



Elements of customer value

Qualitative research in orthopedic medical technology

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Abstract

Due to increased customer demands, heated global competition and slow-growth economies and industries, companies are constantly seeking new ways to gain and maintain competitive advantage. Every company operating in the market is able to produce functional products and therefore by focusing only on the core product or service, it is almost impossible to achieve competitive advantage and sustainable business.

In the spring of 2021, in addition to implants and instruments intended for orthopedics and traumatology, Tuomi Logistics asked in their call for tenders for value-added services. This raised questions within the assignor company of this research and made think what customers really expect from companies manufacturing orthopedic medical devices and implants and what they find valuable.

The heart of the business is to create value. Therefore, by focusing on creating value propositions for the customer that are more compelling than those of other companies operating on the market, is meaningful. By doing this, not only the operation of the customer organization can be improved but also a competitive advantage for the company can be achieved and thereby possibly increase company's profit. For the company to be able to produce better value propositions, it must know what the customers truly value or would value. For this reason, the purpose of this research was to find out what those value elements are for customers in orthopedic medical technology.

The nature of the research was qualitative and total of six customers using orthopedic devices and implants from different parts of Finland were interviewed. The data collection method for this research was thematic interview and a B2B value element was used as a framework for the interviews. The data obtained from the interviews was analyzed using theory-guided content analysis which enabled to find fourteen different value elements. The results showed that customers value reliability, features that make their work easier and the total cost of the product or service. Based on the results and theoretical framework, companies should make sure that the minimum requirements are met and that the basic core value are in place before trying to add new value proposition for its customers. The results supported the notion that there is no significant difference in the quality of the products between the companies operating on the market, and for that reason companies should focus on creating total service entity for the customer in order to achieve a competitive advantage over its competitors.

Keywords/tags (subjects)

Customer value, value creation, added value, competitive advantage, service

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Tiivistelmä

Kasvaneiden asiakasvaatimusten, kiihtyvän globaalien kilpailun sekä hitaasti kasvavien talouksien ja toimialojen vuoksi, yritykset etsivät jatkuvasti uusia tapoja saavuttaa ja ylläpitää kilpailuetua. Kaikki markkinalla toimivat yritykset kykenevät valmistamaan toimivia tuotteita ja näin ollen keskittymällä pelkästään ydintuotteeseen, yritysten on lähes mahdotonta saavuttaa kilpailuetua ja sitä kautta kannattavaa liiketoimintaa.

Keväällä 2021 Tuomi Logistiikka pyysi tarjouspyynnössään ortopedian- ja traumatologiaan tarkoitettujen implanttien ja instrumenttien lisäksi lisäarvopalveluita. Tämä herätti kysymyksiä toimeksiantaja yrityksen sisällä ja sai pohtimaan, mitä asiakkaat todella odottavat ortopedisiä laitteita ja tarvikkeita valmistavilta yrityksiltä ja minkä he kokevat arvokkaaksi.

Asiakasarvon tuottamisen voidaan sanoa olevan kaiken liiketoiminnan ydin. Näin ollen keskittymällä luomaan arvoehtotuksia asiakkaalle, jotka ovat vakuuttavampia kuin muiden alalla toimivien yritysten, ei ainoastaan pystytä parantamaan asiakasorganisaation toimintaa vaan voidaan saavuttaa myös yritykselle kilpailuetua ja sitä kautta mahdollisesti parantaa yrityksen liikevoittoa. Jotta yritys pystyy tuottamaan parempia arvolupauksia, tulee sen tietää mitä asiakas todella arvostaa tai kokee arvokkaaksi. Tästä syystä tämän tutkimuksen tarkoitus oli selvittää, mitä ortopedisiä laitteita ja tarvikkeita käyttävät asiakkaat arvostavat.

Tutkimus toteutettiin laadullisena tutkimuksena ja siihen haastateltiin kuutta ortopedisiä laitteita ja tarvikkeita käyttävää asiakasta eri puolelta Suomea. Haastattelu oli muodoltaan teemahaastattelu ja sen tukena käytettiin B2B arvon elementeistä muodostuvaa pyramidia. Aineisto analysoitiin käyttämällä apuna teoria-ohjaavaa sisällönanalyysiä, jonka avulla pystyttiin löytämään 14 eri arvon elementtiä. Tulokset osoittivat, että asiakkaat arvostat luotettavuutta, tuotteita ja palveluita, jotka helpottavat heidän työtään sekä sitä kokonaiskustannusta, joka heille syntyy yrityksen tuotteita ja palveluita käytettäessä. Tuloksien sekä teoreettisen viitekehyksen perusteella yritysten tulisi pitää huoli siitä, että minimivaatimukset täyttyvät ja että ydintuote sekä palvelu on kohdillaan, ennen kuin yritys lähtee kehittämään lisäarvopalveluita asiakkailleen. Tulokset tukivat käsitystä siitä, että markkinoilla toimivien yritysten tuotteiden laadussa ei ole merkittävää eroa ja siitä syystä tulisi alalla toimivien yritysten keskittyä palvelukokonaisuuksien sekä asiakkaan kokonaisarvon tuottoon kilpailuedun saavuttamiseksi.

Avainsanat (asiasanat)

Asiakasarvo, arvon luominen, lisäarvo, kilpailuetu, palvelu

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1 Introduction

Business customers are constantly analysing suppliers and evaluating the total cost-of-ownership. Optimized prices, meeting specifications, complying with regulations and following ethical practices are minimum requirements in business today. There are strict regulations and requirements not only for the products but also for the suppliers who produce them. Since all the suppliers in the market are able to produce functional products and the prices are well optimized. As supply becomes more and more commercial and subjective, highly personal needs can be surprisingly important to business customers, when they are making purchase decisions. (Almquist, Cleghorn & Sherer, 2018, 5.) By focusing only on core product or service, it is nearly impossible to build sustainable business. That is why it cannot be considered as sustainable strategy in the long run. (Grönroos, 2009b, 15.)

Customers whose costs are driven by what they purchase, are always looking ways to increase their profit. This pressures suppliers to reduce their prices. To get a customer focus from acquisition price to total costs, a supplier must have a full understanding on what its customers value and would value. (Anderson & Narus, 1998, 53.) For the company this is important, since customer value is a central element of competitive advantage and long-term success of the company (Khalifa, 2004, 645). There are full range of rational and emotional factor behind business customers purchasing decisions. To be able to prevent the company to fall into commodity trap, it is critical to understand all those factors and design value propositions accordingly. (Almquist et al., 2018, 5.)

Medical technology business in Finland is mainly limited to large tenders, where public and private hospitals choose suppliers for their most frequently used product groups for several years. In most of these call for tenders, customers compare the price and quality of the offered products between different suppliers. In recent years, there have also been calls for tenders, where the price has been the determining factor when choosing a supplier. The reason for this might be that customers feel that the quality of the products offered by suppliers is about the same and they do not see a difference between the products or suppliers. This can be said to be destructive for the business. The only way a company can compete is the price and that leads into situation where companies do not make a same profit and for that reason, they do not have the same amount of resources to spend for example on product designing or on to service and education.

Tuomi Logistics handles the procurement and tendering processes of the hospitals at Pirkanmaa region. In their previous call for tenders for orthopaedic and traumatology supplies and implants in the beginning of 2021, they asked what value-added services suppliers would be able to offer for their customers in addition to traditional products. They seem to wish for something else or more from the suppliers than what they have traditionally offered them. This was a good example that company's value creation and definition of value seem to shift from product and company-centric view into more personalized customer experience (Prahalad & Ramaswamy, 2004a, 5).

The assignor for this thesis is a one of the largest medical technology companies in the world that offers innovative products and services in orthopedics, medical and surgical, spine and in neuro-technology. Tuomi Logistics call for tenders raised questions and made wonder, what else can be offered for the customers than is already offered, what they need or expect from a company operating in medical technology industry and what customers truly value. It made them think, if the market is changing somehow, what customers want and need and could focusing on value possibly be the source for competitive advantage and more profitable business in the future.

The subject and the motivation for this research came from the author's own interest. How to stay competitive in a market where products are all high quality? Is the price competition the only way for the company to survive or is there something else that can increase company's competitiveness? There has been a persistent advocacy for a stronger focus on customer value, since it has been noticed that it has positive effects on customer satisfaction, competitive advantage and for company's performance. The focus has been not how to sell products to the customers but rather create value for them and in that process also create value for the company. (Kienzler, Kindström & Brashear-Alejandro, 2019, 360.)

1.1 Purpose, objectives and research questions of the study

The heart of the business is to create value. By creating value for the customer, the company can turn that value into profit, which in turn creates value for the company. (Kumar & Reinartz, 2016, 36.) This is beneficial for both parties. However, what is notable, is that customers are the ones that actually create value and it is providers' mission to find out what value customers are actually seeking and create value propositions accordingly (Schultz, 2016, 158–159). By this in mind, the research question for this thesis is:

1. What do orthopedic medical technology customers value?

The research method is qualitative, and data was collected through thematic interviews from customers who work in Finnish healthcare within orthopedics. B2B elements of value pyramid was used as a framework for the interviews. The value pyramid can be used in analysis to improve and examine any B2B company's value propositions and by that, find out what customers truly value and in what medical technology companies should invest so that they could produce better value propositions to their customers (Almquist et al., 2018, 10).

It is quite difficult to evaluate what customers value. However, there are universal elements of value that do exist, which create opportunities for companies to improve their performance in existing markets. Finding those elements might bring new insights that will allow orthopedic medical technology companies to develop and design their services and products that might improve customers' loyalty, greater willingness to try a particular brand and sustain revenue growth. (Almquist et al., 2016, 46.) By creating a value proposition for customers that truly meets their needs might improve customers functions and results, which not only can have financial benefits for the customers but also enables them to serve their customers, the patients, better. Hence, the fact that a medical technology company is able to make better value propositions to its customers can also have implications on public health. By creating better value proposition may be visible for the company in increased competitiveness and profit.

1.2 Structure of the thesis

The structure of this thesis is presented in Figure 1. This thesis begins with an introduction, which briefly introduces the topic and the assignor for this work. It also describes what the background and motivation for the choice of the subject were. The second chapter is the theoretical framework of the thesis which describes the phenomena that are under research. In this thesis, it consists of description of what customer value is, how it can be created and what the importance of service is for the customer value creation. After the theoretical framework, the third chapter represents how this thesis was implemented. It describes the research method that was used and how data was collected and analysed. The fourth chapter presents the results of the analysis which is followed with the fifth conclusions chapter that summarizes the results of the analysis. In

the last discussion chapter the ethicality and reliability of the research are evaluated and recommendations for the further research and management are presented.



Figure 1. Structure of the thesis

2 Customer value, value creation and service perspective in value creation

The knowledge base of this thesis consists of the definition of customer value, what value means to customers, how it can be created, definition of what service is and what is its strategic importance for value creation. Defining customer value seems to be quite an elusive and complex concept to define, since value is seen as very subjective and because it has differences between customers, within customers, and across cultures. It is easily affected by different situations and whether supply is tangible or intangible. By asking, when, where, from whom and by how value is created, the definition becomes even more difficult. (De Chernatony, Harris & Riley, 2000, 41; Mingione & Lenoni, 2020, 74.)

According to Anderson and Narus (1998), only a few suppliers in business markets can answer what customer value actually is and how it can be measured, even though it is highly important to point out to the customer, what is the value of the supply offered by the company (Anderson & Narus, 1998, 5). The theoretical basis of this research will also address the differences between value and added value, since those concepts are easily confused with each other (De Chernatony et al., 2000, 39).

2.1 Value for customers and added value

What value is for customers seems to be quite difficult to define and measure (De Chernatony, et al, 2000, 39; Grönroos, 2008, 303). How customer value is formed, can be said to be highly per-

sonal and idiosyncratic (Zeithaml, 1988, 13). There are multiple definitions on value and according to Leszinski and Marn (1997), "Value may be one of the most overused and misused terms in marketing and pricing today" (Leszinski & Marn, 1997, p. 99). Reichheld (1994) concludes that "Value is driven by a full array of features, such as product quality, service, sales support, and availability" (Reichheld, 1994, p. 15).

Some definitions of customer value emphasize price. One example of this is Zeithaml's (1988) definition of consumer value, where value is seen to be the same as low price. This view highlights the sacrifice that consumers must make, and that way, it is the most salient factor in their perception of value. (Zeithaml, 1988, 13.) Anderson and Narus's (1998) definition of value in business markets also points out the price aspect, "The worth in monetary terms of the technical, economic, service and social benefits a customer company receives in exchange for the price it pays for a market offering". (Anderson & Narus, 1998, p. 6). They highlight that value is what the customers get, in exchange for the price they pay. Porter's (1985) view of value also underlines the price but brings a strategic perspective to it: "Value is what buyers are willing to pay, and superior value stems from offering lower prices than competitors for equivalent benefits or providing unique benefits that more than offset a higher price." (Porter, 1985, p. 3).

Leszinski and Marn (1997) have the same kind of definition of customer value as Anderson and Narus (1998), when they highlight the tradeoff between the benefit customers receive from the product and the price, they pay for it (Leszinski & Marn, 1997, 100). The tradeoff is between what you give and what you get, is also prominent in Zeithaml's (1988) description, "Perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988, p. 14). Grönroos (1997) emphasizes the tradeoff between what customer gives and what she or he gets," Customer perceived value follows from a successful and customer-oriented management of resources relative to the customer sacrifice" (Grönroos, 1997, p. 416). However, Grönroos's (1997) and Zeithaml's (1988) definitions of customer value are wider and emphasize overall sacrifices that a customer makes, which can mean much more than just the loss of monetary value.

Butz and Goodstein's (1996) definition brings forth the emotional aspect of customer value. According to their perspective, customer value is an emotional bond that customer and producer

create after customer has used a salient product or service and found that the product or service provides added value for them. The result of this emotional bond leads the customer to buy the product or service repeatedly and, at best, recommend it to their friends and family. (Butz & Goodstein, 1996, 63.)

