



CHANNEL AND CUSTOMER SEGMENTATION PROCESS: CASE ABB SRU LV DRIVES FINLAND

Myyntikanavien ja asiakkaiden segmentointiprosessi: Case ABB SRU LV Drives Finland

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Tämän kandidaatintyön tavoitteena on löytää case yritykselle sopivin myyntikanavien ja asiakkaiden segmentoinnin viitekehys ja luoda segmentointiprosessi. Case yrityksenä toimii ABB SRU LV Drives Finland. Case yritys on osa ABB-konsernia. Työ on toteutettu kirjallisuuskatsauksena ja kolmen case yrityksen henkilöstölle tehdyn haastattelun avulla.

Teoriaosuudessa esitellään muutamia segmentointiin liittyviä viitekehyksiä, jotka sopivat tähän työhön parhaiten. Työn keskeisimpänä ja case yritykselle sopivimpana segmentoinnin viitekehysenä toimii sisäkkäinen lähestymistapa segmentointiin. Viitekehys koostuu erilaisista kerroksista, joihin liittyy omat piirteet ja ominaisuudet.

Teoriaosuuden jälkeen työssä keskitytään segmentointiperusteiden valitsemiseen teoriaan perustuen. Segmentointiperusteita valittaessa on otettu huomioon myös haastatteluissa esille tulleet mielipiteet ja toiveet. Lopuksi segmentointiperusteista luodaan segmentointiprosessi, joka validoidaan lopussa testaamalla prosessin toimivuutta todellisella datalla.

Lopputuloksena työssä on saatu vastaus tutkimuskysymykseen ja tavoitteisiin on päästy. Sisäkkäinen lähestymistapa segmentointiin on sopivin segmentoinnin viitekehys. Toimiva segmentointiprosessi saatiin myös luotua valituista segmentointiperusteista. Lopputuloksena on yhdeksän eri tapaa segmentoida myyntikanavia ja asiakkaita. Segmentointiprosessia käytettäessä tulee huomioida, että tämä segmentointiprosessi on luotu laajaa tarvepohjaa varten, ja jos prosessia halutaan hyödyntää jotain spesifimpää käyttötarkoitusta varten, prosessia saattaa joutua muuttamaan hieman.

ABSTRACT

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The objective of this bachelor's thesis is to find for the case company a suitable channel and customer segmentation framework and to create a segmentation process. The case company is ABB SRU LV Drives Finland. The case company is part of ABB corporation. The work is a combination of literature review and qualitative research. The qualitative research is conducted as three interviews for the case company personnel.

In the theory part few segmentation frameworks are presented which are suitable for this case. The main segmentation framework in this thesis and for the case company is the nested approach to segmentation framework. The framework has several layers which all has its own features and characteristics.

After the theory part the work focuses on the selection of segmentation criteria. The selection of criteria is based on the theory and on the information from the ABB interviews. When the segmentation criteria are selected a segmentation process is created. The segmentation is validated in the end by testing several parts of the process with real data.

In this thesis the answer for the research question was found and the objectives were met. The most suitable segmentation framework is the nested approach to segmentation. A suitable segmentation process was successfully created from the selected segmentation criteria. The process contains nine different ways to segment channels and customers. When using this segmentation process, it needs to be considered that as there were several different needs for this segmentation process the process might need to be adjusted a bit if it is wanted to be used for some more specific segmentation.

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1 Introduction

This thesis will find out what is the best way to do sales channel and customer segmentation for ABB Service Responsible Unit (SRU) Low Voltage (LV) Drives Finland (FI) which will be referred as case unit in this thesis. ABB SRU LV Drives FI is ABB Oy's unit which is responsible of certain services of drives. The services they are offering are offered globally. Drive or more specifically variable frequency drive (VFD) is an electrical component which adjusts alternating current's (AC) frequency (ABB, 2016). VFDs are mainly used to control the speed of AC electric motors.

To better understand the position of the case unit, it is necessary to explain the place of the unit in the ABB organization. As ABB is a large global firm the organization structure is complex. The case unit is working for ABB Oy, but it is responsible of the drives services globally. The unit sells all its products and services through intra-group sales companies which are called Local Management Unit's (LMU's) in the ABB organization. The segmentation in this thesis will deal with the intra-group sales companies which are customers of the case company.

1.1 Why is this work needed?

To better define the objectives and the research question, it is necessary to have a clear picture why this work is needed. The case unit does not have a proper segmentation process for its customers. To properly do the customer relationship management (CRM) and to plan sales and strategy it is a prerequisite to understand the customer (Ernst et al., 2010). Segmentation is one of the key steps to understand the customers. More precisely this work is to support sales, sales planning and customer relationship management.

1.2 Objectives and research questions

It is necessary to do this thesis as this case company has its own special features compared to more generic cases. The feature that the case unit only sells intra-group is very centric for this work as more often segmentation is associated with normal non-intra-group sales. Existing

research about segmentation concentrates more on business to consumer (B2C) segmentation. There is also research about B2B segmentation, but as this case only sells intra-group there are not that much adequate research available. ABB has its own sales units on the regions where they do business. The sales are channeled through those sales companies. This case unit is part of the bigger sales network of ABB.

The research question is:

-What is the best way to segment sales channels and customers for the case company?

To answer the research questions two objectives are set:

-Best segmentation framework or combination of frameworks for the case company should be found.

-A realistic and useful segmentation process should be made.

Finding the right framework and segmentation theory is crucial to make realistic and useful segmentation process. To get familiar with the theory is also an important part of research and thesis work in general. As the research question is about the best way of segmentation for this case unit, a realistic and useful segmentation process should be made to answer the question.

1.3 Methods and structure

The research is done as a literature review. To consider the characteristics of the case company some qualitative research is also made. The qualitative research is carried out by conversations with ABB personnel. To understand the point of view of the case company, it is important to find out what are the characteristics of the case and what are the things they think are important regarding the segmentation.

