as mentioned before HK Scan which serves 48% of the goods purchased and controls around 90% of the Swedish market, Ugglarps, Dalsjöfors and SLP. These suppliers act in an oligopoly in the Swedish market and HFG has signed contracts with promised volumes with those suppliers. The brands used by these facilities are ICA as the main brand and Euro Shopper, a low price branch for ICA stores.

[42] http://hiltonfoodgroupplc.com/ [Accessed 17/10/07]

The central meat packing plant was developed with the following main goals:

- Less shrinkage
- Wider assortment of products
- More competitive power
- Increased profitability for the stores
- Better quality
- More shelf life
- More hygiene

Quality in the products bought and the precision of the cuts purchased from the suppliers is extremely important in order to reduce shrinkages. This is why the shrinkages are mainly liquid shrinkages and the yield from raw materials is very high. The trim on the primal cut has to be performed very well by the supplier because the cost of the goods represents 80% of the total costs. That is why the production manager puts a high control on the goods received and pressures the suppliers with the trimming quality demanded.

Distribution center

In the distribution center that serves IKL, located in Kungälv, 21 Km north from Gothenburg, ICA trucks coming from KPK plant are received with all the meat products that will be distributed to the individual stores that this distribution center is in charge of. Before sending meat products to IKL, some other products will be put in the truck in order to supply the articles needed by this particular store.

The retailer

IKL, the retailer, is in the grocery business providing a big assortment of products for the daily life to the customers. Some of these products include the meat products that will be received from the wholesaler. Once they arrive to the store, they will be stored in the warehouse, then cut and packed in order to be put on shelves according to customers' demand as described in point 3.2.

The end Consumer

The most important part of this supply chain is the end consumer because it is the one that creates the goal to be achieved by the supply process. To develop loyalty and preference among other options, the products that are requested by them should always be available and at a good price level. The needs of the client must always be fulfilled with quality products, especially in those that are perishable as it is the situation with the meat products.

4.3.2 Process Description

The stores' orders are received at HFG/ICA's facilities at 17 hrs. the latest every day. According to the operation manager Jörgen Swahn the last order should be received six hours earlier than the time they are receiving it now in order to optimize the production and do a better planning. This is due to that they have stand-by periods in which they are waiting for the incoming orders also resulting from the before mentioned low capacity employed of the facilities. Daily production is based on forecasts which are performed based on historical data from the daily orders received from the stores and through daily cooperation with ICA central in which promotional periods for ICA stores and special offers coming from the livestock farmers are taken into account. According to Anders Bergback, production manager for HFG, production is planned for storing and it is arranged in seven different blocks of orders, one block of orders per distribution centre that is created by the forecast. The production planning is aided by an ERP system which tells which primal cuts are needed for producing the forecasted final cuts. Each distribution centre has its own block of orders and the first block to be attended is that belonging to the furthest distribution centre due to the longer delivery time. It is the storage what is forecasted and then the production is performed for a specific storage level every day which will be in the best of the cases fully allocated to the orders of next day.

As said before the orders are received until 17hrs. every day and the delivery to the stores occur the next day in the morning. The average inventory time for finished products is 0.7 to 1 days; 94% of the deliveries are sent with only one storing day after being cut. The maximum number of days the final products (packaged retailing trays) are allowed to be in store at the facilities is 3 days but only around 3% of the units delivered have been in storage for 3 days. These trays have a maximum life span of 8 days in the tray with the preserving gases used. Therefore according to the average inventory of the final products, the average shelf life delivered to the stores is 6.5 days. They are forced to deliver a final product to the retail stores no longer than the fourth day after the cutting and packaging day.

The meat is received in 50 different primal cuts (beef, pork, veal and lamb) vacuumed packaged which makes it last longer and fresh in which case the prices are lower. Beef is always received vacuumed packaged. Beef products have to be kept in the vacuumed package during at least 8 days after the slaughter so as to make the meat tenderer before the end user consumes it. This process is performed in the meat producer facilities 50% approx. of the time required, that is around four days, which moves inventory holding costs to the supplier. Their forecasts have to be done over 50 different primal cuts (considering beef, pork, veal and lamb) which are then cut into 151 different retail products. The average inventory for the raw materials (primal cuts) in the HFG's facilities is 3 to 4 days. However, those primal cuts received in vacuumed packages can be stored in the facilities for a maximum time of 20 days according to the freshness standards.

Supplier's consignments arrive in a reception dock where the personnel check the quantities and quality standards of the product and attach identification labels which give detailed data from the origin and contents of the crates. The storage is performed by a computer guided robot in several lines of shelves containing a large number of racks and through a space optimizing criteria. The computer follows a FIFO system and arranges the positions of the arriving crates in the racks after reading and registering the identification data of each crate. The same robot is responsible for the out-bounding crates by picking and placing them into the production lines according to

the orders placed by the ERP system which at the same time follows forecasting orders given by HFG in cooperation with ICA central.

The production is divided into two daily shifts and a night cleaning period performed every day. The primal cuts enter a different production line based on the final product that is going to be produced. The cut is performed by high precision machines that produce very homogeneous final pieces. As an example of the precision of the machines and the quality of the cut it can be said that in some products the meat is cut in such thin slices that is first frost a couple of centimeters around in order to make a clean cut by the machines. Each of the lines installed has a metal detector that takes apart all the trays with any abnormality detected. In the production line is where the identification and linkage of the origin and destination is done. An important characteristic of the final product offered by Västerås facilities is the high traceability given to the final product. Each label in each tray is given a complete identification in the production line telling where the animal was born, raised, slaughtered and cut before the delivery was performed in the Västerås plant. Moreover, each tray is given a seven digits purchase order number printed containing all the relevant data for the identification of the product's origin and will be linked later to the point of destination in the moment the picking is performed. By this, in case an infection or any other quality default was detected, then all the meat coming from the affected batch or supplier could be located and immobilized in those stores that were supplied from the affected source.

Mince meat represents a large part of the production, 50% of the product manufactured in the whole plant, with an average of 350 tons per week and it utilizes beef and pork meat. The production lines for the mince meat process include very advanced technologies for measuring the quality of the meat delivered by the suppliers. The line machinery measures the amounts of fat, protein and water it is on the meat used for mince. The information is then printed in the labels of the trays and it is used by the retail stores as information provided to the end-user.

Once the products have been cut and packed, they are placed in plastic crates that will continue its flow to the finished products warehouse that is also operated by a computer guided robotic-crane that will find a place in the warehouse for them based also in a FIFO system. According to Anders Bergback, finished products stay in the finished products warehouse normally only 1 day in 94% of the cases. This means that the all the products packaged and stored one day are assigned to the stores orders the day after in 94% o the cases; so the forecasting accuracy is considered to be high.

Once the purchase orders have been placed by ICA, the trays are collected from the finished product warehouse by the crane and put in another electric band that will transport them from HFG's side of the facilities to ICA's side. This delivery is just a small step because ICA's facilities are located just on the other side of a wall and are connected through the transportation band.

When the products are at ICA's side, 8 robotic-arms will be in charge of picking the crates and organize them in pallets belonging to orders per store that they are directed to in a very high speed. The labels of every crate are read and then a label will be allocated in a side of the pallet so as to link the origin of all the meat in that pallet to the final store it will be delivered. After

being labeled they are arranged by distribution centers and routes on different aisles corresponding to different distribution centre's trucks and routes. The aisles are located in the loading area where they will be loaded into full trucks, which belong to ICA, directed to the different distribution centers.

The facilities have a promised service level of 99.5% but according to Jörgen Swahn, they are having some troubles with the service level provided by the suppliers due to the highly traditional working system of the livestock business. The traditional schedules might not be as strict as the more modern and commercial schedules of HGF's facilities.

IKL's products will be then directed to the distribution center in Kungälv were the shipments will pass a break-bulk process and will be divided into smaller orders heading to the stores served by this distribution centre in trucks were some other kinds of products like deli meat will be put so as to complement the orders from a store.

4.4 Other ICA stores' opinions and experiences on the meat distribution system

The main source of information considered for the study will be IKL customers since their demands are the ones that are going to be addressed. With this purpose a survey will be conducted at IKL's facilities and the results will be analyzed to do a segmentation of the market. Based on this segmentation and the preferences of each segment the most valued services will be identified. However, the opinion and experiences of other ICA store managers in the surroundings of Lerum and the perceptions of their customers' preferences will also be considered when drawing conclusions about possible improvements on the process. The different conditions of the other stores and their perceptions of the centralized system will be useful when comparing it to the traditional system. The stores visited were ICA MAXI PARTILLE and ICA MAXI ALINGSÅS, and the store managers interviewed are the perishable managers in those stores.

ICA MAXI PARTILLE

ICA Maxi Partille is a store situated 13 km from IKL in direction to Gothenburg. It has a sales surface area of 5.300 square meters. In 2004 the supermarket started an expansion of its sales surface, changing from an ICA Kvantum to an ICA Maxi format, as part of a project that consisted of a construction of a 50.000 square meters shopping mall around the ICA supermarket that contained circa 100 retail stores and 1900 parking spaces.

During the construction of the new area, the customers had more difficult access to the store which affected the sales figures. The meat department had a traditional cutting system by that time and the effect of the construction works were even bigger in a way that the shrinkage begun to be higher due to the drop of sales and the short lifespan of the products. This made the managers of the store start considering the utilization of the centralized prepackaged system ICA AB was offering to their partners. The product was prepackaged in preserving gases that gave

longer life to the meat cuts and it was exactly what the store needed with the situation in that moment.

At first, with the centralized system, the customers were complaining because they preferred the traditional, but little by little they started accepting and getting used to the new system. Moreover, because this ICA Maxi Partille was the starting point for the new shopping mall Allum, more customers were coming to the store. Not only the traditional customers that wanted to buy groceries but also those who wanted to do some shopping at the other stores around. A bigger and more varied demand was faced by the store and with the centralized system they were able to handle that. During the next years the centralized products were gaining more and more space in the shelves of the store until 2006 when the whole assortment began to come from the KPK.

According to the perishables manager in ICA Maxi Partille, Helena Strindeborn, "*in the beginning customers were a bit reticent to buy products from the centralized system. But as much as the centralized system was more utilized they began to become used to it*". Strindeborn also argued that the customers from time to time come and ask for different number of units in the trays and different sizes. This is nowadays difficult to achieve even though the store still keeps part of the cutting room they had with the centralized system. This small cutting room they have now is used when the meat ordered to KPK is not available. Then bigger pieces of meat are ordered from local suppliers and the meat is cut there in the store as it was done before with the traditional system. This system is still used for the grill and ribs assortment offered. In fact, a comparison of sales using prepackaged meat and the traditional system would be difficult since the sales area and the number of customers was increasing at the same time as the prepackaged system was being introduced.

Nowadays, they order through an automatic ordering system in which the program makes a suggestion of order and it has to be confirmed in order to make it official. The products are received every day in the store and the products are directly transferred directly to the cold chamber in which they will be stored until the products are needed on the shelves. The deliveries to the store are performed daily from the distribution center located at Kungälv. The KPK sends the meat cuts ordered to its DC in Kungälv where they are loaded together with other types of meat like sausages and different types of deli meats. Now with the centralized system one of the advantages remarked by the perishables manager is that if the forecasts are not accurate and the quantities result to be higher than needed, they have more time to sell the exceeding amount thanks to the longer life of the meat.

ICA MAXI ALINGSÅS

ICA Maxi Alingsås is a store located 27 km northeast from Lerum in direction to Stockholm. It has a 3000 m² aprox. sales surface. It used to be a small grocery store that did not belong to ICA, but in 2002 the owner decided to establish it in an ICA Maxi format. Even when they change to be a part of a big group, the customers still recognized the store's origins and are still sensitive to it because of their previous experiences there. The old store had always been well recognized for its low prices and the good location next to the centre of Alingsås has always helped the business thanks to the number of boutiques situated in the area. The differentiation in prices offered

before turned to be more difficult with the increasing number of competitors. According to Pernilla Sporrong, perishable goods' manager in ICA Maxi Alingsås, the main competitive advantage obtained with the change in 2002 was achieved through a differentiation in assortment.

According to Sporrong, in the meat department for the beef products they have different suppliers: KPK 85%, Vikaryd, a local supplier located in the Alingsås area, (5%) and the rest (15%) from other national suppliers located throughout Sweden. In the case of Vikaryd, they grow their own animals, in an environmentally friendly way, and offer a high quality product that is appreciated by some segments of the customers, who are willing to pay a little bit extra for it. Due to the local and small magnitude of this supplier, the quantities delivered are small and in certain moments of the season they close for holidays stopping the supply.