Butz and Goodstein (1996) have also pointed out that there are different levels of customer value. They stress out that in expected level company offers those products or services that the customer have come to expect. This is a basic level what normal to that business or industry. At the second level company offers features that add value. This is something that is not expected by the customer because of company or industry standards. The third and the most ultimate level of customer value is the unanticipated or unexpected level. At this level a company finds a way to add value for the customer that is beyond the customers' expectations. To be able to reach this level a company must listen to its customers and understand their problems. By that a company can find new and different ways to provide products and services that would fill customers latent needs or create such needs. (Butz & Goodstein, 1996, 67–70.)

At the second level of customer value, Butz and Goodstein (1996) mention added value. Added value is a multidimensional construct and it can be easily confused to mean the same as value. There is no consensus on its definition; it means different things to different people and there are different interpretations of it. (De Chernatony et al., 2000, 39.) Grönroos (2009a) distinguishes value to core value and added value. Core value is the benefits the customers receive compared to the sacrifice they make. Added value is in terms of additional services compared to the relationship costs incurred over time. It is also notable that added value is not automatically positive; it can also have negative outcomes and that way decreases the basic core value of the core product or service. This might happen for example because of delayed services, untimely deliveries, incompetent and unfriendly staff, long queuing times. (Grönroos, 1997, 413; Grönroos, 2009a, 195.)

Fast deliveries, considerate and encouraging customer service or well-handled customer reclaim can be considered things that bring positive added value and that way have a positive effect on the perceived total value. Eliminating factors that decrease value for the customers increases a total value for the customer. That is why it is paramount that the basic core value should be in place

for the customers before trying to bring added value to it. The most important factor is to improve the old and not primarily bring the new to the customer. (Grönroos, 2009a, 195–196.)

According to all these definitions, value is something that the customer feels they are getting some benefit from. The benefit can be basically anything: time saving, social status, cost reduction, aesthetics, hope etc. Value seems to be highly personal and it can mean different things for different people. What is notable about value is that it can also be negative. Value has attitudinal components like trust, affection, comfort, and easiness of use and those customer's perceptions are predominant especially on customer's markets. (Grönroos, 2008, 303.)

2.2 Value creation

In service marketing literature, value creation is one of the most ill-defined and elusively used concepts (Grönroos, 2012, 1521). Digitalization, ubiquitous connectivity, and globalization have altered the nature of companies and how they create value. This trend affects all the industries from traditional to emerging industries. (Prahalad & Krishnan, 2008, 11.) Onwards 1990s marketing literature and management started to gain interest towards value creation and especially in to value creation for customers. Previously there were distinct roles for the customer and company in value creation process; the company is the producer, and the customer is the consumer. The view was that value is embedded in products and services that were outputs of firms' manufacturing processes. Companies saw what they believed to be a customer need and produced, or designed products based on that believe which would create value in use. After that they tried to find buyers who would like to have that value. Value was created and controlled by the seller. This value-in-exchange notion was the dominant logic for marketing at that time. Its focus was on tangible resources, embedded value and transactions. (Grönroos, 2006, 323; Grönroos 2008, 299; Prahalad & Ramaswamy, 2004b, 5; Schultz, 2016, 155; Strandvik, Holmlund & Edvardsson, 2012, 132; Vargo & Lusch, 2004, 1.)

Value-in-exchange view was however challenged with an alternative view, that pointed out that value for customers occurs when products, goods or services are used by customers; value-in-use view. Before that use, only the potential of value exists. In this sense, suppliers and service providers do not create value, but customers do, in their own value creation processes in their daily lives

when using products. In that view, supplier can only create resources like physical products, services, employees, information, technology, systems etc. which purpose is to enable customers to create value for themselves. (Grönroos, 2000, 3; Grönroos, 2006, 323–324.) That way the customers are the ones that create value, and the supplier is the one that supports that value creation (Strandvik & Holmlund, 2012, 133).

This value in use-view is supported by Vargo and Lusch (2004) who pointed out that a company can only make value propositions that strive to be more compelling and better than the once that competitors have. The customers are the ones that determine the value and participate in creation through the process of coproduction. Tangible goods are not embedded with value but are embedded with knowledge that has value potential. This value potential is translatable to specific needs through coproduction. Therefore, a value proposition should only be a suggestion, followed with an offer that meets the expectations of what the customer has about that proposition. (Grönroos, 2006, 327; Vargo & Lusch, 2004, 11). Problematic however is that company's value propositions do not always correspond for the value requirements that the customers have. Strandvik and Holmlund (2012) emphasize, that companies with a strong customer-oriented way of operating, do not necessarily have this kind of mismatch between offering and needing. (Strandvik & Holmlund, 2012, 137.)

The traditional concept of value creation is company-centric, where customers are outside the company and the value is created inside the company. Company decides what products and services they will produce and by that they also decided what value is for the customers. Customers are in involved in the process only at the point of exchange. Because customers are more dissatisfied than ever, even though they have more choices than before, has forced to reexamine the traditional way of creating value. Product and company-centric view of value and the process of value creation is shifting towards personalized consumer experience. This means in practice that customers are increasingly co-creating and co-controlling the value with the company and this interaction is becoming the locus of value creation and value extraction. (Prahalad & Ramaswamy, 2004, 4–5; Strandvik & Holmlund, 2012, 132.) Value is no longer delivered but it is instead co-created with the customer and this process includes actions from both parties and possible from other actors also (Grönroos & Voima, 2013, 135; Heinonen, Strandvik & Voima, 2013, 104).

Grönroos (2012) has criticized a co-creation value concept, since he believes that it implies only in those stages in value creation where the company is present together with the customer. He stresses out, that value co-creation appears in those activities where both parties are involved and are in direct interactions with each other. These activities are however only a part of a total value formation. Customers experiences in direct interactions and outcomes of those interactions contribute to the total experienced value (Grönroos, 2012, 1520.) Grönroos (2000) definition of how value is created for customers, emphasizes the relationship perspective and the value-in-use notion: "Value for customers is created throughout the relationship by the customer, partly in interaction between the customer and the supplier of service provider. The focus is not on the products but on the customer's value-creating processes where value emerges for customers and is perceived by them." (Grönroos, 2000, p. 24.)

Grönroos and Voima have created a value model (Figure 2.) that divides the value creation process in three spheres: provider sphere, a customer sphere and joint sphere. In each of these sphere's the roles and the goals for the provider and customer are different (Grönroos & Voima, 2017, 130).

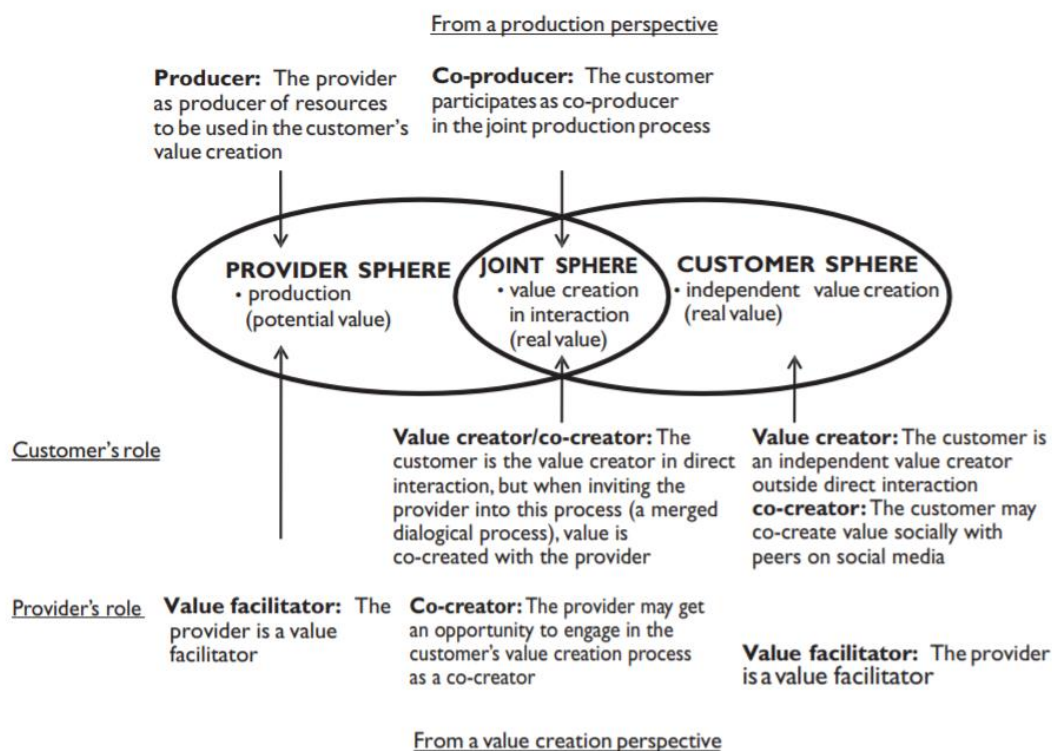


Figure 2. The Grönroos-Voima Value Model (Grönroos, 2017)

The provider sphere is a closed sphere, where company's compiling resources and developing processes makes an offering, that has a potential to eventually become real value. In this sphere a company makes its value proposition and works as a value facilitator. In joint sphere the provider and customer meet and have a direct interaction with each other. In this sphere, providers service-providing process and customers consumption and value-creating processes meet and become one. This interactive, collaborative, and dialogical process create a platform for value co-creation. This is a sphere where provider has an opportunity to engage into customers value-creation process and co-create value. This requires that both actors are willing to do it and know how to do it. Otherwise, the provider role is restricted into facilitating customers value creation. In the joint sphere the provider has an opportunity to be a value co-creator and that way actively influence customers value creation process. Customer's role in the joint sphere is to be a value creator and also possibly the value co-creator with the provider. Roles can also be switched in the joint sphere; customer might give feedback or information to the provider who could use that information for its' own value creation. Customer sphere is also closed sphere like providers' sphere. In that sphere customer creates value independently and provider role is only to be a value facilitator. (Grönroos, 2017, 130–131.)

Grönroos and Voima Value Model (2017) focuses on value creation in Business-to-Customer (B2C) context. According to Mingione and Leoni (2020) there is also a third context which links together B2B and B2C contexts, Business-to-Business-to-Customer (B2B2C) context (Mingione & Leoni, 2020, 73). This B2B2C better describes the context, where medical technology industries operate since the customer is the hospital organization, but the end customer is actually the patient. In Figure 3. the Grönroos-Voima Value Model was extended in order to describe the value creation process in medical technology industry in B2B2C context. However, in this research the focus is on researching the value creation only in B2B context.

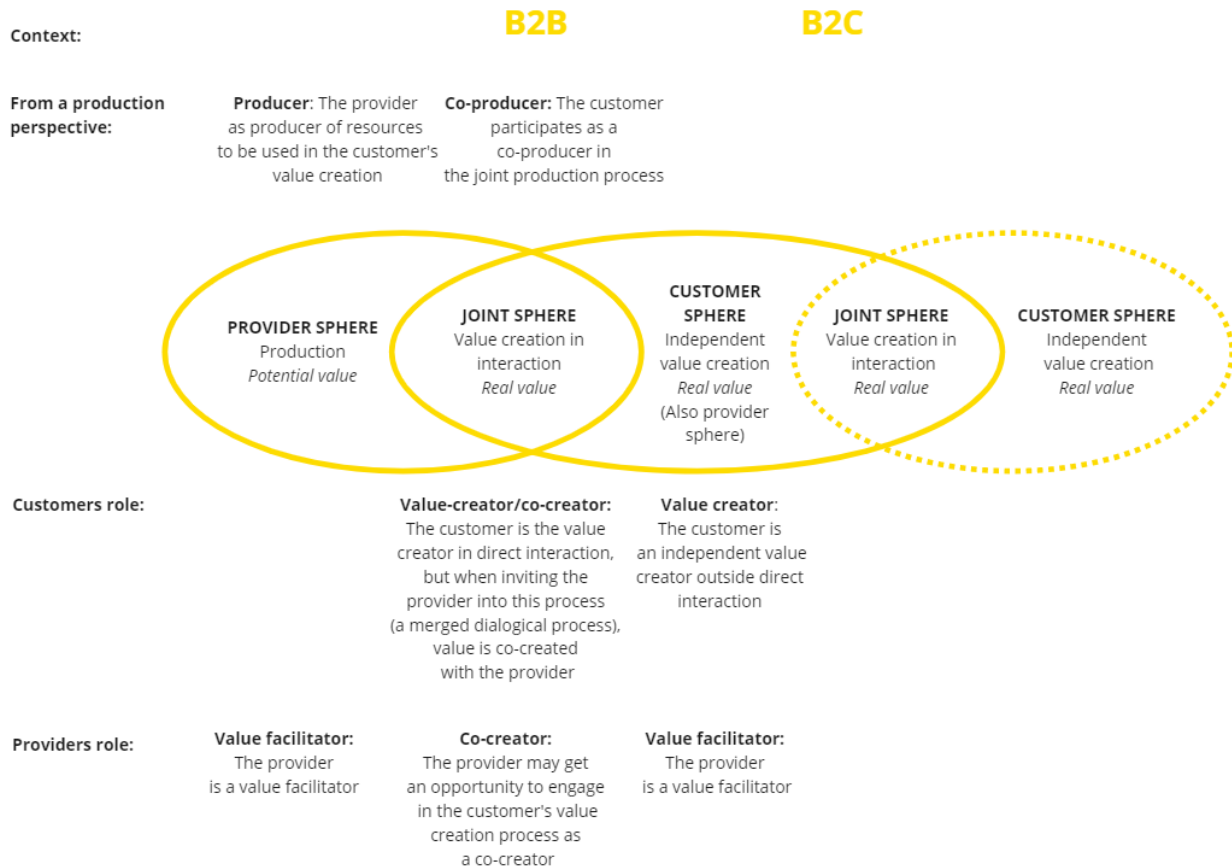


Figure 3. Extended Grönroos-Voima Value Model (modified from Grönroos 2017)

2.3 Value creation and competitiveness

Historically speaking an access to raw materials and capital has been a source of competitive advantage. For some businesses it still is but the increase in customer demands, heated global competition and slow-growth economies and industries, companies are seeking new way to gain and maintain competitive advantage. Focusing on solely on product quality and innovation, no longer provides a clear source of competitive advantage. Companies have to look away from the internal improvements like quality management, reengineering and restructuring and seek the source outside of the company, from markets and customers. Despite the importance of the subject, there is surprisingly few studies that connects the sources of customer value creation and its effect on company's competitiveness (Prahalad & Krishnan, 2008, 45; Sánchez-Gutiérrez, Cabanelas, Lampón & González-Alvarado, 2019, 619; Woodruff, 1997, 139–140.)

