



Department of Business

Master Thesis in Business Administration with an Emphasis on
International Business and Marketing, 15 credits
Spring Semester 2019

The necessary evil

The challenges of manufacturer's transformation process towards servitization in the B2B context

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Keywords Servitization, Service Provision, Service Development, Internal Organizational design, Challenges

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Background The servitization process of capital goods manufacturing is a contemporary issue and indicates that organizations are transforming from offering only products and goods to providing combinations of augmented services with their products.

Purpose The purpose of this thesis is to contribute to the body of knowledge on servitization and the challenges that manufacturers face in the transformation process towards servitization in a B2B context.

Method Through conducting a single- case study on a capital goods manufacturing organization in Sweden and interviewing six directors within the organization we have developed and intensified the current literature covering the challenges that encounter the organizations within this process.

Findings/conclusions Challenge facing a servitized manufacturer business is how to handle service offering customization to suit the final customers ' distinctive requirements. To guarantee adequate delivery, it is essential to have standardized control processes to guarantee consistency and quality of service offerings.

Acknowledgement

Foremost, we would like to express our sincere gratitude to our supervisor Jens Hultman Professor in Business Administration in Kristianstad University for the continuous support of our research, for his patience, motivation, enthusiasm, and immense knowledge.

We would also like to thank Timurs Umans Associate Professor (Docent) in Corporate Governance Department of Business Studies for his support and patient.

Finally, we must express our very profound gratitude to our families for providing us with unflinching support and continuous encouragement throughout our years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them.

We would also like to thank Larsson Company for their hospitality, this research would not be completed without their help.

Last but not the least we like to express our sincere gratitude to Bromölla municipality for the great support to our research.

Thank you

Kristianstad

June 07, 2019

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1. Introduction

“In order to maintain their competitive advantage, it is time for manufacturers to start transforming themselves into service businesses” (Grönroos, 2015, p 463).

Traditionally, industrial manufacturing firms have been worked in a product-oriented business context, without any regard to the significance of integrating the services (Grönroos, 2015). Notwithstanding, with the aggressive daily growth of the competition, an increasing number of the organizations try to differentiate themselves by raising the services' percentage in the offering, leading to well-documented transforming into the service-dominant logic from a goods-dominant logic in the markets (Antioco et al. 2008; Neu and Brown 2008; Sawhney, Balasubramanian, and Krishnan 2004; Vargo and Lusch 2004; Wise and Baumgartner 1999 as cited in Ulaga, W., & Reinartz, 2018). Moreover, Ford, Gadde, Håkansson and Snehota (2011) claimed that organizations could distinguish themselves by stressing their problem-solving capabilities.

Servitization is the process of creating value by adding services to the products. This topic has been studied over the years by several scholars as they try to find the relationship between product improvement and market competition. The business has ever since been the major part of the financial world. There is the creation of new products, the introduction of new market regions and competition in the market products has not become any less; thus, the need to improve the value of products.

Like any other project, servitization needs a specific, measurable, achievable, realistic and time-bound (SMART) goal. To thrive with servitization, a manufacturer necessitates new managerial ideologies, edifices, and procedures for their manufacture and support operations (Tim et al., 2008). There are likely many challenges that may occur during this process. The challenges may bring down the project and lead it to not achieving the target in the set time range. Some authors such as Tim and Howard have supported that there are structures that can be followed to ensure that the servitization process is a success. The main objective of a manufacturer is to ensure that their clients are satisfied with the services that they provide. In a manufacturing company, production and service delivery are in different departments, but they go hand in hand. (Brax, 2005). In the B2B, value re-creation and the coproduction of products and services have become a major proposition and concept (Kohtamakin, 2016). Research that has been done in the recent years have come to a realisation that value is a co-created interaction among actors which implies that the consumer or rather the beneficiary is always a part of the co-

creation of the products. Actors may not be able to take part in the creation of products, but they play an important role in offering decisions and propositions for the creator (Vargo, et al., 2016). The customer who is the intended recipient of the product creation should take an active part in the co-creation of the product.

Product Co-creation should be done with the help of frequent consumer reviews and consumer interaction. The words in the servitization majorly involve the prefix "co". This is because in the many of the procedures that are involved in this process are a result of original innovation. The product is code signed and co-developed. The actors go through a whole process of co-learning and co-innovation. It is essential that when all these processes are done, the consumer is involved. In B2B all the factors that are involved are very important and may be considered traditional, but they prove to be effective in ensuring that the process of servitization is successful and all parties that relate to the product are put in action. Researcher of the B2B exchange paid more attention to the co-production of services and the co-creation of values (Kohtamakin, 2016).

While some researchers describe value as the quality of the product, some others describe it as the amount that customers are willing to pay. Kohtamakin has however given a clear definition of value about co-creation. He says that there is a need to distinguish the interactive and the collaborative nature of product co-production. It is important to know that both economic and social values are involved in the exchange of values. All the factors such as social factors, physical factors and cognitive factors should be put in action when researching co-production of a product. In the economic exchange, all the stakeholders involved in the servitization are made a part of the process. A social exchange leads to a legal and mutual binding between the parties that are involved in the servitization. The process of maintaining a customer relationship may be dynamic and sometimes even a bit strenuous, but the need for good feedback from the consumer is the main priority of any business.

Business-to-business marketing has a long history; it can be traced to the 1890s (Hadjikhani, et al., 2013). The marketing strategy has however developed tremendously in recent years. Research done in 2010 shows that B2B transactions used to cover about 42% of US revenues (Lilien, 2016). Most of the business resorted to the business-to-consumer B2C transactions, and this brought a significant drop to the number of transactions that still use B2B transactions. There has been a need for the audience to understand the difference between B2B and B2C transactions independently to make a clear source of demand whether it is driven by consumer

choice, emotions, or preference. In the B2B transaction, the buyer-seller relationship is very prominent as compared to the B2C. When it comes to decision making, studies have shown that the transactions in B2B, the buyer is more likely to make the buying decision and the buying decision is regarded as unique compared to the B2C (Cortez, et al., 2017).

Customer Relationship Management is essential in any business field. In the current economic world, every business thrives on keeping their relationship with their customers very knit since they are the main reason for the existence of production. Customer dependence and trust is a part of the B2B transaction especially when it comes to marketing of the product. Actors should be very vigilant in maintaining customer relationship as this has been seen to lead to a significant improvement in the business-to-customer transactions (Chang, et al., 2012). Here, the customer is given a chance to form a remarkable relationship with the business and direct feedback on the product can be received from the customer. When customers are close to the business and have the freedom to tell the benefit of the product that is presented to them, the business gets an insight of knowledge that is not only beneficial to them but also the improvement and recreation of the product. The fact the B2B transactions have been in the financial world for such a long time calls for the need to find out the factors that may pause as an issue in servitization about business-to-business transactions.

1.1 Problematization

Grönroos (2015) highlights the great effect of servitization in a B2B context to attain and sustain a competitive advantage. The servitization described as *“a transforming journey- it involves manufacturing firms improving the abilities they require to implement services and solution that enhance their traditional product offering”* (Neely, 2008).

Several manufacturing organizations regard the services as a *“necessary evil”* (Lele, 1997). However, these organizations felt necessary to respond to markets requirements while remaining competitive. Thus, this has allowed them to recognize value by adding services to their products or completely shifting into a service-oriented business model (Baines et al., 2009; Kindström, 2010). Vandermerwe and Rada (1988) described this conversion from the traditional manufacturing of goods to the service-oriented business as servitization. Servitization involves a bundle of customer-focused combinations of services and goods, self-service, and support, instead of only selling products. (ibid).

Most B2B companies have traditionally been product-oriented companies, and these companies are presently involved in the process of servitization by providing services that are in line with the procedures of their clients (Raddats and Easingwood, 2010). In the B2B conditions, organisations seek competitive benefits through service views that represent various service-increased offers. While some of the companies are attempting to create their service offering, other companies already have after-sales facilities that are aimed at gaining product reliability (Gebauer, 2007). According to Ulaga and Reinartz (2011), the companies implementing outsourcing services in the B2B context, the supplier must take responsibility and risk for the operational procedures of the clients for such services.

In addition, servitization does not imply a complete shift from a product-dominant logic to a service-dominant logic in order to become a service supplier (Mathieu, 2001; Raddats and Burton, 2011). Ulaga and Reinartz (2011) emphasize the significance of providing hybrids as a way of enhancing the positioning of a manufacturer by mixing products and services in an offering. The significance of moving into a service-dominant logic or service-oriented company is not what the providers have added, but rather the reason for developing a model as a reaction to the increasing competition for products and increasing client requirements (Kindström, 2010). According to Smith and Maull (2014), in order to attain service-led development (Ulaga and Loveland, 2014), clients need to incorporate into the process of value development that is one of the major conversion focuses. Vandermerwe and Rada (1988) claim that the services offered are the result of the customer-driven demand. Instead of participating in mass production of products, servitization places significance on starting and maintaining customer interactions, as well as offering customer-specific and blended alternatives (Baines et al., 2009).

The most significant reasons covered in the researchs can be categorized into marketing reasons (Baines et al., 2009) and economic, strategic (competitive benefit) for shifting from goods-oriented companies to a service-oriented company or hybrid products.

The competitive advantage in the B2B context is very crucial, and this element has made companies looking for distinct approaches, According to Baines et al. (2009), in the context of the B2B, the strategies for distinguishing between companies relied on three variables: product, low prices or high technology, and these strategic factors became more difficult for organisations to retain. Consequently, the benefits of servitization provide companies with the sustainable competitive advantage obtained from services because these advantages are more difficult to follow, less visible and extremely dependent on labor (Gebauer and Fleisch, 2007).

Hou and Neely (2013) pointed out that servitization allows companies to use service components to distinguish their manufacturing products, thus offering a competitive advantage. Companies will be able to generate a benefit by blending services with their products to block the competition and get clients to enter their business (Vandermerwe and Rada, 1988). To conclude, the significance of services that come as companies could use it to create a competitive advantage by distinguishing a manufactured offer from their rivals.

Servitization has been established and is currently a mode of transaction that is being used by very many businesses. The need to create better products that can keep the manufacturer in the market and at a time please the customer needs. The transition of products has been rampant in the market, and this is because the consumer taste to the products changes on a daily basis. According to Vargo and Lusch, 2008 the state of servitization has led to two corresponding torrents. They have been grouped as Type I servitization and Type II servitization. The first type is mostly inclined towards the manufacturer's side and the thoughts that are linked to the products that the manufacturers produce. This type of servitization considers the services that are provided as a mere addition to the actual product that is put in the market. In the second type, the servitization is regarded as customer drove, the products are re-created due to the service that the customer demands or requires. Type II servitization works hard to ensure that both the services and products that are released to the market are meant to appease the customer; this means that Type II entails a customer dominated concept (Green, et al., 2017). It is essential that the customer needs are met; this only means that the co-creation of products by the manufacturer has to put in place all the factors that are required in service production.

Manufacturer's transformation process has a strong relationship with the B2B transaction process; thus, the need to fully understand the concept of the B2B market transaction. The business-to-business, B2B, transaction method has been in the field for a very long time. To get a clear understanding of the B2B transaction, one should give a perspective to the whole context of business. In 1899, Wanamaker made sure to integrate the whole business community that is manufacturers, suppliers and consumers altogether; he championed for them to have a balance between buyers and sellers regardless of the profit made. He understood that the customer is an essence in the business market and thus the need to involve them in the decision that is made. He made people aware that customer satisfaction should come first before the maximum profit. Though Wanamaker had a very brilliant idea that has was implemented in the following years, in his era many businesses did not follow to the idea (Cortez, 2017).

In modern marketing, the B2B form of the business transaction came into play from Melvin T. Copeland when he researched Industrial marketing and Marketing problems. Marketing has developed over the years, and we had pre-marketing before 1900, field foundation between 1900 and 1920, field shaping between 1920 and 1950, paradigm shift between 1950 and 1980, and finally shift intensification between 1980 to the present day. In the early years, the business focus was majorly in the traditional perspective. Research in these years mostly had a view on a business that is dominated by the market. The market economy experienced the transition B2B which was viewed as a transaction that was more integrative in terms of involving the manufacturers, the service delivery and the consumer/customer. In the third leg of economic development, the customer was considered as a passive entity, and thus the hard-selling mechanisms did not look much into customer satisfaction it was more inclined to the maximisation of profit (Cortez, 2017). This act of having customers as the lesser part of the market community continued up to 1962. The B2B transaction marketing was introduced later in the 1970s and they The B2B transaction continued to grow, and this was due to the constant support especially in the academic world where many scholars researched the B2B marketing. Several movements also promoted the academic interaction and an overall view of the B2B; it led to an introduction of the "new industrial revolution". With the development of the B2B marketing criteria, there are several sectors of this marketing procedure that needed to be looked at; these procedures are; B2B innovation, B2B buying behaviour and B2B customer analytics. These three issues form the main basis in the B2B transactions. The issues mainly look into the development of a more fashionable or approachable business transaction model.

Since the development of the B2B transaction, many organisations have worked hard to integrate this system into their daily business transactions. Integrating this transaction into the system needs high intellect on the subject to ensure that they have a good insight into the transaction method. The use of B2B in marketing calls for the reevaluation of products and this is where reconstruction of products comes in. The value of the product is very important since the product should be able to satisfy the need of the customer/consumer. The consumer need is essential in the B2B transaction. This marketing strategy, however, can undergo various challenges. Some challenges have been researched by scholars in the past one of them being the lack of intellectual input. This challenge cannot be a problem entirely since it has been noted that in the past some other business has prospered through B2B marketing without the academic input.

A good example is the ability of Sweden to use the B2B marketing strategy to sell their products to the world without any academic knowledge of the transaction method; the Swedish economy developed from this transaction. Another challenge that has been brought forward by other scholars is the introduction of the B2C domain to the market (Lilien, 2016). In the B2C the consumer has a more open opinion on the product purchase compared to the B2B; this makes the B2B a little bit rigid in its domain.

1.1.1 Summary of Problematization

Servitization has widely spread and recognized by manufacturers as an innovating process which aims at moving the selling products to an integrated offering in product-service which delivers value in use. The western manufactures advocate the strategy to face-up the challenges which they go through in their competition processes and economic costs. However, the process of delivering these offerings to the marketplace helps in finding all the decoupled manufacturing products and services. This paper provides a set of series with indicative characteristics, which are useful for servitized manufacture. For instance, the offering product-centric servitized gives the businesses focus and is likely to act as a blend for the transactional operations which are supported by the customer management functions. Moreover, internal structures in the manufacturing industries can be cross-functional to help in planning and to control all the activities which the firm does.

Manufacturer, service providers and customers all form a chain that is very important to the market, and neither can be bypassed. The manufacturers have the challenge of ensuring that the other two functions are kept in line and they do this by ensuring that they provide products and services that will keep their position at the top of the chain meaningful. The manufacturers have been tasked with continually changing their products to give it a new meaning that is acceptable to the general public who are the customer. This research is to ensure that the problems that they face while doing this is put to light and the possible solutions to their challenges are covered.

1.2 Significance of the research

The marketing world has become very competitive, and this means that every stakeholder has to make an effort to maintain or improve their stand in the world. This calls for servitization in the manufacturing business. The co-creation of products, the formation of new marketing strategies and improvement of every sector of the product production. This study aims to find

out the problems that manufacturers face in this process of co-creation of their products. These challenges may range from internal, that is, within the company to the problems that they face when they are faced by the clients that their product is designated to. The study will mostly relate the manufacturer's re-production to the B2B, business-to-business, transaction. This transaction has been in the market economy for a very long time, and it is essential for the manufacturer's business. The research will be able to make a clear relationship between the two major selections, and it will also be able to add some other areas such as B2C, business-to-customer, transactions that are transactions that are relatable to the B2B transaction and still play an important role in the manufacturer's production. This research paper will be able to find possible solutions to the problems that will be identified.

