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Solving the need of the Metal and Sheet  
Metal Products when entering the Swedish  
Market

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## TIIVISTELMÄ

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Tämän opinnäytetyön päämääränä on selvittää, mille metalli ja ohutlevytuotteille on kysyntää Ruotsin rakennusalan markkinoilla. Tarkoituksena on myös selvittää potentiaaliset yritykset, joilla on oikea tarve tuotteille. Lisäksi selvittää minkälaisia kokemuksia heillä on suomalaisia metallialan yrityksiä kohtaan. VAMM Steel Oy tuotannon kasvu ja kehitys on ollut jatkuvaa yhtiön perustamisesta lähtien, joten mahdollisuudet kasvuun on olemassa.

Ensimmäisessä kappaleessa kuvaillaan lyhyesti tutkimuksen taustaa ja tutkimusongelmaa sekä tutkimuksen tehtävää.

Case yritys VAMM Steel Oy tuodaan esille aloituskappaleessa.

Toisessa kappaleessa kuvaillaan lyhyesti tutkimuksen teoreettista viitekehystä, keskeisiä käsitteitä sekä tutkimuksessa käytettyjä menetelmiä ja tutkimusaineistoa.

Kolmannessa kappaleessa esitetään lyhyesti tutkimuksen keskeisiä havaintoja ja tuloksia sekä keskeisiä johtopäätöksiä ja tulkintoja.



## **ABSTRACT**

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The main goal of this thesis was to clarify which metal and steel sheet products have the demand on the industry of construction in Sweden. The objective was to find the potential companies in Sweden which have an actual need for products. In addition to find the previous experience and attitudes towards Finnish companies in metal industry. The productions growth and development of VAMM Steel have been continuous since the company was established, so the opportunities for growth is existing.

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Keywords	Swedish market behavior, Metal industry, Distribution to Sweden, VAMM Steel
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# 1 INTRODUCTION

In this chapter I am going through the background of my thesis and the objective of this research. Furthermore, to tell what to achieve with the thesis and with what questions are leading toward the end result.

## 1.1 Background

This thesis has made in collaboration with VAMM Steel Oy, which is a local supplier of the sheet metal products. The focus is targeted to the Swedish markets and the possible customers of sheet metal products. The goal is to find the price range of the sheet metal products in Sweden so that VAMM Steel will know what is the average prices for sheet metal products that the potential customers are willing to pay in Sweden.

The main topic of this chapter is to give a preface to the topic. Defining the research problem and the main target of the research explaining shortly the part of the structure of this thesis.

In terms of international trade and business, “absolute advantage” often refers to business or country specialization and is used to describe the maximization of benefits. In metal industry, the production chain is very diversified. Factories are focusing on sustainable development and saving, which leads on benefits in the long run. Production processes are complex and every step accounts. The company that has a knowledge of producing cheaper, faster and the capacity of producing is higher is truly successful and more beneficial than the competitors. True cases of absolute advantage are rare, but more commonly used term to describe the advantage a business or country has, in production terms, over its competitors is comparative advantage. (Sutherland and Canwell 2004, 1)

Even if each country has its market leaders, there is always a chance to compete against them. Sweden’s largest steel producer SSAB has recently merged with Raustaruukki, which effects on the other smaller enterprises in the same industry. Small



factories is forced to focus on certain areas, that these factories have the true competencies. These factories must do something better than the mass production factories to be able to stand out. Also, the competition in pricing is now even tighter when the bigger producers are merging. Finnish steel producers have a good reputation in Sweden and it is a very positive factor when entering Swedish markets.

According to Sweden Metals (2015) report, increased auto production and construction activity should support growth in local crude steel demand. This is giving opportunities for more specialized sheet metal companies to bring their products to the market for various companies in need of more specialized parts to be used in their end products. The report brings more opportunities for small and medium-sized companies by stating that multinationals in Sweden are noted for high levels of research and development spending, standing to benefit from new product development, particularly in high-tech areas. Within the framework of an enlarged EU, Sweden is well placed to promote and benefit from a Scandinavian growth pole.

The reason why Sweden is a potential country to export to is the common market. A common market, notably the European Community, is a group of countries which have a common external tariff and may, or may not allow labour mobility. Common markets tend to have common, or similar, economic policies in each of the member states. (Swann, Dennis, *The Economics of Europe* 2000)

The decision to choose this company is based on my personal interest towards the company that provided me a trainee place in the summer of 2016. The potential of their products is high known as a high quality of their products and services. The competitiveness in Swedish markets is possible and I also see a chance of competing in the relation of the price and quality that they are providing.

The term “competitive advantage” refers to a situation where a business has a commercial advantage over the competition by being able to offer consumers better value, quality or service. Normally, a competitive advantage would be measured in terms of lower prices but in the case of more benefits and greater quality, higher

prices are possible because of the competitive advantage enjoyed. (Sutherland, Canwell 2004)

## **1.2 Objective**

The core objective of this research is to solve the competitive price of sheet metal products when entering to the Swedish market. To be able to find the competitive price range and the possible customers of steel suppliers in Sweden, the deep understanding of Swedish customers in metal industry is one of the key areas leading towards the answers.

To examine the price range of sheet metal product, the standard product must be picked that will be used in this research process to be able to investigate the possible customers for this specific sheet metal product.