After the right way to do the segmentation is found also segmentation process will be created. The segmentation process will also be validated to see how it works in practice. The validation is made by testing the process with the company data to see if the defined segments are rational and useful. In the end in the conclusions, it is analyzed how the research question and objectives were met. In the conclusions it is also considered how well the segmentation process will serve

the case company in practice. The focus of the work will be in the segmentation criteria and segmentation groups.

2 Segmentation theory

In business or market context segmentation is a process where customers or the whole market is divided to smaller groups with similar needs and wants (Pride et al., 2018). Segmentation is made by selected criteria, and the criteria differs a bit on what kind of market or customers we are segmenting. This chapter presents a suitable segmentation theory for the case unit. Even though the focus is on the theory, the case unit is mentioned to justify why the presented frameworks will fit this case.

In consumer segmentation the segmentation variables are divided to two groups. In the first group the segmentation is made by descriptive characteristics such as geography, demography and psychography. To deepen the understanding also a second group segments are made by behavioral consideration. Consumer behavior consists of things like response to benefits, usage occasions and brand. (Kotler and Keller, 2016, 268)

Segmentation of business-to-business (B2B) markets is typically more straightforward. The segmentation is most often based to geography and firmography such as industry, business location, turnover, product or service portfolio or number of employees. (Shapiro and Bonoma, 1984) The parameters mentioned are characteristics parameters, but it is also possible to use behavioral parameters to segment B2B. The most important thing when deciding the segmentation parameters is to pick parameters which serve best for the certain case. There are many different segmentation frameworks for different situations which will help to create the best way to do the segmentation for each case.

Segmentation of consumer and business market is different because consumer and business customers differ remarkably. For example, there is often less business customers, and the transactions are larger per unit compared to consumer customers. Also, the decision making differs from consumer customers as business customers have more complex decision-making, they are professional and informed buyers. (Brotspies and Weinstein, 2019)

Segmentation is done for a reason, and it is a fundamental concept in modern marketing (Söllner and Rese, 2001). In industrial marketing segmentation plays an important role to successfully manage and to plan the strategy (Albert, 2003). Without categorizing the customers or the potential customer base it is very difficult to understand the characteristics and the behavior of the customers. By putting the customers to groups where they share same needs and wants, the

diverse customer base becomes more understandable. It is also possible that by putting the customers to segments can lead to misunderstandings if the segments are poorly made and they are not serving the purpose correctly. Different segments and the used parameters should be decided carefully and with a good reason.

2.1 Industrial and business segmentation criteria

In the 1980s business segmentation has focused between two parties: the seller and the buyer. In segmentation theory where there are just two parties, it has been relatively simple to just use parameters from geography and from firmography. Firmography means demographical parameters of the company such as industry or turnover and other measurable parameters or characteristics. Nowadays business segmentation theories are also recognizing that the value chain does not end after that one business-to-business transaction. The buying party probably has its own customers, and they can be business or consumer customers. The point is to take it into account that the buyer is not always the ultimate user or the final customer of the product or service. (Brotspies and Weinstein, 2019)

Considering the characteristics of the case company it is justified to use relatively simple segmentation theories. The type of business of the case unit is intra-group business-to-business. The buyer of the case company is not the ultimate user of the product or service and there are one or more steps after the buying ABB sales company before the ultimate user or final customer. In this work the focus is on the straight customers of the case unit and therefore only a little focus will be given to the next parties in the supply chain. It is still reasonable to be aware of some parameters which are further in the supply chain. For example, it is useful to know in what kind of industries the final customers are operating.

Figure 1 shows simplified supply chain of the case unit. It is important to acknowledge what kind of supply chain it is when the segmentation theories are observed. The case unit ABB SRU LV Drives Finland buys its products and services from its suppliers. Then the ABB sales companies or local sales units (LSU) as they are called in the organization buys the product or services. The sales companies have few ways to sell the stuff forward. One way is to straight sale it to the final customer or they can use partners or partner networks which will help them

to channel the stuff onwards. There can be different channel partners in the network for example distributors, system integrators or service providers (ABB, 2021a).

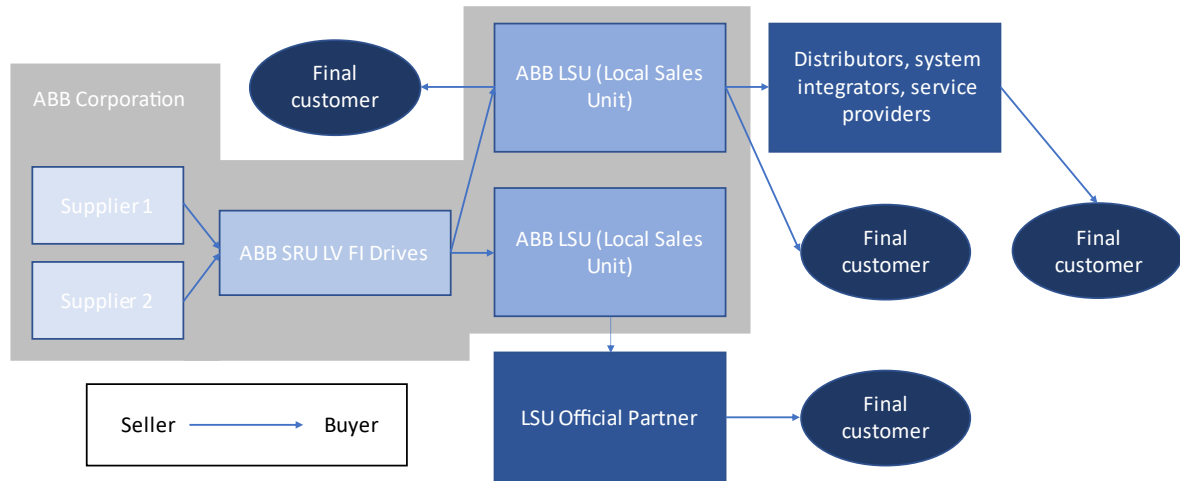


Figure 1. Simplified example of the relevant part of supply chain of the case company

2.1.1 Nested approach to B2B segmentation

Bonoma and Shapiro (1983) has created a nested segmentation model for segmentation of industrial markets which are often business-to-business. The case company is business-to-business as it is defined earlier in this work. Even though in practice the supply chain of the case company continues beyond the straight customer of the case company, business-to-business segmentation framework will give all the critical and useful segmentation criteria for this case. The nested segmentation framework is also well known and used when segmenting industrial markets (Brotspies and Weinstein, 2019; Kotler and Keller, 2016, 283—284).