1.3 Research purpose

The purpose of this thesis is to contribute to the body of knowledge on servitization and the challenges that manufacturers face in the transformation process towards servitization in business to business context. The above paper seeks to identify the servitization in the current manufacturer transformation market and its challenges with regards to the B2B transaction process. While the major task in the research is the servitization, the issue of the B2B transaction is to help to find the relationship between the servitization, the current manufacturer transformation market transaction methods and the challenges that may come in to detour the improvement within this relationship. During the analysis, a comparative analysis will be done from different angles, and this will enable us to make a clear distinction in the market relationship between servitization and B2B transactions. The research will look into the various challenges that may face manufacturers and the possible solutions to these problems at the same time these problems will be related to the B2B transaction method (Green, et al., 2017).

1.4 Research Question

To meet our purpose, we are going to answer the following question. The research question for this thesis is:

What are the challenges facing manufacturers in the transformation process towards servitization in business to business context?

2. Theoretical method

It is not easy to describe the reality of the connection between theory and research. A number of issues are at risk here, however, two in specific stand out. To begin with, there is concern about what type of theory is spoken about. Furthermore, the purpose of collecting data is to either test or build theories (Bryman & Bell, 2015). This chapter introduces the approach and method of the research of the study and then provides and warrants the theories used.

2.1 Research approach

Building a theoretical framework, which argues for the development of a conceptual definition, based on uncertainty and inconsistent structural logics should suggest deduction (Thurén, 2007; Bryman & Bell, 2015; Alvehus, 2013). The deductive approach involves theoretical evaluation, which means theories and assumptions are formulated and tested in studies (Saunders et al., 2009). Furthermore, a sheer deductive approach could hamper the study because the aim of the research involves a qualitative method and therefore reveals the results to personal interpretation (Alvehus, 2013). On the other side, the inductive approach involves the growth of notions through the collection of information, i.e. the production of empirical information contributes to the theory construction (Saunders et al., 2009). Thus, the purely inductive approach is also inappropriate, since it is extremely difficult to find a point of departure without a knowledge and understanding the theories (Alvehus, 2013). Another alternative, abduction, is an amalgam of study methods, which are both inductive and deductive. Abductive approach could also be used to reduce the danger of both approaches by mixing them (Saunders et al., 2009; Patel and Davidson, 2003). A mixture of a deductive and inductive approach should, therefore, be appropriate, as the study's aim is to explore the challenges that manufacturers face in the transformation process towards servitization in a business-to-business context. That is mean, the objective implies an abductive approach since the theoretical framework and the region of inquiry arose from prior studies but meant to explore rather than explain (Bryman & Bell, 2015; Alvehus, 2013).

2.2 Research method

The methodology of the research is described as the procedure comprising data collection, evaluation and interpretation suggested by scientists for their research (Creswell, 2014). The quantitative and qualitative are the two most frequently used methods, in which the selection of the method should be linked to the study's objective (Denscombe, 2009). The word what as

mentioned in the research question should imply preferable a qualitative method (Alvehus, 2013). The research that seeks exploration is suitable for qualitative research methods since quantitative research methods seek to explain logical relationships between factors (Bryman & Bell, 2015; Alvehus, 2013). The difference between the two methods is ambiguous and the use of the difference is slightly discussed (Bryman & Bell, 2015). However, this study is considered qualitative according to Bryman and Bell (2015), who argue that qualitative research involves the formation of theory rather than experimentation.

2.3 Choice of theory

The theoretical framework in this dissertation is based on Business-to-Business marketing theory and customer relationship management theory, followed by an explanation of the term and phenomenon Servitization in the light of the two previous theories. B2B marketing theory provides an insight into the commonality of the market-constituent actors' activities (Vargo & Lusch, 2011). In addition, the field of this thesis is in the B2B context. Customer relationship management theory assists B2B firms in managing their interactions with current and potential customers and in better understanding the requirements of their customers. Due to the complicated nature of the customer relationship, understanding is crucial in the B2B context. This leads to Servitization which is the process of creating value by adding services to the products.

3. Literature Review

This chapter will provide fundamental knowledge of the theories used in this research; business-to-business marketing theory and customer relationship management theory. In addition, a theoretical presentation of the terms "servitization" will be included and the components of service production will be presented with a focus on the challenges within each stage in order to create an integrated image and allow the reader to better understand the study settings.

3.1 Business-to-business marketing theory

The Business-to-Business (B2B) transaction is a method of operation in the marketing field that establishes a temporal association between the advancement of theory and context of business (Cortex, 2017). Wannamaker was among the first to argue about B2B marketing even though the idea was way ahead of their period (Hadjikhani et al., 2013). He explained that in a harmonious and sustainable business system, producers and customers should keep close contact. The retailers who are also regarded as the in-between of the producers and the customers should also be kept very close to both the producer and the customers. B2B in the 20th century was brought to light by Melvin T. Copeland when he was working through his works on Marketing problems and Industrial marketing cases.

The process of marketing is described in five stages namely; a pre-marketing stage which is the period before the 1900s, the second stage is the field foundation stage which was within the range of the year 1900 to 1920. The third stage was the field shaping stage, which was from the year 1920 to 1950. The fourth stage was the paradigm shift stage, which was from the year 1950 to 1980. The fifth and final stage is the shift intensification stage, which began in 1980 and is still in action up to date (Cortez, 2017). Before 1980, the business process was more traditional, and as many researchers stated, it was more on the profitability side than customer satisfaction. The research papers in those years mostly concentrated on market homogeneity, decision-making rationality, differentiation of low products, and nominal prices (Hadjikhani et al., 2013). The essential advantage of the economic view is the simplicity of quantification of cost, revenue and margin when compared to the concepts of behaviour such as emotions, preference, loyalties, desires, and social interactions (Cortex, 2017).

Transition to B2B marketing is considered to be behavioural since it all depends on the customer needs and reaction towards a product. Researchers such as Tyrin and Alderson made

discussions that were meant to give an understanding on the interaction of firms as organized behaviour systems, which allows market heterogeneity and development of information for networks and goods consumption (Hadjikhani et al., 2013). In the field shaping stage, the mode of selling was mostly referred to as the hard-selling stage, where the customer was not given much priority over product manufacturing. The customer was a passive figure in the supplier profit chain. The development of the B2B business transaction in the early days was mostly not given a full coverage in literature by some researchers such as Hakansson, et al., 1995; this is due to the fact that they did not cover the periods of the political wars such as the Great War (1914-1918), the Great Depression (1929 – 1939) and the World war II (1929 – 1939).

The B2B transactions were covered within a short time frame that could cover the time when the revolutions were not happening and the time that fit to change the global economic uncertainty and the social mistrust (Cortez, 2017). The cold war II which started in 1947 and ended in 1962 also brought a phase that dragged down the process of economic growth this meant that the literature on the development of the B2B transaction method was also put to a standstill. It is during this time; however, that there was a convention at the Harvard Business School that was dedicated to the development of the B2B business transaction. The B2B transaction continued to develop after the years that followed the cold war II. In the years that followed in 1970, many other conferences were held to improve the economic status of the global market. Critics that rose from the contrary to the economic dominion on a firm's strategy gave room for the development of the B2B marketing transaction (Cortez, 2017). The B2B marketing got to hold in the marketing in the years between 1900 and 2000. It became one of the leading fields in the marketing world (LaPlaca, et al., 2009).

Eleven findings were found by LaPlaca that are references to the B2B marketing transaction. The eleven results were; mounting corporate expectations and the stakes that are getting higher, global market importance, distributive power of technology, transitioning of B2B marketing transaction to get themselves in line with the rapid change in the market, construction of sturdier boundaries between marketing and other roles, building a more strategic B2B marketing transaction, extraction and leveraging customer and market acquaintance, making a relationship between market's contribution and business performance, making a personal level relationship with customers, finding the mix between centralized and decentralized markets and finding and manipulating marketing talent and noting competitions and how to deal with them (Cortez, 2017).

Manipulating marketing talent and noting market competition can be classified into three perspectives. The three aspects are B2B innovation, B2B buying behaviour, and B2B customer analytics. The growth of the B2B market in organizations depends on the right configuration and the amount of knowledge on the topic. The process of making a transition involving assets and inputs need a wide range of expertise that an organization that needs maintaining strong B2B marketing has to have (Cortez, 2017). During the B2B marketing transaction, the supplier should be able to keep standards and reasonable measures within the policies that have been provided by the manufacturer. This enables both parties to build a relationship that will ensure the strong continuity of the business; it also gives motivation to either party (Jap, et al., 2000). These standards and measures should be inclusive of clear ethics that will cover the way a supplier can handle customers.

3.2 Customer Relationship Management

Given the fact that servitization highly considers customer opinions on a product, it is therefore easy to craft the existing products to fit the needs of the customer. Customers have, however, been put into three categories, and each type has a different impact on the manufacturer. Lightfoot and Baines identified these customer group in 2014. They are namely: "do it themselves" customers- these customers need are for essential services, "do it with them" customers- these customers is in need of intermediate services and lastly "do it for them" customers- they are the customers who are in needs of the product and accompaniment, they need the services that come with the product. The last group of customers is more interested in the product and its performance (Baines, et al., 2014).

Treacy and Mattysens suggested the kind of approach that should be used by the manufacturer to satisfy the needs of all the categories of customers. The first idea is making a differentiation based on the innovation of a product, and its features- the type is referred to as product leadership. The second way is making a differentiation based on the change of services, and the relationship created with customers- this strategy is known as customer intimacy. The last approach is where the manufacturer makes a differentiation based on the excellence portrayed by the operations, and the appropriate value- this type of strategy is often referred to as the operational excellence strategy (Rabetinoa et al., 2017).

Many companies which look forward to maintaining a constant relationship with its customers ensure that they work very hard in keeping the customer intimacy and at the same time they work hard to ensure that their product standards are upheld (Kaplan et al., 2000). Literature has

given us the technique that a company uses to deliver the expected value proposition to each of the customer groups named above. The first technique is to ensure that the companies' activities are centralized. The company must ensure that the manufacturing of products can be integrated flawlessly with the offering of services. The two processes must be dealt with in such a way that they course inflexibility, and they are profitable (Baines, et al., 2009). The manufacturing companies are very productive when they consider the provision of reliable services and good concurrently. The products and services should be cost-effective and should be able to attract new customers; this will ensure that the company has a steady income. The other essential nature of marketing that the companies should put in place is making sure that they understand both the current needs of the customer and similarly their future needs. This will create steady growth and ensures that they do not face extreme economic challenges when the customers need to change abruptly (Rabetinoa, et al., 2017)

The way that the suppliers relate to the customers creates the attitude of the customer towards the manufacturer. This is a clear indication that the manufacturers must ensure that their suppliers maintain a good relationship with their customers (Lages, 2008). Well planned strategies help all the components of a transaction successful; it makes it possible for the manufacturer to serve their customers without much trouble and they get motivated with the transactions they do (Jap, et al., 2000). There is a need to create trust among the involved parties that are the manufacturer, the supplier, and the customer. Each party should be willing to depend on the other party and believe in the actions that they take (Lages, 2008). In the building of long-term relationships, which is essential in the business set up, it is crucial that the parties involved maintain trust. A research carried out by Palmatier et al., 2005 indicated that belief is a significant part of the performance of an organization.

The importance of trust in a company is seen when there is a perceived risk. During this time, the company is put through a test. Depending on the nature of trust that exists, the company can be able to face the risk without any blames to the next party or it could crumble down as a result of little or no trust on the associated party. Perceived risk in business holds much weight in the current business world. In the earlier years of business when the customer was a passive component of the manufacturer decision, there was no need of creation of trust with the customer in the current B2B marketing, building trust with the customer means securing the relationship that exists between the customer and the manufacturer. A strong relationship with the customer is what leads to having successful decision-making strategies since the

manufacturers can get direct open opinions from their customers on the type of product and services that they produce (Lages, 2008).

There is a need for commitment from the manufacturer, the supplier, and the customer. Committing is the urge to have a stable relationship (Lages, 2008). To keep a relationship steady, all parties must play their designated jobs with a lot of dedication. The manufacturer must ensure that the supplier never runs out of the products; they need to ensure that the products meet the standard requirements. Commitment in an organization can be described in 3 ways namely; effective which is the attachment to an organization, continued commitment which is the intended cost of leaving an organization the last reference of responsibility is the normative commitment which is referred to as the expected obligation to keep a relationship with an organization (Lages, 2008). The most critical of the three responsibilities are the affective commitment, which makes the customer maintain a secure attachment to the manufacturer's products and the supplier. It enhances long-lasting relationships in an organization (Roberts et al., 2003).

There is a need for the manufacturer, supplier, and customer to have cooperation. When the three groups work together in a good understanding, the probability of getting a satisfactory profit is very high compared to when they work independently. The three parties should feel the aspect of relationship satisfaction. When services are provided to a customer, their reaction towards the product after years of using it is what will determine their level of achievement; this brings in manufacturers role. The manufacturer should be able to ensure that the product maintains its standards at all costs. When there is a steady assurance to the customer on the nature of the product that is offered to them, they become satisfied with the product and consequently have a relationship satisfaction (Roberts et al., 2003).

The coproduction of products by manufacturers has a significant impact on the economic state of the global market. There is a need for a clear understanding of the concept of servitization. The customers play a significant role in this topic and are to be given the needed attention and priority. Many manufacturers have developed the servitization process when co-producing products and the products are co-produced to fit the customer needs according to the feedback that is received during the business to business marketing, B2B, transaction.

3.3 Servitization

Servitization is a process that has been used by manufacturing companies for years. Many studies have been done on the co-production of products and services. Rada and Vander Merwe did the first study that was done on servitization in 1988. When talking about servitization, there is a need to understand the definition of the term; the term servitization comes from two words, that is, product and service. The word product is well known to the manufacturers, and they are aware of the requirements that are needed to meet product requirement. The second-word service has a great involvement of the customer. It is mainly used to the other functions that are not products.

A research carried out by Baines, 2009 indicates that the process of servitization has developed over the years, and many companies and manufacturers have opted for the improvement of products. Many manufacturers, Baines states, have decided for servitization to ensure that they remain in the competition chain by making sure that the customers are happy with the products they produce. In the past, companies had the notion of existing in either the product or the service sector; this, however, changed when companies started offering both products and services (Baines, 2009). In most papers, servitization is only discussed when about the manufacturing of products and giving of services. Researchers who did documents such as this include, Brax, 2005 and Davis et al., 2006a.

In this century, it is not a surprise to find a manufacturing company providing services. It means that the concept of servitization is widely spread in the market. Companies have, therefore, put into account all strategies that are required to ensure that they use the servitization process and hold their positions in the market. Servitization is very considerate on customer needs. It ensures that customers not only get the products but also get a very detailed insight into the product (Davis et al., 2004). There has been a shift from customers being given products for their consumption and use, to product delivery depending on the like or taste of the customer. The number of types of servitization differs from one type to another. Researchers have identified viable applications in line with “product service continuum” (Oliva, et al., 2003; Gebauer, et al., 2005; Neu, et al., 2005; Gebauer et al., 2008). In this concept, it was a traditional system where companies rarely had the chance to offer services. All that they did was to manufacture products and release them to the market for customer purchase. The companies, however, realized that there was importance in making the customers aware of the type of product that is dispatched to them. It was to give the company a proper insight on what improvements should

be done to their products. With this change, many companies started to move towards the direction of product-service delivery.

Reference to servitization meant three words; finance, strategy, and marketing. These are the three groups of factors that encourage a company to pursue servitization. Every company exists in the business field for financial reasons. All companies are in search of profit, thus the constant inquiry on financial status. For companies to ensure that they receive a steady flow of profit, they need to get accustomed to the new marketing methods, and in this case, one of the ways is servitization. When a company does not follow the latest techniques, it becomes straightforward for it to lag in the business chain (Baines, 2009). Other than the profit margin, there is also income stability. It was noted that there could be one or two orders of great value than a new product on sale (Baines, 2009). It acted as a motivation for companies to major on having a product-service form of business. It was also noted that several companies had made great progress with the product service form of marketing. These companies include; Siemens, IBM, Hewlett Packard, and GE. The companies got a large amount of revenue from providing services even though their sales rate had reduced.