The interest on supplier's profitability in Sweden is also taken under consideration when measuring the market share of the Swedish sheet metal suppliers.

## **1.3 Research questions**

Based on the objectives mentioned above, the specified research questions that guides the study throughout the process are:

- (1) What do the Swedish customers value?
- (2) What kind of benefit the Swedish customers are looking for?
- (3) Which kind of need of products they have?

## **2 SWEDISH MARKET BEHAVIOUR**

The second chapter discusses about the consumer today and what kind of consumer Swedes are. This chapter concludes the buying behaviour in metal industry and describes the ways of buying process. The buying process is influenced with various things that makes the company to choose the right customer. This and more is to come on this chapter that will lead you to a deeper and further knowledge of these aspects.

Sweden maintains among the most advanced telecommunication, transport, healthcare and education infrastructures in the world, which provides a solid foundation for metal producers and metal consumers to operate and expand (Sweden Metals Report 2016). Although Sweden's metals industry is facing into a number of global headwinds, including excess steel supply and sluggish consumption across much of Eurozone, the positive is an improving outlook for local steel demand as autos production and construction activity pick up (BMI Industry View).

### **2.1 Consumer Today**

“Today's consumer can be an unpredictable and more connected than ever before. It is still staggering when thinking about it”. “This single device that everybody keeps in their pockets can be used to review products, check prices, share purchases, request coupons – and sometimes even to purchase products from one retailer's online channel while standing in a competitor's store”.

“While mobile and internet connectivity has empowered the consumer to shop in many ways, it has also created opportunities for retailers” (Alison Bolen, SAS Insights Editor). On the other hand, it gives an opportunity for retailers and suppliers to interact more with the customer about the specifics of the end product.

“No matter where he is shopping, the consumer is the consumer. You have to break down those barriers between channels, empower the consumer in a uniform way

and engage them in the same way on your site as you would in your store.” (Sahal Laher, Seven characteristics of the modern consumer)

## **2.2 Swedish Consumer**

Developing technologies of the mobile and internet technologies has brought the online market into our homes. The consumer can compare prices and search for more advantaged products through the internet. The possibilities are endless and every enterprise wants to be on the internet, where consumers can find your products by single clicking through the search engines.

Price and the value of the product are the two dimensions of the behaviour of the consumer. All consumers are looking for the benefit for the money as, “Price is the primary determining factor for Swedish consumers and the second main concern is quality”. Quality is an experience of the consumer during a long period using a certain product.” Research prior to purchasing is an important process especially with regards to product durability”. The seller should know the product and the qualifications of it. “Other major purchasing factors are value for money, the salesperson’s knowhow, and after sales services”. Creating a long-term relationship with the customer requires trust, openness and fairness. “Swedish people are loyal to brands and shops”. In global world, every consumer is well connected and can change the purchase decision many times when searching for the suitable option. “A large proportion of the population are web-connected and the internet is frequently used to obtain information as well as to make purchases”. Every country has their own privileges of location, technology, natural resources or other richness’s. In Sweden “consumers have resources and purchasing power well above that of most other European consumers”. “They are used to a higher standard of living than in most other European countries and thus have high expectations”. (The Swedish consumer Agency).