This segmentation framework has five general segmentation criteria: demographics, operating variables, purchasing approach, situational factors and personal characteristics. The criteria relate to each other, and the outermost criteria are more general and innermost are more personal and specific. The outermost nests are also easier to observe than the innermost. In this framework it is not always necessary to use all the nests. The parameters can be skipped if they are irrelevant for the case or if it can be given a reason on some other rational way. (Shapiro and Bonoma, 1984) Figure 2 shows the structure of the framework.

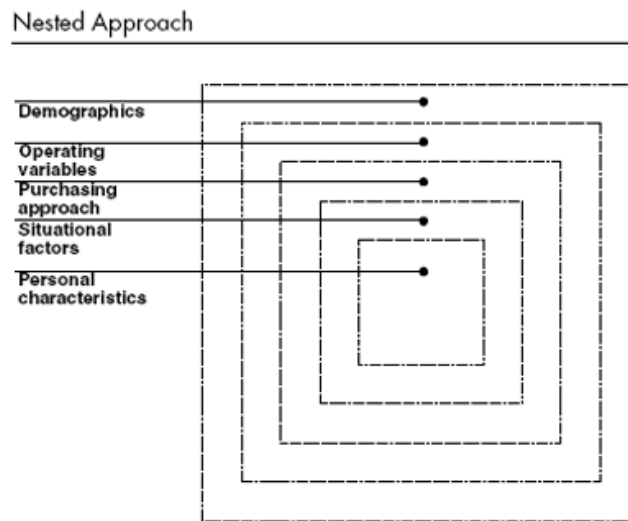


Figure 2. Nested approach to segmentation (Shapiro and Bonoma, 1984)

All five nests have parameters inside them in this framework. As earlier said the parameters can be skipped with a good reason. Next the relevant parameters for the case company will be introduced from the outermost nest to the innermost nest.

Demographics is the outermost nest. As mentioned, outermost layers are more general and they are easiest to observe. The framework defines the parameters of the nest as parameters which can be determined without visiting the customer. Main parameters introduced are industry, size and geography. These parameters are easiest to define and therefore they are often used. It is not recommendable to only segment the market with demographic parameters as it leaves the analysis light. (Shapiro and Bonoma, 1984)

Next nest is operating variables. Operating variables are more precise parameters within demographic nest. The most relevant parameter for the case company in operating variables is products the customer is buying. With the data of what products each customer is buying it is possible to see valuable differences between the customers. Relative share of different products in each sales company will give valuable segments as it might reveal unused sales potential for some products or product groups. Other useful parameter in operating variables is customer capabilities. It is useful to know what the capabilities of the sales companies are. For example,

if the sales company does have only minimal resources and low competence it will be difficult for them to sell complex products or services.

Third and the middlemost nest is purchasing approach. For this case company these parameters are quite the same for all its customers. Purchasing approach contains things like purchasing function, buyer-seller relationship and purchasing policies. (Shapiro and Bonoma, 1984) These parameters are same for all the customers as the customers are part of the same ABB corporation and therefore, they share the same policies and rules. Because the sales companies are different on their size, and they are operating on different geographical locations there might be some small differences on the purchasing approach.

Second innermost nest is situational factors, and the innermost nest is buyer's personal characteristics. These two innermost nests are more personal and harder to observe than the outer nests. (Shapiro and Bonoma, 1984) In this case the amount of segmentation criteria needs to be limited to keep the segmentation simple enough. As these parameters from inner nests are harder to observe and they are more personal it is not wise to concentrate on them. These two innermost nests are also mainly considering the role of the purchase situation which is often quite the same between different ABB sales companies.

2.1.2 Other segmentation frameworks

Even though the nested approach to segmentation seems to give all the important parameters for the segmentation, it is important to observe also some other distinguished frameworks. Many of the frequently used and popular segmentation frameworks are sharing a lot of the same parameters. By also utilizing some other segmentation frameworks the reliability of the parameters and theory for the segmentation of the case company's market improves.

One other approach to organizational segmentation is to concentrate on the organizational buyer behavior. Organizational buyer behavior is often more complex than the behavior of individuals. There are often a group of individuals who are doing the decisions. The individuals might share the same goals, or they might have their own goals. The group of individuals who are making the buying decisions in an organization are called decision-making unit (DMU). (Drummond, Ensor and Ashford, 2008, 73)

According to Drummond, Ensor and Ashford (2008, 73—75) the individuals in the decision-making units are playing one role of the six following: initiator, user, buyer, influencer, decider and gatekeeper. Because the case company and its customers are part of the same ABB corporation the decision-making unit is not that useful framework to use. The buying decisions are mainly made somewhere else somewhere near the final customer or user. It would be overwhelming task to analyze all the decision-making units of the final customers or users. It would also be a waste of resources as effective segmentation can be made with easier to observe parameters. However, some of the roles can be applied on some level to the ABB sales companies as the sales companies are working as kind of a middleman in the supply chain. Sales companies or individuals in the sales companies could have roles as an influencer or as a gatekeeper. An influencer has a major impact on the decisions being made. The sales companies can promote some products or services to their customers to increase the sales which also affects to the case unit. Gatekeeper does not differ that much from influencer. It is not directly making the decisions, but it can affect them. Gatekeeper is a role which can decide if flow of information will continue. In this case, sales company can decide if it wants the information of the case unit to continue to flow onwards the supply chain. (Drummond, Ensor and Ashford, 2008, 73—75)

In organizational buyer behavior, in addition to the decision-making unit roles, there are some more comprehensive frameworks to view these complex entities. The Webster-Wind framework is one of them. (Drummond, Ensor and Ashford, 2008, 76) The Webster-Wind framework concentrates on variables which have influence on organizational buying decisions. There are four categories of variables: environmental, organizational, interpersonal, and individual. Environmental variables are variables which can affect the buying behavior from external environment. For example, actions of competitors or change in political or economical environment are environmental variables. The second group of variables are organizational variables which are internal variables. Decisions, goals, and all other things that are happening internally in the corporation will probably affect the buying behavior on some level. Third group is interpersonal variables. The earlier mentioned decision-making unit roles are a part of this variable group. Interpersonal variables are often connected to interpersonal action in the buying center which is the decision-making unit of buying. Last and fourth variable group is individual groups which concentrates on the affect of individuals to the organizational buyer behavior. Individual parameters are for example, attitude to risk, competitiveness, and personal goals. Because a group is made of individuals all the variables of the individuals will affect on

the behavior of the whole group. (Webster and Wind, 1972) Webster-Wind framework is presented in appendix 1.