The national suppliers serve the meat ready to be sold to the end-user in primal cuts vacuumed packaged in plastic containers. This is a low-price-per-kilo alternative offered to the customer resulting from the less processed meat. The meat is displayed in big pieces in the shelves with the prices and information tag in the package. There is an important point to be observed in the service offered to the customer at ICA Maxi Alingsås meat department. This refers to the possibility of having these primal cut pieces of meat cut by the specialists in the store if it is demanded by the customer. The price per kilo in such a case would remain the same and subsequently, the customer will dispose of a service free of charge.

Although most of the products come from KPK, ICA Maxi Alingsås has 2 employees in the meat department to cut the 20% that arrives to the store in primal cuts unlike KPK's products that are already packed and cut in retail cuts. Under these circumstances, the customer can request and specific size or number of pieces in package and the store can cope to fulfill the customer's needs using a traditional approach.

When they order from KPK, they use the automatic ordering system but they do not take into account the suggestions given by the system. Normally, they have to enter the order manually so as to make it more accurate according to their needs. Sporrong said: *"according to my experience, AoB is not very keen for forecasting the meat needs, as it is for sausages and other deli meats"*. Despite this situation with the ordering system, the products that they receive from KPK are perceived as quality products with a good atmosphere that will preserve the product for a longer period. Moreover, the security offered by the tracing of goods of the KPK system makes it even more appealing to the store.

Even when ICA Maxi Alingsås gets a good discount from KPK because of the high volumes that are bought, Sporrong considers that there are some disadvantages by using this system. The prices they are paying to KPK for the products seem to be a little high. The time the product lasts after being cut and packaged in the gas preserving atmosphere is seven days and the store is receiving it four days after being packaged. This delay leaves small difference between the local cut product life spam and the KPK trays. This is something that has to be improved by the KPK distribution system.

5. ANALYSIS AND DISCUSSION

5.1 Service outputs utilized

Even when the service outputs provided at the store by the meat department could be defined according to the Buckling and Anne T. Coughlan et al. service output framework explained in chapter 2, it has been considered more appropriate for the purposes of the study, the definition of four customized service outputs. The service outputs utilized in the analysis are (1) Meat cut in the store, (2) Product life, (3) Customer service and (4) Price. These service outputs were defined in a way that enabled a segmentation of the customers based on the preference of one of the distribution systems studied in this thesis over the other and at the same time measure the sensitivity to price and to customer service. Each of these customized service outputs include at the same time some or part of those service outputs defined in the theory exposed by Anne T. Coughlan et al. (Marketing Channels) but they are defined in such a way that allow a better study and comparison of the centralized and the traditional meat distribution systems.

Meat cut in the store will be the main service output offered by the store which utilizes a traditional meat distribution system. This service output will provide at the same time: bulk breaking, since it will adapt the primal cuts into a more convenient size for final consume by the customer; delivery time due to that the customer can receive at the very moment he/she asks the exact amount and type of cut it is demanded; and product variety due to the customizing characteristics of the cut-in-the-store offer. Product life will on the other hand be the main service output offered to the customer in a store which utilizes a centralized distribution system. Customer service and Price are used as a part of the marketing mix that is also necessary to measure in order to know how much of each of these factors is optimal to offer to the customers. It is relevant for this study to find out what the customers are looking for every time they buy these products so as to determine which distribution channel fits better their demands and concerns.

One of the most characteristic features of the traditional system is the fact that the meat is cut and packed within the store. By offering this kind of output, IKL shows the client within the store facilities that they have qualified staff to handle the meat products complying with all the hygienic and qualitative standards. The customers can perceive that the products that they are buying come directly from the butchery at sight and that the meat looks fresh and it is ready to be cooked and eaten. According to IKL´s store manager and IKL´s meat department manager; this is one of the most important factors that attract customers not only to buy meat products but also to do their daily shopping in IKL.

For the centralized system, on the other hand, the most important service output that is offered is the longer product life. The meat products can last longer due to the gas mixture used to preserve the products in a vacuum package. Normally a customer looks for a meat product that has a longer product life because that way he/she can cook it within a longer day range. When the

customers at IKL find one of these centralized products on the shelves, they can see in the label that it has more days than the traditional ones. Indeed, it is an interesting characteristic for the customers to be taken into account, especially if the products that they buy are not used the same day in which they buy them.

Price is another dimension that is considered in this analysis because it is an important feature considered by the customers not only when they buy meat products but also with all the purchases they perform. IKL´s price level is an important issue to consider by the store and the meat department managers because that is one of the first things that the customers take into account when choosing to buy a meat product. It is relevant to determine whether the price that IKL is offering is high or low according to customers' perceptions and compared to competitors' prices in the Lerum community. This can be a way to know if there are inefficiencies (or gaps) in the supply processes; if at similar margin levels the price offered by the store results to be higher than the price offered by competitors who offer similar service outputs, it will likely be that there is a cheaper way to bring the product to the customer.

Customer service is relevant because according to IKL´s manager is a service output that is very appreciated by the Lerum community customers. Since the profile of the community is traditional a very close contact with the end consumer is a daily activity in which the customer can express his/her opinion about a specific situation or ask for a special demand in order to be fulfilled by the store staff. The level in which customers´ needs are met through activities performed by the staff will be an important factor to keep or even attract more clients to buy in the store. But these facts were considered necessary to prove through the customer service and moreover measure in which level they were important in relation to other characteristics.

A better understanding of what the customers are looking for can be achieved through this service output analysis and as it has been stated throughout this thesis work "the customer is the keystone of the retailing business". Based on this statement, getting a closer picture of what the customers consider important for them when they but at IKL will provide the appropriate insight to start the analysis and discussion of the situation at hand. By analyzing the service output mix offered by IKL through two different channels, more accurate market segmentation can be performed because the customers´ perception of this mix will be taken into account so as to determine which factors affect in a higher proportion their purchasing decisions.

Since the segmentation of the customers is going to be done based on specific pre-defined service outputs which will be used in the survey, the same service outputs will be used throughout the whole analysis. This is due to the fact that the existence or not of inefficiencies in the activities and/or the errors in the services offered will depend on the segment addressed in the study. As said in chapter 2, what it is a good channel design for a specific segment it could be deficient for another. So the analysis will always refer to the pre-defined service outputs used to define the segments and the activities performed throughout the channel that produces those service outputs.

5.2 IKL'S customers' demand segmentation

The process followed for the segmentation of the customers starts with the survey conducted at the meat department which offered the below mentioned raw data. The raw data is then used for drawing some ideas that will be explained in the findings section.

Raw data

The results of the survey conducted with the customers in IKL's meat department shows the following:

- Among the customers asked, 87% come from Lerum community. This results show that the great majority of the customers are from the close neighborhood. Hence, the study of the local customers' preferences becomes more important.

- The greater part of the visitors consists of regular customers; 58% of the customers visit the store 5 or more times per month.

- The customers were asked to put in order of preference the attributes shown in *figure 5.1*. The largest part of the customers (43% of the interviewed), value product life as the most important service output. Meat cut in the store is considered as the most important factor by an also important proportion of the asked customers (30%). This is of high relevance when considering the distribution strategy to follow. The two more important characteristics in the product for the consumer are those services which are offered by two different distribution systems. However there is a fairly bigger part of the customers that value product life as the most important factor, there is also an important sector of the customers that value in great measure the meat cut in the store. The first factor is more characteristic of the centralized prepackaged system and the last is a characteristic of the traditional distribution.

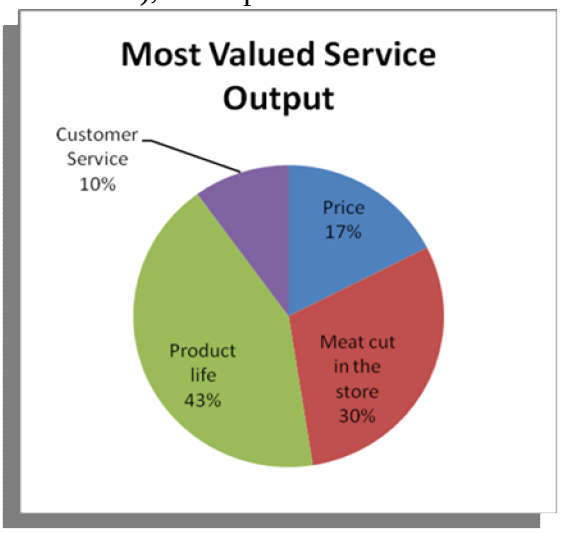

Figure 5.1: Most Valued Service Output

- Only 15% of the customers do not perceive any difference at first sight between the centralized products and the traditionally cut. The vast majority recognize to a larger or lesser extent some difference. Nevertheless, some of them do not know for sure what the specific differences are but they have made assumptions about what they could be. Many of the customers said that the preserved packaged products had a better visual

appearance but, at the same time, they were aware that there were some kind of preservation agents so as to make the meat last longer than with the traditional package.

- When the main differences between the KPK system and the traditional system are explained to the customer, only around 11% of the customers said they would keep on buying indifferently the centralized prepackaged or the traditionally cut meat. This was because they do not concern much about the origin and the processes the meat goes through as long as it looks fresh and has a good price. The main points mentioned in the differentiation were: (a) KPK system meat is cut in a central plant in Västerås in high technological and hygienic conditions and send all around Sweden; (b) KPK system utilizes preserving gases that give a longer life to the meat in the tray; (c) traditionally cut meat is brought from more local suppliers, has been packed more recently and has no preserving elements; (d) the traditional cut is always performed within the store.

- There were different reasons that motivated the preference of the traditional system for the other 89% of the customers that would not continue buying the KPK products. This intention was told after being told the main differences of origin, processes and preserving methods before mentioned between the two systems. The majority (41%) preferred the traditionally cut because it looks fresher and they would have the certainty that it has been cut and packaged more recently. Quality and health reasons are what motivate 16% of the customers asked for preferring the traditional system. Another 13% motivate their preferences based on that the meat is more likely from local producers and show sympathy to those suppliers. It was also mentioned by 5% of the asked customers that they would rather buy traditionally cut meat because of the shorter distances the meat is transported from more local suppliers and its environmental benefits. Other reasons for considering traditional cuts better than the centralized prepackaged ones are quantity discordances with the number of pieces of meat included in the trays of the centralized system (10%), high hand work demand (5%). Those that had no reason for choosing one or another resulted to be around 10%.

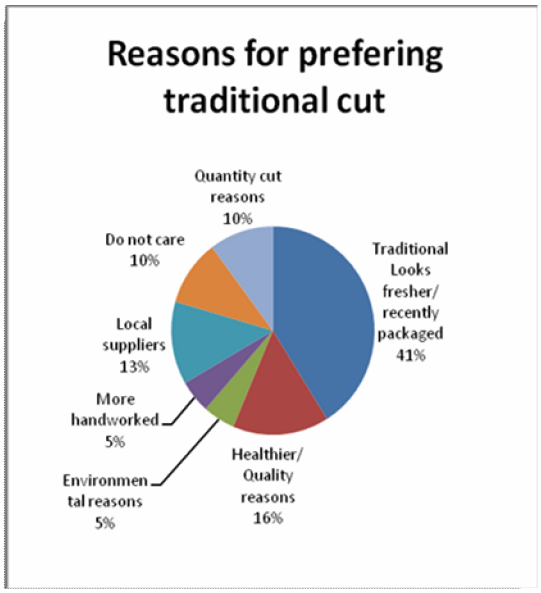

Figure 5.2: Reasons for preferring traditional

- Only a small part of the customers asked were identified as customers that would radically change of store chosen for their shopping if only centralized meat would be offered. This makes sense with the answers given by the other two store managers asked in Alingsås and Partille that argued that in the beginning their customers were a bit reluctant to buy products served by KPK but that in the end they accepted them.

According to the respective perishable managers in the mentioned stores, this was mainly after testing that the quality of the prepackaged products was also good.

- Almost half of the asked customers (47%) also go shopping to ICA Maxi Alingsås from time to time. This was asked in order to measure the importance of the main competitor store in the area among IKL's customers.

- From those that also buy in ICA Maxi Alingsås, 50% go there because of having family/friends there or simply for passing by. The existence of an important commercial area in town is the reason for buying in ICA Maxi Alingsås for 21% of the customers that also buy there. Other reasons are price (16%), working place (11%) or store assortment (5%).