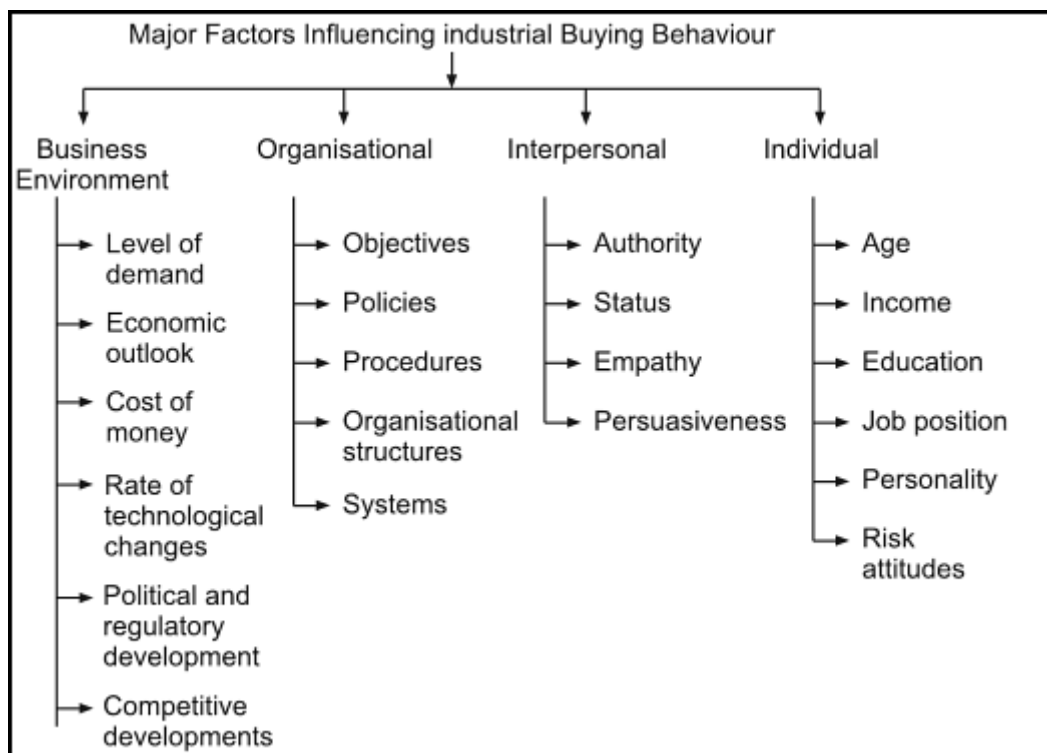
### **2.3 Industrial Buying Behaviour**

The companies which strive to gain success in business to business markets, the provider firms should be aware of the “buying behaviour of the customer firms”. Nevertheless, the process of customer enterprise’s purchase “has a higher complexity which is coming from its nature of being multiphase, multi-person, multi departmental and multi-objective” (Bahtisen Kavak, Niray Tunel 2015, Vol 6, No 6). The industrial buying behaviour varies from consumer when actual buying process has many aspects, such as using more variables and greater difficulty to identify process participants (Moriarty 1984). As the Parkinsson and Baker (1986) explained as the process of product purchase which is made to please the entire organization instead of satisfying just one individual.

The industrial companies are forward looking when seeking the actual buyers and suppliers. Understanding the “procurement function within various organizational forms of buyer-seller relationships, such as strategic alliances, just in time (JIT) relationships and other cooperative arrangements” company can make long-lasting partnerships with suppliers and customers that are seeking for benefit.

The Industrial sector is multi-dimensional in the buying process of the service or a product. Companies are striving their production to minimize costs of the production and maximize the profit of the end products. According to this “Webster and Wind model believes that industrial buying behaviour is impacted by different variables” (Industrial buying behaviour 2014).

The factors influencing on the industrial buying behaviour are shown in Figure 1.



Source: Phadtare, Milind T.,2014

### **Figure 1 Factors influence industrial buying behaviour**

The factors are sorted into four main categories “such as environmental, organizational, interpersonal, and individual.” The indicators influencing these categories include.

- Business environment
  - Level of demand
  - Economic outlook
  - Cost of money
  - Rate of technological changes
  - Political and regulatory development
  - Competitive developments
  
- Organizational factors
  - Objectives
  - Policies

- Procedures
- Organizational structures
- Systems
- Interpersonal factors
  - Authority
  - Status
  - Empathy
  - Persuasiveness
- Individual
  - Age
  - Income
  - Education
  - Job position
  - Personality
  - Risk attitudes

In the “Factors influence industrial buying behaviour” model the industrial company is facing a situation, where the need of changing the production process or way of operating need to evolve. As demonstrated by Phadtare & Milind T (2014) it can be described as “a new task situation elucidates the need that has not faced by the organization before”. The actual level of that need is found going through analysis of suppliers so that “organization will search for many sources of information and support”.

### **2.3.1 Automated machines in metal industry**

By favouring automation in the production the company is reaching more profitable results in their production process. The capacity of producing is growing and the need for employees in the production process is reducing due to machine work. In the metal industry, this occurs more often when the production is growing and more capacity needed. Today's customers want fast deliveries, good quality, quick responses to the orders, low prices and right materials used. This efficiency can only be reached by automated machines that is unfortunately effecting on the need of employees in the company. Automated machines and robots are more consistent and accurate while working and for this reason industrial companies want to buy the right machine from a reliable seller. This is not a simple decision to make and requires remarkable resources of finding the right product and trustful seller. A machine can be massive, when right logistical equipment's are needed or even purchased. Risks occurs in every step when purchasing the machine, delivering, installing and running the machine. Any problem can occur at any time and very specific skills and acknowledge is required when running the machines.

The machine is not necessarily running at itself, so the factory need to take into consideration all the possible training for the staff that the machine requires. The training consumes resources of the factory and the production can even be stopped for a while. These factors are always costly for the factory, so planning beforehand the cost effects of the investments is important for the factory to take into account. (VAMM Steel 2016)



### 3 METAL INDUSTRY IN SWEDEN

At this chapter I have done further research about Sweden's metal industry today and for the days to come. This chapter discusses from the strengths of Sweden as a country and furthermore in what reasons Sweden become such an important steel manufacturer. Forecast for the saddens metal industry is the closing for this chapter which will seal the strengths, weaknesses, opportunities and threats of the metal industry in Sweden.

Sweden's strong placing in the iron market until the 19<sup>th</sup> century was based on abundance of natural resources (Jernkontoret). Nature of endless forests is ideal to produce charcoal. Shape of its land and mountains that exists created many waterfalls that enabled the use of water power. The resource of ores in its soil is evidently a remarkable richness of the natural resources. Everything affected for the Sweden's development in the metal industry, by enabling the use of their natural resources. A country with so many benefits from the land is giving an opportunity for them to produce cheap and gain more profit when selling forward. Even though its natural resources Sweden is an international market place, where companies have benefited from their location and common market to run your business and own shares of the businesses.

Among all the other Scandinavian steel producing countries Sweden is known by its high export and import rates. Export: nearly 85 % of the production. Import: 80 % of the consumption (Jernkontoret). Sweden is also known from its "High share of special steels" that is nearly 65 % of the whole production, which is significant for the metal industry of Sweden. Not only it is special from its steel variation but

it is also focused on “specialised production”. In global context, it is not very common that a country is having “one producer per product group”. In the following picture below are the “Swedish steel producers located” throughout the country.