In this case it is useful and important to pay attention to organizational buying behavior, but the organizational buying behavior parameters are not the main parameters. However, knowing and understanding of the buying behavior is crucial to successfully define the segmentation parameters and segments. Many of the behavior parameters are same for all the customers of the case unit as they all are part of the same corporation. The point that all the customers and also the case unit itself are part of the same corporation is essential information as it makes the business to differ from normal business between independent companies. All the customers and the case unit are working towards one goal and it is the success of the whole ABB corporation.

2.2 How segments should be formed from criteria?

When the reasonable segmentation criteria have been selected, the segments itself can be formed. To benefit as much as possible from the segmentation the formed segments should be informative and relevant. The number of segments should also be reasonable as too much information is harder to process. The point of the segmentation is to get a clearer picture of the large and often complex customer base.

There are five criteria to help to make useful segments. The criteria to follow are measurability, substantiality, accessibility, differentiability and actionability. Measurability is a key to form the segments. If there is no way to measure a parameter, it is not possible to put it in a segment. Substantiality is also an obvious one as the segments are wanted to be useful. Substantiality means that the segments should be large enough and that they should be homogenous enough. If the segment is not homogenous enough it will not be possible or it will be difficult to use the information for customer relationship management, marketing or strategical planning. Third criterion is accessibility. It would be not useful to form segments which are not accessible as there is no possibility to make sales from such. In point of view of market analysis information of non-accessible segments would be useful on some level as then you would know on what you should not concentrate on. Fourth criterion is differentiability. Differentiability leads to segments which are different enough from each other to manage the segments better. For example, in different enough segments different marketing mixes would give a different

respond from each segment. Last and fifth criterion is actionability. To benefit from the segmentation the segments should be actionable which means that it should be possible to formulate effective programs to serve each segment. (Kotler and Keller, 2016, 285)

In addition to the five criteria the nested approach to segmentation suggests that it is justified to begin the segmentation from the outer nests. As the outer nests are more general, more observable and they are more macro level it is easier and clearer begin with them. By repeating the process several times, the most relevant segments will start to appear. (Shapiro and Bonoma, 1984) The relevance of the segments should be though separately for each business case. Also, the reason why the segmentation is made will affect on the relevance of each segment. In this case the segmentation is made for sales support, customer relationship management and for strategy planning.

3 Case segmentation

As segmentation is a process it is needed to first define what is a process. By understanding what a process is and what does it require is a good starting point for the segmentation. One definition in engineering context defines process as following:

- *A set of interrelated tasks that, together, transform inputs into outputs. (ANSI/EIA-632, 1998)*

Process is also supposed to be repeated many times. Because it is repeated many times it is important that it is defined well. When there is a plan or model how the process should work it is easy for people to observe it and people who have not been creating the process can go the process through. A well-defined process is also easier to be improved in future. Every time the process is gone through some feedback can be collected and improvements can be made to the model.

In this case segmentation it is also important to notice that it is possible that this certain process may not be applicable in future just in this form. It is possible and even probable that the needs of the process and the market environment will change on some period. However, as this is a process by making minor changes it is possible to adjust the process for the future prevailing situations.

3.1 Selected segmentation criteria

The segmentation criteria for the case company are based on the theory in chapter 2 and on three interviews. The interview questions are presented in appendix 2. All three interviews were conducted with the case unit employees who would benefit from the segmentation process. They are all also working on managerial positions in the unit. The key question of the interview was: “In your opinion, what are the most remarkable characteristics of customers in the perspective of segmentation? Please explain why.” With the question it was possible to collect different characteristics of the customers and formulate the segmentation criteria. In the interviews the criteria were also discussed to make it clear what is the aim of ABB for this segmentation process.

Ten relevant segmentation criteria were found. The nested approach framework was used as the base of the criteria formulating process. After the information of the interviews were collected the list of parameters was suppressed to the most relevant parameters which will serve best the purpose. To keep the process simple enough it was decided that the number of parameters should be kept reasonably. There is enough work when collecting the data for the ten parameters and ten parameters will give enough information of the segments. To make this all work it is still mandatory that the criteria are formulated carefully and that they cover enough different parameter groups. In other words, the parameters should be different enough from each other and they should cover all relevant information. The ten selected criteria are in the table below. The criteria are for the case unit customers which are intra-group sales companies in ABB corporation.

Table 1. Selected segmentation criteria for the case

<i>Number</i>	<i>Criteria</i>	<i>Additional information</i>
1	Sales	-
2	Location	-
3	Share of different service product categories	Need to be careful as service product family reporting is not well standardized
4	Share of different product families	-
5	Share of sales for different life cycle phases	Active, Classic, Limited, Obsolete
6	Number of partners or share of sales through partners	-
7	Discounts given	-
8	Average size of order	Sales in currency divided by number of sales
9	Gross margin on sales	Need to be careful as the numbers reported may mislead
10	Industry of end user	The data might be difficult to achieve

Sales for each customer is a very basic parameter. For example, an easy-to-use ABC-analysis can be made from the sales numbers. In ABC-analysis the customers are divided to different categories by the volume of sales. The categories can be set to show for example how many

customers are generating most of the sales and what are the customers who are not that important in the perspective of generated turnover (Ng, 2007). Later when generating the segments sales is a good and simple parameter to combine with other parameters. For example, with sales and location it can be defined what are the largest customers in a certain area for example Europe.