According to Prahalad and Ramaswamy (2004a) customers seem to be more dissatisfied than before, although they have more choices of products and services than ever. This is even though companies invest highly in a greater product variety. Problem seems to be that at the same time they cannot differentiate themselves from their competitors. (Prahalad & Ramaswamy, 2004a, 5.) Focusing on core products and quality, is a traditional way for management to gain a competitive advantage. A company with a strong sustainable technical advantage can benefit from this perspective but a company that has adopted this core product perspective but does not have technical advantage over its competitors easily falls into price trap. (Grönroos 2009b, 27.) That is why the scope in many industrial companies is shifting from components into combination of products and services and even entire systems (Strandvik et al., 2012, 132). Customers do not buy products or services, they buy the benefits that they produce, and that is why, one of the most important things in marketing is to create and communicate value to customers in order to drive their satisfaction, loyalty and profitability. (Grönroos, 2009b, 25; Kumar & Reinartz, 2016, 36.)

According to Woodruff (1997) a way to achieve competitive advantage is to deliver superior customer value. To achieve this however requires organizations to learn extensively about their markets and target customers. This raises out though difficult questions like; What exactly do customers value? How well do customers think that we deliver that value and how will what customers value change in the future? After you know what your customers value, a company also should be able to deliver that value for customers. That means that a company's internal processes for delivering value should be in line with what customers value. (Woodruff, 1997, 139–140.)

According to Kumar and Reinartz (2016) customer value is a dual concept. If companies want to have sustainable business, they have to create perceived value for the customers. When they do so, they can extract that customer value into profit and that way create value for the company (Kumar & Reinartz, 2016, 36.) Woodruff (1997) also shared the same notion, that by focusing on creating and delivering superior customer value to high-value customers, will eventually increase the value of an organization. The challenge however is, how to align resources spent on customers and products so that they create value for both parties (Woodruff, 1997, 140.)

Sánchez et al. (2019) have highlighted customers relationships importance in value creation. Capabilities in customers relationships, where there are two directional communications with the customer and the company, contribute decisively to value creation. When this capability is combined with marketing innovations and conversion of knowledge, it is essential factor for customer value creation for companies. This process is also important because it can help improve various business dimensions that are important for competitiveness, such as revenue, costs, and the use of technology. (Sánchez et al., 2019, 624.)

The role of customer has shifted. Customers are connected instead of isolated, informed rather than unaware and active preferably than passive. This change in customers role means that companies can no longer work autonomously without having little or no interference with the customers. This includes everything from product designing, developing production processes, creating marketing messages and controlling sales channels. Customers want to influence and interact with the company and by that co-create value. (Prahalad & Ramaswamy, 2004b, 4–5.) For that reason, by creating high-quality interaction with the customers in order to co-create unique experiences together, can be a new source of competitive advantage for the company. (Prahalad & Ramaswamy, 2004a, 7).

Reichheld and Sasser (1990) have research customer loyalty and how that effects on company's profit. They claim that by having loyal customers, companies can boost their profit almost 100% by retaining just 5% of their customers. (Reichheld & Sasser, 1990, 105.) According to Reichheld (1994) there is a straight link between superior value, loyalty and profit. Customers stay loyal for the company where they get best value and customers are loyal to the company as long as the company offers them superior value compared to its competitors. Therefore, if a company really wants to keep its customers loyal and have effect on the profit, they must monitor as well as modify their basic functions that brought customers into the system in the first place. (Reichheld, 1994, 19; Khalifa, 2004, 646.)

2.4 Service and value creation

During the 1980' the discussion on how to define service was extensive and according to Grönroos (2006) the lack of common definition still exists (Grönroos, 2006, 323). By service can be meant a personal service, service as a good or even a total service entity (Grönroos, 2009a, 76).

Nordics schools view emphasizes more the interactive side of services; “Services can be defined as processes that consist of a set of activities which take place interactions between a customer and people, goods and other physical resources, systems and/or infrastructures representing the service provider and possibly involving other customers, with aim at solving customers problems”.

This definition emphasizes the notion that service should support the customer in a value-creating way. (Grönroos, 2006, p. 323.) Edvardsson, Gustafsson and Roos (2005) have however suggested a new way of portraying service. They emphasize that service is actually a perspective on value creation rather than a category of market offerings. Service means different things to different people and people describe those characteristics that are important for them and leave out things that do not add value for them. Focus is on value through the lens of the customer and key is to co-create the value with the customers. (Edvardsson, Gustafsson & Roos, 2005, 118.)

In the 1970’s the development of service-oriented concepts and models started. But it was not until 2004 Vargo's and Lusch's (2004) dominant logic of marketing article, that truly fueled the international discussion that shifted the thinking towards exchange of intangibles, specialized skills, knowledge, and processes, instead of exchange of tangible goods. In their view, marketing is heading into direction, where goods are integrated with services. It is notable that this new dominant logic for marketing should not be restricted or seen in the traditional goods-dominant view where service is treated as a residual (something that is not tangible), something that is meant to enhance the tangible good or something that is classified as service industry, like healthcare, education etc. Rather it would be defined as: “Application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself”. The new dominant logic of marketing focuses on intangible resources, cocreation of value and relationships. (Vargo & Lusch 2004, p. 1–2.) According to Vargo & Lusch (2004) by adopting this new service dominant logic, would give a richer foundation for the development of marketing though and practices. (Grönroos 2006, 317; Vargo & Lusch, 2004, 1–2.) As Vargo and Morgan (2005) pointed out, “Marketing is fundamentally about service, not goods (Vargo & Morgan, 2005, p. 52).

As mentioned, services are traditionally defined as separate from goods and thought to be produced by certain types of organizations. Defining services as separate from goods gives a wrong

understanding of how important services are for competitiveness and prosperity of society. (Grönroos, 2009b, 22.) This kind of thinking is outdated, since almost all companies offer their customers also services and according to Vargo and Lusch (2004), all economies can consider to be service economies (Grönroos, 2009b, 22; Vargo & Lusch 2004, 10). A machine can be seen as a physical good, but the way this well-designed machine is delivered to customer, is service. Some of the services that are offered for the customers, are however invisible, like invoices and handling complaints. (Grönroos, 2009a, 76.)

The only main difference between services and physical goods is their process nature (Figure 4.). Services can be seen to work in “open” processes where customers can participate as co-producers and that way can directly influence for the progress of these processes, while physical goods are produced in “closed” production processes where customers can only see the outcome of those processes. Goods can be seen as resources that are available for the customers and customers use those in a value-creating way. Services in the other hand are processes where a set of resources (people, other physical resources, systems and infrastructures) are in interaction with the customer and value is created or emerges in these processes. In these “open” processes customers can be seen both co-producers and consumers. The company supports customers value creation with these processes. With physical goods the customer can only perceive the goods as outcomes of “closed” production process and not be a part of the value creation. Because customers participate in this “open” processes, company’s and customers are co-producers of the service and co-creators of value. (Grönroos, 2006, 319; 324; Grönroos, 2009a, 79.) Usually, service includes some kind of interaction with the service provider and the customers. This interaction is very important even though the parties are not always aware the importance of it. (Grönroos, 2009a, 78)

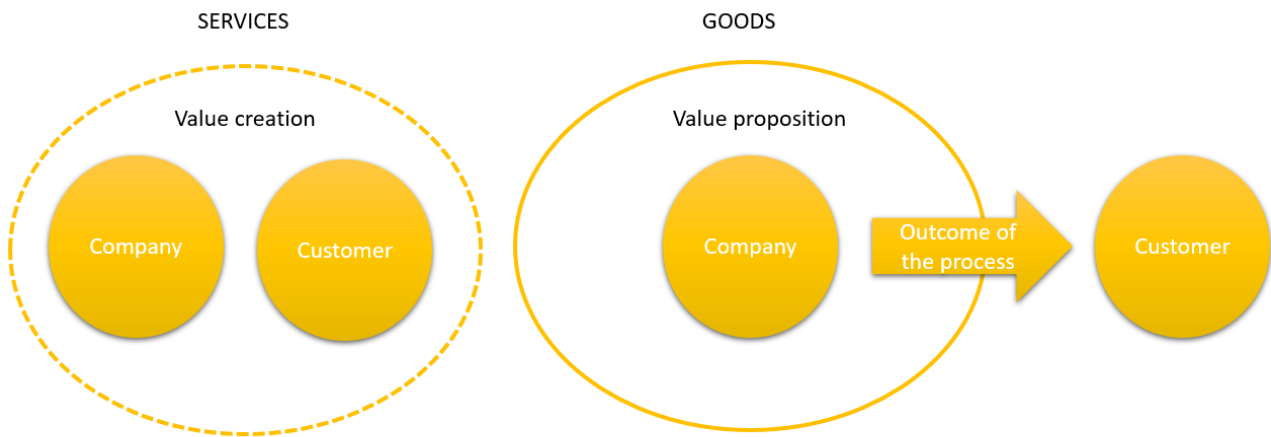


Figure 4. Difference between goods and services according to their process nature

In a context that includes goods, usually has also other elements that effect on consumption process. These elements are for example home deliveries, installation, repair, and maintenance. All these elements have impact on customers value-creating process. The more elements there is in the customer interface, the more complicated the company is to manage the value-creating process. Some of those elements are more important to the customer than others. That is why it is important to try to design and manage those elements and bay attention to those elements that are more critical than others. A perfectly designed and well-function good loses its value to the customer if other elements do not work in value-supporting way. Grönroos (2006) has stated that service logic of marketing is in fact the norm and not a special case, as previously thought. He has made this claim base on the notion that rarely customer contact includes only a physical product without any service support. That is why when the total customer interface is taking into account, goods should not be marketed solely as goods but as service. This makes goods-based marketing a special case and service-based marketing the norm. (Grönroos, 2006, 329.)

According to Grönroos (2009b), there are four different strategies by which a company can strive to improve its competitiveness. These strategies and their characteristics are presented in Table 1. The first is the core product perspective, where the core product is seen to be the source for competitive advantage. In this perception the core product is the only thing that brings value for the customer. This can be seen as good strategy, if the core product has sustainable technical advantage over its competitors. Otherwise, the company can only compete with the price. Focusing

on price is also a strategic decision a company can make. It can compete with price, if company is able to achieve competitive advantage with price and keep that. However, the problem is that when someone offers the same product cheaper, the customer will immediately change the supplier. The third strategic perception focuses on company's image. In this perception imaginary value is created for the product through marketing. This perception works if the core product is attractive and functional. This strategy requires constant investment in marketing. If company can afford to this, the product becomes equivalent to other similar products on the market. The last strategy focuses on service perspective. By this strategy company makes a strategic decision where customer relationship service ingredients are considered to be important. To be able to have sustainable competitive advantage through this, company should develop all the aspects of customer relationship and build a complete package from those ingredients. The force behind this strategy is to focus on customers perception. That perception guides on what company offers beside its core product or service. (Grönroos, 2009b, 26–29.)

Table 1. Strategic perspectives

	Core product perspective	Price perspective	Image perspective	Service perspective
Source of competitive advantage	Quality of the core product or service	Permanent low price	Create imaginary values to complement the value of the core product or service	By focusing on the overall service offering regardless of whether the core product is service or a product
Mandatory for this strategy	Sustainable technical advantage over its competitors	Company is able to achieve and maintain a competitive advantage based on price	Company constantly invests in marketing communications	All components of the customer relationship must be developed as the basis of a sustainable competitive advantage
Also important	Service but it does not have strategic importance	Able to have decent product margin and thus be able to invest in the future	The core product or service is attractive and functional	Core product or service is good quality
Risk	If company does not have technical advantage, it can only compete with price	If competitors are also able to lower their own prices	Company can not afford to invest in marketing and loses its attractiveness and the market to a competitor who is able to market their product	Company does not see the importance of hidden services.

Grönroos (2009b) perception of service strategy is close to service-centered view of marketing where marketing is seen to be a continuous series of social and economic processes that largely focus on operant resources. With these operant resources company is constantly striving to make better value propositions than its competitors. This is a continuous learning process since companies can always do better as serving customers and improving financial performance. Financial performance defines how good value propositions company makes compared to its competitors. There are four characteristics in this service-centered view. The first is that company should identify and develop its core competencies that would have a potential for competitive advantage. The second, a company should identify other entities that could benefit from these competencies. The third one is to build a relationship with the customers and develop together with them customized, compelling value propositions that meet specific needs. The last one is to get marketplace feedback by analyzing financial performance in order to learn how to improve the company's offering to customers and improve company's performance. (Vargo & Lush, 2004, 5.)

Anderson and Narus (1995) also emphasize the meaning of services in differentiating company's offering and on how services can affect on costs and profits. Researchers note that supplier typically offer customers more services that they even want or even need, with the price that neither reflects the value of those services nor cost of providing them. This is because generally supplier do not even know what services customers find important. The lack of this information leads to situation where suppliers do not know what they should offer as a basic service and what the customer values so much, that it could be offered as an additional service for which you could ask for additional price. (Anderson & Narus, 1995, 75.)