An example of the importance of servitization is when there a well-crafted aeroplane is made; the aircraft may not be able to bring in any income if the services that are provided within the aircraft are not of the expected standards (Ward, et al., 2005). The financial state of a company dictates the rate of investment and purchase. When the financial state is stable, then the company can make a constant acquisition of goods, and the investment into the company can be of great value that can see to a good profit in the company. A low and unstable economy, however, keeps the company at a standstill and makes it lag in the market (Brax, 2005).

Companies work with strategies that are well crafted. Plans are what makes one company different from another. It is what makes it possible for a company to get the upper hand in the competitive market. Olivia and Kallenberg, 2003 state that the market competition that is gained through the market is very successful since service provision as compared to product production is tough to imitate thus the ability of a company to have a unique form of market ownership. Manufacturing companies have always tried to introduce new commodities to the market that makes them stand out, but after a while, with the help of technology and other factors, other companies find it very easy to imitate the product. Services, on the other hand, are arduous to imitate since every company can have its unique way of providing services. In the B2B

transaction, customers are mostly referred to as service demanding. In most cases, services double the amount of profit that is brought in by-products (Rada, et al., 2003).

Servitization, just like any other process, has its advantages and its disadvantages. These disadvantages are the challenges that accompany the adaptation of the servitization process. Manufacturing of products is always a constant and repetitive process that has to undergo a series of already set programs. Service delivery, on the other hand, has a unique set of design depending on the nature of service that is required. Dealing with service operations is very demanding and needs an extensive range of knowledge and skill. It makes it a challenge to the business. Service rendering also requires a lot of time. Time is a quantity that everyone needs to save. Companies do not treasure spending a lot on time on products that may not bring the right amount of income. The business, however, when it comes to rendering services, no matter the amount of time, the customer has to be pleased to ensure that the company does not lose any of its customers and to keep an excellent competitive nature. Very many companies have adopted servitization in daily business transactions. Such companies include GE whose services have led to an increase in their income rates.

A company such as Nokia developed to network provided services and Coca-Cola acquire to a distribution control company. In 2000, Howell described that servitization is a way of providing customers with qualitative results. It allows a manufacturer to produce goods that cater for the customer needs and this makes it possible for the company to keep a steady relationship with the customers. It is essential to note that most of the examples of the companies that have developed servitization are large companies or rather the multinational companies.

With regard to adoption of servitization, the research that was carried out by Coyne in 1989 says that the approval of the service system should be dealt with by the use of hard business decisions that are able to input a healthy attitude that can be used to develop products while at the same time rendering optimum services (Baines, 2009). The paper also states that the opinion of the customer is what determines the series of actions that are to be taken to ensure that the services provided to the customer go hand in hand with the products that the manufacturer has made. Operating a product-service business can sometimes be risky since it poses a threat of interfering with the organization abilities. It was a statement that was deduced by Sawhney, et al., 2004.

Previous research states that organizational transformation is the same as that of corporate design. Some small case studies have drawn lessons from the practices of companies that are

successful. Such studies include Davies, 2004, and Miller et al., 2004. These studies also create a significant notion of companies making people in the service industry in the company to be efficient and effective. This is to be done by ensuring that measures have been put in place to encourage empowering of the service industry (Baines et al., 2009). The process of servitization is not an easy task and requires that the manufacturer acquires several skills for it. (Baines, 2009). The requirements include a good set of principles, a physical structure, and SMART processes.

Research done in the past shows that manufacturing companies' main focus was on the ability to get more profit. Profit was what defined a company (Rabetinoa, et al., 2017). Companies reported high-profit margins, stable income, and revenues. The productivity strategy was aiming at high productivity over optimized operations and internal procedures, which were short-term. In the process of allocating resources from low productive products to services, there are specific and crucial factors that must be looked into.

The manufacturer should be able to put up a team that has the adequate knowledge of the servitization process; the unit must be able to strategize well and know how to allocate resources appropriately (Huikkola et al., 2016). The strategy of growth can also be classified into two sets. One is the average revenues and the second being long term revenues. The company should have these strategies such that they can attract customers who are new to their products and services. The second step after attracting new customers is finding a strategy to keep them and make them loyal to the company. Keeping customers' loyalty involves a constant change in the product, and this brings in long-term revenues (Rabetinoa, et al., 2017). Having an average income and long-term revenue in the company can lead to a balance in the economic status of a company.

There has also been an increasing research quantity in the concept of the production of goods and services. The combination is one way of ensuring that the business maintains a steady income flow while at the same time, ensuring that they can make their customers happy (Reinartz, et al., 2011). A research carried out by Palmetier, 2008 shows a derivation of how manufacturers who produced products only gained a great amount of income by adding the service offering category to their organization. The service provider makes the relationship between customer, the supplier and the manufacturer strong such that the manufacturer can get information on their product quality directly from the customer (Palmetier, et al., 2008). The

two functions that are service production and product production can survive independent of each other. It is, however, more beneficial that the two functions correlate in an organization.

The correlation between the services and products makes an organization stand out in a competitive market. The production and reproduction of goods must put into consideration the needs of the customer since the customers are the drive to the development of a product (Reinartz, 2011). Manufacturers should also find a way to make their products and services unique to maintain their customer relationship by getting unique resources to complete their production. Resources as a state on its own do not give an organization the competitive advantage; it is upon the organization to find a way that they can use to make their resources stand out in the market (Reinartz, et al., 2011). When in search of the type of resource to put in place an organization should look at the type of resources that the other competitive organizations have thus made their unique resources. The unique resources should be implemented with product production (Reinartz et al., 2011).

As a summary of the above, many researchers who researched the issue servitization in the business world together with those who studied the Business-to-Business, B2B, marketing transaction method have made it easy for us to understand the very origin of the two concepts. Servitization and B2B marketing go hand in hand in the current market. The research put down on paper by the researchers in the past creates a precise chronology on the view of Servitization from the time before the introduction of B2B transaction to the current state where it is rare to find a manufacturing company that does not offer services to the customers.

3.4 Service Production

To capture a more extensive collection of challenges, three significant streams have been researched and integrated into the literature on servitization challenges. Servitization is faced by three important streams, which include service development, internal organization design, and service provision. To manage any servitized company, there three streams should be considered since they are essential. The theoretical framework of this thesis referred to as the concept of service production which will focus on the challenges into three streams. In figure 1, it comprises of the visualization of service component for company

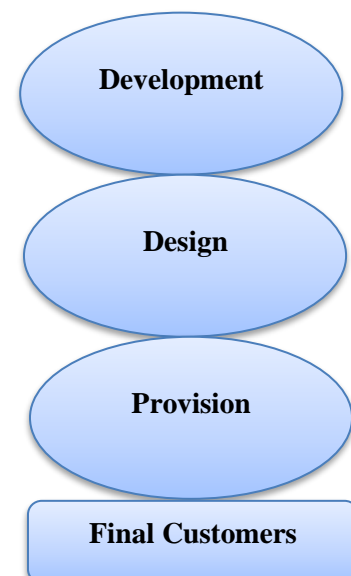


Figure 1: Components of Service Production

transformations towards servitization and how these three streams are related. At the bottom of the figure, shows the point of contact between the organization and the final customer. Moreover, at the centre shows the internal design that builds the basis of services productions from development to delivery. The order of the parts, however, is not of excellent significance, but rather the figure is to give a guide to the rest of this thesis. The three components are affected by the service development process, according to Kindström and Kowalkowski (2009) while the internal organization design is illustrated by Gebauer et al. (2010a,b) as well as Neu and Brown (2005;2008). In every component, we shall highlight the parts that form challenges and an explanation of the importance of each part of the production process.

3.4.1 Service development

Service development is the first challenge that faces servitization and thus has a significant influence the thesis and also the entire stem framework from the model of the "New Service Development Process" (Kindström & Kowalkowski, 2009). For a company to develop its services successfully, they must undergo different stages in service development, which in turn contains various important activities accompanied by challenges that need to be effectively managed. For successful service development, there should be a collaboration of several functions, which includes, intra organizational elements, additional cross functions, and coordination than product development (Kindström & Kowalkowski, 2009).

As Service development is a continuous process, it contains four stages, which include; market sensing, development, sales, and delivery (Kindström & Kowalkowski, 2009). The stages are discussed separately to give a clear sense of reasoning in the entire thesis of the framework. In both marketing and development stages, they are conducted in house, and therefore they are categorized under service development component. The design of the service organization, in turn, generates an effect on the contact between service provision and development.

3.4.2 Internal organization Design

Internal organization is the second stream that draws further challenges in servitization. The foundation of service from production to delivery is dependent and built upon the internal organization design. The main challenge faced in internal organization design results from the combination of goods and services (Shah et al., 2006; Neu & Brown, 2005; 2008; Gebauer et al., 2010a,b). The manufacture companies should find importance in this dimension of service production that creates a transformation towards servitization when the organization design

supports the needs of both service production and goods. Therefore, internal organization design has three different aspects, which include corporate human resource management, organization structure, and culture (Gebauer et al., 2010a,b).

3.4.3 Service provision

All servitized companies emphasize more on their sales and delivering stages those companies that sell goods. This is because all their services are intangible, and the idea of the value that is created on them is particularly important when the services are sold (Kindström & Kowalkowski, 2009). For that reason, service provision can be said to be formed from two parts that are delivered and sales, which will mark the last theoretical stream to depend on when creating our theoretical framework.

Manufacturing companies are faced with the three component challenges which may either create a transformation towards servitization or not. According to our research thesis, the three component challenges may not have a full application on the type of company that we are going to investigate. Consequently, the study will help to create understanding and form a more inclusive group of challenges through analyzing how challenges facing manufacture companies are impacted when a manufacturer is performing company transformation towards servitization. The following section will be a presentation of typical challenges that face companies which are transforming towards servitization, categorization of challenges through the three components of service production, and lastly, identifying challenges in this literature review through visualization together with the challenges identified by Kowalkowski et al. (2011) under the specific component.

3.5 Challenges of Servitization

The following section shows the categorization of challenges that companies face when transforming towards servitization under their specific components of service production.

3.5.1 Challenges of Service Development

3.5.1.1 Challenges of Market Sensing

Investigation of the possibilities of service provision is an important aspect to consider before developing any services. This aspect is referred to as market sensing, which entails careful scanning of the external and internal environment, installed based, customers, and competitors (Kindström & Kowalkowski, 2009). For a company to maintain the long and short run

competitive environment, it should establish its business service through two different approaches (Fischer et al., 2010). First is the exploitation, which is a way of improving short term performance and profits where its activities are linked to the existing products and processes (Fischer et al., 2010). The second is an exploration approach which entails the ways of finding new offerings, maintaining more concentration on long term profits, performance, and new markets (March, 1999). The two approaches are also used in developing service business for servitized companies (Fischer et al., 2010). In contrary, the approaches are found to be challenging as they lack to sense the market opportunities for companies (Kindström & Kowalkowski, 2009). Secondly, it is evident that many companies miss out their potential revenue due to lack of management of present service portfolio in a structured way according to Kindström & Kowalkowski (2009) and also a provision of free services to their customers.

3.5.1.2 Challenges of the Service Development Process

Regardless of manufacturing companies having well-outlined service development process according to Kindström (2010); most companies face a challenge when receiving funding for their projects and commitments from other organizations (Kindström & Kowalkowski, 2009). The authors also describe that there is a need to conduct innovation to adapt to the needs of manufacturing companies by involving the customers and the final user in the product design process. In the provision of services products, constant and quick feedback is essential compared to goods (Kindström & Kowalkowski, 2009). Additionally, the often standardization of development process with classes and gates causes unsuitable development of services. However, innovations must be included in the sales and delivery systems of services (Kindström, 2010). The challenge in the production of the service rises when designing the service portfolio, but in turn, it ensures economies of scale provision (Oliva & Kallenberg, 2003; Reinartz & Ulaga, 2008).

Conversely, designing service platform can be flexible enough to fit the different context of customers and combining it with standardization and rear office. The flexibility can be compared to permit reconfiguration resources that cater to customer needs, and also they only require slight modification to fit different customer profiles. For flexibility to be supported, communication channels and mechanisms must be established in an organization which at times emerges to be challenging (Antonacopoulou & Konstantinou, 2008). Efficient service delivery can be achieved when there are a standardized service process and control mechanism, which

also promote flexibility that the company can adapt to suit their customer's preferences (Reinartz & Ulaga, 2008).

3.5.2 Challenges of Internal Organization Design

3.5.2.1 Challenges of Service Culture

Organization culture is made up of attitudes, beliefs, experiences, and values depending on the type of organization. These valuable resources are not easily substitutable nor cannot be faultlessly imitable (Barney, 1991). The values of a particular company are determined by how the services are impacted. Thus servitized companies find a challenge in coming up with a service orientation that will incorporate culture (Gebauer et al., 2010a). Though the incorporation is not easily done, since the servitized companies are required to shift from cultural and organizational state to goods- dominated business logic where both goods and services are combined (Mathieu, 2001; Gebauer et al., 2005).

However, having an influential manufacturing culture may lead to internal resistances, according to Martinez et al. (2010), which are against new service strategies (Gebauer et al., 2009). In the same case, an organization that has adopted both goods and services strategies have two types of cultures which are challenging to combine (Schein, 2004; Gebauer et al., 2009).

3.5.2.2 Challenges of deciding the structure of the service organization

The degree of organization uniqueness is determined by extending at which the service business is set up to acquire profit and loss responsibly as a separate business. (Gebauer et al., 2010a). Also, the most significant challenges manufacturing companies face is when deciding the structure of the service organization, which is based on how to develop both goods and service in a concurrent manner (Kindström, 2010). As a result, this shows how the decision on how to properly structure a service origination creates a challenge for the companies which have upheld servitization.

According to Oliva & Kallenberg (2003), through the creation of a separate business unit for services with loss and profit responsibility, it has resulted in coming up with a well-organized business structure that helps the organization to ensure that the customers facing personnel have acquired service development know how (Kindström, 2010). The author also adds and says that customer retention and satisfaction emerges when companies create separate business units for internal delivery. Secondly, to achieve a successful production, higher level of integration of

business unit should be considered according to Neu & Brown (2005; 2008) through combining organization efforts according to Kindström (2010) which is contrary to Oliva and Kallenberg' (2003) view. They also argue that a problem may be developed when trying to separate goods and service in accessing required intra-firm, capabilities. Lastly, organization structure can be identified as a hybrid solution which focuses on integration rather than separation (Shah et al., 2006). The hybrid solution acts as a mix between Oliva & Kallenberg (2003) and Neu and Brown (2005; 2008) approaches, which provides a solution for a flat, less hierarchical organization structure where information can be collected between individual engaged in the organization. Although not all functions are integrated into the organization structure, the hybrid can be used as an option by companies who find it hard to completely adapt horizontal organization structure (Shah et al., 2006). The difference in uniqueness is dependent on the type on services the customer provides (simple services) according to Oliva & Kallenberg (2003) and when organization structure offers more complex service (Neu & Brown, 2005; 2008). Therefore, companies need to choose organization distinctiveness that suits the company and also adapt service orientation so that can provide solution on customer's needs.

3.5.3 Challenges of Service Provision

3.5.3.1 Challenges of Customer Relationship

The main challenge facing manufacturing firms is less customer centralism on service organization compared to goods organizations. Service organizations require a higher degree of customer centration due to the needed social closeness of services. (Shah et al., 2006; Tuli et al., 2007). A customer-centric organization is when the managers and employees have close contact with their customers and spend part of their time with them (Shah et al., 2006). To establish a higher degree of customer involvement one requires establishing a good relationship with the clients. According to the service offerings, for an organization to be proven to have fulfilled its needs to its customers, then it must possess an ability to match the right offerings to an individual requirement which in turn requires a lot of knowledge acquisition regarding their customers and process (Kindström, 2010). In contrary, a challenge may arise when the customer is not able, or willing to provide information that is required which most common problem experienced by manufacturing companies in their provision of services (Martinez et al., 2010; Oliva & Kleinberg, 2003). Although the service organization aims as establishing a strong bond relationship with the customers in the provision of services, the customers are

obligated to provide more profound and more frequent interaction with the providers of service than of those who produce goods (Tuli et al., 2007).