Location is the next criterion. With the location it is possible to take a closer look on some specific geographical locations. In the interviews it was noticed that when processing the location data, it is possible to use sold-to-country or shipped-to-country information. Those two are differing in some cases as some of the customers are operating in larger area than just in the country where they are located. It needs to be considered which location data is more useful for each segment or case.

Next criterion is share of different service product categories. ABB has separated the service products to ten different categories. There is also service agreement available which depending on the agreement includes all the ten services. (ABB, 2020) By observing the shares of different service products it is possible to generate segments which will show which customers are more active on which service product. For example, if there is a segment where the customers are selling more than average of advanced services, there is a possibility to observe the segment in more detail and make some conclusions from there. When using this criterion, it is important to be careful with the data given as in the interviews it appeared that there are some differences in the way how the orders are categorized. It is the responsibility of the one who does the segmentation process to use useable data, and if there are some things that should be taken into consideration they should be mentioned in the segmentation. According to current knowledge it seems that the categorization data should be useable enough to make reliable and truthful segments.

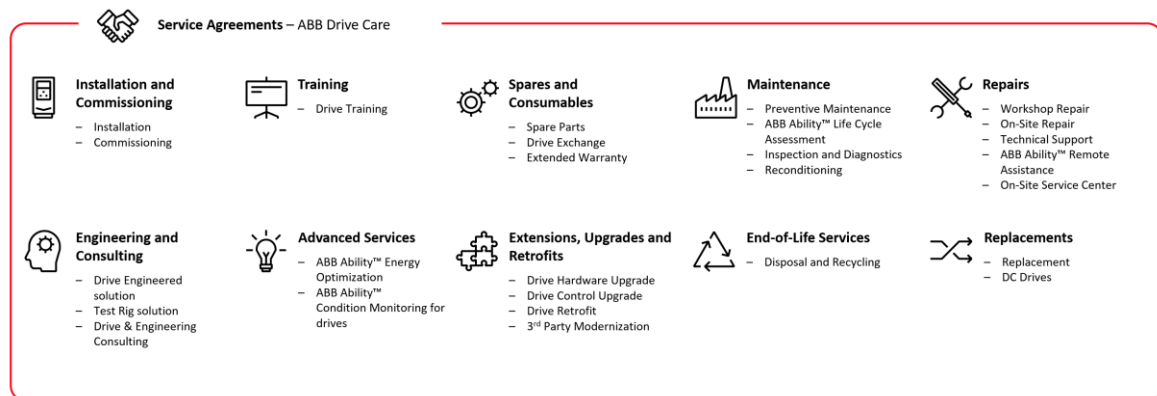


Figure 3. Services of ABB Drives Service presented in a life cycle model (ABB, 2020)

Fourth criterion is share of different product families. It will be useful to see which customers or countries are using which product families. The used product families will also tell what kind of industries the end customers are operating in and on which life cycle phase the end customers are with their ABB products.

Next and fifth criterion is share of sales for different life cycle phase which has some correlation to criterion 3 which is share of different service product categories and to criterion 4 share of different product families. The life cycle phase is the life cycle phase of the product which for the service is bought. Products in earlier life cycle phase use often different services than the ones in the end of the life cycle. For example, products in active life cycle phase would probably use preventive maintenance or condition monitoring but the products in the limited or obsolete would use services like retrofit, replacement or disposal. The average phase of the sold service products for the customer tells how new or old products the final customer is using. By combining this life cycle phase data of sales to the data of installed products database, it is possible to do interesting and useful analysis. Also, useful segments can be created with the life cycle phase data.

Sixth criterion is number of partners or share of sales through partners. The case unit sells the service products to its customers which are intra-group ABB sales companies. After that, the sales company can sell straight to the final customer or through partners. Using partners will make the supply chain more complicated. When the supply chain is as short as possible the case unit has maximal amount of control of it. When the control and responsibilities are decentralized more to ABB sales companies or even to the distributors the possibilities of the

case unit to influence are smaller. The organizational structure and decisions about that are responsibility of the ABB corporation top management. It is still useful for the case unit to understand the situation and how the customers differ from each other. Segments which are using this criterion will further deepen the customer understanding and that deepened understanding is crucial for successful customer relationship management which is one reason why this thesis is done (Wang and Feng, 2012).

Discount given is seventh criterion. To understand the different positions where the customers are it is good to know how much they get discount. It will be interesting to combine the given discount to parameters like sales or location as then it might be possible to better understand why the discount are given. There might be some policy in the sales which describes how the discount are given but by analyzing the data and the segments it is possible to compare how well the policies and the numbers match.

Next and eight criterion is average size of order. This criterion tells how the buying behavior of the customer is. The customer can buy the service products to its stock to improve the delivery lead time or it can order the service products in the same time when their customer orders it from them. The average size of the order can tell also about the size of the final customers. When analyzing segments where this criterion is, it is important to consider what does this parameter mean for the certain case. Segments with average size of order needs to be analyzed more carefully than most of the others as rational explanations for the average size might be difficult to be found so that any conclusions can be made.

Ninth criterion is gross margin on sales which tells how profitable each customer is for the case unit. Gross margin on sales can be combined with the volume of the sales to see what the absolute profitability of the customer is for the case unit. By concentrating on large and profitable customers the profit of the case unit will most likely increase. If the profitable customers are already close to the maximum profitability, the concentration needs to be turned to the less profitable customers. In the end it is all about the strategy on which customers the concentration is aimed. One other strategy would be to concentrate more on the less profitable customers first. For this thesis the strategy itself is not on the focus but it is true that segmentation is important analysis before any strategy planning can be made. For this case it found out in the ABB interviews that, if this criterion wants to be used, the logic behind the business indicator needs to be thoroughly understood as the complex organization structure is making the gross margin business indicator a bit incomparable in some cases. According to

Eggert et al. (2011) manufacturers and industrial suppliers have been seeking growth from services in recent years. It makes well sense to increase the share of services of the revenue as adding more services will increase the whole profitability of the firm (Wise and Baumgartner, 1999). In the perspective of the profitability of service business, it would be very useful to also use segments where some of the parameter is profitability. The data used needs to be useful enough to do rational analysis. If there is not usable data, it should not be used as then wrong conclusions might be done.