Grönroos (2015) has brought out two different mental focuses on management; inside-out management and outside-in. Characteristics of these different management perspectives are described in Table 2. What is notable in this is that traditionally companies, even though they are so-called service companies like banks and airlines, the focus is on company's resources and processes rather than customers. This is the significant difference between inside-out and outside-in management. In conventional product selling (inside-out) the company offers products and service that meet their technical specifications. Problematic is, that usually there are other companies that have those same technical solutions and at that point the price becomes the distinguishing sales argument. In outside-in management approach the aim is to provide value-creating support for

the customer and hence this comes the qualifying characteristics, and a price is just a one element of customer value. (Grönroos, 2015, 6–7.)

Table 2. Fundamental differences between outside-in and inside-out management (Grönroos 2015, 7.)

	Outside- in management	Inside- out management
Core competence	Understanding customers everyday process and how they affect their life/business goals	Understanding technology, products and production processes
Core process	Providing value-creating support to the customers' everyday processes, which contributes to their life/business goals.	Production of goods and/or services
Major sales pitch	Value-creating support	Product (goods or services) specifications
Determining sales argument	Long-term value for customers relating to their life/business goals	Price

2.5 Summary of the theoretical framework

Customer value is a complex concept to define. In summary, customer value is what the customers feel they are getting in relation to the sacrifice they make. Sacrifice can be price that is paid or an overall sacrifice, for example in form of a lost time. Grönroos (2009a) has divided customer value in two different dimensions, core value and added value. He argues that core value is the cost or sacrifice that the customers make compared to the benefits they receive. Added value can considered to be the difference between total costs and total benefits customer receives. Added value shows up over time and can therefore be said to be a cost of the relationship. What is notable it is that added value can be also negative and for that reason companies should pay attention to all of its operations that are in contact with the customer like invoicing and complaints handling. (Grönroos, 2009a, 195).

The view of how value is created has changed overtime. According to earlier understanding value is created within the company and embedded in products and services. Customers are receiving

that value in an exchange of the price they pay. This value in exchange view was however challenged with an alternative view which pointed out that customers actually are the ones that create value in their own processes when they are using the products or services. This value-in-use view highlighted that companies can only make value proposition and customers are the ones that determine the value. Companies can participate in the value creation process only in those stages where they are present with the customer and in direct interaction with each other.

Since the markets and business have changed and customers seem to be more dissatisfied than ever, companies have to find new ways to be competitive and gain competitive advantage over their competitors. Customer value is a central element of competitive advantage. Companies have traditionally focus on product quality and core products to gain competitive advantage but as long as they do not have a strong sustainable technical advantage compared to competitors, it cannot be considered a good strategy. Companies can also compete with the price, but as soon as competitor offers that same product in same or lower price, customers might change the supplier. Investing in marketing can also be a good strategy, if the product is compelling enough and company is ready to put its resources in marketing. The last strategy emphasizes the importance of service. The focus is on customer's perception and on total product and service entity that the company offers. Because there is a full range of rational and emotional factors behind business customers purchasing decisions, it is critical that the companies understand and know what customers value and design value propositions and strategies accordingly. Customers stay loyal for companies where they receive best value and stay loyal as long as they feel that that the company offers them superior value over its' competitors.

3 Implementation

Objective of this research was to find out what orthopedic medical technology customers value. When the research problem was defined, a proper research design must be chosen. A research design refers to how data is collected for the research problems and which methods are used. (Saaranen-Kauppinen & Puusniekka, 2006, 12.) Research is about choices and decision making; what is being researched, what kind of data is collected and what approach is used. There is no one right way to make research, but a chosen approach defines what the research will eventually be. (Hirsjärvi, Remes & Sajavaara, 2009, 123.)

3.1 Research method

Research design can mean different things. In general, it means building a meaningful context for the research data, so that the results can be analyzed as unambiguously as possible (Saaranen-Kauppanen & Puusniekka, 2006, tutkimusasetelma). Research methods can be divided into two broad categories, qualitative and quantitative research. Method used in this research is qualitative. In qualitative research, data is collected, analyzed, and interpreted. (Burns, 2019, 150.) Qualitative research emphasizes reality, the subjectivity of the information obtained from the research and context-specificity (Puusa & Juuti 2011, 47–52.) Qualitative research describes real life and how diverse it is. Object is to examine and understand that complexity as comprehensively as possible. (Hirsjärvi et al., 2009, 161.)

In this research, it was important to find out the person's perspective of the subject that is being under research. Qualitative research is therefore suitable for researching topics that are not already well known and that are wanted to be understood better and more comprehensively. This can be done by obtaining a lot of information about the narrow subject and making own reasoned interpretations from it. (Ojasalo, Moilanen & Ritalahti, 2018, 105.)

3.2 Collection of data

Data for this research was collected through interviews. Interview is a flexible data collection method and for that reason suitable for various studies. Since the subject in this research is highly subjective, and the answers can be very diverse and pointing in many directions, interview was an appropriate data collection method. It is logical, that if you want to know what people think and why they behave in a certain way, you ask them. (Hirsjärvi et al., 2009, 204–205.)

In an interview, both parties influence on each other. The interviewer is an initiator and the facilitator of the conversation, who motivates the interviewee and maintains the conversation. The interviewer also knows his or her own role and the interviewee learns from it. When using interview as a research method, there is an opportunity to choose people for the interview who have experience and perspective on the topic that is being under research. There is also an opportunity to repeat the questions or present it differently, ask to clarify the answers, correct misunderstandings,

ask for reasons for opinions, and generally discuss the topic. (Eskola & Suoranta, 1998, Haastatelu; Hirsjärvi & Hurme, 2008, 35; Tuomi & Sarajärvi, 2018). This kind of flexibility and openness is suitable for research like this, since the subject that is being under research, can be considered to be highly personal, subjective and even abstract.

Thematic interview as a data collection method

In-depth interview, thematic interview and form interview are different interviews methods that can be used in qualitative research. The difference between these interview methods is in how structured and open they are in nature. Those differences are presented in the Figure 5. Data for this research is collected through thematic interviews which is semi structured interview method. In thematic interview the themes are pre-selected, and interview proceeds according to these themes. (Hirsjärvi & Hurme, 2000, 43–44.)

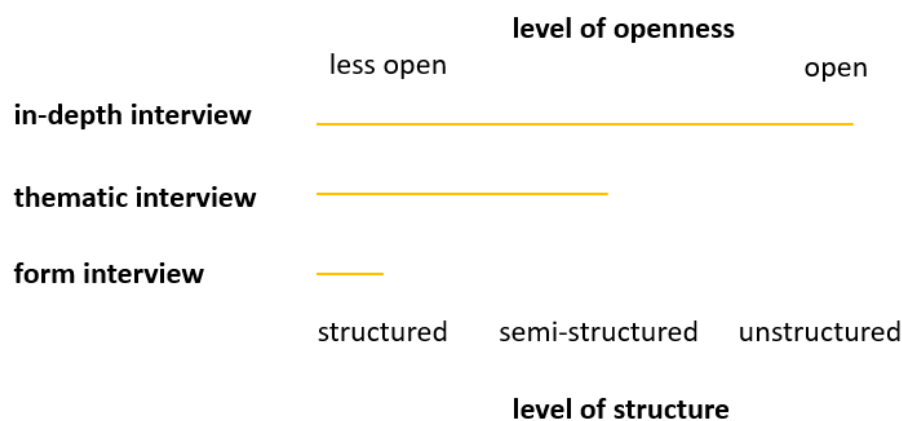


Figure 5. Differences between different interview methods according to openness and the level of structure

Themes for this interview came from the B2B elements of value pyramid, which will be presented in more detail in the next chapter (Almquist et al., 2018, 6). Themes are all the same for all the interviewers but since thematic interview is not a structured interview method, there is no need to go through them in any particular order. For that reason, in terms of openness, thematic interview is closer to in-depth interview. In thematic interview person's interpretation of the matter that is

under research and the importance they give to things is emphasized. Since the interview is carried forward through the themes, it frees the interviewer from the perspective of the researcher and that way highlights the voice of the interviewed, which can be said to be important in terms of the success of the research. (Hirsjärvi & Hurme, 2000, 48; Tuomi & Sarajärvi, 2018, 87–88.)

Selection of interviewees

A total of six people were interviewed for this research. Because the interview is a resource-intensive method, the number of interviewees in the study was consciously kept small. (Hirsjärvi & Hurme, 2008, 36). In this way, the data from interviews did not become too large considering the scope of the research and the resources that were available for this work. There is no right answer to what the sufficient sample size for qualitative research is. It depends on what you want to know, what is the purpose, what is useful, what credibility it will have and how much time and resources there is available for this research (Patton, 2002, 244).

In qualitative research the main purpose of the research is not to make statistical generalization about the subject. (Tuomi & Sarajärvi 2018, 98). The choice and quality of interviewees was more important to this research, than the number of interviewees. What matters in terms of the success of qualitative research is not how large the number of interviewees is, but the quality, durability, and depth of interpretations. (Eskola & Suoranta, 1998, Aineiston koko; Puusa & Juuti 2011, 55.) Even a small number of interviewees can be very valuable if those interviews are information rich (Patton, 2002, 244). In this research, all of the six interviews were informative and dealt with the researched phenomenon very extensively from many different perspectives. What was noted during the last two interviews that the interviews began to repeat themselves, i.e., to become saturated (Kananen, 2012, 174). Therefore, by increasing the number of interviewees would probably not have brought any new information to the research. Consequently, the number of interviewees can be considered suitable considering the purpose and objectives of this research.

In qualitative research, a small number of individuals are often judiciously selected, who have as much knowledge as possible about the topic, have experience with it, or represent a small group that is relevant to the research. (Tuomi & Sarajärvi, 2018, 98). However, it is not always easy to find persons to be interviewed, who are relevant for the phenomenon that is under research (Hyvärinen, Nikander & Ruusuvaori, 2017, 222). With the help of the representatives that work

within the ortopedic medical technology industry, it was however possible to find persons, who have long working experience in orthopedic surgery and that are in position where they observe hospital's operations on a bigger scale and are thereby suitable at evaluating the phenomena. In Table 3. the description of the interviewees is presented.

Table 3. Description of the interviewees

	Identifying information	Profession	Title	Work experience (years, approximately)	Sector	Duration of the interview	Interview method
Interviewee 1.	H1.	specialist orthopaedics and traumatology	deputy chief, traumatology	9	public	58.13	remotely
Interviewee 2.	H2.	specialist orthopaedics and traumatology	chief medical officer, traumatology	12	public/private	1.17.44	remotely
Interviewee 3.	H3.	specialist orthopaedics and traumatology	chief medical officer, orthopaedics	14	public/private	1.21.25	remotely
Interviewee 4.	H4.	specialist orthopaedics and traumatology	orthopaedic surgeon	11	public/private	1.15.21	remotely
Interviewee 5.	H5.	specialist orthopaedics and traumatology	orthopaedic surgeon	8	public	37.09	remotely
Interviewee 6.	H6.	specialist orthopaedics and traumatology	chief medical officer, orthopaedics	19	public	50.02	face-to-face

Interviewees were contacted through phone or email and asked their willingness to be interviewed. All the persons that were requested to be interviewed agreed. The interviewees come from different hospitals and different hospital districts. Therefore, geographically Finland is widely represented in this research. Different views between hospitals and districts are thus well exposed, which give a wider perspective to the phenomena that is under research.

Since the interview seeks to obtain as much information as possible about the subject or phenomenon under research, it is justified that the questions be sent to the informants in advance. It is also ethical to tell in advance what topic the interview is about, as this will also make it easier for people to promise to be interviewed. (Tuomi & Sarajärvi 2018, 85–87.) For this reason, an email was sent to interviewees where the purpose and goals for this research was presented. Also a picture and a brief introduction of the B2B elements of value pyramid was sent to the interviewees and asked to be familiarized with it. As the topic of the interview is very subjective and difficult to define, it is good that the interviewees have time to prepare and think the topic in advance.

Remotely, video-based interviews have grown in importance and also increased researchers' options. They enable a real-time interview to be conducted in a time- and cost-effective manner. According to research conducted by computer, some face-to-face interview benefits such as social contact and another person's energy level are lost, but on the other hand, it was showed that interviewees spoke more in remote interviews than face-to-face. Therefore, although a remote interview cannot fully replace a face-to-face interview, it was a viable option for this research. (Lo Iacono, Symonds & Brown 2016, 103; 113.)

Since Finnish hospitals are geographically scattered over a very wide area, it was reasonable for the resource reasons, to make most of the interviews remotely. In this research, five of six interviews were made through Teams. Global covid-19 pandemic has learned people to use Teams and other communication platforms and for that reason, a use of remote interview as a communication method, was not an issue in this research and did not seem to have affect to the quality or depth of the interviews.

It is necessary to record the interview in one way or another. This is the only way to ensure that the interview goes without interruptions or distractions (Hirsjärvi & Hurme, 2008, 75; 92.) For this reason, all interviews were recorded. That gave an opportunity to focus only on interviewing and taking notes did not take unnecessary time or disturbed the actual interview. Once the interview is recorded, it also served as a memory where can be later returned. That way new perspectives can be found and used as an aid to interpretations. After you listen to a recording of an interview, you can realize what the interviewee really meant by their answers, since sometimes things may not be always said directly, but instead must be read "between the lines". (Ojasalo et al., 2018, 107.)

It is a good idea to talk about recording the interview in advance, because some may feel recording own speech uncomfortable. (Ojasalo et al., 2018, 107.) Usually, however, the interviewees forget the existence of the recording, even though it was initially exciting (Hirsjärvi & Hurme, 2008, 92). In the email that was send to interviewees, they were informed that all the interviews will be recorded. Recording requires permission from the interviewee and all the interviewees were asked permission to record the interview. Face-to-face interviews were recorded on the author's personal phone as an m4a file, from which the recordings were transferred to secured OneDrive and to the authors computer which is locked by the password. After the transfer, the recordings

were deleted from the phone. Interviews via Teams were recorded on the author's computer and on secured OneDrive in MP4 video format.