Additional, collaboration and interaction between the customers and suppliers increase the more advanced the services offerings are. Simple services require less service involvement in both manufacture and design, thus deploying more complex services. The complexity of the services determines the final impact incurred on the customer relationship. (Fischer et al., 2010). The closeness of the final customers and the service partner becomes dependent on the performance of someone else.

3.5.3.2 Challenges of Launching Services

Launching of new services is considered to be more multifaceted than the launching of new goods (Kindström, 2010). This is because although the tradition goods manufacturer moves away from its traditional value base, it imposes a change from its traditional positions in the customer's preferences (Kindström, 2010). As a result, this leads to the development of two complex challenges in the manufacturing company on how to visualize their services offering to their customers in comparison to good and how to convince their customer that they provide proficient service like that of goods. Lack of experience of service provision from both the service providers and customers create a complication that makes the customer lack appreciation of quality and value of service (Mittal et al., 1999).

3.5.3.3 Challenges of sales personnel and delivery

Forefront employees should ensure that they develop good relationships with the customers, solve the problems that the customers have and also acquire knowledge through their interrelations with them (Gebauer et al., 2009). Although the reduction of cost of services offered by a business organization acts as a selling point, also it increases the value and productivity of service. Moreover, a challenge may arise when a salesperson is explaining the importance of services to their targeted customers since they are intangible. Hence, there is a need to make business organization services to be tangible as possible since it will make it easier for the final customer to perceive and understand the services in a positive way (Kindström & Kowalkowski, 2009).

The sales force should have the required knowledge when they are selling services, along with goods (Neu & Brown, 2005). Many salesmen have been faced with the challenge of lacking a mindset that can sell the combination of both goods and services and therefore, manufacturing

companies should implement a way in which they can create incentive system which will offer motivation to their sales personnel so that they can be capable of selling the combination of both goods and service (Reinartz & Ulaga, 2008). In this way, the development of appropriate measures and tools to the sales personals is an important strategy to implement (Kindström & Kowalkowski, 2009). Changing values, norms, and the existing mindset is the biggest challenge that is encountered (Kindström & Kowalkowski, 2009).

The sales force should undergo training so that they get the required knowledge on the service features that will help the customers understand the benefits of the services offered (Neu & Brown, 2005). Although the manufacturing companies can come up with right service for their customers also the sales force should act as the supplement of manufactures by effectively communicating to the customers on the benefits of the services (Kindström, 2010).

3.5.3.4 Challenges of pricing and revenues

Pricing tends to be both complex issue and a challenge irrespective of whether the company chooses to sell or deliver their services by themselves. Pricing is always adapted accordingly since the occupation of customer's procedures implies the shift of associated risks towards the service providers (Reinartz & Ulaga, 2008). Consequently, the pricing of services is determinant of the complexity of services.

The adaption of revenue mechanism is essential to consider when one is changing into any service, particularly for advanced services (Kindström, 2010). The suitable mechanism depends on customer maturity while the providers focus on the internal processes of the customers. The maturity of the customers provides reliable information for the suppliers so as they can have a better understanding of the requirements and needs of the customers that need to be catered for. Therefore, this calls for all companies to adjust or rather change the way they approach their market position, encourage more advanced customers partnerships and revenue schemes to meet the customer's needs (Kindström, 2010). For a successful implementation of adequate revenue mechanism, there is a need to have a better understand the internal cost structures since they are different cost structures for services and goods (Kindström, 2010).

3.5.4 Model of the Challenges of Servitization

Figure 2 shows both Kowalkoski et al.'s (2011) challenges; external service provision and service products that are compiled and categorized according to how they have been identified in the whole framework. The resolution of the entire framework is to give guidance on how to

create an interview guide (Appendix B) that helps the case company to collect relevant empirical data. Secondly, it will help in digging deeper in the precise areas of interest without going awry when using a theoretical framework that acts as the base of empirical search. In this way, it will make the empirical collections focused when the company is concentrating on specific interest regarding their study. However, in chapter *, includes the categorization of challenges that are centred on the three components of service production, which have been experienced in our empirical data. Additionally, through analyzing the challenges that the company faces, it will show how the challenges are impacted when accompany is transforming in servitization provision of services.

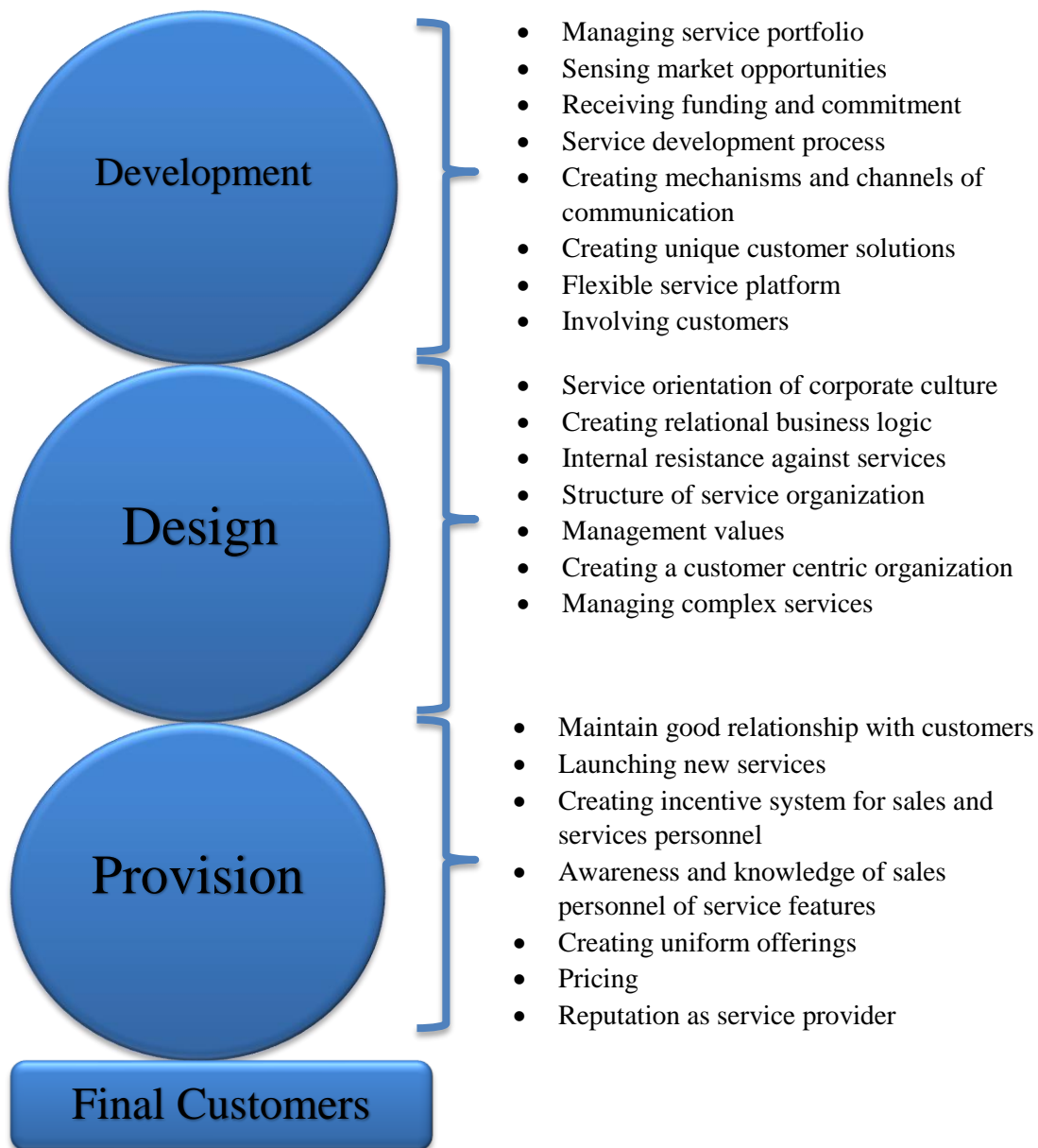


Figure 2 Model of the Challenges of Servitization

4. Methodology

In the following chapter, we will describe how both scientifically and practically we approached this study. First, through a review of existing theories, we explain our approach to practice and how we have developed the research area. Secondly, we describe the collection and analysis of the empirical data. Finally, we discuss how research quality has been guaranteed and how our views on generalization and scientific approach are presented.

4.1 Practical Approach

The purpose of research, according to Bryman and Bell (2015), should be guided by the decision on the respective design and strategy of research.

4.1.1 Qualitative Research Strategy and Case Study Design

We have chosen a qualitative method since the goal of our study is to identify and analyze the challenges faced by the service organization in a manufacturing company. A quantitative procedure would not have provided us with the same deep knowledge of and challenges in the Service Organization (Bryman & Bell, 2015). According to Bryman and Bell (2015), the purpose of our research was to develop additional knowledge regarding the field of why a qualitative study is appropriate. In order to identify the key challenges based on the experiences and perceptions of employees of service organizations throughout the data collection, we believe that qualitative interviews have been suitable for our study.

The research design combines empirical data and conclusions in a logical sequence with the original research question of the study, it is also described by Yin (2018) as the plan for finally making an overall contribution of knowledge from the configuration of the research question. According to Yin (2018) when you are interested in a representative or typical case of a particular phenomenon, a single case study design will be suitable. Due to the limitation in resources and time of this thesis, it was impossible to design a longitudinal plan, and the cross-sectional structure was not suitable because we had the intention to study this phenomenon in depth. Further, since the interesting variables for our study were initially uncertain, a case study was appropriate for us, since it allowed us not to restrict us to only a few variables. This is illustrated by Yin (2018) as applying an intensive design in which a specific problem is investigated in depth, and the most possible relationships (variables) are exposed.

4.2 Literary Review

In order to obtain further insights into servitization and deepen our knowledge of our chosen topic, we started our study with a literary review. Initially, the study was guided by an authentic interest in this field, but over time, the original idea was edited. We suppose that this allowed us not to delimit ourselves to new thoughts ahead of time, while also enabling us to carry out our literature search in a manner that has been sufficient for our research. We were looking forward that this thesis would allow us to determine an appropriate research problem to make a more significant contribution to the field.

We mainly used the website of the University Library to access the Web of Science search engine that was recommended by our supervisor, where we found appropriate and relevant literature. We were able to sort and classify relevant academic journals through using Web of Science depending on how many times they were cited. This gave us the chance to recognize several important researchers and relevant academic journals. We have further scanned the articles that were relevant for finding more sources. By conducting this extensive research of previous research, we have developed a knowledge of what has been studied before and it has been allowed us to find something that had not been studied previously in this specific context. Moreover, the study of previous literature allowed us to find an appropriate company for our case study which enabled us to identify what type of enterprise is typical for such research. Depending on our understanding that some articles dealing with our topic may have been missed, but that use different terminology because our initial literature has been found through keyword searches. Furthermore, some existing literature which has not yet been cited may have been missed.

Yin (2018) explains the development of theory in preparation for a case study is crucial. On one hand, the developed theory supports the researchers as it delineates the data to be collected, on the other hand how the collected data could be analyzed. This literary review allowed us to establish a theoretical framework for service production components within a manufacturing company's service organization that became later the basis for our empirical data analysis.

4.3 Choosing the Case Company

Initially, we set specific criteria that we thought the proper company should meet before contacting any company for our case study:

1. Running in the capital goods manufacturing industry in Sweden;

2. Explicitly declaring that they are providing services nowadays (is servitized);
3. Willingness to engage and allocate time for us as well as provide us with relevant and appropriate information.

With assistance from the municipality of Bromölla, it was agreed with “Larsson™” to conduct our research with them. For a while now, Larsson™ has been servitized and publicly communicates this. They are a big manufacturer of capital products and played a major role in the Swedish industry for a very long time. It was much simpler than we visited the business premises and conducted personal interviews due to the fact that they are Swedish made, which we thought was very important. The company's large size and that they mainly supply goods in a B2B context make Larsson™ suitable for our study since most research has been carried out so far on large companies within B2B provision. This allowed us to construct upon past research. When we read their magazines and annual report and visit their website, we understood that services and solutions become increasingly essential for the organization and we assumed that they should have a lot of knowledge in this field. Larsson™ can help as an example of a servitized manufacturing company in Sweden market and the search will, therefore, enable us to obtain a general comprehension of the phenomenon as their activities and experiences will be insightful about the average experience of similar companies.

4.4 Selecting Interviewees

When we have chosen Larsson as our case company, we had the opportunity to contact them and interview several employees working with service production within the service department. With the help of Bromölla municipality we contacted the Chief Business Development Officer (CBDO) in an email we described the aim of our study and asked if it would be possible for us to interview a few of managers. He subsequently sent us names of six executives within different sections of the organization who would be available for interviews, and also declared himself as prepared to be interviewed. We did not have so much control over which to interview, more than that they operate within the organization. However, we believe that the directors we had the opportunity to interview was very aware of both operations and service strategy and allowed us to acquire a good overview of the organization and the challenges they are encounter. We have felt much greeted through the visits at the company site and were capable to collect a lot of interesting information.

4.5 Conducting the Interviews

4.5.1 Semi-Structured Interviews

Due to a great deal of flexibility it offers, Bryman and Bell (2015) argued that conducting interviews is probably the most widely employed method in qualitative research. In the same line, Yin (2018) explains that the benefits with conducting interviews are that they enable the researchers to concentrate on a particular field of interest while simultaneously allowing for the researchers to gather perceived conclusions. The weaknesses of interviews are that they could be biased due to poorly articulated questions from the researchers or that the interviewees feel like they are unable to convey information about their employer (Yin, 2018).

Through conducting semi-structured interviews, we were seeking to generate detailed and in-depth analyses of our case including the maximum amounts of variables. Through semi-structured interviews, the interviewer uses an interview-guide with particular subjects to be discussed. This approach enables the interviewees to address and express in their own words what they believe to be important regarding specific themes (Bryman & Bell, 2015).

Hence, we believe, that this was the most appropriate method for our research, while at the same time we intended that the interviews take further of a conversational mode and in advance we were not sure of what the interviewees believed to be interesting within our field of research.

The interview guide enabled us to conduct the interviews in a guided and non-structured manner and it can be shown in the Appendix... This was appropriate for our research because we were not sure of what the important information would be in advance, and this enabled us to readily follow up on interviewee's interesting statements or to change the order of questions according to the conversation's natural direction. We used the interview guide that we have created including particular interesting fields and several important areas considering each field as recommended by Yin (2018). During the literary review, we had been able to identify the essential parts of service products that the themes were based upon it: internal organizational design, service provision, and service development. The order of questions was not the most important to us, but instead, we could cover all the themes. Therefore, the interview guide used as a road map, and it allowed us to direct the discussion in the right direction whether we felt we had missed a topic or wanted additional clarifications about a specific issue. Our purpose

was to pose open-ended questions while we could ask the interviewee about actual facts in addition to their individual perceptions about specific matters.

4.5.2 Meeting the interviewees

All of the interviews were conducted face-to-face at the organization site during a two days' time period and they all had a duration of about 30-45 minutes each. We hoped that meeting interviewees in individuals will lower the risk of misunderstanding as we were capable to monitor their tone of voice and body language throughout the interviews and that if there is anything seemed confusing or unclear, we were able to ask follow-up questions. According to Bryman and Bell (2015) this one of the crucial benefits of face-to-face interviews. The details concerning where and when our interviews took place are shown in Table 1 below. Due to the analysis unit in our study is an organization we do not consider the identity of the individuals to be important, however instead, the position and function in which they operate to be of interest.