Findings

The first deduction from the raw data obtained is that with 87% of the customers being residents of Lerum community, the demographic and social studies of the community members and the results from them obtained will be a good tool for describing IKL's customers. Among Lerum's population, 72% approx. has children below 18 years old which is a bit over the figure of the whole country (68% approx.)[43] being the percentage of those below 18 years old the 29% of the total population. This is a good indicator of the potential customers the community has. The percentage of people between 25 and 44 years old is 26% of the whole population in Lerum and is a similar percentage for the population between 45 and 64 years old. It can be thought that the segment between 25 and 44 years old is more interested in a fast visit to the store when shopping and not so interested in interrelating with a clerk as the 45-64 segment due to the more hasted lifestyle of the average individual on this age. In this case, the percentages of ages distributed in both segments are similar (26%) which will likely result in a demand for both service output types, the traditional with more customer service and the centralized with longer life span products.

Another reason that may encourage the utilization of the two different distribution systems is that the two points most voted in the survey are exactly the more characteristic service outputs offered by each of the systems studied. Taking into account that 43% of the customers asked considered life span of the product as the most important characteristic when buying meat and 30% considered the possibility of buying meat cut by the staff in the store as a freshness guarantee, it is clear that the store has to try to offer both things. The option of offering meat cut in the store which lasts as long as seven days as the centralized packaged does, is not possible with the store's actual resources and it would be very difficult to include the required machinery in the store facilities. For this reason, a preliminary conclusion might be that the combination of a centralized system and a traditional one seems to be very appropriate for the IKL's customers' demand satisfaction.

IKL's customers know in general terms about the difference of origins of the different systems' products. They know some about the existence of preserving gases in the centralized cut products and the mechanical cut of the meat due to the homogeneity between meat cuts in

[43] www.lerum.se [Accessed 29-10-07]

different trays. The existence of those differences does not seem to affect much to the final customer's decision as much as when other differences are mentioned. Such other differences mentioned were the higher technology in the centralized plant, the longer transportation distances covered by those centrally cut products and the shorter time elapsed between the cut and the placement on the shelves for the traditionally cut products. These mentioned differences seem to arise more reluctance on purchasing centrally cut meat. It is true that due to time limitation in the interviews the differences mentioned were very basic and this could have led to offer biased information to the customers. Some of the arguments posed by the customers like considering the centralized cut products as less healthy might be a proof of it after visiting the facilities of the central plant in Västerås which offered testimony of the high quality and hygienic standards.

However, the basic differences shown (still valid) served for drawing some findings. For instance, the main reason argued for preferring the traditionally cut products (41%) after being shown the differences, was the higher freshness of the meat on the traditionally prepared trays. The freshness was the most important reason for a much larger percentage of the customers over other reasons such as the quantities offered per tray, the local origin of the meat or health reasons. These results could be matched with the results on the preferences over service outputs demanded: the preference of product life as a service output over other service outputs by the larger part of the customers (43%) is then very likely motivated by the idea that the product with longer life remaining is fresher. Freshness is the main concern to 41% of the customers asked. Considering the color of the meat is in good conditions in all the meats shown as the gases used by the central plant allow in its products, it could be thought that the only reference the customer has to estimate the freshness of the product is the expiring date shown in the tray's tag.

Another conclusion that might be drawn from the joint analysis of the data above mentioned is that if the customer values the product's life span as the most important service output it is probably because the remaining days before the expiring date serves as a measure of the freshness of the product which is another major concern given by the customer itself. If the only measure the customer has to evaluate the meat freshness is the expiring date, then the customers will very likely choose the centrally cut products due to the normally longer expiring dates they have, if no detailed specifications on the differences between one and another systems are given. Then, traditionally cut products will be in a very unfavorable position if no information is given to the customers that enlighten the benefits of traditional cut meat in the store such as the local origin of the meat, the customization possibilities of the cuts or the shorter time elapsed between the cut from the primal till the display at the shelves.

The importance of providing information about the traditionally cut meat gains more importance if the fact that the customers can get used to the centralized system is considered as some ICA meat department managers pointed out.

Segmentation of IKL's customers

One of the questions asked to the customers in the survey, as it was mentioned in the methodology, was to put in order of preference the following features according to their considerations when buying a meat product: price, meat cut in the store, product life and customer service. Each market segment created will include those customers that chose each of

the before mentioned features as the first option. Then within each of the segments, the percentages of second preferences were determined in order to draw more precise demand profiles from each group. The table with the segments determined by the first preferences and the percentages of the second preferences is as follows:

	Lowest Cost Segment (17%)*	Fresh product/Hand work demand segment (30%)*	Life span concerned Segment (43%)*	Interactive Segment (10%)*
Price	X	25%	47%	50%
Meat cut by the staff in the store	75%	X	47%	50%
Product life	13%	42%	X	0%
Customer service	13%	33%	6%	X

Table 5.1: Customer segmentation and percentages of second preferred service outputs within each segment.

*These are the percentages of Price, Meat cut in the store, product life or customer service as first preferences in the whole sample.

Each one of the market segments is formed by customers who are similar among them by choosing a specific service output as first priority when buying a product from the meat department. The features used for the differentiation are service outputs that matter for building a distribution system or another.

From table 5.1 it can be observed that the larger segment of IKL's customers (43%) is the Life span concerned segment. The customers that belong to that segment value the life span of the goods over other attributes and services offered. After the life span of the products, they are equally interested in proportion in the price offered and in that the meat becomes cut in the store. Customer service is not considered so important for the majority of the biggest segment.

Another important segment is the Fresh product/Hand work demand segment. This segment represents 30% of the total customers asked and their main interest is that the meat displayed in the shelves was cut by the meat department staff in the store. The bigger part of the customers belonging to this segment value the life of the product in great measure and it is followed by customer service. This is a segment that demands service outputs characteristic from different distribution systems and probably this segment will demand a mix of products from KPK and traditional cut.

The third biggest segment, the Lowest Cost segment (17%) is greatly interested apart from the final price of the goods, which is their main interest, in that the meat is cut within the store facilities. This is the most homogeneous segment due to that within the same segment the answers were very similar when ordering the four service outputs asked.

As a first conclusion it can be said that the two service outputs that should be present to satisfy the two biggest sectors of the customers are the offer of a long life product and a meat cutting service within the store. Both sectors have those service outputs in their two biggest preferences. Price will always be an important factor to be considered but the sensibility of it is not as high as expected.

5.3 Activities to produce service outputs

The service outputs that are offered to the end consumer can be produced at different stages of the distribution channel but it does not matter in which point they are generated, they will always reach the end consumer. In the case of IKL, since there are two different systems that are being used to offer the customer the meat products, different outputs can be obtained in different levels from each distribution system.

5.3.1. Activities performed in the traditional system to produce service outputs

As stated before, one of the main features of the traditional system is the fact that the meat can be cut and pack in the store at customers' sight as a service output. Previously, the traditional system process has been described and as the meat products go through the channel different activities are performed in order to contribute with the freshness of the retail product bought by the end consumer. The activities performed in the traditional system that contributes to create the service outputs are the following: **breeding, slaughtering, cutting, packing, negotiating, order processing, inventory holding, risking, promoting, financing and ordering.**

The beginning of the process starts at the farm because the breeders (farmers) are the ones in charge of the **breeding** activities by raising the animals in their own farms. They need to feed the animals and get them fat so that more advantage could be taken from them. This process will have an impact on the meat cut on the store service output since the animals raised on these farms are the "raw material" needed to have the retail cuts, without them it will not be possible to provide meat products.

The next step on the process takes place when the slaughter house, in this case Dalsjöfors Slakteri, performs the **slaughtering** activities which consist on killing the animals to use them to provide food for people. On the product life output this is the point of origin and when the numbers of days that elapse become really important because it will impact on the freshness of the product.

One of the main activities performed in the meat distribution channels analyzed is the cutting of the meat. These activities will be named **cutting**, which will include any activity by which the meat is processed from the carcass into smaller cuts for a more suitable end consume. These activities might be performed by any member of the channel which has the required resources for the cutting. The first member that performs cutting is Dalsjöfors Slakteri once the animals have been slaughtered, they need to be cut in sides (halves) and then in quarters to be sent to Dalsjöfors Kött. Once at Dalsjöfors Kött facilities the meat is received in quarters and is cut into primal cuts and packed the same day so as to get them, as soon as possible, into the vacuumed

packages which preserve the meat for like around a month. When the primal cuts arrive to IKL they are cut into retail cuts that will be put on the shelves at end consumers' disposal.

The activities involving the packing of the meat cuts are also a relevant activity in the channel in which the members incur in important costs. This activity will be named **packing** and will include all those processes performed for putting the meat cuts into a sealed container which allows a better handling of the product and better preservation for it. The first time the packing activity is performed is when the primal is packed in a vacuumed plastic container. From that moment the freshness of the product can be extended because of the absence of air in the plastic bag. The product will remain packed the same way throughout the whole distribution channel until it reaches IKL's warehouse where it will wait for the customers' requests or shelves' replenishment. This packing activity allows the meat department manager to apply a postponement strategy in which the primal cuts can be maintained in that state before "customization" by cutting them in retail cuts for the end customers. Furthermore, the meat department staff at IKL performs a second packing of the products on plastic trays and covered with plastic once they have been cut into the retail cuts.

Negotiating activities are performed between Dalsjöfors Kött and Färskvaruhuset to establish the purchase conditions and the amount of primal cuts that will be bought by the latter and prevent any product scarcity in the wholesaler's warehouse. Since IKL and its wholesaler work using a pre-order system the amount of products received by IKL is normally accurate so that no stock-outs are faced by the store. Moreover, since there is a chance for the meat manager to modify the pre-orders before they are sent to IKL, there is little room to be wrong on the quantities. Another factor that contributes highly not to have stock-outs is the fact of having a close relationship with Färskvaruhuset (wholesaler). This close relationship results from the negotiation activities performed by IKL with its wholesaler through time. In case of an unexpected amount increase in an order, the wholesaler will take products stored at its warehouse from other minor clients so as to be able to satisfy IKL's needs and prevent stock-outs. This established bond among channel members can impact directly the customer service output since having enough products in the shelves as well as in the warehouse is important to satisfy the customer needs.

Also in terms of costs, since the products are specifically prepared for IKL at Dalsjöfors Kött facilities, the products are not handled anymore to put them in different containers or pallets since they will remain packed in the same trays until they reach IKL's facilities. When the primal cuts are sent to Färskvaruhuset, the products are set on its warehouse and then the orders are prepared to be loaded on the truck that will deliver them to IKL. This **order processing**, which is a special consideration given to IKL's orders, will keep handling costs low so that they do not affect the final price setting by IKL's meat department manager.

Referring to physical possession and ownership, they are considered as only one activity since in the channel structures that are being studied, they are always together in a joint activity called **inventory holding**. On the one hand referring to physical possession activities performed in the traditional system, all the channel members are involved in them because the products are stored and transported several times before reaching IKL's facilities. First, the breeders have physical possession activities and costs since in order to raise the cattle they need to have them on a

certain area in their farms. For instance, having the animals on the farm is more costly during winter because they need to keep them warm and to do so they need to have them inside the barns to keep them "stored". Actually, during January there is a big scarcity of meat products because there are not enough cattle that are being raised because of the high costs that these physical possession activities represent during the winter time and also due to the high demand on Christmas season. When the animals are transported to Dalsjöfors Slakteri, the cost of having the animals either alive or slaughtered has a cost that the company will bear during their storage in their facilities.

At Dalsjöfors Kött, the next link on the chain, first they have a place where the quarters will be hung and kept until they are moved to the cutting areas. Also, there is a small storing area where primal cuts will remain before they are sent, once or twice a week, in their own trucks to Färskvaruhuset. At the wholesaler facilities, the products will stay one day before they are sent to IKL the day after. All these activities impact two service outputs in the traditional system: customer service and meat cut in the store. By accomplishing the physical possession activities in an efficient way throughout the distribution channel, the products will be available at IKL and therefore the customers will be pleased because they will be able to have the traditional products (meat cut and packed in the store) that they look for (customer service). Even the end customers are involved in the physical possession activities when they buy a lot of products and store them at home because they prefer to buy larger amounts instead of dropping by the store several times.

On the other hand, ownership activities are performed throughout the supply chain since once the products pass from one member to the next one the costs related to hold inventories are transferred at the same time. Due to the meat products' nature it is very important for IKL to have the products on their storage as soon as possible to have them fresher. The ownership activities are performed all along the distribution channel but the product's characteristics that are kept in inventory are different as the meat is processed. For instance, the breeders and slaughterhouses own the cattle but the slaughterhouses also own the quarters which is their final product. In the case of Dalsjöfors Kött, they have also two kinds of products stored at some point, quarters and primal cuts. Färskvaruhuset will have only ownership over primal cuts but IKL, the final link, will have it over primal and retail cuts.