The interview is a confidential situation, and the interviewees must remain confident, that what they say will be treated confidentially. (Eskola & Suoranta, 1998, Haastattelu). When the interviewees were asked their willingness to be interviewed, they were assured that the interview would be completely confidential and that they could not be identified from the results. The personal data like age, sex and organization they work for is not presented in this thesis. The recorded material is transcript out without the personal data of the interviewers and the analysis has been made on the basis of this transcript. The original interview recordings are not published anywhere and are only in the possession of the author. Individual sentences from the transcript have been brought into the thesis as an example, but not the whole spelling. The results of the data can be found in the thesis published in Theseus.

B2B elements of value pyramid as a frame for interviews

Interviews were built around the B2B elements of value pyramid (see Appendix 1.). Almquist et al. (2018) have analysed scores of quantitative and qualitative customer research from over three decades to identify what matters most to buyers. From this research they build the B2B elements of value pyramid. The pyramid is formed out of a total of 40 value elements that are divided into five different value sections: table stakes, functional value, ease of doing business values, individual values and inspirational values. In the bottom of the pyramid are table stakes. A term "table stakes" comes from poker and it means that the company must be able to meet at least these values in order to be involved in the business. This includes meeting specifications and complying with regulations. Functional values are above table stakes. They include economic and products performance needs, like cost reduction and product quality. Those values have considered to be important especially in manufacturing. The third level is divided into five different sections: productivity, access, relationship, operational and strategic. The purpose of all those categories is to ease of doing business. At the bottom of the pyramid are the values that are more objective. When the pyramid rises higher, the values become more subjective and personal. The fourth level of the pyramid is dedicated to individual values, such as the importance of design and aesthetics and the reduction of anxiety. Last level is dedicated on value elements that are inspirational. They

can help company to vision the future, give hope or enhance company's social responsibility. (Almquist et al., 2018, 5–6.)

In the original version of elements analysis, there is five steps, that should be used; benchmark, talk with customers, imagine ways to increase value, refine, test, and learn and last apply the acid test. (Almquist et al., 2018, 10.) Considering the required extend of the thesis, resources and objectives, the focus was on the talking with the customer step of the analyse. At this point, it was important to understand the customer's experience and explore what they were frustrated with, satisfied with and especially what they value.

Focus on this thesis was on the 36-value elements. The table stake value elements were left out from this research since they are minimum requirements and therefore not relevant to be included in the interviews. Elements that are in the bottom of the pyramid are quite traditional value elements. They are easy to measure and competing on them is straightforward. As the pyramid rises, the values in them become more difficult to isolate and quantify. That makes them also more difficult to implement. By using this pyramid as a framework in interviews, helped to discover what customers truly value and which medical technology companies should invest in the future to be able to add value for the customers. (Almquist et al., 2018, 7.)

The B2B elements of value pyramid was used as a framework for these interviews. During the interview the pyramid was went through with the interviewees piece by piece. It ensured that all the different value elements were discussed with all interviewees which made the interviews more systematic and comprehensive. Since the thematic interview method is quite open in nature, it gave the opportunity to explore and ask questions that illuminate and clarify a certain value element. (Patton, 2002, 343.) Thus, it clarified what that particular value element meant to them personally and how they interpret it.

Hirsjärvi and Hurme (2000) recommend performing a rehearsal interview before the actual interviews thus the actual interviews contain fewer errors. (Hirsjärvi & Hurme, 2000, 73.) Because the lack of interview experience, a rehearsal interview was conducted. Purpose of rehearsal interview was to test how the B2B elements of value pyramid works in practice and also to give understand-

ing how long time one interview will take. This rehearsal interview confirmed that the B2B elements of value pyramid works well as a supportive material. It helped the interviewee to see all that can be included in the concept of value and, on the other hand, served as a frame for the interviewer. Rehearsal interview also gave opportunity to test how Teams works as an interview channel and what should be take into consideration before the actual interviews. It gave knowledge, experience, and confidence for the actual interviews.

3.3 Analysis of data

Describing, interpreting, and understanding the phenomena are the aims for the analysis of the data (Puusa & Juuti, 2020, 143). The analysis, interpretation and drawing of conclusions can be said to be the core issues of conducting research. These provide an answer to the research problem or, on the other hand, can also be used to find out what the problem should have been. (Hirsjärvi et al., 2009, 221.) Data from qualitative analysis is transformed into findings. However, there is no direct instruction or standardized techniques to do analysis and therefore every transformation is different. (Hirsjärvi & Hurme, 2008, 136; Patton, 2002, 432.)

A basic analyse method is content analyse, that can be used in any qualitative research (Tuomi & Sarajärvi, 2018, 103). It can be considered as a single method for analyses or as a subtle framework, where other analysis entities can be combined. Content analyse can be used in any qualitative research and it is a systematic and objective way to analyse even unstructured data (Tuomi & Sarajärvi, 2018, 103). Content analysis is a relatively simple way to do analyse and does not require in-depth theoretical knowledge. For this reason, it is also suitable for a novice qualitative researcher and thus for this research. The aim was to get the data to be studied in a condensed, clear, general form, without losing the information it contains. The purpose of the analyse, was to make a clear link with the data, so that reliable conclusions can be drawn from it. (Hirsjärvi & Hurme, 2008, 117; 122; 145.) Different stateges of the analysis in this research are presented in Figure 6.



Figure 6. Structure of data analysis

3.4 Framework for analysis

A lot of material is usually obtained through interviews and because of that making sense to the data can be difficult. This makes qualitative analysis challenging, laborious and problematic but at the same time interesting. When data is recorded, there are couple of ways to start the analysis. The recordings can be written open, transcript or categorizing can be done directly from the recorded interviews, in which case the interviews are not written open. (Hirsjärvi & Hurme, 2008, 135–138; Patton, 2002, 432.)

In this research the recorded interviews were transcript. Transcribing the interviews takes a lot of time, but at the same time it gives a good understanding of the interviews and therefore serves a good base for the analysis (Eriksson & Kovalainen, 2008, 85). Since all the interviews for this research lasted approximately an hour, was the transcribing phase laborious and as a result, there were almost a hundred pages of data to be analysed. Transcribing is an aid to analysis and its accuracy depends on how important individual words are to the research. In this research, only the content of the answers was relevant and therefore the transcript of the interviews was more vague and only common language was used. (Ojasalo et al., 2018, 107.)

Depending on how the theory guides the analysis, the content analyses can be purely based on the data where previous knowledge, observations or theory have no effect on the execution or outcome of the analysis. Analyses can also directly rely on some theory or model when it is called theory-based analyses. And then there is theory guided analyses where the theory can support the analyses, but it is not purely based on that (Tuomi & Sarajärvi, 2018, 108–110.) Units for theory guided analysis are collected from data, like in data-based analysis, but also previous theory or knowledge helps or guides the analysis and therefore analysis is not purely based on data (Tuomi & Sarajärvi, 2013, 96–97). In this research the analysis was based on theory-guided analysis, since the B2B elements of value pyramid was used as a framework for the interviews. That way it was

natural that a theory that guided the research and worked as a phase for the analysis. But it was clear from the beginning that the B2B elements of value is only a framework and guide for interviews and not a theory that possibly limits the analysis and results. For these reasons theory guided analysis was a good approach for this research.

Reduction

The analysis of qualitative research combines analysis and synthesis. The material was broken down and separated into parts in the analysis and so it could again be brought together in a synthesis, which goal was to create an overall picture of the topic. (Hirsjärvi & Hurme, 2008, 143.) The goal was to clarify the material and gain new information through that process (Eskola & Suonranta, 1998, analyysitavat). Ojasalo et al. (2018) advice, that it is a good idea to start the analysis of the data by reading the transcript data several times (Ojasalo et al., 2018, 110). By doing that, gave a good overall view of the data and idea, of what might be revealed from these interviews based on the analysis.

After researcher has gain some initial overall picture of the material, Puusa and Juuti (2020) advice researcher to spilt it to pieces and view that in more detail (Puusa & Juuti, 2020, 152). Tuomi and Sarajärvi (2018) emphasized that it is highly important for the success of the analysis, to decide what is interesting in this data, hold on to that decision, find those things from the data and leave everything else away. That way the subject of the research remains limited and there is a possibility to find answers to the research problems that were intended to. (Tuomi & Sarajärvi, 2018, 104–105.)

After transcription, the open written material was reviewed several times and reduction phase began. The goal was to remove everything that is irrelevant for this research from the data. This was done by underlining those parts from the transcribed material that responded to the research question that have been set for this research. Everything else was left outside. Those highlighted parts were transferred from the original transcript, in to excel-file. In excel, the original expressions were reduced and listed up, see Table 4. This was made quite technically by looking at the original expressions and by simplifying those. (Tuomi & Sarajärvi, 2018, 122–123.)

Table 4. Expression's reduction

Original expressions	Reduced expressions
<p>"Quality of the service is important. That there are always products available and stock is refilled. So that we do not have to cancel the surgery because we do not have a certain product"</p>	<p>Service quality. There are products available when needed.</p>
<p>"It's important, of course, if there are any new research results. Usually, the representatives bring out if there are any new research results. We will be informed about those. It is important."</p>	<p>Information about the new research results.</p>
<p>"Yes, it is important, new surgery methods are constantly being developed and the products have to develop along with it. And when we get new products, we get new surgery methods and smaller incisions and easier solutions. So yes, it is something that you appreciate."</p>	<p>Product development. Easier solutions.</p>
<p>"It is important that the representatives are integrated into the clinic. We have a large clinic, for example. That they know the right people who need to be known."</p>	<p>Representative knows the customer.</p>
<p>"Training, both equipment maintenance and users. Intangible things are also important. Not just iron."</p>	<p>Education, not only for the users but also other professional groups that handle the products. The importance of intangibles.</p>

<p>"This is probably related to the quality, that the products are riskless, that they are sterile. But of course it is important. Everything is important. The risks must be minimized, because we are playing with people's health and it is always unique. If we take risks and get an infection. It is important and part of that is representative and their products."</p>	<p>Products are safe to use. Avoid of taking unnecessary risks. Representatives expertise.</p>
<p>"To sell what the customer needs and what the customer is willing to pay for. And then the purchase price will decide whether we can reach an agreement."</p>	<p>Offer the products the customer needs. The price and need meet.</p>
<p>"We prefer to work with the company, which has the widest service and can get many things through them. It makes operations easier."</p>	<p>Range of selection. Making operations easier.</p>

Clustering

In analyses, the data must be categorized in some way. There are three different types of categorizing data: classification, theme design and typing. Classification is the simplest way of categorizing data. Data is separated into classes and counted how many times one class presents in the data. Theme design and classification are quite similar, but theme design is more interested in what said about different themes. From the themes, can be found similarities that can be turn it generalization. In this research theme design was the most suitable way to categorize data. Essential for this is, what is said about each theme. The data is broken down and grouped according to different topics. Thus, it is also possible to see how different themes appear in the data (Tuomi & Sarajärvi, 2018, 105–106.)

After original expression were reduced, it was possible to start to cluster the data into different categories. Cluster provides preliminary descriptions of the phenomenon that is under research. Those reduced expressions that were found in previous phase, were themed into lower categories

according to similarity and named in descriptive way. They can be named according to the characteristic, feature, or concept of the phenomenon. Aim was to find similarities and regularities in the different interviews and divide them into their own categories.

Themes can be determined already before the data collection phase, like in this research where different themes were already present during the data collection, since the B2B elements of value pyramid worked as a frame for the interviews. Going through the pyramid with the interviewees helped to understand what all kinds of value there can be in the B2B context. It also made sure that all the different value elements were reviewed with each interviewee. There were some value elements in the pyramid that did not directly fit in this context and interviewees did not know what this element could mean in their case and how that could be valuable for them. For this reason, all the elements that were in the pyramid, were not necessarily relevant for this research. Some of the elements were also very similar, which why there was some overlap in the interview and some things were covered several times.

Since in theory-guided analyses, the analyses it is not purely based on the theory, gave an opportunity to get the value elements also from the data and not directly from theory. In this research it was important since during the interview, it was noticeable, that all those value elements that were in the B2B element of value pyramid did not fit in this context that well and also because there can be found value elements in the pyramid, which did not correctly describe the value that emerges from the data. That is why it was important to be able to create new value elements, that would better describe what the interviewees told. For this reason, theory-guided analyses suits for this research since the theory and data together guide the analyses. (Tuomi & Sarajärvi, 2018, 109–110.)

Researcher should go interesting themes through many times and make sure that they are important for this research. It also helps to understand their relationship to each other and to understand the internal structure. Making different categories is one of the most critical stages in the analyses since in this phase the researcher decides which expression belong under same theme or category. This is about the interpretations the researcher has given for the information that he or she has gain. (Puusa & Juuti, 2020, 152–153.) This phase in analyses was quite time consuming because you must try to find out what is essential in this reduced expression and what would be the

right word that would describe that well enough. Clustering from reduces expressions to lower categories is presented in Table 5.

Table 5. Clustering to lower categories

Reduced expressions	Lower category
Price is the most important factor when choosing a supplier.	Price
Simplification. Not too many options. Functionality of the product. Easier solutions.	Usability
Product offering can be modified according to customer's needs. Configurability of the product selection.	Customizing
Functionality of the product. Products are safe to use. Customers know how to use the products safely.	Risk reduction
New, better products. Innovations. Continuous development. Product development to meet the customer's needs.	Product development
Wide range of products. Variety of products.	Product range

<p>Don't have to cancel the surgery because there are no products available.</p> <p>Products are ready to use.</p> <p>Secure that customer has the products that they need.</p>	Product availability
<p>Willingness to help.</p> <p>Active, but appropriate.</p> <p>Takes everyone into account.</p>	Personality of the representative
<p>Open communication of information.</p> <p>Information about new products.</p> <p>Information sharing.</p> <p>Honest communication.</p>	Communication
<p>Education brings meaningfulness to work.</p> <p>Education organized by companies.</p> <p>Enable education where customers can meet colleagues.</p>	Education
<p>There is research data available.</p> <p>Products are high quality.</p> <p>Meeting quality standards.</p>	Evidence-based quality
<p>Respecting the customer.</p> <p>Representative knows the customer.</p> <p>Representative knows his/her products.</p> <p>Representative is professional.</p>	Representatives expertise
<p>Representatives' expertise available when needed.</p>	Product support

Corporate social responsibility. Company works ethically. Charity work.	Corporate responsibility
Stability of the company.	Stability

After the reduced expression were divided into lower categories, the reduction continued by combining the lower categories into upper categories. That was made quite roughly and all the elements from lower category were divided into four different upper categories. (Pusa & Juuti, 2020, 153; Tuomi & Sarajärvi, 2018, 124.) At this stage, it was noticeable that some of the lower category themes, could actually belong under of couple of upper categories. In Table 6. can be seen how those upper categories were divided into main categories.