Interviewee	Location	Date/time	Duration
1- CEO and Sales Director	Company site	2019/05/21, 09:30-10:15	45 min
2- Account Manager	Company site	2019/05/21, 10:30-11:05	35 min
3- Account Manager Spare Part	Company site	2019/05/21, 11:15-11:45	30 min
4- Technical Director	Company site	2019/05/21, 11:50-12:30	40 min
5- Purchasing Director	Company site	2019/05/22, 10:00-10:30	30 min
6- CBDO, Chief Business Development Officer	Company site	2019/05/22, 11:00-11:45	45 min

Table 1: Details of Interviews

4.5.3 Analyzing and Processing the Data

The authors plan during the interview was to collect as much empirical data as possible and to select relevant data during the categorization- and or analysis of the data later on. All of the interviews have been recorded to allow the writers to hear them several times and not to forget or miss something important. The interviews then transcribed into English and categorized

according to every specific theme in the interview guide as soon as possible after all the interviews were conducted.

Therefore, the authors have passed through the data several times before they even started analyzing it. The collected data was deconstructed and then rebuilt in such a manner that the servitization development of the studied company could be displayed first followed by data concerning possible challenges. The reconstructed data is displayed in the findings chapter following the methodology chapter of this thesis. In order to relate and organize the data gathered with the research question, the findings were then evaluated and interpreted by categorizing earlier specified themes taken out of the literature review.

After having categorized the challenges identified by the specific elements that influence service production, the writers begin to compare the challenges and difficulties identified in the literature review with the ones they found through their empirical data collecting. The authors intention was to see if they would be able to recognize all of the challenges that the manufacturers go through during the product transformation process towards servitization that previous researches mention. Moreover, if they could also to identify some challenges had not been discussed previously.

4.6 Quality Criteria

4.6.1 Criticism of the Sources

Criticism was directed toward qualitative research for being highly impressionistic and subjective, this means that the researcher's view greatly influences the study, making it difficult to replicate qualitative research (Bryman & Bell, 2015). The researcher will probably make somewhat subjective interpretations and it is also difficult to make a generalization to a population through qualitative research (Bryman & Bell, 2015). Further, within our theoretical framework, we have utilized solely academic journals and scientific research, which can be regarded as reliable sources. With search engines such as the Web of Science, we have been capable of identifying several of the most cited articles and researchers in this area of research. In order to avoid misinterpretations, we have utilized steadily in our study the primary source. The table (2) show the Ranking of Articles from AJG Ranking System.

Ranking grade	Rating explained
4*	world elite journal (recognized worldwide as exemplars of excellence)
4	top journal (publish the most original and best-execution research)
3	Highly regarded journal (These journals have good submission rates and are very selective in what they publish)
2	well regarded journal (publish original research of an acceptable standard)
1	recognized journal (publish research of a recognized, but more modest standard in their field)

Table (2) Ranking of Articles from AJG Ranking System (Academic Journal Guide, 2018)

For this research, 42 scientific articles have been used by the authors, and 40 of them are from journals rate in the list from AJG (2018). This implies that 2 of the applied articles have not been considered to be qualified as recognized journals. The below table (3) illustrates the ranking of cited journals.

AJG Ranking 2015	Numbers of cited articles	Percentage
4*	2	4,76%
4	8	19,04%
3	16	38,09%
2	10	23,8
1	4	9,55
Not in the AJG list	2	4,76
In total:	42	100

Table 3: Ranking of articles used in this thesis

Out of 42 articles, 95,24% of them have been published in recognized journals. This suggests that the majority of the used articles are of high quality.

Our empirical data has been collected in interviews, and there is no identified reason to distrust the collected information. All of the interviews have been conducted professionally where we had open conversations with the interviewees. Before conducting any interviews, the participants were informed that their identity will remain anonymous, allowing them to converse openly without having to think about having their names published. Therefore, all interviewees have agreed to have their positions referred to. The honesty of the people who

interviewed us was a little surprising and how in some aspects they criticized their own organizations.

4.7 Reliability

According to (Bryman & Bell, 2015) the most important criteria for management and business research are reliability, validity and replication. Both concepts in qualitative research are not as straightforward as in quantitative research, and both can be considered as being highly connected and interlaced. Bryman & Bell (2015) argued that it could be difficult to find general procedures or rules for supporting the quality and that due to that each qualitative research is unique. Moreover, In order to make the reader build his opinion about the validity, reliability and quality of this thesis, in this chapter the thesis process will be described comprehensively to provide the reader with sufficient data.

Moreover, High reliability implies that there are no mistakes in the research, either randomly or unsystematically, Esaiasson et al. (2007) argue that the researchers might achieve greater reliability through the careful and appropriate conduct of their research. Throughout the research, the authors intend to conduct the literature review and collect the empirical data formally and consciously to prevent errors. Nevertheless, all the interviews have been conducted and recorded in the same manner, and the researchers were constantly able to listen to the material repeatedly, thus reduced the risks of errors. By doing this and according to Yin (2018), the reliability of this research is enhanced. Furthermore, in describing the treatment and the analysis of the gathered data, the authors have attempted to be particular in order to enable reliability through transparency. Therefore, the authors of this thesis claim that requirements for the reliability are fulfilled.

4.8 Validity

Bryman and Bell (2015) maintain that validity should not only be regarded as the collection of data but as referring to the entire research process and also as the question of if researchers are studying what they say they study.

Esaiasson et al. (2007) have mentioned three definitions of validity: Congruity between theoretical definitions and empirical indicators, the lack of systematic research error and that the researchers are studying what they claim they should

study. The validity of results is reached through elevated conceptual validity and reliability. "concept validity" and "results validity" are regarded as the search's internal validity, on the other hand, the external validity concept concerns whether the results are generalizable and applicable to other units. The authors of this search claim that this research is highly valid internally as they attempted to implement a standardized interviewing procedure. In addition, all the participants have been provided with the possibility to review the thesis beforehand in order to decrease the risk for mistakes and enhance validity. The risk of false reports of events decreases since the respondents could rectify any misinterpretations on our part. We have therefore attempted to prevent any systemic mistakes. The analysis unit in this research is an organization. However, the sources of data collection are individual interviews. By this way, the researchers were able to collect data about the functioning of the organization, but this information is based on the opinions of the people who have been interviewed and not necessarily on the organization per se. Nonetheless, as many of the participants frequently discussed the same difficulties and challenges, the authors conclude that they are examining what they say they are studying and therefore that they fulfil the terms for "results-validity". The authors assume that the research's external validity is less important as their aim is not to generalize outcomes for all possible cases but to be applicable to the particular form of company they chose to examine. Notwithstanding, even if the outcomes that the authors of this paper acquired is specific for the context and the organization they investigated, and they, consequently, will not be capable to generalize the research results on enterprises outside this particular setting, it is still their belief that the conclusion acts as an instance of the servitization phenomenon and therefore may be generalized to comparable cases. This will be addressed further in the following chapter.

4.9 Scientific Approach and Criteria for Generalization

It is difficult to perform research with no impact from prior knowledge or experiences, and it is almost impossible to achieve real objectivity. The science perspective of this thesis will be provided in this chapter, which has affected the way the research has been done. This thesis is based on Johnson and Duberley's (2000) model and demonstrates trends that suit the best in Figure 2's southwest quadrant. The epistemological continuum takes a subjectivist perspective from an objectivist perspective of epistemology. Having an objective perspective of

epistemology would also imply that this research is entirely objective and that there are truth and accuracy of this studied phenomenon. This is considered impossible, as mentioned above, and therefore this thesis is based on a more subjectivistic perspective of epistemology. This thesis considers trends closer to the subjectivist point of perspective. This thesis describes a true phenomenon, but for this phenomenon, it is not the only explanation. Thus, the evaluation of challenges for a servitized manufacturer is not comprehensive, but there are challenges, and examples of them have been given that can be applied to comparable instances.

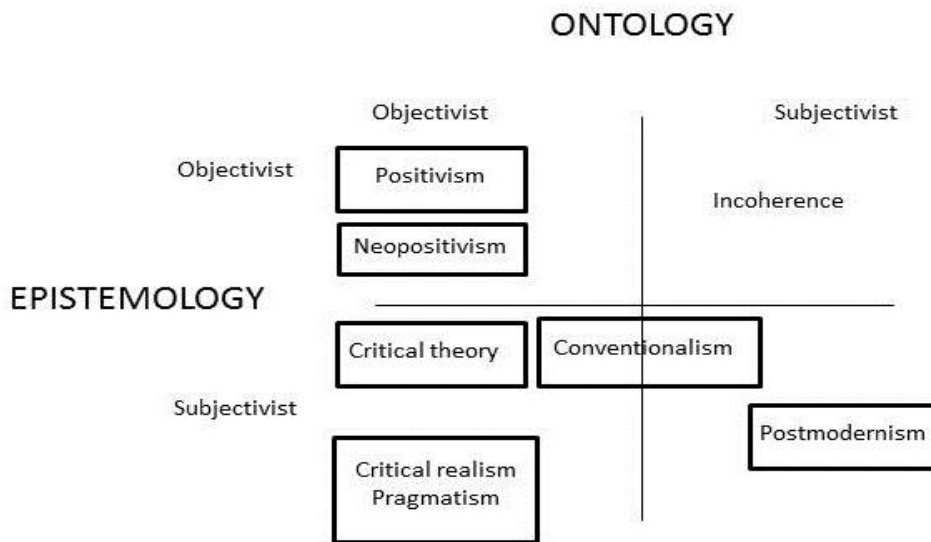


Figure 2: Scientific Perspectives (Johnson & Duberley, 2000, p. 180)

The capital goods manufacturer that chosen as case company for this thesis is not unique. Many producers of capital products are now servitized, and one instance has been investigated in this dissertation. As mentioned above, this is not the only and ultimate interpretation of this phenomenon, but this company's experiences do not vary considerably from other comparable firms and therefore this specific company's experiences can function as a useful instance. While the results of a case study cannot be regarded as statistically representative, Esaiasson et al. (2007) claim that "analytical generalization" is feasible. Therefore, although the case company in this thesis could not represent the entire population of the servitized manufacturer, it is still feasible to point out particular elements that can contribute by inference to saying something appropriate about the entire population and the findings can be applicable to comparable instances.

4.10 Ethical and legal considerations

Initially, an agreement between the interviewer and the organization must be concluded in order to conduct the interviews with them, and it is necessary to provide the organization with all the information the concern the participation. According to Silverman (2011) that the participants also have to be informed about the purpose and the content of the research. The initial communication with the participants of this research was through email. The authors discussed with the Chief Business Development Officer (CBDO), which led him requiring more information via email. Hence, we have sent the first detailed email to the CBDO, who received a brief introduction of the researchers, the university that they represented, the purpose of the research and the description about the number of interviews that were required to conduct, additionally brief position' description about the managers that we intended to interview was included (see appendix *). Furthermore, the CBDO gave a suggestion for a date, time and place where the interviewees have time to participate in this research and the researchers have approved via email. In addition, after the first conference with the CBDO, the interview guide was sent in a separate email, informing participants about the study objective and could allow the interviewee to prepare and explain in detail what they think, making the interviews less aggressive and parasite. Moreover, before each interview, the participants were provided with information about the following:

- Purpose of the research
- Interview duration
- Information and recording utilization
- The collecting data is confidentially processed
- Information and approval about recording the interview

5. The Empirical Findings & Analysis

This section contains only information gathered during the collection of our empirical data. The six interviewees gave us a great deal of data and challenges, which are synthesized from the heart of the organisation and move out to the point of contact with the final clients.

5.1 About Larsson Sweden Company

There was the conduction of the research regarding the challenges of the transformation of the manufacturing firms into the servitization business model in the B2B context. The management of the Larsson Company was interviewed in this process. Larsson Company was formed in the year 1948 and is currently a leading manufacturer in the processing equipment in the starch industry (Larssonsweden, 2019). It is a company which has built up a considerable amount of the bank of skills and expertise which cover the whole processes of different adaptations for various sources of starch. The company has thus resulted in the production of the vast exports across the entire world: the productions which cover the starch industry (Larssonsweden, 2019).

The manufacturing plant of Larsson Company is located in the place where there is a head office in Bromölla Sweden. In the year 2007, Larsson Company opened a trading branch in Guangzhou while in the year 2009 opened a branch in Belarus. In the year 2015, it opened a branch in Brazil. Larsson Company is able to offer proficient solutions as well as expansive capacity to deliver various productions by the use of diverse specialized sub-contractors as well as the partners in various areas across the world (Larssonsweden, 2019). The company is entirely owned by the Larsson family.

5.2 Service Development

5.2.1 Managing the Service Portfolio

Following the conduction of the research through the interviews where there is an attempt to understand the challenges faced by the Larsson firm in their transformation process towards the servitization in the B2B context, there are a lot of the empirical findings which are results from the research concerning the management of the service portfolio. It is agreed by the researchers that the transformation of the Larsson Company towards the provision of specialized services and solutions in tandem with the traditional products being offered is quite challenging in the long run, seen in

“...It is not about machines we are offering complete solutions. We are selling solutions and of course what the customer asking for and that is the kind of process we have ...”

- CEO & Sales Director

The employees and some managers, of the company, were interviewed on the viability and the feasibility of the transformation of the firm towards servitization: it could be understood that Larsson has already gotten servitized, seen in

“...In all activities we are customer focused since they are the most valuable assets in all our operations ...”

- Chief Business Development Officer

It was thus discovered that the Larsson company tends to go through some challenges for the processes of offering services in the B2B context to be fully realized, where such a firm will then have the capability to carry out its activities of the provision of the products, provisions of services, as well as the provision of the solutions in the same line of products to other firms. The findings from the research areas brought out below.

Regarding the management of the service portfolio, it came out that Larsson Company employs a whole lot of tactics in the attempt to ensure that the offering of services and solutions in the servitized environment is successful in the long run. There has been the integration of the management that is responsible for the matters of service offered by the company. The employed management oversees the operations of the firm in regard to the functioning of the services department, seen in

“...We sell new machines, new projects and plans for our customers. Also, the service part deals in the engineering of machines and integrating it to existing facilities of clients in factories and sell startup engineering and commissioning, education training of customer on operating new machines. There are also after sales services where we provide spare parts to customers after using them for a while. We also provide spare parts for one or two years to customers on purchasing the machines, and they are consumables. There might be improvements, adjustments of machines as well as spare parts, we always also offer spare parts as a package which are expected to last a shorter lifetime, say two years...”

- Chief Business Development Officer

The employment of such management was primarily to ensure the planning, supervising, controlling, and staffing for the service employees for the firm. It is thus a challenge for the company where it is required to maintain the full functionality of the management segment of the services being offered in the firm as well as other branches distributed across the world. There are the branches of Larsson Company in other parts of the world, such as Thailand, that are responsible for the offering of the goods and services to other firms in its B2B business context. The employees in such areas are thus in close contact with the customer. The management of such a long chain and widely distributed locations of sales points for the services and products poses another management challenge to the central management located in Sweden, observed in

“...because it is different when you send goods to a European country, it not as if you send to Brazil or Thailand, you have to have some them to comment, you have to have some selections, some segmentation of course because its different on how we handle but at time we have a routine of firm link and then we can be flexible depending on the client...”

- Account Manager Spare Part

There should be the constant communication between the central management in the head office as well as the employee in other parts of the world in ensuring that they maintain the proper offering of services in a balanced system the goods to other firms. The management of the services is quite costly to the Larsson Company.

5.2.2 Service Development Process

From the research conducted by means of interviewing the employees of Larsson company on the challenges of the adoption of the servitization business models in the B2B context, there is an aspect of the effects of such a transformation rooting from the development process of the services. In this case, despite the servitization business model is relevant, there is an aspect of such a business model being poorly understood in start, as seen from the excerpt of the interview from the interviewee saying - Technical Director

“...I can confess this is not easy, it is very difficult, it is always interaction between people and how to react, but on the other hand we are standing for quality, so we really have to have high level of services...”