*Source: (Jernkontoret, 2007)*

#### **Picture 1 Steel Producers located in Sweden**

Sweden truly is an international market place and has companies with owners from all around the world. Looking at the steel producers in Sweden “the majority of companies are wholly or partly owned by foreign steel producers”. According to the table 1 it is evident that Sweden’s steel producers have merged with multiple companies during the past few years.

## ”Swedish” steel producers 2007

The companies are classified according to their main production policy

	Swedish owned 	Partly owned by foreign steel related companies	Wholly owned by foreign steel related companies
Ordinary steel	SSAB Tunnbrät SSAB Oxelösund		Ruukki  Scana Steel 
Stainless steels	Sandvik MT	Outokumpu STP  Fagersta Stainless 	Carpenter Powder  Outokumpu Stainl. 
Other alloy steels	Kanthal Boxholm Stål Höganäs		Erasteel Kloster  Uddeholm  Ovako  Surahammar 

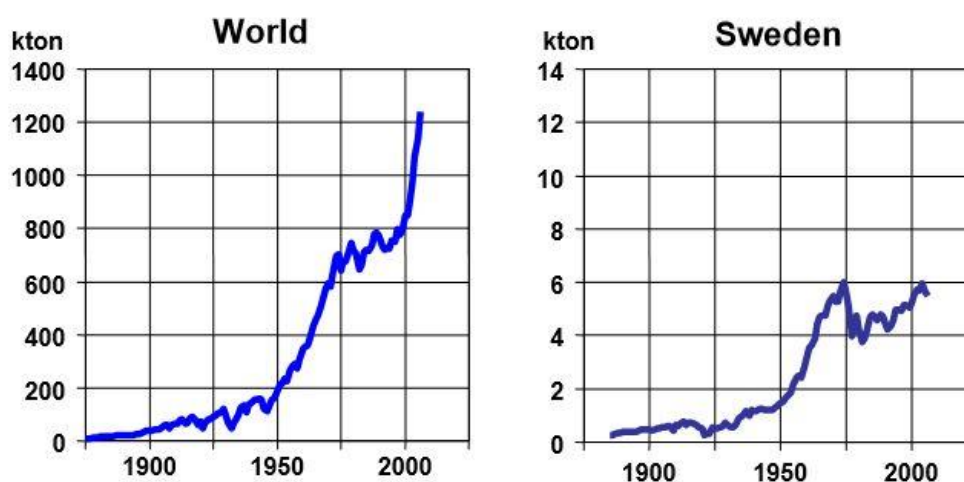
Source: (Jernkontoret, 2007)

**Table 1 “Swedish” steel producers 2007**

In the world scale Sweden is still a small producer of crude steel. The country produces in average of 6 kton in a year, which is quite small amount according to the world scale where the production reaches 1250 kton per year.

The figure 1 below demonstrates the Sweden’s crude steel production growth vs world production growth during the past centuries.

## Crude steel production



Source: (Jernkontoret, 2007)

### Figure 2 Crude steel production

Even though the Sweden's production is evidently quite small in the world scale of production it does not tell the whole truth. Sweden is "a mid-sized European steel producer and has a strong reputation for making high-end products". The Swedish steel industry is a world leader in great technology who has clear focus on "R&D", "high productivity", and they have a great emphasis on "environmental matters". These values have a high impact on the interest against them and these values have brought the foreign companies to merge with them. As showing in the table 2 below it describes in which areas Sweden's steel companies are the world leaders. (Jernkontoret 2007)

<i>Stainless steel</i>	<b>Outokumpu</b> biggest in hot rolled plate <b>Outokumpu Stainless Tubular Products</b> one of the biggest in welded tubes <b>Fagersta Stainless</b> one of the two biggest in wire rod <b>Sandvik</b> biggest in seamless tubes
<i>Tool steel</i>	<b>Böhler Uddeholm</b> biggest
<i>High speed steel</i>	<b>Erasteel Kloster</b> biggest
<i>Electrical resistance wire</i>	<b>Kanthal</b> biggest
<i>Ball bearing steel</i>	<b>Ovako</b> biggest
<i>Carbon steel</i>	<b>SSAB</b> biggest in abrasion-resistant and structural steels with extra-high strength
<i>Iron and steel powder</i>	<b>Höganäs</b> biggest

Source: (Jernkontoret, 2007)

**Table 2 “Steel producers are world leaders”**

### 3.1 Sweden’s metal industry today

The consistency of being the industry leader in certain areas is unstable in this global world. Even an industry leader in certain areas is facing “a number of global headwinds, including excess steel supply and sluggish consumption across much of the Eurozone”. However not bad without some good, “A positive is an improving outlook for local steel demand as autos production and construction activity pick up”. To be able to maintain the position on the market,” Swedish steel producers, including industry leader SSAB have been restructuring and appear well placed for the upside once prices start to recover”. (Sweden Metals Report 2015)

In this global world, everything effects on everything sooner or later. The countries and the industries are well connected, especially in Europe. The common market and the agreement of free trade is enabling the fast movement of merchandise between the nations. Sweden is part of this communion and, “is also an important supplier to the European autos industry, which means producers have felt the effects

of the Eurozone crisis which has weighed on steel demand across the region”. Lately, “significant growth in Chinese steel exports” is causing to “oversupply” and to reduce prices. This has triggered “steelmakers to limit capacity and to heavy contractions in Swedish output, interspersed with sluggish growth in recent years” (Sweden Metals Report 2015).