As a result, the member channel that will have the highest inventory holding costs for primal cuts, since there is capital tied up to it, insurance and storage costs, will be the retailer since they are most likely to spend more time in its cold chamber than in the other members' warehouses. In fact as Johan Frodell pointed out, the inventory holding cost is minimized in this way due to that it would be more expensive if the meat were kept in the wholesaler's warehouse until it were required by the store. These inventory holding activities can impact the meat cut in the store, customer service and price service outputs. To be able to cut customized meat cuts at the store, a sufficient primal cut stock is required. Since the service offered at the meat department brings the possibility of choosing the primal from which the cut can be obtained from, a high primal stock is then required too for this reason.

Since exclusiveness contracts are nonexistent among the channel members, due to the freedom to choose who to buy from, this aspect related to risk does not apply for this particular case. **Risking** activities are performed by Dalsjöfors Kött every time they negotiate with

Färskvaruhuset since the prices are set on a weekly basis. Also they are performed every time that IKL's meat department manager negotiates with Färskvaruhuset the price at which the primal cuts will be bought during a whole week. If the market prices rose unexpectedly the wholesaler would lose money because it might have sold his products at a smaller price to IKL and would not be getting as much money for its products as it would have by setting a bigger price. Since the prices are set on a weekly basis if the wholesaler set a low price he might try to get compensated on the next week setting a higher price. The same "win – lose" situation could happen upstream on the channel when Dalsjöfors Kött sells products to Färskvaruhuset. Nevertheless it is important to mention that the ICA retailer has the chance to decide who to buy from and to set its own prices according to the net margin that he wants to get from the products.

Another activity performed by the members of the channel which carries costs for them is the **promoting** activity. Some discounts could be offered to Färskvaruhuset by Dalsjöfors Kött if the volumes that are bought are higher than some other period. Similarly, Färskvaruhuset could offer special prices for the goods they sell to IKL. If promotion activities are performed by IKL to promote the sales of the traditionally cut products by offering special prices or discounts on a week or some days, the customer service and service outputs can be affected. Since the end customers will be paying less money for the meat products that they usually buy, there will be a cost likely shared by the wholesaler and the retailer in terms of margin levels.

Even when there is a pre-order based system that is used between Färskvaruhuset and Dalsjöfors Kött, as well as between IKL and Färskvaruhuset, some **ordering** costs are involved due to the order modification performed to either increase or decrease the amount of products bought. Some adjustments are needed because of the highs and lows in the demand of the products. Every week, the meat department manager calls his contact at Färskvaruhuset in order to close the deal and agree on the quantities that will be sent to IKL. The same situation happens upstream when the wholesaler contacts Dalsjöfors Kött to adjust the orders according to the IKL's requirements. These ordering activities can impact the final total cost and hence the final price calculated by the meat department manager on a weekly basis.

Financing activities are performed throughout the channel since credit terms have been established among the channel members so that a certain period of time can elapse from the moment the goods are received until the moment they need to be paid. Although there are not contracts among the members, the payment periods established downstream among Dalsjöfors Kött, Färskvaruhuset and IKL allow them to cooperate and coordinate themselves in a better way while doing business. Even the end customers participate in the financing activities when they pay the meat products using their credit cards in order to perform the payment later on the month.

5.3.2. Activities performed in the centralized system to produce service outputs

The centralized system works in coordination not only with IKL but also with many other ICA stores along Sweden. Since a lot of stores need to be satisfied in their requirements a very organized system has been set up so as to cope with high meat product volumes ordered by the stores.

The activities performed along the distribution channel by the members of the centralized meat cutting system are: **breeding, slaughtering, inventory holding, cutting, packing, order processing, negotiating, promoting, ordering, financing and risking.**

The **breeding** is the first activity performed in the centralized system as it is in the traditional system and in any other meat distribution system. It is also considered being value added in the product even when the product is taken over by the slaughter houses as mentioned before like raw material. In the case that is being studied the breeding is performed by livestock farmers which have long term contracts with the slaughter houses and supply them and by large scale breeder organizations such as Swedish Meats which are co-owners of their own slaughter houses. For the KPK system the main breeder is Swedish Meats which supplies primal cuts to the HFG cutting facilities in Västerås. Breeding activities include all the costs related to feeding the livestock, veterinary services and all the costs incurred for growing the animals in healthy conditions such as vaccines and so on.

Slaughtering activities are performed by very specialized members who own special resources for carrying out this type of activities. In the case of the centralized system the responsible for the slaughter of the animals are HFG's direct suppliers such as Swedish Meats (HK Scan) or Dalsjöfors Slakteri.

As it has been defined before, **inventory holding** activities will be composed by physical possession and ownership. On the side of the physical possession activities in the centralized system are performed by the breeders, HK Scan and the other producers as Dalsjöfors, HFG and ICA in their Västerås facilities and ICA's retailing stores. The breeders perform inventory holding from the time the calf is born until it is sent to the slaughter house as said in the traditional system activities description. The cattle have to be kept either in open lands or in the indoor facilities until the time the animals are considered grown enough to be slaughtered or until the moment the breeder considers.

From the moment the slaughter houses take possession of the livestock there is a short period of time until it is slaughtered but this period is also considered as inventory holding. Then the carcass goes through a cutting process until the beef primal cuts are obtained and then packed in plastic vacuumed containers. Then, the slaughter houses storage these vacuumed primal cuts during a time of approximately eight days in order to make the meat tenderer before it is delivered to HFG's cutting facilities.

Due to the interest of HFG of having the meat as fresh as possible, the elapsed period that is required between the packing and the delivery for the tendering process has to be very accurate.
Once at the co-owned facilities by HFG and ICA AB, the storage of the primal is approximately of 3 days average. Then, the forecasted orders are stored after being cut into retail cuts in a finished products warehouse where they wait to be assigned to the orders actually placed that day by the group of stores working with the KPK system. It has to be said that the storage is always done at HFG side of the facilities and at ICA's side the prepared rolling pallets only are storage the time required until they are loaded into the lorries owned by ICA to be transported and distributed to the regional distribution centers in Sweden, in this particular case Kungälv.

After the retail cuts arrive in Kungälv's distribution center, they will be then directed to IKL so the storage activities will be done at their cold chamber to keep the products there until the shelves need to be refilled for the end user's disposal.

On the side of ownership activities, they are distributed among all the members in the distribution network and will be included in the inventory holding cost. These costs are transferred to the next channel member every time there is a product delivery. The theoretical framework in which the conclusion will be based about inventory holding activities is that inventory levels could be reduced by better information flows.

When using the centralized system, the **cutting** and **packing** activities are performed by HFG's suppliers and in HFG/ICA's facilities in Västerås and none other neither packing nor cutting process is performed at other points of the channel. HFG's suppliers perform the cutting process from the slaughter of the livestock until the primal cut is obtained. Then the primal cut is vacuumed packed and delivered to HFG. At HFG's facilities the meat is cut into retail cuts and packed into plastic trays which are filled with preserving gases and then term sealed. A longer lifespan is an inherent service output coming from these activities. As it has been seen in the survey results, customers are really interested in having meat products that can have a longer duration so they can cook and eat them after some period stored in their refrigerator. Furthermore, since the products are directly cut and packed in KPK facilities, the product will not be modified during the distribution process, implying that the product's atmosphere will not be affected in any way until the product is opened by the consumer once it has been bought and taken home with him/her. The cutting activities that are done centrally has given the benefit of reducing costs because of the waste reduction levels achieved in HFG resulting from the exigencies demanded from the suppliers and the high cutting technology employed. As a result, the total final cost for producing some cuts as the Rygbiff are reduced notoriously. Since the meat volumes processed in Västerås are high due to the distribution done all along Sweden, economies of scale can be achieved along the cutting and packing processes and the costs of utilizing such high cutting technologies can be cut down. In the packing activity it is also included the traceability of the goods and the identification of each unit with labels that provide information about the origin of the specific unit all the way upstream the channel.

Another aspect that contributes to the good's longer lifespan in the centrally packed system is the fact of only having **order processing** at KPK facilities. Since the products have already been picked according to the final destination at HFG-ICA's facilities in Västerås they will spend less time in handling at other points of the channel and they will get to the store in less time. As a result the products will very likely arrive to the store a day after they have been cut and packed in Västerås and the product's shelf life will be longer. The order processing is also helped at HFG's production lines by the usage of an ERP system that programs the picking of primal cuts from the storage room and the production activities based on the different order blocks forecasted by ICA central.

Negotiating activities do not occur the same way on the centralized system since the prices are not negotiated as they are in the traditional system. The prices are set by ICA and then IKL and the other stores will decide if the prices that are being offered are convenient to be paid to get the retail cuts. However since the ICA retailers have the decision power to be able to choose who to

buy from, the relatively high or low prices set by KPK are considered when setting the prices offered to the end consumers. The negotiation cost that the stores might incur in are only those resulting from the time spent in analyzing the prices offered by the KPK system and the prices negotiated with the local suppliers. Negotiation activity is intense between the breeders and slaughter houses and HFG. There is not as high promotional activity between these members as there is between ICA and its stores, but this is traded off by tough negotiations based on the market situation (offer and demand).

Bonuses are provided by KPK to IKL, and to all the other ICA stores for using the automatic ordering system. These bonuses are considered **Promoting** activities. Also when HFG has over-stock makes a request to ICA to implement promotional campaigns in its stores so they can push the inventory downstream. In this process not only HFG but also ICA participates by reducing their selling prices. These activities can impact on the price setting by the meat department manager because if the store gets discounts then lower prices can be set because less money is spent on buying the retail cut trays prepared by KPK. Also special promotional periods can be set by the specific store at its own costs for influencing the final customer's purchases.

The **ordering** costs for HFG would be all those costs in which the company incurs when ordering to its suppliers and would include labor hours dedicated to put the orders, phone calls or other communication systems used for the transfer of information to the suppliers such as electronic data interchange (EDI). On the side of the stores, since there is an automatic ordering system (AoB) that is used by all the members or stores of the KPK network, the ordering costs are reduced because of the suggestion that are set by the system itself in order to be able to supply the right amount of products to IKL. However, since it is not used by IKL to the fullest because the suggestions given by the system are not totally accurate, some time is spent modifying the orders so they can be closer to the real needs. These ordering activities that take some labor time can impact on the prices set by the stores since costs related to ordering need to be addressed every time there is a need for replenishment. As ordering cost is also considered the forecasting process that ICA provides to HFG for giving a preorder which helps planning the daily production. The distribution centers are not placing any order since they act as mere transferors of shipments to the final stores.

The costs in which a seller incurs when supplying goods but not charging at the moment are called **financing** costs. HFG might have these costs if the meat trays are delivered into ICA's facilities but the payment is not done until 30 days or more have elapsed.

All the **risking** costs are those which HFG has when fixing a specific selling price with ICA for a period of time, for example a week, and risks losing money resulting from a price increase during the period.

5.4 Cost analysis for both systems (Efficiency Template)

As explained in the theoretical framework, the efficiency template is divided in two main segments or column groups: weight for activities and proportional activity performance of channel members. Both column groups will be briefly described in order to explain the content of the table.

5.4.1 Efficiency Template for the traditional system

a) Weights for activities

The traditional meat distribution channel is characterized by having the **cutting activities** more distributed among all the members of the channel. This results in slightly higher total cutting costs for the whole channel due to that there is some duplicity in the activities and the equipment necessary to do the cutting which in the traditional case is performed by more actors than in the centralized. In this case more skilled personnel to perform the cutting are required in the retailing store and the total cutting costs are raised resulting from higher labor costs.

Another factor affecting the cutting costs in the traditional distribution system is the high shrinkage born by the retailer resulting from the arrival of low quality trim of the meat delivered by the supplier. In the centralized system this issue is strictly controlled by the HFG over its suppliers and is a key component for the low shrinkage experienced by its cutting plant at Västerås. A possible measure to reduce the costs in the cutting activities within the traditional system might come from putting higher demands on the suppliers for the trim conditions as it happens in the centralized or as Johan Frodell pointed out, a possible test with suppliers who are already supplying HFG which have better skilled personnel that perform a higher quality trimming.