Table 6. Clustering to upper categories

Lower category	Upper category
Usability Risk reduction Evidence-based quality Customizing Product development Product range	Product quality
Product availability Product support Expertise and personality of the representative Communication Education and networking	Service quality

Price	Price
Stability Corporate responsibility	The company

4 Results

In this chapter the results of the analysis are presented. Through the analyses there were found fourteen different value elements. The results are divided into themes, according to the upper categories of the analysis. Through the analyses there could be found four main categories price, product quality, service quality and company. Within those categories there were fourteen lower categories which are presented in Figure 7.

Product quality	Service quality	Price	Company
<ul style="list-style-type: none"> • Usability • Customizing • Evidence-based quality • Risk reduction • Product development • Product range 	<ul style="list-style-type: none"> • Product availability • Product support • Expertise and personality of the representative • Communication • Education and networking 	<ul style="list-style-type: none"> • Price 	<ul style="list-style-type: none"> • Stability • Corporate responsibility

Figure 7. Elements of value in ortopedic medical technology

Some of the elements stand out from the material more often than the others. Purpose of this research was not to raise which value element are more important than the other, but only to present what kind of values elements can be found in this context that is been under research. However, Figure 8. gives some notion on how the elements from lower category were weighted in the data.



Figure 8. Wordcloud from analyses

4.1 Product quality

H4: It is really meaningful. Absolutely, I would never want to compromise on quality.

Quality of the products stand out from the data in many different forms. It is about usability, risk reduction, product range, customizing, product development and evidence-based research. The goal is that the product works as well as possible for the purpose where it is was designed to. That it provides the best possible treatment results for the patient. Surgery complications are expensive for the customer and produce a wide variety of disadvantages for the patient. Thus, it is desirable that these could be avoided.

H5: If you can, the product is so good that you can somehow avoid revision surgeries, then that is perhaps the best added value that can be obtained with it. That is, it works as well as possible in the job for which it was designed.

Usability

Usability was one of the things that was emphasized from the data in many forms. It was highlighted that the product must be simple to use and easily available. Usability is about how products are packed, how easily packages can be open, how many steps include in the use of the product, how instruments work in practice, is there a lot of spare parts, how simply and ergonomic they are to use, how easy they are to clean and sterilize, how many instruments you need for the surgery and is there a risk that the product or instrument can be used in wrong way. Usability of the product not only can save customers time and effort but also have effect on the result of the surgery. It brings financial benefits to the customer since saving time in operation theatre is a direct monetary saving for the customer.

H3: For all the items used in surgery it is important that they are easily available, that they are packed so that they are easy to open and that the instruments needed for the surgery are not all separately. By that you could save time in the operation room and thereby save money.

H1: Of course, if we manage without some single step or product and are able to treat more patients with less, then that is always important.

H5: Usability of the implant is as easy as possible, so it also saves time. Both in the operating room and otherwise.

H3: Functionality and work ergonomics are important.

H6: The usability of the product, that it is faster to install or easier to sterilize or lasts longer, does not break down in use.

H1: Well, it depends a bit on the product. Yes, if we are talking about a bulk product, then I would say that the price is important, but in some other product, the most important thing may be usability. If it is a really cheap product, but its usability it is not good, so it can be +/- and statistic can go to the more expensive side, if it's like it's not quick to implant for example.

Customizing

Customer organizations are different, not only by their size but also in their operations. For that reason, customers seem to hope that the instrument and implant selection can be modified and customized according to their individual needs. What instruments are included in the instrumentations and what is the selection of the implants. It was hoped that product selection is customizable so that it serves customers individual needs. Purpose of the customizing is to smoothen and simplify customers operations and that way make it more effortless.

H4: That the selection will be modified exactly to suit your needs. What goes a lot, we have a lot of that. Yes, it is important, and it will be used.

H5: Not all people are the same size, and you may not always need all possible options from a system, but we can modify it according to our needs. It is essential to be able to modify the product range and service according to our needs.

H3: University hospitals may have a different need, than in some smaller hospitals for different instruments. That the company should also see what is being done where and what kind of need there is for those things. Even though there are new and great instrumentations, it is not necessarily everywhere the best thing.

Couple of respondents also hoped that company could make customized instruments for them that would fulfil their individual needs. It was also hoped that company's willingness and process for doing that would be easier and more flexible than it is currently.

H1: For example, if I wanted longer instruments, so it would be done quickly. Like in the old days, someone was told by a metal worker to do this and then it is already done.

Evidence-based quality

According to the respondents, it is essential that products meet specific quality requirements. Products must be tested, there must be reliable research evidence that products are high quality, work for the purpose for which they were designed to and that they are safe to use. All the respondents felt that products that are currently available on the market meet the quality require-

ments and are therefore high quality. For the company to be able to offer its products on the Finnish market, specific quality requirements must be met. This is challenging for the new companies that would like to enter the market, since if they lack the required research results that proof the quality of their product, customers do not even consider their products as an option. This is however beneficial for the existing supplier since threat of new entrants is low on the market.

H3: Every time we make a purchase, the products must meet the criteria. At least the ones that are included in the tender contract, that they are high quality. And we do not want to take even in comparison those products, that do not meet those specific specs. There are probably all kinds of in the world and in different circles. I have seen various products in the world that we would not necessarily dare to take in our own use, because there is no such proof of their quality and registration results and such.

H6: We have pretty good product control in Finland, and of course we are a small country, so new copy companies from India have not entered here. And then they always get stuck because they do not have a representative here in the country. They are eliminated. Yes, the companies that operate in Finland are big companies that already have quality requirements, for example, from the American market. Yes, the products meet the quality criteria, so maybe it is more user and hospital-specific, that what you have used to use, or it does not make sense to change, for example, an artificial joint model every few years to the new one.

H5: I do not think the big brands on the market in Finland have any quality differences in the quality of the products. Everything fulfils the task for which they are intended.

Since all the respondents consider that all the products that are currently on the market are high quality and meet the minimum quality requirements, it was noted that differences between companies is made through in quality of the service rather than in quality of the product.

H1: The most important is the product itself and that it works and is of uniform quality and usable. But a good product alone do not get you very far these days. Especially if you are switching from one product to another.

H6: That it is not necessarily just the quality of the product when they all already exceed that minimum criterion. That does not solve which supplier gets chosen.

H2: Well, the service has a lot. That the products are generally good for everyone. But yes, there are huge differences in the quality of the companies' service. After all, it means a lot to us if we get help quickly in problem situations or because we have the

things we need to have on the shelf. And it does not happen in all companies these days and it has a big meaning. It affects our decisions about which implant we use.

Risk reduction

Orthopedics is about treating patients and one extremely essential part of it is that the products are safe to use and that the product-related risks can be minimized. It is essential that the products are high quality and by that minimize the complication that area implant or instrument related. This is closely related to previous value element that the products must meet specific quality requirements and thus be safe to use. However, some of the respondents highlighted that reducing risks is not only about the features and quality of the product, but also about the quality of the service. That customer has to be educated and advised to use the product correctly and that way user related risks can be minimized. There must be clear instructions for the safe use of the products and information on where assistance can be applied at any time of the day, if problems or ambiguities arise.

H5: That there must be certain legal obligations that services and products must fulfil. Everything in medicine is related to minimizing risks, and in procedures, the first two pages tell you when not to use and so on. One of the most important aspects.

H1: Of course, it is important to be able to trust that if you put in a human implant, it is first of all sterile, and it is so that it does not immediately fall apart when the person takes the first step or gets tired. Or so that you can trust that it will last.

Product development

If it is possible to reduce complications, lower the costs or improve usability then the products development was seen essential in terms of value. According to the respondent's answers, the goal of the product development should be to improve patients' treatment results, improve product's properties, make operations more efficient and bring financial savings for the customer. All the respondents felt that product development is an essential value element and in general saw it positively. However, the respondents stated that the product development produced by the company should be something that really benefits the customer and brings value for them.

H2: For example, a new implant is more affordable than the previous one, so it directly affects our result and cost reduction. If the company develops some new product that are more affordable or with which our operations more efficient or there will be fewer complications or something like that.

H5: Orthopedics likes new equipment and new innovations. We eagerly try something new until we realize that there are problems with it. But it is always nice to try new things.

H3: Yes, it is important, new cutting methods are constantly being developed and the products have to develop along with it. And when we get new products, we get new operation methods and smaller incisions and easier solutions, so that is what you value.

Couple of the respondents noted that product development can also be seen negatively. These respondents emphasized, that the goals of product development must be something that really brings value for the customer and products are not developed only because it can be sold as a new and therefore at a higher price. The goal of product development should be to produce products that have properties that genuinely benefit the customer and not just to be a way for the company to ask for a higher price for its products.

H6: A clearly good product, because it is easy to use and that the innovation remains, that it is not replaced constantly by developing something new and different. The same product, just a little more expensive and a bit different. That is what I consider bad quality. But if someone is good and functional, then the product development and usability of the product, that it is faster to install or easier to sterilize or lasts longer and does not fall apart in use. These benefit the customer, but not in the way that company brings the new products all the time, but in a slightly different look and at different price.

Product range

Variety of the products and product range was seen important among the respondents. This is valuable for the customers since they are able to take many different products only from one supplier. This reduces the amount of the companies in the hospital and that way makes operations easier and simpler. It also gives more opportunities for customer to choose which would be the most optimal solution for the patient's treatment. It was also notated that it is not only the range of products but also the range of service is find important. One respondent stated that having only

a one supplier could give them financial benefits by synergy, which means that the prices of the products can be more affordable.

H4: Maybe that product X is a good example that it has a wide selection of different implants. It matters, it is unimaginable to take from company that does not have selection a wide enough.

H3: Actually, yes in both that we like to deal with a company that has the widest service and can get many things from the same, through the same channel. It makes operations easier.

H5: No, we specifically want to go in the other direction. By whose companies we do business with, I do not mean that as little as possible, but that we get as much as possible from the same company. In other words, we get a synergy benefit from the same and probably get the price a little lower because the same company supplies us more rather than some specific plating system.

It was also noted that wide variety may not always be the determinant factor when choosing supplier. Some companies may have products or one individual product that the customer needs and then it does not matter what other products the company has.

H6: That if you think some certain product family, trauma products are one of the typical ones where the breadth of selection can be determinant factor when making purchase decisions. But on the other hand, somewhere else it may not be that important. For example, if I go to a car shop, I will buy that one car. It does not matter what other cars are there for sale. It does not affect the customer's point of view, as long as there is the one car that I want. So, this depends totally on the product or service.

4.2 Service quality

By quality of the service is meant that products and product support is available when needed, representatives are professional and that they are pleasant to work with, communication with company is honest and open and that customers will get education and possibilities for networking.

Product availability

Product availability was definitely the largest single value element that emerged from the data. Essential for the customer was that they can trust that the products that they need are available when they need them. This is about trust and reliability. Respondents emphasized that they want a supplier which takes care that there are products available when they need it and customers do not have to stress about it. In the previous chapter it was noted that customer value that the company can offer them a wide product range and they prefer to acquire as many products from one supplier as possible. At the same time, almost all respondents stated that they are not ready to rely on just one supplier, as they are concerned that if there are supply issues with that supplier, they are not able to treat their patients.

H2: And then this kind of reliability and that supply chain works. You can count on it, that when you need something, you will have it.

H4: It is important that the service is high quality, we always get products, and they are replenished. So that the surgery is never cancelled, because there are not some products available.

H3: That we want to be sure that there is always a product if there is a problem. But this is probably how it would be possible in theory if the prices could be lowered and it is promised that the product is always available and there is a good product and good service, so why not. But not in those places where I have been working myself, so it is not entirely up to one journalist to do the job, precisely because of these reasons.

Not only that the products are available when needed but also a smooth, easy process how to order new products and fast delivery times, was considered to be valuable. Reliability of delivery and availability of products were also seen to have financial benefits for the customer, since time is saved and surgeries do not have to be cancelled for that reason.

H4: Good processes, so time is saved at the same time. We have an implant and we have an someone who immediately orders a new one and that they are available for our use in a couple of days. This is important, it saves time. A good process so it does not waste anyone's extra time.

H1: If someone could come up with a way of how to get that product from the factory to that person, so that everything would go as smoothly as possible, without any hassles, that would certainly be an added value that would be appreciated.

H4: And as a result, if the patient can be operated faster, without having to wait for instrumentation or implants. It will certainly reduce costs as a whole. Yes, the speed of the service and short delivery times will have an effect on that.

Also the logistic, how products are stored and how they are marked and packed was seen as an valuable element regarding availability. When product is needed, it should be easily available, so that no unnecessary time is spend on this process.

H3: If we think from the point of view of the operating room, so in a way that the products and instruments are available as simply as possible. Whether you can influence the logistics. But if you can, then at least that is something you could speed up.

H6: In the sense that the packaging is easily recognizable by appearance, due to errors, or for example, visibility in the warehouse. That there is a system in it. The colour corresponds to the company's logo. It makes for example warehouse logistics easier.

All respondents saw reliability of delivery and product availability so valuable element, that it is the main reason why they do not want to be dependent only on one supplier. One of the respondents felt that one supplier is enough and if major delivery difficulties occur, they could get a replacement product from another supplier.

H2: But if we have had taken everything from that one company, what we would have practically been able to do, because they have such a wide selection. If we had gone to do that, we would have been completely screwed. When they at this point do not get to deliver much of anything. The fact that we have many suppliers somehow protects us from market disruptions.