### **3.2 SWOT analysis for Sweden’s metal Industry**

The following information is stated by “BMI industry research”. Sweden’s forecast for metal industry made at 2015. This forecast is made in SWOT analysis considering the years of 2015-2019. This forecast includes what is necessary to take into consideration and also in which areas Sweden has opportunities to become more profitable.

#### **Strengths:**

- “Specialising in added-value, niche steel products have given Sweden a competitive advantage and allowed it to leverage against the slump in Eurozone demand”.
- “Sweden maintains among the most advanced telecommunications, transport, healthcare, and education infrastructures in the world, which provides a solid foundation for metals producers and consumers to operate and expand”.
- “Sweden’s largest steelmaker SSAB returned to profit growth in 2014”.
- “The recent merger between SSAB and Finland’s Rautaruukki should help reduce price competition in the Nordic market”.

**Weaknesses:**

- “Sweden’s status as an open trade-oriented economy means that the ongoing European economic crisis poses significant downside risks to Swedish growth”.
- “Sweden’s reliance on the Eurozone as a trade partner has negatively impacted the country’s economy, as the nation’s export sector represents just over 50% of GDP”.
- “The steel sector remains highly dependent on demand from the European autos industry, which has been hit hard by the economic crisis”.

**Opportunities:**

- “Increased autos production and construction activity should support growth in local crude steel demand”.
- “Multinationals in Sweden are noted for high levels of research and development spending, standing to benefit from new product development, particularly in high-tech areas”.
- “Within the framework of an enlarged EU, Sweden is well placed to promote and benefit from a Scandinavian growth pole.
- “US Steel demand is expected to remain steady as the economy achieves a stable growth trajectory”.
- “The European Parliament’s “Steel action plan” is expected to support steelmakers via exemption from regional climate and energy legislation”.

**Threats:**

- “Europe’s crude steel surplus will continue to limit opportunities for Swedish exporters”.
- “SSAB is gradually diversifying its operations across neighbouring markets, such as Finland”.
- Autos industry worldwide has seen manufacturers switch to using aluminium more than they use steel, which has had a negative impact on steel production in the country recently”.

- “Globalisation will continue to pose major competitive challenges to the Swedish economy, which needs to pursue its comparative advantage in high-tech and service sectors”.

Source: (BMI Research, 2015)

### **3.3 Forecast for the Sweden’s Metal industry**

In this diverse industry, it is quite challenging to stand out as a well-known producer. While the bigger producers are merging the smaller and medium sized has to cooperate in able to stay up and running. However, the Sweden’s metal industry is forecasting the status of “Growth ahead, but producers still cautious” which is for the near future. The matter of finding the right customers and contracting long lasting contracts is the key of running a profitable factory. The world steel association is forecasting a “faster growth over the medium term” in metal industry in Sweden, while auto and construction industries are developing their products and so growing the demand in steel market.

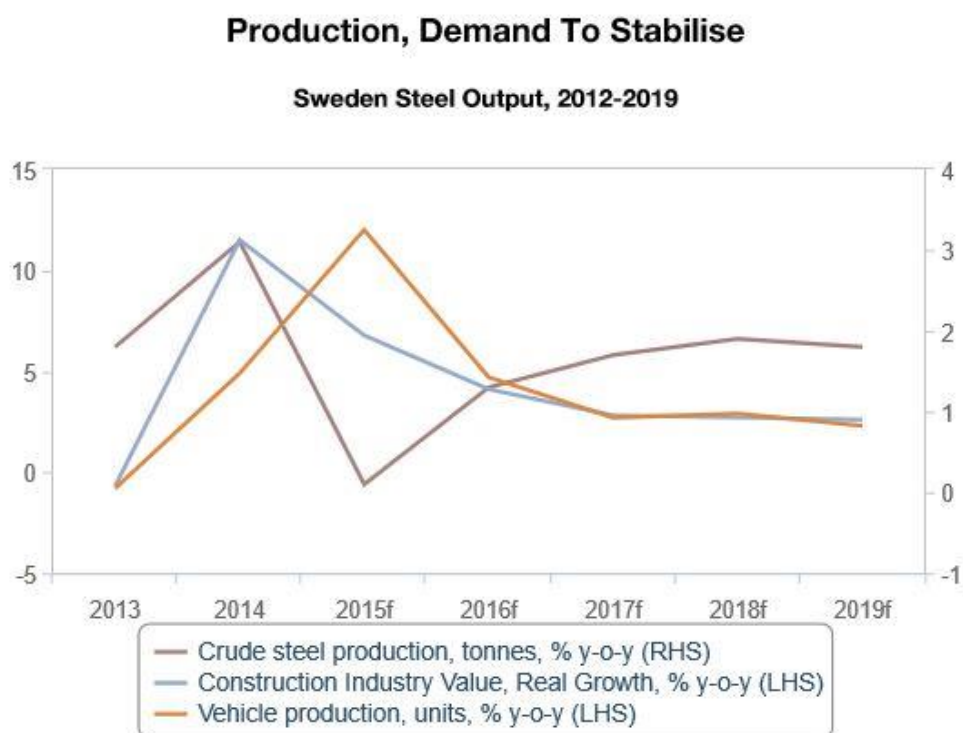
The European markets are highly dependent on the demand of each other, so the supply and demand of the products is going hand in hand. The Sweden’s metal industry is going towards “low-growth environment for Swedish steelmaking to give way to faster output over our medium-term 2015-2019 forecast period”. The growth of the key industries of metal is causing “an improving demand scenario as the industry feels the positive effects of higher activity in key demand industries such as construction and autos production”. This is vital for the suppliers of the companies who are producing different parts for the companies in these industries. The suppliers are highly dependent of the orders of the customers and without constant production the factories will be slowed down or even shut down (Forecast for metals industry in Sweden).