In the traditional system the volumes handled by each of the actors are not as high as in those handled by HFG in the centralized and the level of mechanization cannot be as high as in the last one due to a lack of volume which led to a good efficiency of the investment required for the automation. This is why the labor cost represents a higher share of the total cost in the traditional distribution system than in the centralized and it also affects the total cutting activities costs.
Cutting is probably the most important among all the activities in the traditional system because they are the ones that produce the most characteristic service output that identify the traditional meat distribution system. The possibility that the end-user has of ordering the meat the way they want it to be cut is only possible through a meat cutting service offered at the store. The meat cutting service offered provides at the same time another service output considered in the study; this is the customer service, understood as the assistance to the end-user in any query they come up with or advice they seek from the professionals at the meat department.

The transportation of cattle and meat in the traditional channel is in principle over shorter distances due to the more “local” position of the livestock farmers. In the case of Dalsjöfors the majority of the meat cut at Dalsjöfors Kött comes from suppliers located in the nearby around the slaughter house they have in Borås (70 km. approx. from the cutting facilities in Gothenburg). The handling of goods in the warehouses is carried out along smaller distances too due to the rather smaller size of the facilities compared to the size of the average warehouse in the centralized system. The smaller surface of the warehouses in the traditional system also results in a lower storing area cost in terms of rental fees. The lower transportation costs and the smaller size of the average warehouse in the traditional system reduce the weight of the **inventory holding** costs in the traditional system in relation to the centralized system. Along these

activities it exist an important factor affecting the costs of all of them which is the cold chain. The transportation, the storage and all the manipulation within the warehouses has to be performed in a temperature controlled atmosphere to preserve the meat in good conditions and allow its distribution.

The insurance costs which cover the warehouses and the goods stored throughout the traditional distribution channel are lower than in the centralized resulting from a much smaller average inventory, a much smaller surface utilized in the warehouses by each one of the actors and much less expensive machinery utilized. The costs of owning the products and the resulting capital tied up in the acquisition of the goods is less as well due to the lower volume handled by each of the members. These lower costs of ownership which include insurance costs and the cost of opportunity incurred when a smaller volume of goods are purchased are also a factor that reduce what the inventory holding costs represent in relation to other activity costs along the traditional channel.

Inventory holding activities are a crucial part of the whole performance along the channel, without a well design of these activities the whole amount of service outputs would be diminished in high measure. However, in this case of the traditional system these activities do not affect as directly in the obtaining of one or another service output considered and that is why its final benefit potential has not been modified from its actual cost weight though it has a medium-high weight on it.

Another activity that represents a fairly high share of the total cost of running the channel is the **negotiation activities**. In this case, the negotiation is performed between almost every member along the channel due to that there are more individual actors in the traditional system than in the centralized. In some cases as in the wholesaler case, these activities are the core of its performance in the channel due to that they deal with a large number of producers and decide upon several offers everyday in order to make the most of those price reductions. These activities have a great benefit potential for the final price of the product, which in this case is considered another service output, because a balanced and fair establishment of the transaction terms and marginal benefits among the actors will lead to better price assignment.

The **breeding activities** represent 15% of the total costs and include all the costs incurred in feeding the animals and growing them in good health conditions with the resulting veterinary and medicament costs. These costs represent a fairly high part of the total costs of the channel as it was pointed out by some of the members of the channel, but they are however considered to add low value to the final product.

Order processing costs are the personnel costs resulting from the labor hours required for the preparation of the orders by each one of the members except for the end-user. The orders processed from the breeder to the wholesaler are those sent by the members of the channel to their respective suppliers starting from the orders placed by IKL on the wholesaler. But it also includes the labor hours needed to replenish the shelves after the end-users pick the goods. The importance of these activities in relation to the production is considered to be high on the basis of that they are affecting to some extent all of the service outputs produced. Order processing activities affect directly in the possibility of having in every moment the goods that customers

demand on the shelves. In fact it is affecting directly the life span of the goods, because if the orders are not prepared correctly with a good checking of the packing dates, the shelf life of the product can be affected once it reaches the retailing store. It also affects the service output called customer service since during the replenishment of the goods at the store the personnel will be closer to the customers and will be even more accessible to possible customers queries than from the cutting area. It has been observed during the activities at the store for this thesis that it is precisely during the replenishment times when the customers ask more to the personnel of the store. For all this, the benefit potential of the order processing activities on the service outputs is considered to be high.

The annual **promotion** costs are also an important cost to be mentioned here. It may seem that the cost is not very high in relation to other costs, but represent a high cost for the retailer due to that IKL bears almost all the expenses of the promotional periods set and is a crucial part of the price service output. The further we go upstream the channel, the less cooperation we find among the members of the channel in the promotional activities offered to the end-user. Promotional activities affect directly the offer of a good price as a service output.

Financing activities are not considered a high channel cost since according to Erik Gumabon, HFG plant manager, the cash-flow is high and the payment terms which were no more than 30 days. This makes the financing costs not affect much to the channel members activities and hence to the production of the service outputs.

b) Proportional activity performance of channel member

The first activity which is performed in the channel is the breeding which concerns only to the breeders and no other member in the channel participates in it. The breeding process is always performed parallel to inventory holding activities which consist of the keeping of the cattle. Then the cattle is transported by the slaughterhouse and slaughtered in its facilities, skinned and prepared for the cutting. Then the cutting begins still at the slaughterhouse where the meat begin to be cut into parts, first into sides and then into quarters. The process of cutting the meat until it reaches the quarter is considered to cause 20% of the total cost of the whole meat cutting process till the retail cut. Then the quarters are sent to Dälsjofors Kött in Gothenburg where the quarters are boned and cut into primal cuts that are then trimmed and packed into a vacuumed plastic. This cutting process is considered to be the most elaborated and the one that include the highest cutting cost of all the stages of the cutting process. Then the primal cuts are used at IKL store for the cutting of the final retail cut which will be performed in front of the customer or in batches for trays that will be placed at the shelves every time it is required. This cutting process is also elaborated and represents 33% of the whole cutting process. Due to that there is some additional cutting required for the consumption of some pieces, and according to the meat department manager, the end-user participates also in the cutting process.

As mentioned before the packing activities are performed in Dälsjofors Kött, where the primal are packed in vacuumed plastics that will preserve the meat for more than 20 days and at IKL store where the retail cuts are packed in plastic trays and covered by a plastic film which carries the correspondent tag. The last packing process is considered to be more elaborated and to

require more packaging material and that is why the packing at IKL represents 60% of the whole packing procedure.

The breeder carries a lot of the annual inventory costs resulting from the rental of the land needed for the breeding of the cattle and the facilities to keep them. Also the value of the livestock kept along the year is very high and is kept for very long periods of time. This makes the breeder to carry high average inventory along the whole year which results in 20% of the whole inventory holding costs throughout the channel; even when no transportation is carried out by the breeder at all.

Dalsjöfors Slakteri pays the transportation of the cattle to its facilities in Borås and performs the slaughtering the same day. The meat is cut into quarters and is not delivered to Dalsjöfors Kött later than the day after. The inventory holding activity is considered to be done 15% of it by the Dalsjöfors Slakteri facilities. Dalsjöfors Kött receives the quarters and cuts them until the primal cut and will send them to Färskvaruhuset the day after, therefore the inventory holding costs for them are very similar to those incurred by the slaughter house. Färskvaruhuset holds the goods during a period of approximately 16 hours which is quite similar to the time the goods are held by the slaughterhouse and the cutting plant. However, it has higher inventory holding costs because they pay for the different routes to deliver the stores and the volumes of each route are lower than those sent by the cutting plants which results in a higher transportation cost per kilo. IKL is the member of the channel which incurs in higher inventory holding costs because it holds inventory for its meat cutting service offered to the end-user. As mentioned in chapter four, the inventory carried at the store is due to that it is cheaper to do the tendering process at the store than asking the suppliers to do it at their warehouses. This also gives the possibility to offer different primal pieces to get the cuts from for the customer taken from the cold chamber at the retailing store. The end user is considered to carry a small percentage of the inventory holding cost due to those cases in which the customer freezes the goods for being consumed later on.

The main actor in the negotiation activities (40% of them) is the wholesaler which deals daily with a high number of suppliers and trades with large batches of goods. In some cases the wholesaler buys large amounts of goods making profit of special price offers that are given by meat producers. The retailer is also an important negotiator in the channel because it deals with several suppliers and the prices are negotiated weekly or even on a shorter period basis. The rest of the members' negotiations are signed for longer periods and their negotiation costs are not as high or as in the case of the end-user they are non-existent.

When it comes to order processing, it is at Dalsjöfors Kött where more activity is performed since there is where the pallet is made according to the orders sent from the wholesaler which have been before sent by the retailer to the wholesaler. The wholesaler will only receive the pallet in its warehouse and will place it in the loading dock, where it will be loaded the morning after. The pallet will only be modified at the wholesaler's warehouse in the case that some goods need to be added as a result from a last minute modification of the order by the retailer. The order processing performed by the retailer is that of the replenishment of the shelves as said before.

Resulting from the percentage of the activities performed by each of the actors and the relevance each of those activities have for the production of the service outputs it can be obtained which part of the benefit could be fair to assign to each of the members of the channel. It is important to say that no matter the costly a number of activities performed by a member can be, if they are not very relevant for the production of the service outputs they should not receive as much compensation as the member whose activities are crucial for the services valued by the customer. Given the current channel structure, each member should get the indicated Normative Profit Shares as a compensation for the value added to the product.

In the case of the traditional system as it has been observed, the member who should get the highest proportion of the channel benefits is the retailer since its performance is the one which creates more value for the final product mainly through the cutting, the inventory holding, promotion and packing activities. Then, Dalsjöfors Kött will be the second in the profit share mainly for the cutting activities performed and in a lesser extent for the inventory holding, the packing, and the order processing activities. The rest of the members share a very similar profit except for the end-user which in this case performs very little of the activities and the benefit obtained from them is not very high. However the possibility of asking the teller to do the cutting in the size and pieces they want leaves even less cutting activity to be performed by the end-user in the traditional system than in the centralized, reducing even more the benefits they should obtain from the traditional channel profit share. This lower profit share could be translated into higher prices in the traditionally distributed products than in the centrally distributed ones.

Efficiency Template for the **Traditional** System										
	Weights for Activities			Proportional Acitvity Performance of Channel Member						
	Costs	Benefit Potential (high, medium or low)	Final Weight	Breeder	Dalsjöfors Slakteri	Dalsjöfors Kött	Färskvaruhuset	IKL	End-user	Total
Breeding	15%	low	8%	100%	0%	0%	0%	0%	0%	100%
Slaughtering	3%	low	2%	0%	100%	0%	0%	0%	0%	100%
Cutting	21%	high	27,5%	0%	20%	42%	0%	35%	3%	100%
Packing	7%	medium	7%	0%	0%	40%	0%	60%	0%	100%
Inventory Holding	31%	medium-high	31%	20%	16%	16%	20%	27%	1%	100%
Negotiation	8%	medium	8%	5%	15%	10%	40%	30%	0%	100%
Promotion	5%	high	7%	5%	0%	5%	25%	65%	0%	100%
Ordering	2%	low	1%	0%	15%	5%	60%	20%	0%	100%
Financing	1%	low	0,5%	20%	20%	25%	15%	15%	5%	100%
Order Processing	5%	high	7%	10%	10%	40%	30%	10%	0%	100%
Risking	1%	low	0,5%	15%	20%	20%	30%	15%	0%	100%
Payment	1%	low	0,5%	20%	20%	20%	20%	20%	0%	100%
Total	**100%**	N/A	**100%**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Normative Profit Share	N/A	N/A	N/A	15,9%	14,8%	23,6%	14,2%	30,3%	1,2%	**100,0%**

Table 5.2: Efficiency Template for the Traditional System in Ica Kvantum Lerum.

5.4.2 Efficiency template for the centralized system

a) Weight for Activities

For the centralized system, according to the estimations, the most important activities are those related to **inventory holding**, since the products all along the channel are stored several times before they reach the end consumer. Although the meat processing industry is not considered as high technology intensive, the state-of-the-art equipment for warehousing that is used by HFG/ICA AB in Västerås represents a high fixed cost not only for the actor itself but for the channel as well. Another important fact related to the inventory holding is that since the study is dealing with meat products they need to be handled through a cold chain which implies the existence of a cost of keeping all the storage rooms at a regulated temperature in order to keep the goods in the best shape. Also, HFG demands from its suppliers to keep the meat at their facilities during some days so as to get a more mature meat by keeping it more time inside the vacuumed package before they receive it at HFG/ICA AB's facilities. It is important to notice that the stored goods' nature is constantly changing as the products go forward in the channel due to the cutting activities that are being performed throughout the first stages of the process. In the centralized system the weight that the inventory holding activities receive is slightly higher than the traditional because the number of days that the products will be stored throughout the chain will be more compared to the traditional system since the products will have longer periods in the members' warehousing facilities.