H5: It does not depend on whether you could take it, you certainly could take it, if there was a company like that could offer it. Yes, it could be taken. Of course, it comes with its own risks if you only take it from one supplier and this one supplier has some kind of delivery difficulties, so there could be problems.

Product support

All the respondents emphasize the importance of the product support. It is about the physical support that the company offers for the customer. How easily support is available, how willing they are to support the customer and does the customer know who to contact when they need help or support. All respondents seem to value the quality and quantity of product support to the extent where it affects whose company's implants the customer ends up using. As with product availability, product support is important in terms of whether the customer trusts the supplier. What was seen essential in this, was that product support must be available when customer needs it. The representatives do not have to be in the hospital at all the time, but when their expertise is really needed, then support should be available.

H6: Yes, product support is very important. For example, in calls for tender, it is often required that there must be a representative in Finland. There must be product support for these regular sales products.

H3: It is not just that a product is sold at a cheap price and then nobody is seen anywhere. Let's commit to the work and to the cooperation that has been promised. That has a huge importance. And it is quite clear that, the cooperation will be done, where that commitment is maintained. If there is another company whose representative is nowhere to be seen and cannot be contacted, maybe it controls quite a lot of the hospital's activities, which products are used and with whom we are working.

H1: The fact that there is product support, even physical support, is extremely important, especially at a stage like this when something is changed, new implants are introduced, without it nothing will come of it. There are examples, that things are not done in that way, and nothing will work with them.

Product support is closely related to product availability which was seen one of the most valuable factors for the customer. Respondents emphasize that they hope that the supplier would actively take care of that product shortages would not even appear, by making sure that there is enough implants and instruments in the customer's stock available. And if there is difficulties in product availability, then the supplier would actively try to find the solution for the customer. Respondents seems to hope that if there is product shortages, customers are informed and actions are made in order to find a solution.

H2: After all, it means a lot to us if we get help quickly in problematic situations or if we do not have the things we need to have on the shelf. And it does not happen in all companies these days and it has a huge importance, and it affects our decisions about which implant we use. If that chain does not work, if we have something from company X, but it is not on our stock, then we will not use it and then when you do not use it, you will not be able to use it the next time either. Or if you cannot get hold of that company's representative, we will have quite a lot of problems. If you cannot get hold of him/her and you have not seen him/her in a year, it will affect what you are interested in using. That yes, it is important for both of us.

H6: If it is for continuous use, an implant that is placed continuously. And the fact that supply interruptions are not considered good. That is where the product support comes in. If there is a force majeure, good product support takes care of the customer. That product is acquired from somewhere or a replacement product is arranged. Yes, it makes a big difference.

Expertise and personality of the representative

The expertise of the representative was one of the original value elements that was on the B2B elements of value pyramid. Respondents brought out that representatives must know their products, what is available and how to use those products. It was noted that representatives do not have to have a surgeons knowledge base for example on anatomy, but they need to understand what they are talking to the customer. Essential was that customers feels that representatives can be trusted. Representatives must be committed, willing to help, flexible and available when needed. According to the respondents, the representatives have an important role for product availability. It was also seen desirable that the representatives know the customer, their organization, and the way they operate. That way they are able to serve the customer by responding precisely to the needs of that customer.

H5: The fact that the representatives know their products, know what is available, know how to use those and have experience of the usage, has a significant impact.

H4: I think it is important to be interested, in all things in life. There are some representatives that you can see right away that they just go there for work or make contact. A year might go by without hearing anything from them, and then you wake up and realize that you could sell something there. So that is not commitment.

H6: Yes, it is really important that the representatives know their products and how they work. That way you can also teach staff to use them. And is well informed what's on the hospitals stock. I think it's really important.

The personality of the representatives was one of the value element's which emerged from the answers of the interviewees. Not only that the representatives know their products and does their job as expected, but also that they are pleasant persons who to work with, was seen valuable according to respondents. All the respondents noted that there are representatives that are more pleasant to work with than others, and that might have effect on which suppliers' products are used. Respondents emphasized that representatives must be easy to work with, appropriate on their manner and pleasant. It was also noted that too pushy and aggressive selling was seen negative.

H5: Well, the quality of the service has a significant effect on that. And it also goes a lot into the personality, what kind of representatives the company has. That there are others, personal chemistry, who is pleasant to do business with.

H2: But even at this moment, there are representatives like that who, I just do not feel like seeing. And it is not just about me, it is the same people who, for some random reason, do not see anyone, because no one of the customers goes out for coffee with them... The company's sales are affected quite a lot by who we cooperate with there.

H4: Not too pushy, but active enough. Expert and friendly, efficient. You don't have to be overly friendly, but appropriate.

Communication

Transparent, open, honest communication was one of the things that was considered valuable according to the respondents. It is about how the representative communicates with the customer but also how company communicates. Respondents seems to hope that they will have appropriate information about the new products and research that concern it. That the company does not only raise up researches which are favourable for them and keep quiet about the ones that do not necessarily support the company's product. Customers seems hope that they will have information about research results in a transparent manner. They hope that company also shares information about things that are not favourable for them, like difficulties in deliveries.

H5: It is important. Especially when implementing new products in to use and of course if there are any special challenges in obtaining or delivering your implants, that information is essential. And of course, if there are new products, hearing about them is also important.

H4: And honesty. There have been companies that, I understand that they bring the good sides of the product and the studies as well, but the few studies where it is positive, but yes, if it is... We always want studies, not just the two that are good, so we kind of stay silent about the ones that do not necessarily support that idea. Information about research in a transparent manner.

Education and networking

Product education was seen essential, what it comes to service quality. Education includes local education at the hospital to all customer groups who deal with the company's products from surgeons to nurses and people working in cleaning and sterilization department. Also, external education events like user meetings, cadaver trainings and third-party congresses were seen valuable. The purpose of the education is to learn how to use the products so that it is safe and that desired end results are achieved. All respondents stated that the education which the company provides is valuable not only because it develops customer's own professional skills, but also because it gives opportunities to network with other colleagues. Networking with colleagues brings opportunities to share information, which lowers the threshold to ask for assistance from colleagues from another hospital if need for that arises.

H6: Well first of all, of course, that the product is used correctly, even in such large units where shift work is done, so all those who use the product will be able to receive appropriate user training.

H3: Yes, it is more and more important these days to have such a wide network in which to operate. And yes, companies also play a big role in organizing various things, educations and for that matter as well as in bringing surgeons together and talking about the same things.

H2: You get to know people who do the same thing, you interact with them a lot, so it kind of expands your skills, you can ask and there will be Whats up-groups and you can send a message saying; how would you do this? Those user meetings are quite similar. Those are useful perhaps for us more experienced surgeons who do not have another experienced colleague next to you who can give support.

Customers hope that companies would continue to create opportunities for education and networking. All the respondents brought out that education offered by companies have a big role in terms of developing their own professional skills, since hospitals have a quite limited number of resources to use in surgeons' education. Respondents seems to hope that companies could also

attend to third party education events more flexible, since those are seen valuable especially for the experienced surgeons.

H5: It is regrettably important in view of the way this further training of surgeons is organized in Finland. Almost no resources have been allocated to them.

H2: I wish that companies would make it possible to participate in international congresses rather than in the company's own education. Especially when you have a little more experience. It is really nice for young surgeons to go to cadaver education somewhere and put an implant to a patient. Good, but maybe for those who have done a little more, let's go to the OTA or AAOS. That would be useful. At the moment, it does not work like that.

4.3 Price

Acceptable price was one of the table stakes in the B2B elements of value pyramid. This means that company must have a certain price to be able to be involved in the business. From the interviews answers it was noticeable that price was also a part of many other value elements that were in the pyramid and therefore its importance cannot be underestimated. Couple of the respondents highlighted, that price is in fact the most important individual value element when choosing a supplier and which company's products are eventually used. However, at the same time all the respondents noted, this it is not quite that simple and that there are many other factors that influence of the choice of which company's products are used and which all have affect to the total cost formation for the customer.

H3: Well, yes, it is very important. It is important that there are decent products that work, and you can trust them. Although I just said that the price is the number one factor, yes, in all purchasing decisions, it is not just the price that makes the choice, it is the features of the product that also make the difference. That it is not just the price. That yes, it is important. A product like that with experience and what is been tested, and today, the fact that there is research evidence for it. And that there is a register of the prostheses. We know then that there is a working product that can be offered to the patient.

All the responded noted that price is linked to the quality of the product in multiple ways. If the quality and usability of the product is poor and you must use several products instead of just one, it can end up being more expensive for the customer than using that one high-quality more expensive product. Couple of the responded also recognized that usability and quality of the product

may also affect how much expensive operating room time is spent into the implantation of the product. A poor-quality product can also be the cause of a complication, which can be very expensive for the customer to manage. Thus, quality of the product can have indirect effects on the customer's expenses.

There was some dispersion in the answers in terms of whether it is good in terms of costs that there is a one supplier in the hospital or multiple ones. One responded noted that they strive to acquire as many products as possible from one supplier so that they get a synergy advantage and thus reduced product prices. Couple of respondents however highlighted that it is a good for them to have multiple companies in the hospital and that way get competition to the hospital which also might reduce prices.

It was noted from the respondents' answers that also the service that company provides can have indirect impact on customers expenses. If the service level of the company is not as expected and there are no products available when needed or they are expired, can lead to the situation where the whole operation must be cancelled, which is extremely expensive for the customer. Also, education and product support influences customers total costs in terms of how smoothly the operation proceeds. If customers are well educated and know how to use the product, then it is not only safe to use the products and possibility of the complications is lower, but it also may reduce the time required for the surgery.

All the responders thought that products that are currently on the market are good quality. One responded noted that for this reason, price can be a very good indicator when choosing a supplier. Customers cannot get bad products anymore. However, all the respondents highlighted that is not just the price that is important and valuable for them and for example quality of the service has quite great importance to them also.

H6: Of course, the price is also important. Since the quality criteria are met in all of them, the price is a very good selection criterion. By improving quality, a higher price cannot be justified because the minimum or essential quality criterion is already met by everyone. And then again cheap, some copy product from somewhere, so it is not worth it. It will be expensive in the long run. For example, in joint replacement, there have been these disasters that came through the register, and we have learned from them that it is safest to use products that have a long track record and experience. If you always choose the cheapest, it can backfire on you.

Customers seem to value more about a good overall price-quality ratio, rather than just cheap price. Price is important for the customers and if the products between companies are same quality, then the price can be the determining factor when choosing a supplier. None of the respondents were ready to compromise the quality of the service for a cheap price.

4.4 The company

Health care professionals' mission is to produce health benefits for patients. According to respondents, for that reason they want a stable, reliable company that they can trust, and which operates in responsible manner. Therefore, stability and corporate responsibility were two value elements which were perceived valuable by the respondents.

Stability

Stability of the company was one of the original value elements that was on the pyramid. All of the respondents felt that this something that is valuable and meaningful for them. In respondents answers this emerged in very different ways. In general, it was about having a supplier that can provide products and service that both can be considered good in quality. It was also pointed out by one of the respondents, that the company's stability is also important in terms of how company can handle possible product-related complaints and compensations. According to the respondents, customers want a supplier that they can trust, and which has a long history and experience in the industry. Half of the respondents also pointed out that for that reason there are doubts to take new start-up company as a supplier, since you cannot be sure how the future of the company looks like and how they can meet the service level expected by customers.

H2: That is why this has a huge meaning. And then in terms of this kind of trust, it is important. If you have been a supplier for years and you have seen that it works well and they have cooperated with us for a long time, then you trust it more easily.

H1: I prefer to choose a stable, well-known company.

H6: Since long contracts are usually made, the fact that the company does not, for example, change personnel all the time and is not in a crisis, but is able to operate and serve the customer evenly and with high quality. If the company itself is in crisis, for example due to bad personnel policy or poor profitability, that it cannot afford to

keep personnel, then in a way product support and all other parts of the service for that product are minimized. Yes, it does matter.

Corporate responsibility

Corporate responsibility is a broad concept, and, in this research, it is formed from many different value elements of the pyramid. According to respondents answers customers seems to value suppliers which operations are transparent, ethical, and non-corrupted. That product development and products are tested, so that it is not done in unethical way and that environmental issues have been considered. Environmental aspects of responsibility were highlighted in some of the respondents' answers, and it was noted the importance of these issues has grown over the past few years. Concretely it was hoped that companies would pay attention how implants are packed and how they can be recycled.

One of the respondents emphasized, that nowadays companies have clearly paid more attention to the responsibility of their operations and a clear improvement has taken place. One responded however pointed out that there is still a room for improvement and hoped that companies would create possibilities together with the customers to do charity work and thus improves social responsibility.

H5: Certainly, it has improved, and it is important nowadays. In earlier times, there was room for improvement. That too has changed in ten years, it has become healthy, and it is important that the operation is transparent.

H6: And then indeed this financial non-corruption and transparency. I see it important.

It was also noted by one responded, that companies must fulfil these certain standards related to responsibility even to be able to offer their products in tenders. For that reason, companies that do not take these things into consideration cannot even enter the market. Corporate responsibility thus can be considered as a minimum requirement for the company to operate in the market. Couple of the responded felt that they do not even think about such things because they assume that these issues have been taking into account in the company's operations.

Couple of the responded felt that social responsibility of the company is built as a part of the all the other elements of value that were presented in the pyramid and thus is not a separate value element. That the basis of everything the company and its customers do, is to create the benefit of society through the promotion of health.

H3: Of course, it is important to take care of society, you cannot deny that. But maybe it comes through other factors. I cannot say anything specific about that, when that thing works and these other things work, does it automatically lead to these things that are hoped for. That is right, that's exactly what I meant, that when these different areas that we just went through work, it will automatically lead to this happening and society will benefit from this and public health will improve, and patients will heal faster

H4: Well, that social responsibility is the most important of all. I somehow believe that we are a part of society, so everyone's actions have an impact on society and thus on everyone's well-being, that no one can only think about business and only about their own benefit. I believe that such a good mood or sharing a good thing or even material only produces good, in return. So, it is important that I hate that kind of selfish thinking. No matter how you make the business, the brand must be much better when it is not just, that it has some kind of social responsibility, it is nevertheless a part of society.