The BMI’s research on the industry, forecasts the expand of the construction industry is “confident that this will filter through into higher local steel demand, with crude steel consumption forecast to expand by 2-3% through to 2019”. When “this should provide a platform for Swedish producers to increase output



over the period and we are looking for production to grow by 1-2% a year over 2015-2019 to reach 4,86 million tons (Forecast for metals industry in Sweden).

The figure 3 is clearly defining how the production is heading to stabilise in the future, which is relieving for investors and the suppliers as well. When the industry is forecasted to be stable in the future, it also triggers the suppliers to invest for the new technology of the production. The working methods are also renewed and every company in this industry is looking for benefits by restructuring and making the processes as cost effective as possible.



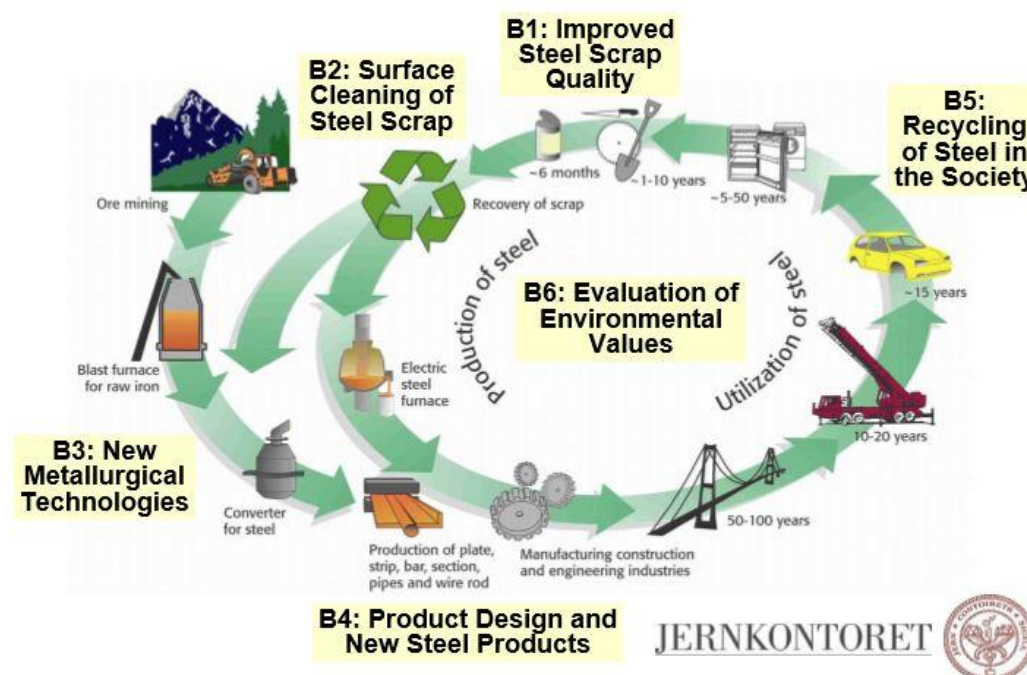
Source: National sources, BMI

**Figure 3: Sweden Steel Output, 2012-2019**

Today's demand of the products recyclability and eco-friendly is a significant issue. Producers are facing many challenges of the eco-friendly lifecycle. Recycling the waste and producing with "high resource efficiency" causing "minimum impact on natural eco-systems". The global issue of the emissions is something that every company should take seriously. The natural resources of our globe are running out fast if every company is not "economising of natural resources". The aim is to produce "low specific energy" with "low specific CO<sup>2</sup>". The great challenge is to do all these steps with "low waste" during the production process.

Since the European common market is investing in the future of eco-friendly products the Sweden's authorities have stated "demands on products" that should be considered. The products should be "Safe to use", "recyclable", and firms being able to "economising of natural resources".

According to the following picture 2 we can see that Sweden is spending valuable interest on creating an environmental friendly future by going "towards a closed steel eco-cycle".



Source: Jernkontoret, 2007

## **Picture 2 Towards a Closed Steel Eco-cycle**

### **4. Distribution to Sweden**

The fourth chapter tells shortly the main principals of the roles of different intermediaries and their distributors when reaching the end-product. The value creation is explained what happens between the processes when raw material is manufactured and then to be assembled and sent to another intermediary, who adds value on it. Each piece of the bigger whole product matters is this chain of processes and the quality has to be precise and made according to the measurements. The heavy logistics are involved when considering the steel products that can weight several tons. Transporting these products include certain restrictions and risks and is usually more expensive as well. The closing of this chapter is gives further knowledge of the importance of steel and its high demands on the market. The steel is also a very diversified market and brings its special aspects from all other industries. It is very important to trust the potential of the homeland and this way provide a workplace and opportunities for the native people.