Inventory holding and **cutting activities** are close connected since in almost all the steps of the process once cutting has taken place, a storing step will follow. It is worth to mention that the cutting will be performed only by two actors, HK Scan and HFG/ICA AB, unlike the traditional system when more channel members are involved with this particular process. First, at HK Scan, the cutting process will start from the carcass until the primal cuts are obtained. The second phase of the cutting process will take place at HFG/ICA AB, where the primal cuts will be cut down to retail cuts. Due to the high meat volumes that are cut every day at HFG/ICA AB, economies of scale can be achieved and, as a result, less costly the cutting activities per kilo cut will be.

In the centralized system, the **packing activities** have a very high impact in the product lifespan since the gas mixture that is used in the trays is directly related to one of the services outputs offered by the KPK system: product life. The fact of having a sealed container keeps the meat away from air and, hence the rotting of the meat can be avoided or delayed. Advanced equipment is used to calculate the optimal amount of gases that should be put in every tray so as to ensure that the product's expiration date shown on the label is accurate. Furthermore, a tracking system is used in order to detect the presence of metallic objects in the trays as a prevention measure.

Breeding the cattle is an important cost throughout the meat processing process because the feeding and growing performed by the breeders takes a long process until the animals are ready to be sold. In the centralized system the existence of a cooperative group composed of breeders (farmers) named Swedish Meats has entitle them to own a part of HK Scan in order to be able to process all the cattle they produce every year. By having their own company, the breeders do not

have to worry about not being able to sell their cattle to several customers since they produce it to only one customer. According to official information provided by Jesper Gunnarsson, purchasing manager at HFG, the breeding percentage of the costs is 76% and the cutting and slaughter costs are 24% for HK Scan. However, it is worth to mention that the breeding percentage provided by Gunnarsson, not only includes the costs of the food but also the inventory holding costs, which in this thesis have been separated to have a deeper insight into them. This cost distribution shows that breeding has a very significant impact not only on the purchasing price paid by HFG/ICA AB but in the total channel costs.

Order processing in this distribution channel carries a lot of costs since all the orders from IKL, and the other ICA stores within the ICA network that buy KPK products, are served by Västerås processing plant. Since HFG programs its production plan according to the forecast done by ICA AB, they will process the orders according to the distribution center to which the products will be sent. In order to be able to program the production a customized SAP platform is used so as to be more accurate while distributing the order blocks to be produced. In the case of IKL, when the products are picked and put into the rolling pallets (dollys), the system through the robots will put a label in which it will be indicated the distribution center (Kungälv in this thesis case) to which it will be directed as well as the final destination (Lerum). Once the products arrive to Kungälv's distribution center, the dollys will not be modified; they will just be assigned to the trucks that will take them to IKL along with other products that are bought from ICA AB.

The way in which **promotion activities** are carried out on the centralized system is very important in terms of how they impact the service output's offer. In spite of the fact that the prices are set by ICA AB and that IKL has no options to modify them in any way, IKL has the option to decide if it is convenient for them to offer KPK's products. However, if ICA AB decides to launch a promotional campaign in which the meat prices are very low, IKL could have a situation where the selling price advertised nationwide by ICA AB could be lower than the price IKL actually paid for the goods. If this situation arises, even when the end consumers will be satisfied by having low prices, the member that gets more "damaged" is IKL since they have to bear the cost. When promotions are offered to IKL, it is normally when there are overstocks that need to be "pushed" to the stores at almost any cost because losing money selling at lower prices is more convenient than throwing the products away.

The activities that belong to the financing, risking, ordering and payment do not impact in a big proportion the services outputs that are produced by the centralized system. Because of this situation they have been assigned small percentages since although they are considered within the channel they are not as relevant as the activities that have been assigned a higher percentage.

b) Proportional Activity Performance of Channel Members

When distributing the percentages among the channel members at the beginning of the chain, there are two activities whose 100% will be performed by only one of them: breeding and slaughtering. Since these two activities are highly technical and special equipment and facilities are required to perform them, no other channel member could be able to perform them.

Regarding the cutting activities, they are basically done by HK Scan and HFG/ICA AB. A higher proportion is assigned to HK Scan since they will have to cut the carcass down into sides, to quarters and then finally to primal cuts that will be delivered to HFG/ICA AB. The costs incurred by HK Scan with the cutting include the labor and machinery costs that they need to pay in order to be able to process the meat for HFG. When the products arrive to HFG/ICA AB, the primal cuts will be cut down to retail cuts that will be the ones available for the end consumer. This particular set of activities is the most important for the final service outputs offered to the end customers and the actors that develop them need to take into account that their performance level will be reflected in the sales level of the centralized products. Packing activities are closely connected to the cutting activities, since the same channel members are involved at performing these activities. At HK Scan the only packing that is done is when the products are in primal cuts and the vacuumed package is used. As for HFG, the packing that is performed at their facilities is quite complex since the gas mixture needs to be calculated in order to have the optimal to extend the products' lifespan.

Inventory holding activities, being the most important cost in the centralized channel, are fairly distributed among several channel members since a lot of storing is done at different stages of the distribution channel. However, the biggest percentage has been estimated for HFG/ICA AB since there will be two stages in their facilities where the products will be stored. First, when the products arrive in primal cuts to their facilities and they need to be put in the warehouse before the products are selected and sent to the production line. Later in the process, when the cutting activities had taken place, a second storing phase will be performed. The retail cuts will be put into storage waiting to be taken and assigned to the order blocks that will be then delivered to the different distribution centers of the ICA network.

The negotiation activities are mainly carried out between HK Scan and HFG, since the prices that HFG needs to pay to get the primal cuts from HK Scan are negotiated regularly. The other channel members do not really have a high cost regarding negotiation. For instance, since the prices that the KPK system establishes cannot be modified by either Kungälv or IKL, negotiation is practically nonexistent. As in the negotiation activities, for ordering, order processing and risking the only actors that are involved are HK Scan and HFG/ICA AB. Most of the "burden" has to be borne by these two channel members along the distribution channels since once the products arrive to Västerås, the products practically enter "ICA territory" and even when separate entities or business units are interacting, it is less complex to establish business relationships among them since they all belong to the same group.

After analyzing and describing how the centralized channel functions through the efficiency template, the most important figures are the ones showed in the normative profit share row which indicates how should the profits ought to be distributed among the channel members. Since in the centralized system, most of the activities are performed and distributed between two main actors, HK Scan and HFG/ICA AB; as a result, the biggest "piece of the cake" is obtained by them. In the case of HFG/ICA AB, 37.9% of the profit share should be gotten by them since the activities that are performed in the Västerås' facilities are influencing the service outputs in a great proportion. Moreover, the processes taken place at KPK's facilities are the core of the centralized system where ICA AB found a way to produce their meat products at a lower cost and with more efficiency to be able to distribute to the ICA stores along Sweden.

Very close in the profit share distribution is HK Scan with 30.5% since they participate in the performance of almost all the activities with the only exception of the cattle breeding. Their contribution to the service output production is very high due to not only their high volume of products sold to HFG but also because of the cooperation and collaboration that they have established with them. Moreover, since HK Scan belongs to Swedish Meats it is well connected to the breeders and a better kind of deals can be achieved in order to make the processes cheaper.
The centralized system, as can been seen in the efficiency template, relies on HK Scan and HFG/ICA AB to function properly and that is why almost 70% of the profit share should belong to them. However, the participation of all the channel members is very important in order to make the whole channel function properly by performing their activities in the best possible way.

Efficiency Template for the **Centralized** System										
	Weights for Activities			Proportional Activity Performance of Channel Member						
	Costs	Benefit Potential (high, medium or low)	Final Weight	Breeder	HK Scan	HFG/ICA AB Västerås	Kungälv DC	IKL	End-user	Total
Breeding	15%	low	8%	100%	0%	0%	0%	0%	0%	100%
Slaughtering	3%	low	1%	0%	100%	0%	0%	0%	0%	100%
Cutting	18%	medium-high	20%	0%	70%	25%	0%	0%	5%	100%
Packing	10%	high	16%	0%	20%	80%	0%	0%	0%	100%
Inventory Holding	33%	high	36%	20%	20%	35%	8%	15%	2%	100%
Negotiation	4%	low	1%	5%	47%	47%	0%	1%	0%	100%
Promotion	5%	medium	5%	5%	15%	30%	0%	50%	0%	100%
Ordering	2%	low/medium	1%	0%	30%	60%	0%	10%	0%	100%
Financing	1%	low	1%	20%	20%	20%	20%	15%	5%	100%
Order Processing	7%	high	10%	5%	30%	45%	10%	10%	0%	100%
Risking	1%	low	0,5%	15%	60%	20%	0%	5%	0%	100%
Payment	1%	low	0,5%	20%	20%	20%	20%	20%	0%	100%
Total	**100%**	N/A	**100%**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Table 1: Efficiency Template for the Centralized System										
Normative Profit Share	N/A	N/A	N/A	16,4%	30,5%	37,9%	4,2%	9,3%	1,8%	**100,0%**

Table 5.3: Efficiency Template for the Centralized System in Ica Kvantum Lerum.

5.5 Gap analysis

As explained in the theoretical framework chapter, after having analyzed both systems with the efficiency templates, it has to be determined if there is any inefficiency in the processes throughout the different distribution channels and/or if erroneous levels of service outputs are being offered by IKL.

The demand-side gap analysis will be performed independently from the distribution system utilized. This analysis will determine if the customer is receiving what he is demanding; if he is receiving more than what he demands or if he is receiving less than what he expects from the store. This assumption is based on the customer's perception of the store, where he receives a bundle of services from IKL through different products which offer different levels of each service output respectively resulting from the combination of two different distribution systems. It is worth to mention that the end customer is not always aware of the distribution system used when he benefits from the services offered.

The supply-side gap analysis will be performed considering each distribution system separately but within the same gap template analysis for each segment analyzed. Those service outputs that are not addressed by the analyzed distribution system will not be taken into account. This is what happens when studying the centralized distribution system concerning the meat-cut-in-the-store service output. This service output is entirely addressed by the traditional distribution system and a possible supply-side gap for the centralized system in the production of the meat-cut-in-the-store service output will be discarded. This kind of gap will be impossible to close because the centralized distribution system does not offer this service output. Moreover, since the objective of the supply-side gap analysis is to find more cost efficient ways to perform the distribution of the meat products by service output, it will be pointless to propose improvements in a system that does not provide a given service output.

As it was shown at the beginning of this chapter, there are two predominant segments in IKL's customers: the "Life Span Concerned Segment" and the "Fresh product/Hand work demand Segment". Together, these segments are 73% of the total customers what makes interesting to focus the study on them since if any drastic measure has to be taken due to some gap in the demand-side; it will preferably be to satisfy any of these two major segments of the customers. The existence of similarities between the other two segments described ("Lowest Cost Segment" and "Interactive Segment"), and the two segments studied for the gap analysis will also encourage the decision of basing the study on the two biggest ones. For example, a higher offer of longer shelf-life products to satisfy the segment "Life Span Concerned" will result in higher level of price service output offer because of the lower average cost of the centralized products for IKL which will at the same time satisfy the segment "Lowest Cost".