Last and tenth criterion is industry of end user. With the data of the end user's industry, it is possible to see what the distribution of the industries is. In the segmentation the segment can be sorted by the share of the largest industry by revenue, or some other model can also be used. Some industry data can also be observed from the share of different product families as some product families are industry specific. For example, the ABB ACQ580 is designed for water and wastewater industry (ABB, 2021b). Reliable data of the end user's industry might be difficult to get as the supply chain is sometimes complicated and it is not always known where the service products will go in the end. If some reliable data is achievable, it would be useful to create segments based on the share of different industries.

These ten segmentation criteria were selected with the help of nested approach to segmentation and the criteria are taken into account the opinions and wishes which appeared in the ABB interviews. The information from the interviews is very valuable combined with the theoretic framework. The ones working with the customers are most likely to know what the most important and most interesting parameters or criteria are to observe as they have experience and knowledge of the system and the customers. The scientific theory framework on the other hand gives a scientifically approved way for the segmentation and it supports the opinions and work what the ones working with the customers are doing.

The number of criteria was decided in cooperation with the thesis worker and ABB. The argument why there are not fewer criteria is that fewer would not cover all the wanted areas what are wanted to be observed. The argument why there are not more criteria is that more criteria would make the segmentation process too laborious and with too many criteria there might be a situation where there are too much too complicated segments which would make the use of the segments more difficult.

When the framework of nested approach to segmentation was used and the criteria were evaluated it appeared that most of the criteria are emphasized on the outer nests which are more general, observable and macro level (Drummond, Ensor and Ashford, 2008, 83). Criterion number 1 sales, number 2 location and number 10 industry of end user are on the outermost nest which is demographics. In the second outermost nest which is operating variables are criterion number 3 share of different service product categories, number 4 share of different product families and number 5 share of sales for different life cycle phase. In the purchasing approaches nest, which is the middlemost are criterion number 6 number of partners or share of sales through partners, number 7 discounts given and number 9 gross margin on sales. The second innermost nest is situational factors and there is criterion number 8 average size of order. The innermost nest buyers' personal characteristics is empty as all the possible parameters in the nest seemed irrelevant for this case. All the customers have almost the same motivation, perceptions, and attitudes towards risk. The similar characteristics are because this case unit and all its customers are working in the same corporation towards same goals, and they also share the same ABB policies. Data of buyers' personal characteristics would also have been difficult to get. All the criteria are following the "five criteria to help to make useful segments" framework. In the buyers' personal characteristics at least measurability and substantiality would have been difficult to fulfill as personal characteristics are difficult to measure and the information what the possible segments would have given would be less useful than the segments created with other parameters.

3.2 Case segments

Nine segments are created from the ten segmentation criteria. All the criteria are used and as useful and versatile segments as possible are created. Sales will be a key parameter for most of the segments. Sales is one of the most important business indicators as from sales the profits are made after the expenses. Sales also reflects the size of the business very well.

First and very basic segment is sales to different countries. The sales parameter will be order intake and the country is country where the order is shipped. It is better to use the country where the order is shipped than the country where the order is sold as in some cases one customer is responsible for few countries. Getting the more accurate data of where the order is going gives

more useful information. The countries are divided to four segments. The segments will be segment A, B, C and D. Segment A will contain countries with largest order intake and segment B will contain the countries after that and so on. All the segments will have 25 percent of the order intake. From the number of countries in each segment it is possible to see the distribution of order intake on different countries. Also, the importance of each country will be seen by the fact on which segment they belong.

Second segment combines sales, location, and service product category. The segment tells what the relative share of each service product category in each country is. The smallest countries are excluded from this segmentation as they are not that relevant, and they would distort the segments. In all the service categories all the countries are ranked by their own relative share of the certain service category. Then it can be seen for example which countries are ordering exceptionally large quantities of that service product. It will be useful to see for example where new or the most profitable service products are sold the most. Before making any significant decisions the quality of the data needs to be verified as there might be some different standards how the service product category is marked on each order.

Third segment is same than the second one, but the service product category is changed to the product families. In this segmentation the distribution of different product families on each country can be seen.

Fourth segment has the same parameter sales and location as the three first ones have. In fourth segment those parameters are combined with the order life cycle phase data. With these segments it can be seen where different life cycle phases are most active regarding to the order intake data. It will give important information as for countries which are emphasized on some specific life cycle phase the most suitable services can be marketed and sold.

Fifth segment includes only the information of the percentage of the sales what the customer does through partners. This data gives valuable information of the purchasing approach the customer has. Share of sales through partners might also explain some of the behavior of the customer.

Sixth segment is discounts given which like the fifth segment tells a lot about the seller-buyer relationship. It will be also useful to rank the customers by discount given to really see which ones are getting more discount and others. From there some explanations can be made and it can be evaluated if the discounts are given for the right customers.

Seventh segment goes to the same category with segment five and six as it gives again information of the behavior of the customer. The parameter is average size of order. With this data is possible to analyze if there is some correlation with other parameters such as the order intake. When the customers are ranked by average size of order different explanations can be made for that. If some correlations are found also the causality can be observed.

Eight segment is gross margin on sales. It will be interesting to see which customers are most profitable customers. In this segmentation also the order intake can be observed to see if there is correlation with the profitability and order intake. As mentioned earlier this segmentation criterion should only be used if reliable data is found. According to the interviews the gross margin on sales data might be a bit misleading on some cases as all the sales are intra-group sales and some policies and other organizational things might affect it.

Last and ninth segment is industry of end user. Here the distribution of end user industries will be compared between customers. It would be interesting and useful to see which industries are most active on each customer and location. Concerning this segment, it might be difficult to find comparable data as the supply chain from this case unit to the end user might be sometimes long and complicated.