5 Conclusions

Aim for this research was to find out what orthopedic medical technology customers value. Results of this research are congruent with Reichheld (1994) thought that value for customers is driven by a full array of features (Reichheld, 1994, 15). The result of this qualitative research brought out four upper categories which contained a total of fourteen different value elements. In the interviews these elements of value were emphasized in different ways, but all the elements which were found by this research, were value creating and meaningful for most of the respondents.

The findings in this study are congruent with Almquists, Cleghorns and Sherers (2018) notion that optimized prices, meeting specifications, complying with regulations and following ethical practises are table stakes that company must fullfill to be able to offer it's products to customers (Almquist et al, 2018, 5). This was an assumption for this research from the beginning since in order to be able offer products in Finnish market, company must meet these minimum requirements. Also the respondents answers confirmed this assumption and stated that the

market is very well established and it is very difficult for new entrants to offer their products and enter the market.

One of the most significant findings of this research was that what the orthopedic medical technology customers truly value are quite simple and basic things, which can be divided into three different main points. These are presented in Figure 9. and explained in more detail below.



Figure 9. Totality of value at orthopedic medical technology

Customers seem to value features that ease their work. Value elements from the research that support this notion are; products support, which is available when they need it. Representatives' expertise and willingness to help the customer. Education that enables customers' professional development and the correct and safe use of products. Product availability and that products are easy to use, work well for the purpose for which they were designed to and can be modified according to customers' individual needs. Products and services that a company provides should simplify customers' operations and help customers to do their work in the best possible way.

Reliability was one of the features that rose up from respondents' answers in many forms and can be considered to be a part of several value elements that emerged from the analysis. It was notable from all of the respondents' answers that customers value a company that they can trust. Part of this is that there are competent representatives which are willing to give the support and service according to customers' individual needs. Customers expect that the company that they collaborate with is stable and operates responsibly. They assume that the company will take care

of that there is products available when they need it and if there is some problems with the products or with the deliveries, the company communicates about them openly and tries actively to find a solution for the problem. Customers value product development that is based on research, which gives them confidence to use the product and trust that it is riskless and safe for the patient.

Results of this research support Anderson and Narus's (1998, 53) thought that customer's whose costs are driven by what they purchase are always looking ways to increase their profit. For this reason, respondents highlighted that the price is one of the most valuable factor for them. This was particularly due to the reason that customers feel that all the products which are on the market can be considered good in quality. Therefore, it is mandatory to point out to the customer's the total costs of the product, instead the acquisition price. Result of this research show that customer's value products that are easy and safe to use, service that makes sure that they have products available when needed and education and support that instructs them to use and handle the products safely and effectively. All of these different elements can save customers time, reduce errors and prevent complications and by that have an impact on the customer's total costs.

Elements of value that did not emerge from the representatives responds were inspirational values like hope and vision. Respondents felt that these were too declamatory and did not add value for them. They seem to value things that are concrete and which facilitate their daily activities like product support and usability of the products. Also design and aesthetics was one of the things that for most of the respondents was not meaningful and value creating. Even though it was noted for some of the respondents, that for example beautiful colors in implants are pleasant to watch. But usability and durability was felt to be more valuable features for the product, than its color or overall aesthetics.

Respondents highlighted on their answers that they value product development and innovations but noted that the outcome should be something which truly brings value to the customer and is not only something that is new and for which the company can ask for higher price. This result supports Vargo and Lusch's value in use- view, that value is created in customer's own process and companies can only make value propositions that are more compelling than its competitors. For

this reason it is critical companies know what customers truly value and create value propositions accordingly, whether it is product or service.

6 Discussion

Purpose of this research was to find out what customers in orthopedic medical technology value. Objective of the analysis was to bring out the essential from the data and make reliable interpretations and conclusion from it (Puusa & Juuti, 2020, 175). Reliability and validity are central to the practice of science, and evaluation it, is a part of good research practice. Through research, the researcher seeks to discover new things and communicate the discovery. (Puusa & Juuti, 2011, 153.)

According to Puusa (2020) with the help of qualitative research it is rather challenging to draw conclusions that are scientifically sustainable. It requires that research design and questions are carefully thought out, data is collected through appropriate method and that there is capacity to perform the analyses and make results and conclusions about it (Puusa & Juuti, 2020, 145.) This chapter discusses the issues that may have affect the reliability and ethics of this research. Also possible recommendations for the further research and management are suggested.

6.1 Reliability

Reliability refers reproducibility of measurement results. There are some issues that make the reliability for qualitative research challenging. There is no direct formula for determining significance, no means of accurately replicating a researcher's analytical thinking, and no straightforward test that can ensure the reliability of the research. There are no direct instructions on how the analysis should be done. So, therefore Patton's advice is to: "Do your very best with your full intellect to fairly represent the data and communicate what the data reveal given the purpose of the study". (Patton, 2002, p. 433; Puusa & Juuti, 2020, 145.)

Eriksson and Kovalainen (2008) advice to adopt alternative but common criteria for qualitative research. They emphasize that the use of classic evaluating criteria (validity, reliability and generalizability) in qualitative research has many limitations. Therefore, they advise to trustworthiness as

an evaluation criterion for qualitative research. It contains four different aspects that assess qualitative research; credibility, transferability, dependability, and confirmability (Eriksson & Kovalainen, 2008, 294.)

Credibility

Credibility stands on how accurate and precise your results are in relation to the data. Can another researcher have relatively same interpretations and conclusion from the data that was obtained. Objectivity would be ideal in conducting research, where researcher's own assumptions and actions don't affect into research. However, as Puusa and Juuti (2011) state, this is practically impossible. (Puusa & Juuti 2011, 153). What researcher knows about the subject beforehand and has affect for the acquisition of material and for the analysis. What the research is interested in, what kind of observation she or he makes, have therefore impact on research (Puusa & Juuti, 2020, 143; 147). Since I work in this industry, I obviously had own perceptions and thoughts about the subject and what the final results of this research might be. However, I think it was eventually a good thing that I was aware, even from the beginning, that my own views can have an impact on the results. That way I was able to take that better into account and thus try to avoid it. For that reason, I believe that my own perspectives did not have that huge effect on the data collection, analysis, interpretation and the results of this research. I was also genuinely interested about the subject and hearing what interviewees think and thought about it and that openness supports the generation of reliable results despite what my own preconceptions might have been.

Transferability

Transferability means that the results of the study are completely or even partially in line with previous studies. Results and conclusion on this research are compatible and support previous research that has been made. These have been brought up in the conclusions chapter. (Eriksson & Kovalainen, 2008, 294.) But must take into account, that the B2B value pyramid was used as a framework for the interviews. In some respects, it was a good support for the interviews and helped the interviewee see what all value can be and for that reason supported the validity of this research, since it helped both the researcher and the interviewee to stay on a topic, understand what is being researched and that way answer the research question. On the other hand, the pyramid also perhaps brought out elements of value that the interviewees would not necessarily have

mentioned without it and that way supported previous knowledge of the subject. B2B elements of value pyramid guided the interview and gave a frame to it, and maybe for that reason, certain value elements were highlighted in the analyses more clearly than they might otherwise have. However, the aim of this research was not to draw scientifically valid interpretations and conclusions about the subject, but mainly to highlight what elements bring value to the customers. This was accomplished with this research and the reliability of the research is increased by the fact that the results are in line with previous results.

The time when the research was done, can have effect on the results of the research. Diachronic reliability refers on permanence of measurements and observations at different times. This is problematic on qualitative research since rarely it deals with immutable objects. (Saaranen-Kauppanen & Puusniekka, 2006, Reliabiliteetti). This can also have affected to the results of this research. During the time when the data was collected the medical technology industry and the whole world suffered from raw material shortages, logistic problems etc. because of the covid-19 Pandemic crisis and the war in Ukraine that started in February 2022. Since all the companies in the industry have had more or less problems with product deliveries, could have influenced the fact that value elements that concern deliveries and product availability stand out strongly in the interviews and therefore in the results of the analysis.

Dependability

Dependability refers that the researcher has a responsibility to offer a reader information that proves that the research process has been logical traceable and documented (Eriksson & Kovalainen, 2008, 294). Since qualitative research often lives and shapes during the whole process, it is essential for the reliability and readability of the research to describe the whole research process, increased understanding of the topic and the basis of the presented interpretations. According to Puusa and Juuti (2011), it is difficult to describe the course of the process, but it is important to be systematic, transparent, justifiable, and verifiable. Reliable and systematic analysis is the only way that interpretations can be considered effective. The description of the method that has been used, and its traceability, serve as a map for the reader to check how the research has been done. (Puusa & Juuti, 2011, 51;116.)

The evaluation of the research was done during the whole process and not just at the end of the research. Eriksson and Kovalainen (2008) emphasize that it is essential for the good quality of the research. (Eriksson & Kovalainen, 2008, 290.) The reliability of a qualitative research is enhanced by the researcher's precise description on how the research have been conducted. This applies to all the different phases of the research. (Hirsjärvi et al., 2009, 232.) It was essential for the reliability of this study that all phases of the study were accurately reported, explanation on why certain conclusions were made and the impact of those decisions were evaluated. By being accurate and consistent of all the phases of the research was a way to prove that this research is high quality and the information that it produced by can be consider reliable.

Conformability

The idea conformability is that the data and the results obtained from it are not only a product of the imagination. Data, analysis, results and interpretations are easily understandable. According to Hirsjärvi et al. 2009, the reliability of the research can be improved by a detailed explanation of how the research was carried out (Hirsjärvi et al., 2009, 232). In this research this was obtained by precisely describing the different phases of the analysis and how the data was classified. Results of this research was illustrated with direct quotations from the material and the reasons for the interpretations and conclusions have been opened in detail. Also, different figures and tables help the reader to observe the different phases of the research and its results.

6.2 Ethicality

When talking about research ethics, it means how you carry out the ethic in your work. Minimum goal is that nobody is actually or potentially harmed because of your work. (Maylor & Blackmon, 2005, 280.) Ethical commitment guides good research. It is part of the reliability of research and thus ethics is also part of the quality of research. In practice, this means, for example, that the research plan is of high quality, the research design is suitable for solving the research problem and that the reporting has been done carefully. (Tuomi & Sarajärvi, 2018, 149–150.) There are ethical issues involved in every research and in every step of the research (Hirsjärvi & Hurme, 2001, 19). The Finnish National Board on Research Integrity (TENK), together with the Finnish scientific community, has prepared a research ethics guide on good scientific practice and the handling of suspicions of infringement. This guide emphasizes honesty, diligence, and accuracy in research work,

recording and presenting results and evaluating the results themselves. The research has used ethically sustainable methods of data acquisition, research, and evaluation, and that the work of other researchers is treated with respect and reference is made to their work in an appropriate manner. (Hyvä tieteellinen käytäntö, 2012.)

6.3 Recommendations for the management and further research

Objective for this research was to find out what orthopedic medical technology customers value. Through this research, fourteen different value elements were identified. According to the result of the analyses a succession for the orthopedic medical technology companies is that they should focus on providing a total service entity and focus on total value formation for the customer to be able improve its competitiveness. Results of this research suggest that companies in medical technology should take care that they meet table stakes that are a minimum requirement for the company to be able to even provide its products to customers and make sure that basic core values are in place before trying to add new value propositions. When these core values and minimum requirement are met then the company can start to focus on adding value to the customer by more personal and subjective value propositions.

Since all the respondents agreed that generally speaking, all of the products that are on the market are good quality, but between companies there is differences in service level that company offers for the customer. For this reason, by adopting Grönroos's service perspective as a strategy and focusing on creating a total service entity for the customer, might be a source for competitive advantage for the company. By having an outside-in approach in managing and viewing all of the operations in company according to this service perspective, might bring the company a possibility on creating value propositions that truly add value to the customer and enables that the price is not to the determining factor when choosing a supplier.

Since this research only focused on finding out what customers value, a recommendation for the further research would be to follow the Almquist's, Cleghorns and Sherer's (2018) original value element's analysis but use value elements that were found in this research as a base for the analysis. The first phase would be benchmark. By performing a quantitative survey for the customers would be possible to see how company's products and services perform relative on competitors offering. The fourteen elements found in this research would work as a base for this survey. The

second phase would be to talk with the customers and that way understand their experience more precisely. After these two phases, a company should determine, which are the core elements that they should focus first and present best ideas for the customers and revise the value propositions before further development. The final stage would be to reevaluate how these value propositions stack up against competitors and perform a follow-up survey for the customers where you ensure that initiatives that you were planning to deliver are valuable for the customer. (Almquist et. al., 2018, 10.)

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Appendices

Appendix 1 . The B2B elements of value (Almquist, Cleghorn & Sherer, 2018, 6)

INSPIRATIONAL VALUE

PURPOSE



INDIVIDUAL VALUE

CAREER

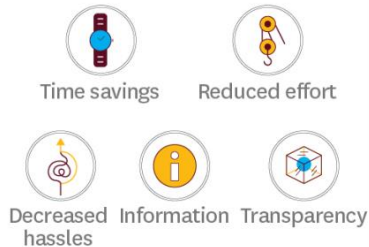


PERSONAL

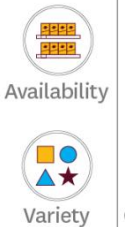


EASE OF DOING BUSINESS VALUE

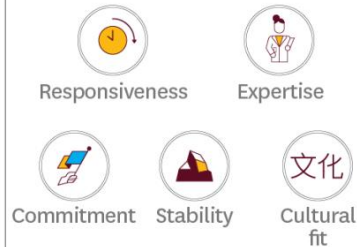
PRODUCTIVITY



ACCESS



RELATIONSHIP



OPERATIONAL

STRATEGIC

FUNCTIONAL VALUE

ECONOMIC



PERFORMANCE



TABLE STAKES