The gap analysis template for the "Fresh Product/Hand Work Demand" and for the "Life Span Concerned" segments will be the following considering the demands of the respective segments:

	MEAT CUT IN THE STORE	PRODUCT LIFE	PRICE	CUSTOMER SERVICE
Level provided (low-OK-high)	OK: The customers interested in this customized way of shopping meat are offered the service as if it was a traditional butchery store.	Low: The meat products this type of customer buys have a lower product life than the centrally cut products in general and product life is the second most valued service output for 42% of the customers in this segment.	High: The customers interested in traditionally cut products can buy them for an average 14% cheaper price than those from a centralized system in the competitors' stores. Due to the high costs borne by the retailer, mainly for the shrinkage caused by the cut in the store, the profit margins are under the optimum level with the prices offered to the customer. It is important to remember that price is the service output less valued by this segment.	OK: One out of three customers belonging to this segment chose "customer service" as their second option for service output after "meat cut in the store". The personnel availability is offered at any time when other activities are performed like replenishment or cutting meat in front of the customer. The offer of this service output is very cost efficient because it can be performed while other activities are being done. But it requires personnel trained for giving advice.
Efficiency (OK-high cost) Traditional	High cost: the shrinkage costs involved make the process more expensive and leave very small margins for the retailer.	OK	High cost: Excessive negotiation and risking costs between some channel members.	OK
Efficiency (OK-high cost) Centralized	N/A	High cost: higher inventory holding costs than the optimal due to excessive product storage.	OK	OK
Source of problem	Shrinkage costs are high for the store. Too high percentage of the purchased meat by IKL cannot be sold as the number of retail cuts that the primal was meant to be cut into.	The traditional cutting and packing system does not include preserving gases which would give longer life span to the products offered. Unknown reasons for keeping inventories for the centralized system, very likely at the distribution center and resulting from forecasting/ordering errors.	IKL managers, in their attempt to differentiate in prices from the competitors, are in many cases offering higher service for lower price. Considering that this customer segment knows all the services offered and value them, they might accept a fairly higher price in the traditionally cut products than the current. In the traditional system, due to the higher number of transactions between the members at the beginning of the distribution channel, the final price increases and reduces the net margin for the retailer because of the impossibility to transfer the cost impact to the end consumer due to the competition's pressure.	N/A
Environmental-managerial bounds	Long term relation with suppliers has created excessive reliance on the usual wholesaler. Swedish law only allows specific companies to deal with waste management and therefore there no options to gain a benefit from the shrinkage.	Resulting from the very perishable nature of the product, the traditionally cut meat cannot last as long as the centrally cut ones. In fact the introduction of preserving gases will undermine the freshness image of the traditionally cut products.	Pressure from the competitors in pricing policies.	N/A

Outcome desired	Decrease the shrinkage levels.	Achieve a good flow of goods throughout the channel from the Västerås facilities through the distribution center, where no inventory should be performed, until they reach the retailing store.	Obtain a higher profit per product of the traditional system and stop selling products for less than what they cost to obtain. Reduce the negotiation and risking costs at the beginning of the channel so the final total cost for running the channel is reduced.	N/A
Tactics to close gap	Buy meat products from suppliers that could provide better trimmed primal cuts to reduce shrinkage costs.	Improve the automatic ordering system and the forecasts to get closer to the real needs of the stores and hence produce and send only what it is needed. By this, the goods will flow through the channel until they reach the retail store with less lead times.	Make a differentiation of the products offered in the traditional way by advertising the services and advantages of having the meat cut in the store and compete in price mainly with those products from the centralized system which have much less costs. Create strategic alliances between jointed breeders and the slaughter house as it happens in the centralized system where the breeders are more vertically integrated.	N/A
Predicted change in channel performance	By having better primal cuts, more meat could be used to be put in the retail cut trays. Hence, the shrinkage would be reduced and costs would drop.	Longer shelf life for the products resulting from lesser time elapsed from the packing date to the delivery to the store. With a better and more complete usage of the ordering system, the production will be more precise.	Through more cooperation between the members at the beginning of the channel, the breeders could participate more in adding value to the product and they would receive more compensation for their activities.	N/A

Table 5.4: Gap analysis Template for the "Fresh Product/Hand Work Demand" segment.

	MEAT CUT IN THE STORE	PRODUCT LIFE	PRICE	CUSTOMER SERVICE
Level provided (low-OK-high)	High: the customers receive this benefit but do not value it that much.	Low: the customers demand to have longer lifespan in the products they buy. Final lifespan is reduced due to delayed deliveries to the store from the original arrival date.	OK	**High:** this is the least important aspect for the members of this segment and does not affect their buying decisions. As well, it is not appreciated and it is considered an over-offer.
Efficiency (OK-high cost) Traditional	High cost: the shrinkage costs involved make the process more expensive and leave very small margins for the retailer.	OK	High cost: Excessive negotiation and risking costs between some channel members.	OK
Efficiency (OK-high cost) Centralized	N/A	High cost: higher inventory holding costs than the optimal due to excessive product storage.	OK	OK
Source of problem	The policy of the store to satisfy in a greater extent other customer segments over the lifespan concerned segment. Shrinkage costs are high for the store. Too high percentage of the purchased meat by IKL cannot be sold as the number of retail cuts that the primal was meant to be cut into.	Unknown reasons for keeping inventories, for the centralized system, very likely at the distribution center and resulting from forecasting/ordering errors.	In the traditional system due to the higher number of transactions between the members at the beginning of the distribution channel the final price increases and reduces the net margin for the retailer because of the impossibility to transfer the cost impact to the end consumer due to the competition's pressure.	Having staff in the meat department to provide a service that is not appreciated by this segment to serve other segments.
Environmental-managerial bounds	Long term relation with suppliers has created excessive reliance on the usual wholesaler. Swedish law only allows specific companies to deal with waste management and therefore there no options to gain a benefit from the shrinkage.	The managerial decision determined by HFG/ICA to work with a semi-automatic ordering system and the channel design in which the products have to go through the distribution center before they reach the store.	N/A	The managerial decision was made *a priori* and determined the need of having meat department staff to satisfy other segment's demands.
Outcome desired	Decrease the shrinkage level.	Reduction in lead times for the centralized system. Achieve a good flow of goods throughout the channel from the Västerås facilities through the distribution center, where no inventory should be performed, until they reach the retailing store.	Reduce the negotiation and risking costs at the beginning of the channel so the final total cost for running the channel is reduced.	Reduction of meat department staff.

Tactics to close gap	Buy meat products from suppliers that could provide better trimmed primal cuts to reduce shrinkage costs.	Improve the automatic ordering system and the forecasts to get closer to the real needs of the stores and hence produce and send only what it is needed. By this, the goods will flow through the channel until they reach the retail store with less lead times. Encourage the usage of the improved ordering system so that the forecasts are more accurate.	Create strategic alliances between jointed breeders and the slaughter house as it happens in the centralized system where the breeders are more vertically integrated.	Keep only staff to perform the shelf replenishment activities.
Predicted change in channel performance	By having better primal cuts, more meat could be used to be put in the retail cut trays. Hence, the shrinkage would be reduced and costs would drop.	Longer shelf life for the products resulting from lesser time elapsed from the packing date to the delivery to the store. With a better and more complete usage of the ordering system, the production will be more precise.	Through more cooperation between the members at the beginning of the channel, the breeders could participate more in adding value to the product and they would receive more compensation for their activities.	An optimal number of employees will be working in the meat department offering the minimum customer service required.

Table 5.5: Gap analysis Template for the "Life Span Concerned" segment.

5.5.1 Demand-side gap analysis findings

"Fresh Product/Hand Work Demand" Segment:

The description of the demand-side gaps will be done individually, per segment studied, in order to show what measures would be required to take so as to adapt better the offer to the respective segment's demand. The measures can be contradictory from one segment to another and that is why in next point (Conclusions) more global measures that consider all the segments at a time will be shown to provide a strategy to be followed by the meat department as a whole.

There are two demand-side gaps in the "Fresh product/Hand work demand segment" that appear in the offer of product life and price. The product life offered with the traditional products, that are the products that the customers within this segment are interested in, is lower than what it is demanded by them (SOO<SOD). There are contradictory interests within this segment resulting from the demand of very fresh products and the demand of long shelf life in those products. The customer is interested in fresh products cut in the store on a customized and traditional way but they also value on a high extent that those products last long on the fridges without the need to frost them which would undermine the quality of the product. The meat begins the deterioration process once it has been opened from the vacuumed package it is wrapped in when it is still in a primal cut form. Considering that the products are at any moment under a controlled temperature until they are picked by the customer from the shelf and that the meat is only taken from the vacuumed package and cut into a retail cut when it is required for the replenishment of the shelves, there is at first sight little to do to extend the product's life with the current technology. The situation is aggravated by the managerial decision of keeping a fresh product line image which could be threatened by the inclusion of preserving gases on the products. Including these gases would not be an easy thing to do though, due to the costs of the equipment necessary for the adding of those gases. For all this, the most feasible way to add life span to the product could be through providing the retail cuts to the customer the fastest as possible after the cutting from the primal cut. This could be done through an optimized replenishment of the shelves in which the optimum quantities are cut for each of the replenishments performed throughout the day in order to have the goods the least time as possible at the shelves until they are picked by the customer. Another strategy might be offered for those customers more demanding for product life; this strategy consist in a promotional campaign to advertise the possibility of ordering the meat at the counter and the benefits obtained from it like the longer product life and the customization of the cuts.

The customized service is a top quality service that offers the customer the longest life span possible for a very fresh product which is cut in the way indicated by the customer itself from the primal cut chosen. All these services are the source of important costs carried by the store such as the inventory costs that would not be as high if the products were only offered through the shelves. That is why they should be considered when setting the selling prices of the products offered through the traditional distribution system. That is also why it will be also recommended a careful increase of prices for certain products of the traditional

system parallel to the advertising all of the benefits of the more local and a more hand worked products.

The level of service output price provided will be in general always lower than what the customers demand because the interest of the customer will always be to find the best service for the lowest price. But the price is considered to be a service output in this thesis with the purposes of finding also the optimum level of it to provide to the customer, considering not what the customer "would like" to pay but what the customer "accepts" to pay. With this purpose, the list of prices with thirty three products displayed in the beginning of this chapter was created to compare the prices of the two biggest competitors in the area with IKL. As it was shown in the table, the competitors are offering many more products through the centralized system with the resulting less personalized service and they are offering these products at a 14% average more expensive price. This fact leads to an unfavorable situation of IKL respect to its competitors in terms of meat department profits, since the margins obtained are below to what it should be. These figures are below the costs in some cases and it will not make any good in the long run to the meat department as it is currently organized. This means that the level of price offered as a service output by IKL is too high (SOO>SOD) in relation to what the customer could accept if they really value the services offered. For this demand-side gap it is also suggested an advertising strategy of the services offered by the meat department which differentiates the store from the competitors and at the same time a careful price increasing strategy for the most costly products that improves the profits per unit. Through this strategy the managers could observe how much the customers of the Fresh product/Hand work demand segment are accepting to pay for these high service products offered at IKL and compete in price for the "Lowest Cost" and the "Life Span Concerned" segments with the products obtained through the centralized system (KPK) that carry much lesser costs. By this the correct level of price service output will be assigned to the products.

"Life Span Concerned" Segment:

For the lifespan concerned segment, there are some gaps in the demand side that need to be closed in order to please the customers belonging to it. The most important gap that exists is the fact of the customers are demanding a longer product life since the shelf life they are already receiving by IKL from both products, traditional and centralized, seems to be not enough. Even when the centralized products have a longer life because of the conservative gases, they are not arriving to IKL when they are supposed to and that generates a very similar or even equal status in terms of the remaining days to be consumed. On the other hand, currently lifespan cannot be extended for the traditional products since there are not auxiliary methods to do so within the store. Once the primal cuts are taken out from the vacuumed package, the meat put in the trays will have its normal decomposition process. In order to close this gap, the changes need to be done in the supply side for the centralized system since this situation is being originated because of problems with delayed deliveries in the distribution.

Moreover, not only the customers belonging to this segment but the other customers at IKL are not fully satisfied with the lifespan of the meat products since they consider that the days they have before the products expire are too few. In spite of the demands from the

customers to receive a longer product life in the meat products it is somewhat complicated for the store to be able to close this gap without affecting in great proportion the prices. Since special equipment to add preservation agents such as gases would be required to extend the product life, the operating costs will increase, hence the prices would rise.

Since IKL is a supermarket and needs to please all the customers that come to it, no matter to which segment they belong to, not only the demands from a specific segment (lifespan concerned segment) will be taken into account but from all the kinds of customers that come and buy their products to IKL. Due to the kind of business that a supermarket represents, there are several groups that need to be targeted because very varied requests will be posted by the end consumers.

Having stated the importance and relevance of considering the customer segments as a whole, then several remarks can be pointed out. For instance, according to the gap analysis for the lifespan concerned segment there will be a need to reduce the meat department staff, but since this is not an isolated group, it will be impossible to comply with their demands because there are other customer segments that appreciate the fact of having the meat department staff available to post their special requests when needed as an essential element for the customer service level.

Actually, the fact of having meat department staff is what makes IKL different from its competitors in the Lerum area. Since no other supermarket is offering the same personalized service, this situation makes IKL an attractive option for the customers to come and buy not only their meat products but also the other groceries they need. Due to the fact that one of the most attractive service outputs offered by IKL is the meat cut in the store, it is highly important to be able to maintain and even improve it so that the chance to come to the “butcher” will be the special touch that will keep on attracting customers to the store.