#### **4.1 Intermediaries and their roles in Steel distribution**

Metal Products and services in weighty logistics have several specific characteristics. Items are substantial, sizeable and now and then complex to work with. The business ideas are resource operations (Erkki Hämäläinen, 2003). Maintenance and preparing require significant ventures from the administrator for capital-serious frameworks. When appropriately service administrators have put resources into abilities that they have coordinated their administration ideas.

#### **4.1.1 Roles in Value Creation**

Producers in metal industry are steel plants, which deliver steel and metal items in standard structures. Producers also known as upstream workers may ship their products to middle handler or directly to OEM clients. Original Equipment Manufacturers (OEM) are enterprises that build finished products from pieces, components or modules provided by middle handlers. Services that are adding value along the supply channel are in different positions. In this chain of processes middle handlers work as a connecting link in the centre between the manufacturer and OEM. Main handlers in between with their part of ownership of the products do a more significant input to the overall value making than other brokers. The main brokers are providers that make a certain service for the product that possess the items. With handwork or mechanically work out the products and offer price worthy assistance. The risk exists in item sourcing, stockholding, handling and related administrations. These mediators negotiate, invest and handle the goods they own. These operating companies are stockists benefit focuses and part providers (Erkki Hämäläinen, 2003).

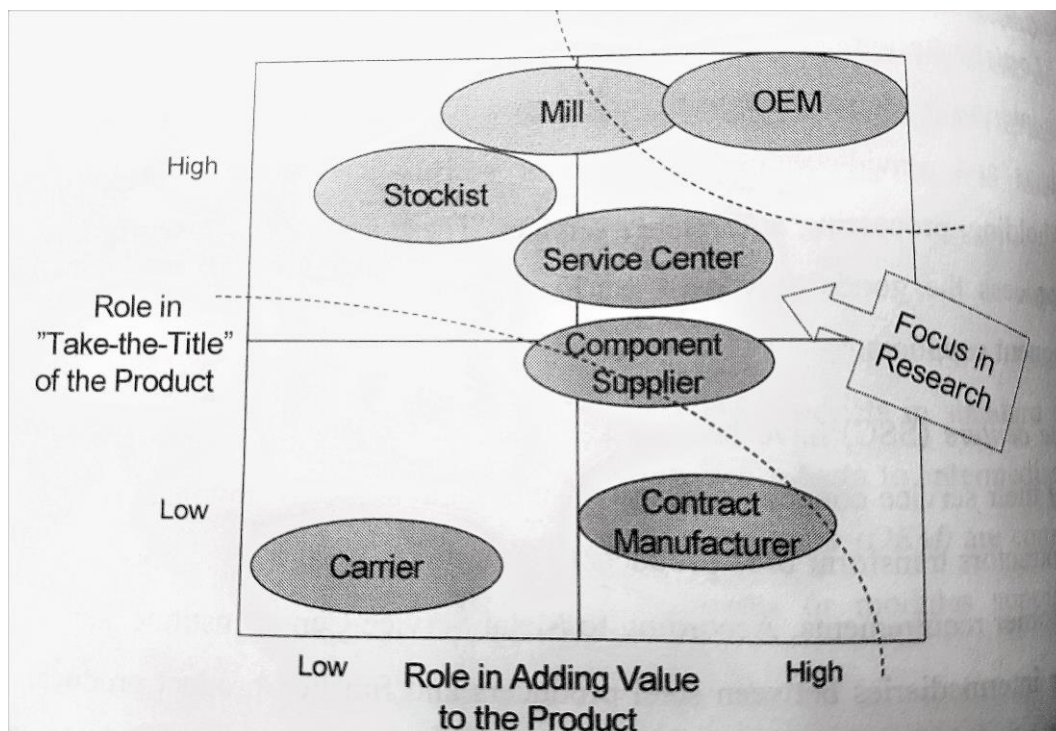
These service centers (SSC) are main workers in the broker assistances. Evidently as a part of their business concept they hold remarkable stocks of crude material in their warehouses. When SSCs and subcontractors change base items to modified parts and segments in view of client necessities. As indicated by Metal Administration Centre Organization, benefiteres are the intermediates between steel makers furthermore, completed item makers. In fact, Steel service centre (SSC) is another name for an operation that purchases completed steel, regularly forms it somehow, and after that offers it in a marginally unique shape. After processing the product, it is ready for delivery when the SSC's transport the steel and other metal items in the correct amounts, the correct frame, and at the correct time required by clients. However, benefit focuses are less capital-serious than steel plants since they needn't bother with heaters and casters (Metal Service Centre Institute, 2003).

Definitions of stockists, contract manufacturer and component suppliers:

*Stockists*, which convey loads of base items from numerous providers, source items in high volumes from makers and exchanging houses. Rather than preparing base items, they concentrate on standard stockholding thus their value-added contribution to items is low. Stockists work with break-mass and solidification standard territorially and locally, what's more, the key business process is convenient conveyance of product(s) to the client (Erkki hämäläinen, 2003).

*Contract manufacturers* that deliver parts, segments or sub-amasses of modules and work as the principal level providers to the OEMs. They have capacities in assembling of complex items. Assembling is activated but requests of OEMs and regularly utilizes their crude materials. Contract makers rarely have their own stocks. (Erkki Hämäläinen, 2003).