From the interviews of the employees of the firm, it is found that the servitization business model has the capability to act as an overall architecture with the capability to govern on how value is being created, delivered, as well as captured, where there is a holistic description of the aggregate activities of the companies in the aggregate formats. From the interviews, such a business model is seen as being the meta concept which exemplifies the strategies of the Larsson company once adopted, as well as aligning its elements such that it will, in the end, capture the essence of the cause and effect relationship between the Larsson company adopting such a business model and other businesses which are consuming its products and services since the business context in operation is the B2B context, as the services are being developed, observed in

“...One of the keys of our expansion is that we have an understanding of people and different culture and how it works in different countries. When we know what the customer really wants then we design the line accordingly. So, it is very much customized process lines we are doing...”

- CEO & Sales Director

There has, according to the findings of the interviews, the level of the abstraction of the servitization business model from the product level in their development, to business level, to firm level, and finally to the industry level, as seen in

“...we don't do much service job ourselves because we trying to design the machines in a way that easy to maintain by the customers and they customers can do the services by themselves, then of course we do some service and also some services offering by our local representative like agents and subsidiaries...”

- Technical Director

The participants of the interview were able to comment and agree on the purpose of the servitization business model where is the movement from the operational process management to the future-oriented strategy as the services are being developed and offered to the consumers. Service development and offers, from the employees, is able to affect both the short term and the long-term activities and the objectives of the Larsson Company, obtained from

“...when they [the company] took the decision of putting a lot of effort to inspect all sales, that shows that it’s a really important part, and it’s always open-minded about this, and we got a lot of time to work with it and making it the best as possible and if we get the new things then we take it up and then we do it. What we’ve done simply is an improvement...”

- Account Manager

Further, the servitization business model was found to be an efficient tool which can link the future planning with the operational implementation of the business at hand.

5.2.3 Involving the customers in Development

From the findings from the interviews conducted on managers of the Larsson Company, it was found that the employees are being involved in the servitization process for the model to be successful and bear fruits for the company. The customers, as claimed by the interviewees, have the potential to provide ideas which when utilized in the most positive way can result in the progression of the business. The stakeholders also commented on the need of the business model to be adopted for the benefit of the successful understanding the need to provide advanced services to other firms which act as the customers in the long run, as seen in the response by the interviewee that

“...we like to show every time the same reference person you know, the project leader has to go there to solve the problem. If the customer has a new ideas then he has to contact his project leader, and we are willing and looking for this ideas also, if they have good ideas then we will pick it up and do really work for it and make something out of it...”

- Technical Director

The transformation of the business model to include the advanced provision of services can be understood, as posited by the interviewee, to have the capability to change the entire creation of value from only being rooted to the product to support the desired needs and outcomes of other customers in this context. The focus on the satisfaction of the customers is demanded, which can be quite demanding in such areas as the consistency of services to them. The delivery of advanced services primarily occurs through the longitudinal relationships with customers which can even last the whole life cycle. The customers of the organizations at hand will then

increasingly become involved in the developments of the services and solutions offered, as seen in

“...when it came to choose between the benefits and the customer relation we always running after long relation with our clients because it is too small world. We are still wanting to be number one in this industry...”

- Account Manager

There is also the aspect of the customers becoming increasingly involved in the development as well as the delivery of the advanced services. The interviewees stated that the advanced service provision changes the ownership of the business to access since the customers are deeply involved in understanding the provision of certain services in the long run. The transformation of the business model to include servitization acts to present quite significant changes in most aspects of the operations of the Larsson company, especially the ones in which the interviewee took part in the answering of the question regarding the matters of servitization and the challenges faced as they are being implemented to add on the traditional product-oriented nature of the firms. Servitization business model, as from the outcomes of the interviewed resource persons of the organization, serves to advance the provision of the services to the customers who in this case constitutes other businesses, seen in

“...We have a real attitude that the customer is right that kind of attitude we have, moreover we don't like to have unsatisfied client, we go very far in servicing our customers, sometimes I think too far but this is the one right way that this company like to operate...”

- Purchasing Director

The inclusion of the customers can be beneficial as they know what they want and their advice to the company, used in the changing of the operational modes of the firm, is the most trusted with regard to the service delivery and can greatly aid in the improvement of the solutions and services offered to the customers, seen in - CEO & Sales Director

“... If we develop something, we have to send it to our customers to get their feedback, it is happening frequently that we are doing and developing innovation together with our customers...”

The areas of the revenue models will also have to evolve from the one-off transactions to the ones involving the continuous payment for the products, services, and solutions offered by the Larsson Company to other firms consuming them, as suggested as being the most appropriate tool where customers are involved in the company operations. Such a new revenue model will, in the long run, have to account for the greater risks held by the suppliers as they cater to the advanced services. The customers are more comfortable with the continuous form of payment, especially where they have developed trust with the company products and services. Such a case will have resulted in the observed contribution of the customers in the development of services offered in the company. It can thus be observed that Larsson company will be supposed to effect a lot of changes to the range of the existing product-based business models such that there shall be a diverse value creation, delivery, as well as capture of the customer loyalty in the run to successfully prosper in so far as the transformation to the advanced provision of services characterized with the inception of servitization is concerned, as seen in

“...I like to solve the problems even it will cost us money I don't care because I like to have this future relation with the customers because it is pays back in the end ...”

- CEO & Sales Director

5.3 Internal Organization Design

5.3.1 Service Orientation

In this case, there is the focus on the lower level micro factors which are crucial in their respective units, cumulatively, in the production of the resultant outcome of the organization. The services and solutions, in this case, are inclined at the best satisfaction of the customers. According to the interviewees, it turns out that there is first the need to understand the link between the lower level origins as well as the higher-level outcomes of Larsson Company. In this sense, as Larsson company has tried its best to shift towards servitization in the B2B business context, there is need to, first of all, align the actions of the small scale units within the organization so as the required overall outcomes of Larsson company in the provision of the products as well as the services are realized in the long run. It can be observed, as pointed out by the interviewees, that an organization is a cumulative result and thus acts as an aggregation of the individuals as well as their actions, as seen in the response by the interviewee that

“...I think so of course, there are some people not delivering that kind of service but I think most of the people in the workshop are also feeling it, but I also think that’s something that the company is very aware of, telling it internally that we must solve it...”

- Purchasing Director

In this sense, there is the application of the behavioral theory of a firm which greatly emphasizes on the individuals as well as their roles in the process of their influence on the resultant outcomes of the organization where they have the power to influence the outcomes of the activities in which the services are tailored to meet the expectations of the customers. From the results of the interviewees, it turns out that the individuals, which include the managers of the organizations and the salespeople, have great effects on the resultant services provided to the consumers. They can immensely, as seen for the case of Larsson company, alter the course in which the level of satisfaction the customers is achieved. Since the individuals in the organizations have varying beliefs, values, preferences, as well as the characteristics as stated by one of the interviewees in

“...if there is a problem the client knows who to contact, if it is the operations manager, if it is a field manager, the client can also contact project manager at our side at our company because they have a close relationship and then if its top management then the client would contact our sales persons, and we do a lot of technical sales, so the sales person have knowledge of how the machines and processes work, then if it comes through the sales organization then we take them to the technical parts of our company....,”

- Chief Business Development Officer

They also have various skills and abilities that will enable them to undertake various tasks in diverse ways, and which have been utilized in the case of Larsson Company to satisfy the service needs of the customers.

Additionally, individuals can also be seen to have varied rational abilities, where others are far much more rational and logical than others. The individuals within the organizations also have various abilities to integrate with others, as seen in

“...I think he [CEO] trusts, he puts a lot of trust in the employees firmly and if there is something that is gone wrong, then they have to support, and of course if you are in group,

people to be responsible, then they be responsible, and also if they see and experience its better I go for him and ask questions and with time I learn and what we have done due, I think that's important because we still have the same feelings for the sales ...”

- Account Manager Spare Part

Such capabilities have been employed in Larsson to explore on the potentials where the customers are to be well served and to ensure that they get satisfied in the long run. The services and solutions provided to customers in different parts are inclined to tap their utmost satisfaction. It has been through such practices where there has been the continuous progression of Larsson Company, arising from the increased market base as the customers are well served. One of the interviewees pointed out that the customers are given some operational services on how to carry on the tasks of operating some machinery. Others are made to understand how to service some equipment once they need the changing of spare parts. Such is done by the professional sales force in the company. The offering of such services is offered in such a way that there is the satisfaction of the common service need of the customers as per the experiences of the sales force in Larsson Company.

“...We offer these services in the package and there is also a certain amount of spare parts in the package. We also provide spare parts to customers, and they know the process so they can buy. When we train, we train the customers with the help of the factory management, we train them how to do the service and maintenance themselves. No one comes from external areas to service our machine. The staff and customers can do them by themselves. They know the parts that are expected to have a short lifetime and the consumables so they can service them by themselves, they are provided in all our manuals ...”

- Chief Business Development Officer

Besides, it can, as pointed out by one of the interviewees, be observed that the diverse variation in the characteristics of various individuals within Larsson company can subsequently have the power to affect the way they carry out their daily activities, where they can also make different decisions to pursue different things, there are those individuals who have certain ideas whereas there are those who cannot accept the ideas as proposed and undertaken by other people. Such different pursuits of activities and choices made by varied individuals will ultimately and collectively affect the nature of the organizational outcomes, which can then be

observed in different organizations basing on the nature and characteristics of the individuals in those areas, while at the same time affecting the service provided to the ultimate customers. The heterogeneity of the outcomes of an organization, under the conditions where there are similar strategic directions, will thus significantly depend on the nature of the diversity existing amongst the individuals within the organization as well as their choice of actions, as seen in the response from the interviewee that

“...There is on daily basis there is contact between the sales organization and also the agents in Thailand. And also, we do have new projects, we have people from Sweden that are present in Thailand and the project managers they have a close relationship with key persons in the sales agents organization and the sales agents they have direct contacts also with the end clients such that there is a kind of triangular flow of communication being maintained, it’s always important to keep the sales agents in this contexts to keep informed of what’s going on in their parts...”

- Technical Director

Owing to the above explanations of the differences in the individuals within Larsson company, which is the manufacturing firm, the unity of purpose in the process of the need to undertake and carry out certain activities can demand a lot of efforts, time, as well and the financial resources for them to be implemented. It can be observed that the process of servitization, as brought out by the interviewee, is a process that will be quite demanding since it requires a unity of purpose from all the individuals in an organization, which can also be hard owing to the diversity and heterogeneity existing among the individuals within the organization. It is thus a state which can pose a challenge to the process of the inception of servitization by the manufacturing firms in their B2B business context. It is because the provision of the advanced services to other firms by Larsson company require the inception of the major organization-wide transformations which can affect all the individuals in a certain common way, the coping of such organizational individuals with certain requirements of the servitization process can pose a challenge since not all of them have the same capacity to accommodate them, as seen in – CEO & Sales Director

“...during the time we are doing this like educating the operators, and also maintenance the people that also in our scope. We have to educate the operators and maintenance people ...”

It can, therefore, be challenging to adopt and incept the servitization into the B2B business context by Larsson Company.

5.3.2 Structure of Service Organization

For the case of the organizational structure, there was a key transformational challenge concerning the movement of the Larsson Company from the transactions based on the relation of the organizational structure. It is mainly cased there is the need for the firm to develop a special team in the sales, where they shall be able to handle issues more intelligently as they arise in the process of trading the products and services to other firms which are the consumers of such products and services being offered. The process of the alignment with the service strategy has been conspicuously noted as the key challenge in such transformation. It is a challenge in the areas of the effective design of the organization as well as the integration of the advanced services being developed to the existing product-oriented nature of the business.

The firm struggles to make and implement the strategic transition of their businesses towards the service-based business models which are able to effectively fit the customers as well as maximizing its internal synergies. For the perspective of the operational transition in the trading of the service structure, there is the need for a revolutionary transformation approach in terms of its structure so that servitization can best be realized. In this case, there is the perception of the firm being seen as having to struggle much in the attempts to adopt such a revolutionary approach of the operational modes. The firm also struggles its best in the attempt to change their innovation management practices based on the existing products offered in the run to advance the production of services as part of the transactions when the products are being sold to other firms.

Also, Larsson company faced a lot of difficulties with regards to the development of the new advanced offering of services since the development process of the services tend to be different from the existing dealing in the products as well as their development processes. The organization structure with regard to the organization if service had to be hugely considered as part of the run to ensure the success of the organization in various spheres. There are the internal processes concerned with the alignment of the strategies with the advanced services which are being offered, as well as their performance requirements, which in the long run tend to prove to be very challenging while thus preventing many product-oriented manufacturing

firms from the steps towards the provision of the advanced services to other firms under the servitization activities.

For effective and proficient services organization, the business processes required the development of new capabilities projected towards supporting the provision of advanced services: a great impediment in the process of the transformation process. There are also various challenges concerned with the skills for upgrading in the front-end sales face in the process of the transformation towards the provision of advanced services that have been developed in the Larsson company that are product oriented in nature.

Finally, there is an aspect of the development of a suitable reward system for the motivation of the individuals who support the provision of the advanced services to other businesses by the Larsson company, which has proved to be a challenge for the firm that has traditionally been dealing in the product-oriented nature of the businesses, as observed in the response by the interviewee that

“...the positive thing about this is that there is a strong relationship between the stakeholders and thus a good working environment is being maintained. The only risk is that of the clients getting jobs elsewhere or getting sick, which can be solved by replacing them almost as quickly as possible...”

- Account Manager

Additionally, there came the need to develop a well-organized structure for the distribution of the services to various firms in the B2B context, as brought put by one of the interviewees who was an employee of the Larsson Company. It came to put that due to the widely distributed operational nature of the company, the servitized business model was also to be applied to other firms in the outlets across the world where the company had its branches. It then established that there should be well-experienced sales people to work in the servitized offering of the services of the company, such that the sales force had a hierarchical model that could be traced back to the general management in the head office. Such a structure was challenging to get established in the period that it was being developed. Since it was a new element to the organization.

5.4 Service Provision

5.4.1 Relationship with the customers

From the findings of the research, it came out that Larsson Company has managed to develop and maintain a good relationship with its customers, as observed in the citing of the case examples of the situation where the company enjoys a good relationship with the customers in Thailand, seen in

“...Thailand is our biggest market and I know personally almost all customers and they know for sure me because I am a well-known face in Thailand in the starch business, so that very much like a relation between friends...”

- CEO & Sales Director

However, the above rooted from the requirement of the company to effectively read the nature of the customer, which was a great challenge as the adoption of servitization business model by the Larsson Company on a B2B context was in its earlier stages, as observed in

“...the relationship with the customer growing step by step ...”

- Technical Director

It can be observed, as stated by the interviewee, that there is the need for an entire upholding of the relationship with the customer of the organization, in the interviewee response that

“...I can see it's good, but it could be better, it can be much better. I think communication is always some way of, can always be better ...”

- Chief Business Development Officer

The business model, in this case, defines an architecture which aligns the elements which will feature an essence of the cause and effect relationship to exist between Larsson Company, the money, as well as their customers which are other firms. There is thus the need for linking various components in the business model for the benefit of aligning them with the entire business logic of the firm. From the interviewee, when Larsson company moved towards the advanced provision of service alongside the traditional product line, there resulted in the need

to create, deliver, as well as capture the value in such a way that there was the harmonious bind with the existing product-based model in which the customers were being well served, seen in

“...we always try to fix the matters to have it running according to our promise, and even it cost us money I don't care because I like to have the reputation that Larsson takes the responsibilities for what we supplying not only try to sneak out to back door and pay some penalties and something like that...”

- CEO & Sales Director

Larsson company implemented such through the establishment of an effective relationship with the customers in all parts that they were being served. However, it could be understood that Larsson company had to do such and it demanded and required a lot of time, resources, technical skills from training, as well as the change of the existing business culture and structure of an organization for the benefit of the production of the results where the relationship with the customers was quite effective, as is currently, as observed in

“... the very best way to go and visit and meet our customers... The big challenge is time ...”

- CEO & Sales Director

Undergoing such cumulative changes can thus be seen to have been quite demanding to Larsson Company, hence seen as a challenge in the adoption of servitization form of the business model by the firm in the B2B context.