These nine ways to create segments will give enough information at least for the beginning. When the process is repeated feedback will be collected and the process will be improved if needed. Now the most important thing is that the process itself is created as earlier there has been no process at all. It is also important that the process created now is based on scientifically approved segmentation frameworks as then there is better possibility that the process itself works well. When the process is repeated it is possible that some of the current segments will be removed from the process and some new will come.

It is also important that the nine ways to create segments in this process are mostly following the “five criteria to make useful segments”. If the segments are not useful there is no point to create them. For sure some segments will be more useful than others but the benefit of doing segments from some criterion needs to be bigger than the work invested in that segmentation to create value.

The reason why these segments are mainly just ranking of the customers with different parameters is that now these segments will be more widely usable. If the need of this segmentation would have been more specific more accurate segments would have been made.

Now the ranking type of segmentation will give more options for different users of the segmentation. Again, in here when the process is repeated it will adjust better to the current needs.

In the appendix 3 all the nine segmentations are presented in one table. In the same table, criteria used are also listed and an examples are also given.

4 Validation of segmentation process

In the validation three important segmentation criteria combinations were tested. The data from which the validation was done had seven parameters: date, order number, service category, material number, sold to country info, shipped to country info, order intake. From those parameters segmentation criteria 1 sales, 2 location, 3 share of different service product categories and 8 average size of order was tested. The test data had all the orders from year 2020.

The first criteria combination which was tested was sales to different countries. From the data order intake data and shipped to country data was combined. The outcome was a list of each country ranked from largest to smallest by order intake. Then an ABC-analysis was made for the list and four segments was made. Each segment had approximately 25 percent of the total order intake. Also, from the analysis it was possible to see for example how many countries make for example 80 percent of the total order intake. The point of the ABC-analysis is to group the items in groups with different importance. (Lun, Lai and Cheng, 2010, 166) In this case the items are the customers, and the parameter of importance is order intake.

The second criteria combination was sales, location, and service product category. The distribution of each service product category for each country was tested. Again, the shipped to country data was used instead of sold to country as it reflects better the reality as some customers has more than just one country on their responsibility. If wanted and needed this same segmentation can be made with the sold to country data if it would better reflect each customer. In the spreadsheet smallest countries were filtered out to improve the readability of the segments. The smallest countries are also often irrelevant in this segmentation if there are no special needs. In this segmentation top countries segments were created for each service product. For each service product category all the relevant countries were ranked by the relative order intake of the country for that service category. From these segments it was possible to see which countries are focusing most on which service category. This data is especially interesting when analyzing in which countries for example new or exceptionally profitable service categories are emphasized.

The last test was made with sales and location data. From sales data the average size of order was calculated for each country. This time the location data was country to sold instead of

country to shipped. As the average size of the order reflects the buying behavior of the customer it is better to use the customer data instead of the destination country data. The countries were ranked from the biggest to smallest average size of order. The same graph also included the total order intake for each country to see if there is any correlation between the total order intake and average size of the order. In this case the correlation was not considerable. It was possible to create different segments from this segmentation. For example, a segment where the countries have relatively large average size of order and a large order intake was possible to find. Also, a segment with large average size of order and a small order intake was possible to find. These findings will help to understand the buying behavior of the customers.

All the segments should be tested to be sure that they work. In this thesis only those three segmentation criteria combinations were tested, and it seems that they give useful data and segments. As the other criteria combinations are created with the same framework and methods it is probable that they will work at least moderately. As this segmentation process is needed for several different needs it is probable that the segments need to be adjusted any case for that certain need.

5 Conclusions

In this thesis channel and customer segmentation process was created for the case company which was ABB SRU LV Drives Finland. In this chapter results of the work are presented. How well the research question is answered and were the objectives met will also be evaluated. In the end it will also be discussed how useful this work is for the case company and what kind of follow-up research possibilities there are. The research question of this thesis was:

-What is the best way to segment sales channels and customers for the case company?

The answer for the question is a combination of results from the literature review and ABB interviews. From the literature review it emerged that the nested approach to segmentation framework would fit this case well. Then the information from the interviews was combined with the framework and ten segmentation criteria was found. The focus on the criteria is more on the general and observable parameters as it appeared that it would be irrelevant to focus on more specific or even personal level parameters. The best way to do segmentation for the case company is creating segments from the ten selected criteria. In this thesis nine combinations from the criteria are presented. From those combinations the segments can be made. In the appendix 3 the criteria combinations and the examples of the possible segments are presented.

The objectives of this thesis were:

-Best segmentation framework or combination of frameworks for the case company should be found.

-A realistic and useful segmentation process should be made.

Best or at least useful segmentation framework for this case company was found and a realistic and useful segmentation process was made. As there were several reasons why this segmentation process was needed it would have been difficult and too complex to make a process to fit all the needs perfectly. Now this process is a best compromise to fit those all needs well. If this segmentation process is used specifically for some need there might be better frameworks or processes to use. The needs why this segmentation process was created were broad: sales support, sales planning, and customer relationship management.

As there were no segmentation process earlier in the case unit this process will indeed be useful for the case unit and it will generate value. This process is based on scientific theory, and it acknowledges the special needs of the case company. If it appears that the process is not fully suitable for the purpose in practice it can easily be modified to better serve the needs. As some of the criteria combinations were tested to make segments the process should work at least on the tested criteria. To make the process work in practice the person or team who does the segmentation needs to understand the business and what are the characteristics of each criterion. There should also be enough competence to use the data correctly as the quality of the data might differ in some cases.