Since this segment is not interested in either the meat cut in the store nor the customer service, they perceive the meat department staff to be more than enough. The strategy to follow so as to close the gaps related to these services outputs should be simple: reducing the number of people that work in the meat department. However, this approach is not possible to take since there are other segments that IKL needs to address to the other customer segments and, even when the biggest segment is the lifespan concerned with 43%, the others must not be given less importance.

When giving conclusions and suggestions to improve the demand side gaps concerning the service level provided by the meat department, it is worth to mention that the changes that might be adopted will also impact in the purchases performed by the customers in the whole store.

5.5.2 Supply side gap analysis findings

Among the highest costs for the traditional distribution channel, only surpassed by the inventory costs, was the cutting costs as it was shown in the efficiency template for the

traditional system. It was at IKL where 35% of these costs were incurred and they were in a great extent due to the shrinkage born by the retailer. The better the trim at the beginning of the cutting process the lower the total shrinkage cost for the whole channel due to that the cost per kilo of shrinkage at the retailer level is much higher than at Dalsjöfors Kött level for example. This is due to that the price per kilo is raised by passing from Dalsjöfors Kött through the wholesaler to the retailer and those parts not valid for the sale that turn into waste are much more expensive at the retailer level. So if the shrinkage costs are transferred to Dalsjöfors Kött, the total cutting costs for the channel would be lower.

Moreover, the shrinkage obtained at Dalsjöfors Kött is much easier to make use of than at the retailer level since larger quantities of other type of waste are gathered resulting from the high volumes processed daily. The waste at Dalsjöfors Kött is sent (as explained in chapter 4) to Dalsjöfors Slakteri where it is shipped together with its own waste to an energy plant for no cost to the slaughter house. As pointed out by Björn Hellström (Dalsjöfors Kött plant manager), if the waste was sent from Dalsjöfors Kött to the energy plant, they would have to pay for getting rid of it. The volume of waste obtained at the slaughter house is by this way enough for the energy plant to arrange the transportation and pick the waste up for their own purposes without charging the slaughter house. A good trim in the beginning of the process will therefore result in a lower total channel cost and very likely a lower selling price for the end consumer. Even when the purchasing price for the retailer will be slightly higher, a better quality product will be obtained from the meat producer, and the shrinkage costs will very likely be reduced in a higher extent. Then it is suggested to the retailer to ask the wholesaler to source from a supplier that applies better trimming to the products or establish higher demands on the quality terms.

With the purpose of offering the customer a top quality service it was taken the managerial decision of offering the customer an assortment of primal pieces to choose the one from where the final piece is going to be cut. This is a very costly decision in terms of inventory holding cost since there must be enough assortments of primal pieces stored in the cold-storage room so as to be able to show different pieces to the customer that demands this service. This is not mentioned in the gap analysis as a gap in the efficiency of the supply-side because it is also a decision that decreases the transportation costs and results very likely in the end in lower costs than through an alternative way. The alternative way would be to receive daily only those pieces that were forecasted to sell each day instead of having to store primal cuts for three days. The inventory holding costs would be decreased by the storage of those products, but the transportation costs would be higher if the deliveries were daily instead of every three/four days.

Even when the gaps have been classified in demand and supply side during the gap analysis stage, they are closely linked and therefore some of the improvements that need to be done affect both sides. For instance, in order to deal with the product life gaps in the demand side that were found during the gap analysis, the actions that need to be made have to be performed in the supply side. In the centralized system, a better coordinated product flow needs to be designed throughout the channel so as not to have delays in the product deliveries to IKL. A factor that could impact directly is the usage of the AoB system that not only IKL but the other ICA stores connected to Västerås processing plant are using to order. Since it is not used the way it should, there is a very big potential to improve the

flows if better and more “real-time” information is provided by the stores, IKL for instance, so that more accurate forecasting could be done.

Another aspect that could be improved, aiming at the product life service output, is the possibility to reduce lead times between Västerås and IKL. The goal is to make the elapsed time shorter, especially in the step in the middle where the meat products go through the distribution center in Kungälv, in order to take advantage of the longer shelf life offered by the products coming from the centralized system. This could be achieved through a better distribution planning and a more accurate delivery schedule so that no time would be lost and, therefore keep the customers satisfied with a higher number of days in which the meat could remain edible.

When dealing with the price from a supply side approach, the gap for the traditional system could be closed through the establishment of strategic alliances, for instance between the breeders, the slaughterhouses and the cutting processers (Dalsjöfors Kött) as it happens in the centralized with the merger of HK Scan with Swedish Meats. This strategic alliance could reduce the channel costs and therefore increase the margins throughout the channel. A necessary prerequisite to make the alliance work properly is the fact of having a group of breeders that would be interested on establishing a breeder union to have stronger power to run their own slaughter house. Furthermore, the negotiation costs could be decreased since there would be less time invested in dealing prices and selling amounts, thus the final price could be lower. Finally the jointly performed activities of the breeders, the slaughter house and the cutting processers would reduce the transportation costs between breeders and slaughter house because this cost could be shared by the members of the breeder union; also the transportation costs between the slaughter house and the cutting processers would be eliminated if the slaughter houses also include cutting processes as it happens with HK Scan in the centralized system.

The last structural suggestion mentioned about the strategic alliance between breeders and slaughter houses will also bring a solution to the low profits that are currently obtained by the breeders’ guild that creates a complex situation for them. This situation has led many breeders to consider if carrying on with the business or not, due to the cost of their activities and the low turnover they obtain. This situation is a result of the low added value they provide to the final product through their performance in the growing of the livestock. An alliance of this type will allow the breeders to participate more in the channel’s value adding activities and share a bigger part of the benefits obtained from running channel and at the same time reduce the total costs.

6. CONCLUSION

After the efficiency template and the gap analysis have been carried out, several conclusions and suggestions can be given in order to improve the current situation concerning both meat distribution systems used by IKL.

As mentioned at the beginning of this thesis, the meat department is considered by the managers of IKL store as the anchor tenant for many shoppers when choosing a supermarket. That is why IKL store managers determined to address all the customer segments identified so as to attract the larger amount of customers to the store who perform also the rest of their purchases in the other store departments. This is why the main conclusion is that a dual distribution system for the meat department which offers different service outputs that result interesting for different customer segments is very convenient for the sales of the whole store. The two different distribution systems converge in the store because both end up at the retailing store. This makes that the measures for correcting the deviations on the services provided to a segment should be implemented without undermining the other segments' interests.

A possible measure to adapt the products offered to the customer's demands would be to identify those products in which is more interesting or necessary to compete in price and adapt the mix of traditional and centralized products which actually is 80% traditional and 20% centralized. It might be interesting to compete in price trying to keep the margin levels not below a minimum level. This will always be easier with products that are cheaper for the store as the products brought through the centralized system.

Even though it has been observed that the customers in other stores had adapted to the offer through a centralized system which offers less personalized service, the suggested strategy for IKL is to differentiate the store's services through advertising the benefits brought to the customers through the traditional distribution system. This high level of service offered is very hard to find in the Lerum area for the type of retail store IKL is and it could be used as a competitive advantage against its competitors.

When it comes to prices in the meat products, IKL is well regarded by the end consumers since the prices that could be found in ICA Maxi Partille and ICA Maxi Alingsås were higher than the ones offered by IKL (Appendix 2). Given this situation, it has been seen that the prices set by IKL for both products, centralized and traditional, are cheaper and therefore the customers are comfortable paying these prices because they are getting quality products. However, a differentiation has to be done between the traditional and the centralized products in the customers' eyes so as to be able to assign different prices since the products cut in the store have in some cases lower selling prices than the actual costs incurred when offering them. This, in the end will test the interest level the customer has in buying the meat in the traditional way and paying what it actually costs to offer this service. Still some suggestions have been given to reduce the cost of this traditional service such as setting stricter quality conditions on the suppliers that would reduce the shrinkage at the store or strategic alliances in the beginning of the channel flow that would reduce risking, inventory holding and negotiation costs.

Since the centralized system relies heavily on the forecasts provided by ICA AB and the orders placed by the stores, it is highly important to improve the automatic ordering system (AoB) in order to decrease the delays on the deliveries to the stores. These delays are causing that one of the main advantages of the centralized system, which is the long product life provided to the customer, is being vanished by spending very valuable shelf-life in the warehouses. One of the improvements that the ordering system should include is the consideration of different quantities of trays included in each crate ordered.

The traditional cutting system can be used in such a way that helps avoiding some problematic situations as the waste caused by units not sold and close to expire. If an optimized amount of meat is cut each time the replenishment is performed, the problem will be minimized since the meat is perfectly preserved while it remains in the primal cut and vacuumed packed. Situations such as this mentioned has caused lately great commotion due to the expiring date tag shifting in some meat department stores in Stockholm. As said before, an efficient traditional cutting system could help avoiding these situations.

As final conclusions and suggestions for the IKL managers is to encourage them to implement an activity based costing system so as to calculate more accurately the costs in which the meat department incurs and to assign a “correct” selling price per product. Also, if future cost elimination want to be achieved, the most advisable way to do it is to cooperate and coordinate with the other channel members.

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APPENDIXES

Appendix 1

1. How often do you come to this store every month?
   - ☐ 1-2 times
   - ☐ 3-4 times
   - ☐ 5-More times

2. Do you live within the Lerum community?
   - ☐ Yes
   - ☐ No

3. Please order the following characteristics according to the priority you give them in order to buy a meat product
   - ☐ Price
   - ☐ Meat cut by the staff in the store
   - ☐ Product life
   - ☐ Customer service

4. Do you perceive any difference between the following two products?
   - ☐ Yes
   - ☐ No

5. Do you buy any of the following products?
   - ☐ Yes
   - ☐ No

6. Would you continue buying these products if they were centrally packed?
   - ☐ Yes
   - ☐ No

7. Why?

8. Do you also buy in ICA Maxi Alingsås?
   - ☐ Yes
   - ☐ No

9. What is the reason for choosing that store?
   - ☐ Store assortment
   - ☐ Price
   - ☐ Closeness to a commercial area
   - ☐ Other

Appendix 2

Alingsås	Partille	Lerum		Lerum vs. Allingsås	Lerum vs. Partille	Notes
46.95	41.95					KPK
62.95	58.95	53.9	Local	85.62%	91.43%	KPK
42.95	41.95					KPK
79.95						10% fett
89.95	101.95	79	KPK	87.83%	77.49%	Mager nöttfärs; 5% fetthalt
66.95	56.95	58.9	Local	87.98%	103.42%	Finmald; KPK
69.95	86.95	59.9	Local	85.63%	68.89%	Finmald; KPK
61.9	72.95					70/30; KPK
56.95	41.95	49.9	Local	87.62%	118.95%	50/50; KPK
52.95	49.95	44.9	Local	84.80%	89.89%	50/50; KPK
42.95	39.95					50/50; KPK
46.95	48.95	36.9	Local	78.59%	75.38%	KPK
49.95	50.95	39.9	Local	79.88%	78.31%	KPK
139						10 fillets
169						4 fillets
59.95	62.95					10 pieces
64.95	72.95					5 pieces
139	175.95	139	KPK	100.00%	79.00%	Thin slices; 5 fillets; KPK
104.95	112.95	99	Eu. Sh.	94.33%	87.65%	Thin slices; Euroshopper KPK (Allingsas); ICA KPK (Partille)
104.95	112.95	109	KPK	103.86%	96.50%	Thin slices; Euroshopper KPK (Allingsas); ICA KPK (Partille)
199	198.95					3 Pieces
169	219.95	164	Local	97.04%	74.56%	5 Pieces
	169.95	149.9	KPK		88.20%	10 Pieces; KPK
94.95						Höglandskött (Vacuumed package)
84.95						Ake Stahl (Vacuumed Package)
	95.95	99	Local		103.18%	KPK
134	151.95	129	Local	96.27%	84.90%	2 Pieces; KPK
	135.95					10 Pieces; KPK
139	142.95	139		100.00%	97.24%	
99		99		100.00%		
84.95	94.95	69.9	Local	82.28%	73.62%	KPK
159	169.95	149.9	KPK	94.28%	88.20%	5 Pieces; KPK
84.95	89.95	81.9	Local	96.41%	91.05%	
72.95		73.9	Local	101.30%		6 Pieces
	47.95					1 Piece
64.95						Ake Stahl (Vacuumed Package)
99	142.95	89.9	Danish	90.81%	62.89%	KPK

Indicates when IKL prices are lower than the competitors.

Indicates when IKL prices are the same as competitors.

Indicates when IKL prices are higher than the competitors.