5.4.2 External Provision

Since Larsson uses a different services strategy depending on the markets that they are dealing with.

"... The relationship with our customers is different from region to region ..."

- Account Manager Spare Part

For instance, they offer their services directly to the customers in the European market without using any services provider, however, Larsson Company offer the same services in the Asian markets utilizing a services partner that could represent them in these markets, and that to reduce the prices to their customers.

“...In Europe we have separate service contract and in other markets are included ...”

- Account Manager

5.4.3 Customization vs. Standardization of Services

In this case, the capabilities concerned the skills and accumulated knowledge which are employed by the firms in the coordination of various activities while using the assets. Larsson Company is the one being referred to in this context. It can be observed, from the responses of the organizational interviewees, that there are the capabilities routines which aid the firm in the undertaking of their various operations. They are, as they posit, the critical elements which can aid in the management of the day to day operations, achieved through the reliable as well as the satisfactory performance of various activities which aid in the making of the living by the firms.

From the interviewees' responses, it is found that Larsson company adopting the use of servitization are required to build and establish new capabilities which differ in a significant way from the existing capabilities which are product oriented in nature, as seen in the excerpt

“...we do not just like to sell a single machine and compete for only the price, because Sweden is a high cost country compare to South American countries and Asian countries, we cannot just compete only on price, so we are doing the full service...”

- Purchasing Director

Larsson Company, in the usual case, possess the highly skilled and technical capabilities in the lines of production as well as the ones related to technology. However, the adoption of the servitization by the firm where there shall be the provision of advanced services and solution to the customers requires that there is the effective integration of the products and services, while using them in the run to achieve the desired outcomes of the customers, as seen in

“...we have quite a lot high level of service, of our solutions to offer to our customers when it comes to a know-how, the engineering, that is incorporated in the delivery of the full-scale plans because there is a lot of different type of services included, so in that sense we are very high but when it comes to after sales service, I would say we are very low...”

- Chief Business Development Officer

The various capabilities which are required in the provision of advanced services, as well as the complex process of the development and delivery of the advanced services, are varied in nature. One of them includes as per the responses of the interviewee, the capability to mitigate the risks, as seen in

“...we don't do much service job ourselves because we trying to design the machines in a way that easy to maintain by the customers and they customers can do the services by themselves, then of course we do some service and also some services offering by our local representative like agents and subsidiaries...”

- Purchasing Director

In this case, the risks can occur in the process of the provision of the advanced services to other firms in the B2B context, where such capability will be required for the effective curbing of the risks that can affect the smooth flow of the activities involving the provision of the services. In this case, Larsson Company will be advantaged in that they will not be required to incur any additional costs for the operational activities as the advanced services are being provided to the intended customers, as seen in

“...I have no problem to making a lost one or two years, because I know in the future it will better again, this is the way that I thinking a very long term thinking, I don't care about the loses in the first years because it will pay back later on, and also we have been in the business for 70 years and we have as I think a good experience...”

- CEO & Sales Director

Additionally, there is an aspect of the need to develop effective communication with various stakeholders as the advanced services are being provided to the customers alongside the products. In this case, there is supposed to be a developed deep relationship between Larsson Company at hand as well as its suppliers, the customers, and the partners who are being worked with. Such a step requires the setting up of an effective public relations department which is equipped with well-trained staff, alongside the presence of the sales force which has the necessary experiences for the selling of the products as well as effectively interacting with them as the services such as the ways to operate certain machinery, as seen in

"... In this way, live communication and relationship shall be maintained in the long run, and there is efficiency in the performance of the business. The customers will stay satisfied while the managers and the agents will keep in touch, hence ensuring the smooth flow of operations in any part of the globe where the business is being transacted..."

- Chief Business Development Officer

The customers receiving such products and services will, in the long run, have the full information on the products as well as the advanced services given to them. For the provision of such services, the staff needs to be well sourced and trained, which can offer a challenge to Larsson Company in terms of time consumption. The disruption of the normal running of the business, as well as the need to expend a lot of resources in the long run. Such also regards the development of the leaders as well as the personnel who deeply understand the business challenges and environs of the customers, who in this case involve other firms. They should then have the capability to figure out the ways in which they can, in the provision of the advanced services to the customers, figure out how their challenges can be solved afterwards.

It should also, as brought out by the interviewees, be understood that the sale of the advanced services through the activities of servitization differs immensely from the actual sale of the products by Larsson Company in the B2B context. It is because the activities under servitization require the engagement of customers by means of strong customer involvement which should be present as well as the co-creation of the offering, as seen in

"...If we develop something, we have to send it to our customers to get their feedback, it is happening frequently that we are doing and developing innovation together with our customers... It is also important that not promise more than what you can fulfil, cause if you promise a lot and then you fail; then you lose the faith of your customer ..."

- CEO & Sales Director

There is also an important capability of dealing in the provision of the service-oriented structures, which is an important aspect for the effectiveness of a firm in the servitization activities. The above-stated capabilities which should be present for effective servitization to be realized are, as stated by the interviewee based on the four major stages involved in the transformation of Larsson Company to form the business model involving the offering of the advanced services alongside the products. They are the development of a solution, creation of demand, the selling of solution, and finally the delivery of the solution at hand. Such a process,

as pointed out by the interviewees, is a long procedure which can consume a lot of time while requiring the use of substantial amounts of resources, hence costly. There is also the need for the use of digital technologies as the servitization is being adopted, hence leading to the need for the inception of the ICT personnel as well as the huge sums of money in them, hence characterizing their costly nature.

6. Discussion

This chapter will recognize the challenges of service production that a service organization in a capital goods manufacturing company encounter. The chapter will begin with a classification of those challenges that have been found in the empirical data in previous Chapter based on the theoretical framework. Secondly, these challenges will be analysed to see if these challenges could affect the organization and how.

6.1 Challenges of service development

6.1.1 Market Sensing

Market sensing implies analyzing the internal as well as the external environment carefully. How Larsson senses the market is essential in saying that client requirements must guide service development. At Larsson, incorporating client requirements into service offerings is challenging. Since Products can be physically used and tested, the comparison of distinct kinds is much easier, but service offerings are difficult for the customer to assess and compare.

It is essential to sense all stakeholders engaged in service activities (Matthyssens et al., 2006), while Larsson attempts to operate close to both their representative and clients. It is essential also to ensure that both the representative and the end customer can participate in the market sensing stage in order to prevent distorted data affecting the development of the service. If all stakeholders are engaged, it will generate a higher knowledge of the services, thereby reducing the need to explain or persuade the representative and the client when the service is created and ready to start.

6.1.2 Managing the Service Portfolio

There has been the conduction of the research, aiming to collect the information by the means of interviews, from the members of the manufacturing firms in so far as the servitization is concerned. In this case, the information that was being collected concerned about the challenges of the transformation process of manufacturers into the servitization in the B2B business context. A lot of findings were collected from the managers of Larsson company where they faced the actual challenges that could be encountered in such a business move, during its first periods of inception of servitization business model. One of them concerns the implication of the adoption of such a business model on the management parts of the company (Gebauer & Fleisch, 2007).

It came out, as presented by the interviewees, that the management of the firm can greatly be adversely affected by the fact that they are supposed to have the necessary knowledge, skills, and expertise for the management of the ambivalence brought about by the operation in both the products and services by the manufacturing firms. Also, there is need for the capabilities by the employees to enable them to effectively serve the other firms purchasing the products and services in the most satisfying manner, hence maintaining the operative nature of the manufacturing firms, through having satisfied customers, that is able to generate substantial amounts of sales as well as the earned profits from the proceeds of sales (Kohtamäki & Partanen, 2016).

Also, there is a need to be the presence of the understanding by various individuals in the organization, whose cumulative works contribute to the general outcomes of the organization. In this regard, they should be having homogenous goals for the benefit of effective implementation of the strategies which have been put in place by the manufacturing firms, with the view to achieving certain objectives as are the aims of the inception of the servitization activities into the business contexts and operative structures of the organization at hand. In this way, it can be observed that the transformation of the processes of the manufacturers to servitization in the B2B context is faced with a lot of challenges as brought out above.

6.1.3 Service Development Process

Larsson today has a formal service development system, and it is affected by the process of product development. The service operations were not able to create their own particular procedures, measurements and instruments and are therefore based on product development frames. This has allowed them to make use of synergies, but the interviewees point out that it is essential to adapt the procedures of service development even more to the particular requirements of service development. Developing services is different because it cannot use the same clear and unambiguous rules, such as weight and size, as is generally the case with product development. The interviewees claim that establishing standardized processes tailored to service development requirements will allow service development to be more effective and less time-consuming. Thus the company will be better ready to handle the hazards engaged in service development by standardizing the process as certain problems can be expected more readily. In addition, a standardized method will also enable Larsson to boost focus on exploration operations as they will have a basis to build on and as the method will make it simpler for them to study in detail the procedures of clients.

The process of servitization as one of the business models of interest have been admired for the application by many businesses, and more especially the manufacturing industries: despite its challenging nature during inception and maintenance. It is mainly because, as brought out in the interviews, there is the need to transform the entire business model which come with a host of activities to be undertaken in the long run, with the aim of paving way for the development of the services and solutions which are to be offered alongside the products. The process of transforming an organizational business model is a task by itself and out bears a semblance of reorganizing the entire system of the organization (Gronroos, 2011).

The inception of the servitization processes of the provision of advanced services to the customers bear the need to incorporate the comprehensive type of business model, which: as recorded by the interviewees: is an undertaking in practice due to its hectic nature which thus bears a semblance of the need to expend most of the resources, including the finances, time, and personnel of the organization in its inception.

The process in which the services are being developed requires the application of some expertise in deeply understanding the existing products as well as their corresponding services as they are being offered to the customers. Also, there is a need to understand the needs of the consumers by the manufacturing firms (Gebauer & Fleisch, 2007). As the services have been incepted in the firms such that there shall be the continued interactions with the customers who also provide their opinions on what should be added or removed from the services and solutions being offered in the long last, there shall emerge an excellent firm that offers both the goods, services, and solutions in the most satisfying way to the customers in the B2B business context.

6.1.4 Involving the customers in Development

Additionally, there is an aspect, as brought out in the interviews, of the need to achieve a thorough understanding by the concerned stakeholders in the run to accommodate servitization as a form of the business model in practice, where they engage the customers in the business operations of offering advanced services. The members in the organization will require comprehensive explanations as to the nature of the servitization forms of business models which they will then use them in offering substantial services to customers as they seek to know their views. The development of such a comprehensive plan, involving the printing of the relevant notes, as well as the training of the personnel to disseminate knowledge to the stakeholders of the manufacturing firms requires a lot of time that could have been used in the

progressions of the selling activities of the organization as laced by the experiences and expertise obtained from the included customers (Grönroos, 2011).

Additionally, there shall be the need to pump finances where the exposing individuals will be adequately trained in the nature of the servitization forms of nosiness models, in which there shall then be their steps in the education of the stakeholders of the organizations on the requirements to be done in the event the customers offer certain types of comments regarding the services being offered. The servitization business model is being adopted by the manufacturing firms (Gebauer & Fleisch, 2007).

Following the comprehensive information and education of the stakeholders of the business and the knowledge gained from the interaction with the customers, there shall then be the alignment of all the operational activities of the manufacturing firm with the servitization form of the business model adopted (Kindström, 2010). In this case, the process of realignment in such a context will require the components of the business model to be in line with the overall business strategy of the manufacturing firm, alongside the factoring in of the customers since they are the final users of the services and solutions offered.

In the end, the effects caused by the inception of the servitization form of the business model into the manufacturing firms can, therefore, be seen to be consuming a lot of challenges where the customers are being included and their requirements are met precisely.

6.1.5 New Service Innovation

Exploitation and exploration notions are defined as two ways of developing a service activities (Fischer et al., 2010), and all interviewees agree that they must be engaged in both, but they are not quite there yet. The vision of Larsson is to be able to create both its current service portfolio and to focus on innovation in service and to consider longer. Currently, many of the Larsson operations related to the development of the service activities are concerned with exploitation operations and, for instance, are working to improve the support and delivery techniques to the representative, which they are attempting to standardize as much as possible. The process for service development, which they are looking at right now to ensure more effective service development in the future, is also included in exploitation.

The interviewees describe the company as being in a realm of experience and because of the expertise and data already accessible to them, exploitation operations will always be simpler.

Using the characteristics they already have on the products is less complex for Larsson, rather than creating fresh ones that take a lot of time and resources. Because the development of facilities based on entirely new technology is more costly, it is simpler for Larsson to do primarily exploitative activities. One interviewee also says that customer demands and expectations of continuous development and improvement of current services mean that this naturally becomes their focus area. The interviewee explains that services are generally anticipated to be enhanced in a quicker rate compared to products, which also needs feedback velocity to be quicker. This implies that customer relationships and representative interaction must be properly addressed.

6.2 Challenges of Internal Organizational Design

6.2.1 Service Culture

It is difficult to increase the service orientation of the organizational culture, particularly the absence of service department, but the managers in Larsson are working hard in the organization to broadcast service culture, which according to Gebauer et al. (2010a) is essential.

The interviewees' overall view is that it is essential to allow time to be taken to increase the service orientation and that a first step is to make the service department more visible in the company. Larsson's managers need to work with and speak the language of the products organization in addition to the language of service in order to reduce opposition to services in the company. This implies that as things are done and conveyed differently, the service department will have to handle both the goods-and the service which is very complicated.

6.2.2 Service Orientation

From the conducted research, it emerged that the emerging challenge of the use of servitization as a way of the advancement in the provision of the services and solutions to the customers alongside the traditional method of the provision of the products to the customers can be quite effective in the selling volumes as well as the returns realized for the manufacturing firms. It is because all the products are sold together with their services, hence going out as full packages which can be very advantageous to the performances of the manufacturing firms (Gebauer and Fleisch, 2007).

However, the process of the inception of the servitization forms of business models into the business operations of the manufacturing firms can be very challenging owing to the factors

which have already been brought out in the empirical findings section, including the orientation of services. In this case, there is the fact that the offering of services by the manufacturing firms should be inclined in the most satisfactory way in line with the needs of the customers, as seen in the case of Larsson Company.

The process of the servitization of the business operations by the manufacturing firms can greatly co-exists the orientations of the services as well as the products being offered by the manufacturing firms. Such a process also contributes to ambivalence, where there is dealing in two lines of offerings by the manufacturing firm, the products and their respective services. There shall also be the situation in which the organization is being drawn to the business context in a simultaneous way (Grönroos, 2011).

The fact there is the dual focus on the offerings by the manufacturing firms shown by the processes of the provision of the products and their respective services and solutions indicates the presence of the challenges to be encountered in balancing and maintaining the performances on the two lines. Otherwise, there shall be the provision of either services and solutions or the provisions of the products can have the transactions not well delegated in the long run, a situation which can serve to adversely affect the operations of the business activities of the manufacturing firms.

6.2.3 Management Values

In a production company, the service department must ensure that top management understands service importance (Shah et al., 2006). Management signals today at Larsson that they value services and help building the service department by establishing strong objectives and reorganizing the company to concentrate more on services.

However, the interviewees recognize that leadership communication could be more coherent and that resource allocation would be more in products organizations parity. In addition, leadership conduct and corporate culture service orientation will affect staff conduct (Gebauer et al., 2009), which may explain the absence of knowledge and support of staff in the company for the service department. This implies that it is crucial that leadership be coherent and demonstrate that to boost service orientation, they support the service strategy. At Larsson, leadership values ' service orientation does not seem to be affected by the use of external service suppliers, but rather is an inner problem.