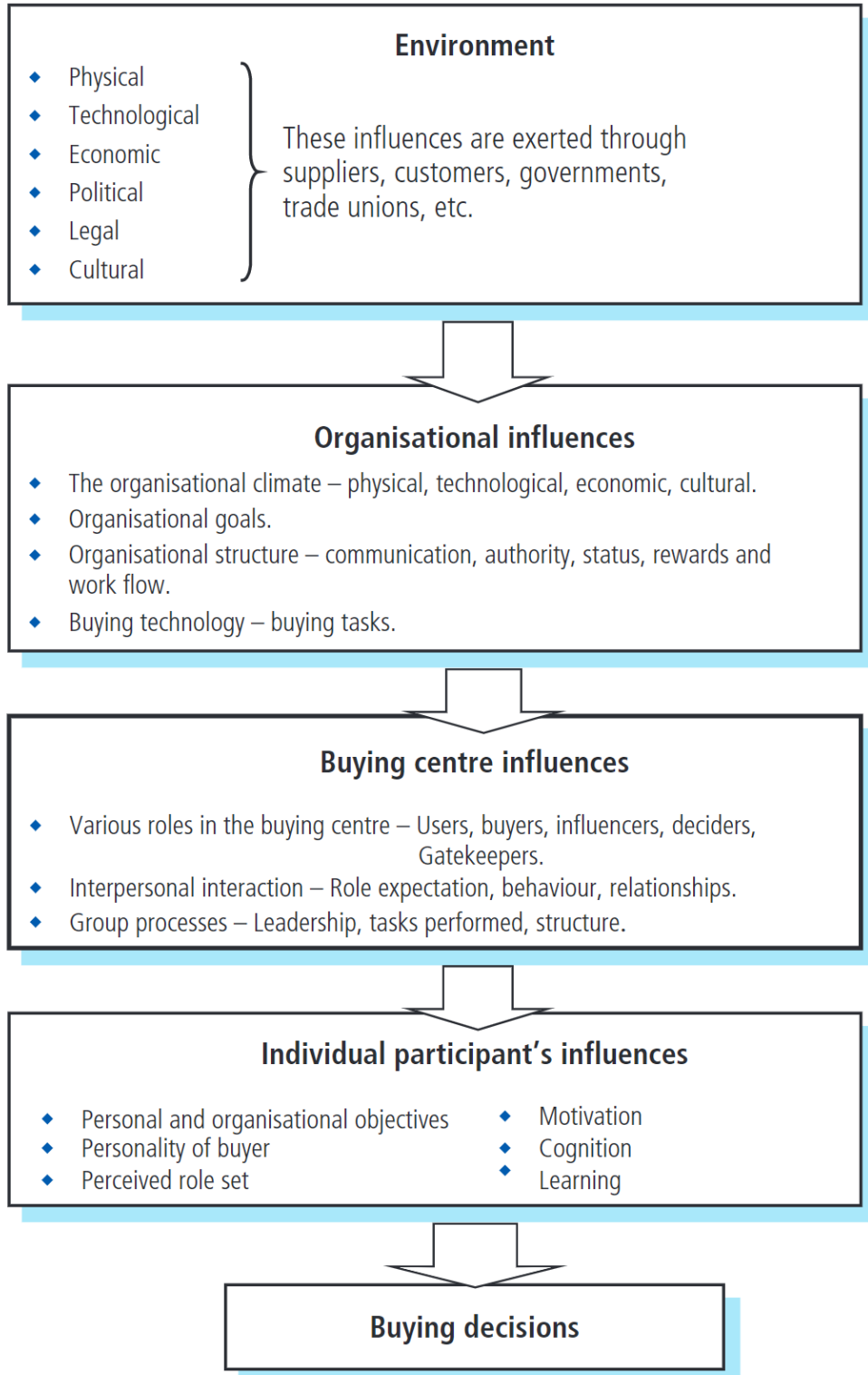
To better understand why some countries are more often in the same segments it would be a great follow-up research to compare the service maturity of different countries. In this context the service maturity means what kind of culture there is in the perspective of service usage. Is it “run and repair”, “run and maintenance” or something else? Follow-up research can also be made for this segmentation process when the process is gone through few times and when some feedback is collected. For example, to make this segmentation process more versatile and thorough, it would be useful to also use quotation and installed base data in the segmentation in addition to the order intake data. That would need some more research on this topic. Also, this whole segmentation process should be reformed completely. On the other hand, using only the order intake data the process will stay more simple and easier to use.

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Appendix 1. Webster-Wind framework (Drummond, Ensor and Ashford, 2008, 77)



Appendix 2. Interview questions for ABB SRU LV FI Drives employees. The idea of the questions is to get basic information and to arise conversation on the topic.

1. What is your position in the organization and what are your responsibilities?
2. How does the sales process work as a whole and who are participating in it?
3. What are the characteristics of ABB SRU LV FI Drives business?
4. What are your sales channels and how do they relate to each other and what are the differences between them?
5. In your opinion, what are the most remarkable characteristics of customers in the perspective of segmentation? Please explain why.

Appendix 3. Nine segmentations for the case company

Number	Segmentation by	Criteria used	Example
1	Sales to different countries	Sales, location (order intake, shipped to country)	ABC-analysis, the sum of each segment is 25 percent, A segment has all the largest countries by order intake and B has second largest and so on.
2	Relative share of each service product category in each country	Sales, location, service product category (order intake, shipped to country, service product category)	A list which tells for each country what is the relative share of each service product category for them. Smallest countries are filtered from the list.
3	Relative share of each product family in each country	Sales, location, product family (order intake, shipped to country, product family)	A list which tells for each country what is the relative share of each product family for them. Smallest countries are filtered from the list.
4	Relative share of each order life cycle phase in each country	Sales, location, order life cycle phase (order intake, shipped to country, order life cycle phase)	A list which tells for each country what is the relative share of each order life cycle phase for them. Smallest countries are filtered from the list.
5	Sales what the customer does through partners	Share of sales through partners, location (share of sales through partners, sold to country)	Ranking of the countries by the share of sales through partners from largest share to smallest.
6	Discounts given	Discounts given, location (average discount given, sold to country)	Ranking of the countries by the average discounts given from largest to smallest.
7	Average size of order	Average size of order (order intake, count of orders, sold to country)	Ranking of the countries by the average size of order from largest to smallest. Sales sum data can also be in the same table to see, if there is any correlation between them.
8	Gross margin on sales	Gross margin on sales, location (gross margin on sales, sold to country)	Ranking of the countries by the gross margin on sales from largest to smallest.
9	Relative share of each industry of the end user in each country	Industry of end user, sales, location (industry of end user, order intake, sold to country)	A list which tells for each country what is the relative share of each industry of the end user for them.