6.2.4 Structure of Service Department

Larsson's interviewees see organisational task separation as optimal for where they are today. A key problem for the service department is how to foster a service mindset within the manufacturing organisation and encourage service culture. By dividing the goods- and service department, it is thought that, according to the interviewees, the service department has the opportunity to concentrate on its own problems without being affected by problems primarily related to the product department. For Larsson, the selection of organizational structure is more about the relative size of the service department in comparison to the organisation of products than about the sort of service strategy pursued by Gebauer et al. (2010a, b). Since the service department is unable to account for the benefits of services, it will be hard to alter the corporate culture's service orientation. Since the service department is unable to account for the benefits of services, it will be hard to alter the corporate culture's service orientation. As an improvement in service orientation is what is considered necessary to integrate the goods- and service department, it can be asserted that the capacity to make separate account revenues has an effect on the organizational structure at least in the short term.

From the conducted research, it was found that the practices of the provision of the advanced services to other firms alongside the provided products serve to deal a huge blow on the management of the manufacturing firms at hand, especially at the beginning periods of servitization. In this case, there are many adjustments that will be made on the management so as to accommodate the changes that have been incorporated into the operational mode of the organization (Gebauer & Fleisch, 2007). The structure of the management includes the service organization, which has to be incepted with the managers who deal in the servitization part of the affairs of the manufacturing firms. The inclusion of such a management part will ensure that there is smooth management of all the affairs of the organization, where the services which are being incepted will then get well undertaken. However, a lot of challenges come with the incorporation of the new management structure for a service organization, as brought out in the subsequent paragraphs.

First, there are the steps of the recruitment of the most viable managers, which have to be followed in the long run. It will ensure that the most competent managers are employed, with the knowledge, skills, and capabilities to run the functioning of the provision of the advanced services to the customers by the organization (Gebauer & Fleisch, 2007). Such managers will also have to be selected from the most elite class, hence the need for a thorough interviewing

to carry put the most productive recruitments of the management staff of the servitization programs in the organization. It is, therefore, a procedure that can then be time-consuming, costly, as well as requiring the employment of the most elite class, hence a challenge in the development of the most elite management part of the servitization program.

Additionally, there is an aspect of the fact that there is a need for the effective remuneration of the newly employed management staff. In this case, such a management staff requires the periodic salaries, the allowances, as well as other incomes which have to be catered for by the manufacturing firms which have employed them. It can be a challenge where such a management staff will be in the need of a substantial amount, of funds to cater for their wellbeing, a situation that can then erode the financial bedrock of the manufacturing firms as brought out by the interviewees in the conducted research.

Additionally, since the fact that the services and the products are to be produced and expended at the same time, the situation of ambivalence in which the firms will have to pull together two different lines of action with the struggle to achieve both of them in the long run, it is the work of the management to well carry out the activities of the management of the activities involving the provision of the products and services at the same time (Grönroos, 2011b). In this regard, the management of the firms will be required to have the understanding of the management of both the provision of goods and services in a situation of ambivalence, such that there are perfection and balance, with the focus in the upholding of customer satisfaction lanced with increased sales and the profits in the long run (Kindström, 2010). Such is the work of the management, a great challenge of having to have an absolute understanding to carry out ambivalence with the view to balancing the provision of the products and services to their customers in the most harmonious and satisfactory manner.

6.3 Challenges of Service Provision

6.3.1 Relationship with the customers

Enhanced consumers interactions and powerful customers relationships are recognised as the essence in a servitized corporation since the relations are no longer only transactional, but service provision demands constant communication throughout the lifetime of services with the final customer (Tuli et al., 2007). Since Larsson™ is a family enterprise, they have a remarkable relationship and with their final customer equally with their representatives especially in the Asian market.

From the interviews conducted regarding the inception of servitization into the B2B business context of the manufacturing firm, as seen in the case of Larsson company, there are the challenges which come along with it, including the need to uphold a cosy relationship with the customers. It is because of a mix of the need to incept a thorough transformational process where the services and solutions are to be provided alongside the provision of the services to the customers who are the other firms utilizing the products and services of the manufacturing firm (Gebauer & Fleisch, 2007).

As brought out in the case of Larsson Company which has a stable relationship with the customers, there is a need to attend the customers as they want for them to remain loyal. It is because Larsson Company is well attending its customers. The efforts of the manufacturing firms to uphold the required relationship with the customers should, thus, be accompanied by the struggle to optimize the offering of services, solutions, as well as the products.

6.3.2 Relationship and Competence Risks

External service provision indicates that specific factors correlated to the delivery and sales of services are outside Larsson's control. For example, the uncertainty associated with the absence of expertise between Larsson' partners must be managed. For many years, Larsson's partners sold products and are not always interested in taking the hazards and becoming service providers. For Larsson, this implies that their representatives must sometimes be persuaded to sell and provide the services. The enhanced risk and needs for big investments lead to some of the representatives to believe that services are a burden.

One of those interviewed stated that the services should not confuse Larsson's partners but rather boost their earnings and that Larsson must figure out a way of showing them this. Larsson, therefore, demands to act to empower their partners and help them to feel secure and confident about their services. It is essential that the sales force need to have the understanding required to sell services together with the goods (Neu & Brown, 2005), and this has been considered by the interviewees. Therefore, Larsson Company have to ensure that the salespeople of the service partners both realize the services' value and have great awareness about service characteristics. At Larsson, they attempt to encourage salespeople of their partners to concentrate more on customers' procedures and how to increase efficiency rather than just selling the costliest goods.

The current priority of Larsson's partners is to sell goods rather than services since they make more money from the sales in the brief term. Larsson, therefore, requires instruments, both to promote and facilitating communication and to organize how profits can be shared, hence, the partners can understand that they can actually make a profit from the services' sales, and that, as opposed to machine sales, it even generates a continual stream of revenues. Since Larsson has a powerful manufacturing culture, their partners have been offering machines and goods for many years and could likewise have a powerful culture in favour of products and goods.

Improving service orientation of corporate culture is a crucial factor for a servitized manufacturing organization (Gebauer et al., 2010a), and the researchers claim that when utilizing an external service provider, as in the study case, it additionally becomes essential to enhance the service orientation of the external partner. One way of enhancing service consciousness among the partners is to attempt to make their partners talk about the advantages, as they will have a bigger effect on each other as recommended by Larsson.

6.3.3 Launching Services and Supporting Provision

Launching services is a key challenge when deciding to use partners for the services' provision (Kowalkowski et al., 2011). According to the interviewees when it comes to the services it takes a very long time to introduce it to Larsson' representatives, much longer compared with goods. They have a network of several representatives especially in the Asian markets and this indicates that they have to handle a broad range of requirements when starting their services and supporting their partners.

This problem also grows with the scale of the service portfolio, and the complexity of the offered services. In order to provide the final clients with information and deliver the services in the correct manner, Larsson should, therefore, educate its partners on the advantages of these services. For Larsson, this indicates that they have to instruct their representatives on how they, in turn, should educate the last consumer, this indicates, for Larsson, that they have to teach their representatives on how to educate the last consumer in turn. This can be more complex and challenging compared if Larsson were to train and educate the final customers themselves and will unquestionably raise complexity to the services' production.

De Brentani, (2001) argue that supporting final consumers in understanding the profits of the service offerings is crucial in-service provision and it is more complicated to explain a service than it is to explain the usage of goods. If the services partners do not recognise how services

run, they will not be capable to sell and offer it to the customers in the appropriate way. The end-customer generally understands services, according to one interviewee, as they may relate it to their activities and operations, but the service provider that offer the services must be trained. Therefore, it is apparent that Larsson's task is to teach and to ensure that the service provider understands the functionality of the services.

6.3.4 Creating Uniform Offerings

Since Larsson has several partners worldwide, ensuring the quality of its services and ensuring that they are fully uniform is almost impossible. Consequently, Larsson has the challenge to follow up all their representatives worldwide in order to make sure they all have the right expertise and the proper manner to offer the services. The interviewees at Larsson indicate that they have to work toward increasing the control of their services providers. Reinartz and Ulaga (2008) present standardized monitoring mechanisms, which might be one way since it would enable Larsson to compare several services provider based on similar condition.

6.3.5 Customization vs. Standardization of Services

Following the inception of servitization form of business model, there shall be the need to develop into the customization as well as standardization of some aspects of the services and solutions being offered. It is a process which needs the availability of the necessary skills, expertise, and knowledge base regarding the products, the solutions, and the selling of the services to be dealt in by means of the advanced service provision (Gronroos, 2011b). In this regard, it will cost the manufacturing firms, as per the outcomes from the interviews, their time and funds used in the production of such components of the workforce in the run to imbibe the selling of the services and the solutions to lace the already existent dealing in the provision of products sold to other firms (Kindström, 2010).

It is, therefore, a challenge to the manufacturing firms where they are required to employ all the strategies available in sourcing the required workforce into the organization to aid in the dealership with the widened provision of the customized and standardized services, solution, alongside the products which have been existent in the manufacturing firms as their characteristic products dealt in (Gronroos, 2011b). There are also the capabilities which cover such aspects as the creating offerings, the development of the customer insights, the integration of the available knowledge, as well as the digitization, which have been identified as suiting in the effective dealing with the customers during the process of servitization in which the

products, services, and their respective solutions are being provided to the customers, which are composed of other firms of the organization (Gebauer and Fleisch, 2007). Subsequently, there shall result from holistic handling of the customized and standardized the products and services in serving the customers, such that they will get satisfied from the way they have been treated by the sellers and the dealers operating in the manufacturing firms.

7. Conclusions

In the following chapter, conclusions from the analysis will be presented. Furthermore, several implications for further study will be presented.

The purpose of this thesis was to define and categorize service production challenges in manufacturer servitized capital goods in B2B context in order to ameliorate the perception of the servitization' phenomenon. The organization studied is engaged in the servitization process to certain degrees. The servitization phenomenon was obvious by adaptation to customers, relationship building and service offerings, which means that servitization is indeed present in the B2B context. Moreover, difficulties in developing servitization proposed by prior studies are also existent in the B2B context. The analysis of this thesis findings indicate that the absence of product relatedness between the services and goods offered may possibly lead to consumers resistance towards the augmented services.

Furthermore, the authors also reviewed how these problems are affected by the use of external service suppliers, additionally, many of the challenges connected with the development of service and internal organizational design are also increasing. The challenges a service department faces in its service production in a servitized capital goods manufacturr as recognized by Kowalkowski et al. (2011) in previous research.

In conclusion, as observed in the case of the Larsson Company, the manufacturing firms face some challenges when it comes to the transformation of their businesses to include servitization in the B2B context. The manufacturing firms will have to consider the availability of the required expertise amongst the employees and the management to carry out the servitized businesses. Also, there shall be the requirements of factoring in the customers on the business operations as they contribute some ideas that can benefit the business at hand (Kindström, 2010). The service organizations, as well as the operative mechanisms of the entire firms, will also have to be altered, the processes which can cost the firms in terms of the financial resources, time, and the need to involve more stakeholders in the long run. Hence, the adoption of servitization business model by the manufacturing firms in the B2B context can be quite challenging.

A further challenge facing a servitized manufacturer business is how to handle service offering customization to suit the final customers ' distinctive requirements. Instead, the manufacturer's challenge is to provide the distributors with the needed assistance. To guarantee adequate sales

and service delivery, it becomes vital to provide adequate assistance and educate the distributors when launching services. Moreover, to guarantee adequate delivery, it is essential to have standardized control processes to guarantee consistency and quality of service offerings. In addition, the manufacturing business must also discover methods internally to account for services profits. It is very hard to transmit the significance of the service organization and the service products in the capital goods production business by not being able to demonstrate the economic outcomes of services. In addition, this will make it hard to boost the corporate culture's service orientation. Consequently, the failure to separate earnings from services impacts several inner organizational design challenges. This research also demonstrates that some service development and inner organizational design challenges are not influenced by external service delivery, but are still vital to manage to guarantee effective service output. These challenges primarily concern the connection between goods- and service organisations and the integration of goods- and service growth.

This thesis attempted to expand servitization research and contribute with further challenges and difficulties which previous research does not propose. One such challenge may be among the representatives involving in servitization process where the relation with their supplier could hinder their strive to develop the servitization process.

6.5 Limitations and Propositions for Future Research

This study represents an initial attempt to examine the challenges that encounter manufacturing organization toward the servitization, and it is up to others to test the proposals through additional empirical investigations. First, this research has only examined one view of a relationship between two players and thus has certain limitations. More information can be obtained from the collection of primary data from dealers and final clients, which can either confirm or alter our results. Furthermore, some factors are particular for the search case company that the researchers chose, for instance, they use different service strategy depending on which market they deal with (Europe, Asia, South America). These are company-specific matters that could generate difficulties and challenges that may apply only to firms in comparable situations. Second, it could be helpful to examine if the challenges vary for businesses offering services with a different level of complexity through external providers. Third, as this research does not evaluate the performance success of the case organization, potential research can, therefore, be conducted in

comparison and analysis based on the outcomes of all three organization arrangements identified with Kowalkowski et al. (2011). Finally, since the researchers conducted interviews with only a single case study, it could likewise be of interest to conduct a cross-sectional investigation in order to obtain additional knowledge of this critical organizational arrangement. Moreover, the finding indicates that when engaging in the servitization process, practitioners may require to concentrate their efforts towards producing mixed (integrated) solutions, which merges goods and services into complete augmented offerings in order to generate lock-in outcomes and prevent a condition where organizations have to compete with pure service suppliers on the same terms.

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Appendix 1

The Interview Guide

1. service offerings
 - Type of services?
 - Complete solutions?
 - Width of the service portfolio?
 - Demand?
2. Customer Relations
 - Increased customer focus, how?
 - External organizational structure (Contact points, information exchange)
 - Difference to product organization?
 - Segmentation of customers?
3. Internal Organizational Structure
 - Internal organizational structure - What does the service organization look like?
 - Integration of goods and services?
 - Communication?
 - Difficulties?
 - Synergies? Collaboration?
4. Service Culture vs. Goods Culture
 - Service culture in a manufacturing company - How is this handled?
 - Difficulties?
5. Personnel Recruitment and Training
 - How is it ensured that the right skills are in service organizations?
6. Service Innovation
 - Customization vs. Standardization - How is this balanced? Industrialization of services on a larger scale?
 - Innovation vs. streamlining existing offers - How is this balanced?
 - Collaboration and synergies with product development?
 - Differences to product development?
 - How are customers involved?

Appendix 2

Hello Magnus Larsson,

We are students in a master program with specialization International Business and Marketing at Kristianstad University.

Currently, we are writing our master thesis about "How manufacturing companies provide services to their customers" and how can these services contribute to the company's competitive advantage in the market.

So we are interested in the TitanX company as one of the leading companies in Sweden market that provide tailored solutions and services to costumers in addition to the main products.

We looking for having about 5-8 interviews, predictably about 30 minutes each, with managers from different levels in the organization for examples Sales, Marketing, Operation, R&D, purchasing, and somebody from the top management (strategic level, planning).

Our research' goal is to the economic stability of the organization through the offered (products and services), and keeping the organization attractive in the eyes of customers and ensure customers loyalty.

We will be more than happy if you accept our proposal and hope that our research results will contribute to both the company and the academic research in a useful way. We appreciate your cooperation in advance.

Best Regards

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Appendix 3

Hi Issam and Hussam,

LARSSON is interested in and willing to offer you a possibility to do your master thesis using our company as your “case study company”.

You can read more about LARSSON on our website and I look forward to schedule the first meeting with you, and maybe together with your supervisor, at our office in Bromölla to further discuss this and get to know each other.

In case you are interested in doing your master thesis at LARSSON, I will be the one from our company coordinating your work and arranging interviews with key people in our organization.

Best regards,

Magnus

Magnus Larsson

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Appendix 4

coding scheme

flexible implementation	Category	code	Interviews
Service Development	Managing the service portfolio	Integrated solutions	1, 6, 3
	Service Development Process	Adoption of innovation	4, 1, 2
	Involving the customers in development	Feedback from customers	4, 2, 5, 1
Internal Organization Design	Service orientation	Service culture	5, 6, 3, 4, 1
	Structure of service organization	Family firm	2, 6, 3
Service Provision	Relationship with the customers	Personal relationship	1, 4, 6, 2
	External Provision	Relationship with representative	3, 2
	Customization vs. Standardization of services	Flexible implementation	5, 6, 1