*Component suppliers* who practise on part producing. They produce either against OEM's request (MTO) or for public markets (MTS). Materials are sourced typically from stockists or from the plants straightforwardly. Parts are conveyed specifically to OEMs sequential construction system, for example a mechanical production system Figure 3 (Erkki Hämäläinen, 2003).



Source: Erkki Hämmäläinen, 2003

#### Figure 4 Description of the Roles of Intermediaries in a Supply System

*Supportive intermediaries* in this figure as a second gathering, the emphasis is on overseeing streams of data or products between the administrators in a supply channel. They have no title as proprietors of the products. Administrators in the second gathering give steady mastery, data and transportations services.

Other administrators, for example, operators, advisors, lead coordinators suppliers (LLPs) and different bearers of the products and obtaining associations give steady administrations in the supply framework.

*Third-Party logistics (3PL)* is meaning of utilizing an outside organization for at least one coordination's benefits paying little heed to how extensive, entangled, or tactical those administrations are. For instance, organizations can utilize an outsider coordination's supplier to supply essential warehousing administrations in two or three urban areas.

*Fourth-Party logistics (4PL)* is defined utilizing integrator for the sole reason for helping your inventory network accomplish its full key esteem (Marino 2002, 23), (Erkki Hämäläinen, 2003).

#### **4.1.2 Heavy Logistics**

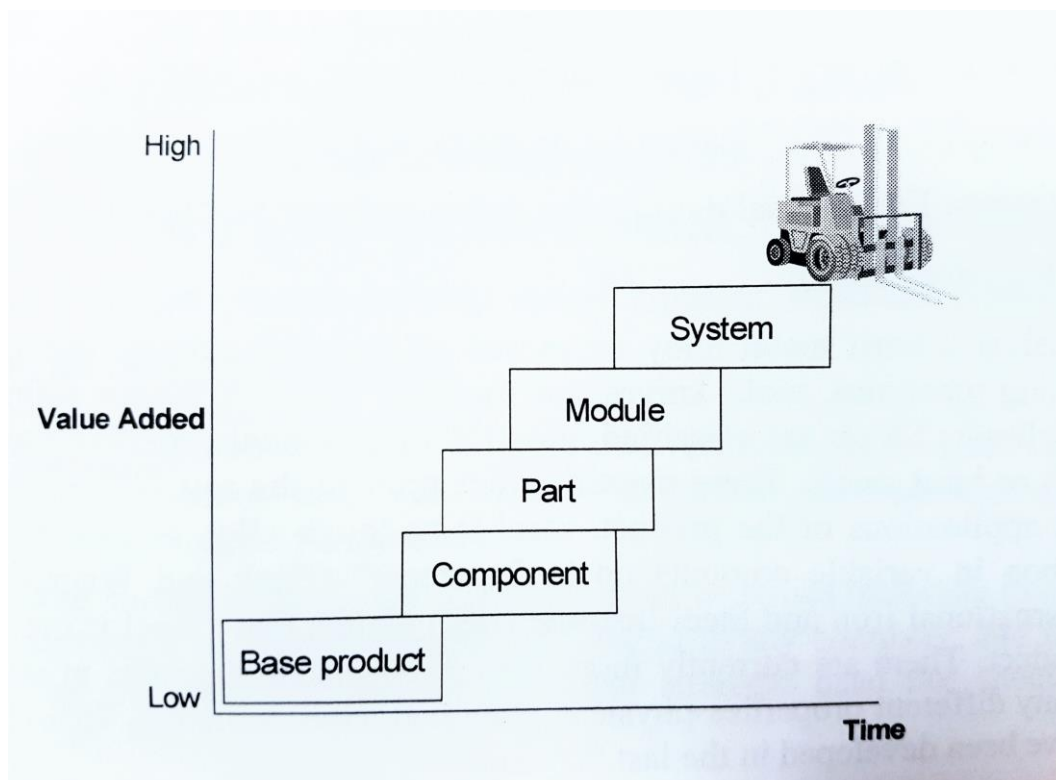
The process of developing value in heavy transportations is a long-haul responsibility for administrators. By including an incentive in a skill is a basic choice by the organization. Approval is required as stockists choose to spread their administrations or OEMs plan to outsource value included handling.

Common items in heavy transportation are steel, paper and timber items. There exist, nevertheless, no uniform grouping for items, and steel items alone are arranged in different ways.

In the process of assembling a steel item changes its physical qualities. Brokers maintenance adds value step by step to an item. The ranking of the product is explained on various ways, contingent upon value include handling input. In “heavy logistics” the steel products have standard shape at an early “stage of production”. During the first phase, plants create the base items and then offer them in bigger amounts of crude material to OEMs or stockists. Brokers first step is stockholding arrange picking and conveyance of a standard or handled item to the client. Treatment of constituents and parts that may also involve some constructing processes has a high esteem included information contrasted and stockholding administrations. Handling and constructing are customization administrations, that are executed due to customer’s needs. Certain product is treated to another shape and size by cutting, bowing or slatted into parts or tweaked segments.

*“Components, parts and modules are assembled into a system or part of a system. The assembly line coordinates all logistic flows into a system, which is the final product”.*

The following figure 5 describes how the value is added to the product during the hierarchical process. Each stage is crucial when reaching the end-product. The quality needs to be good in every step of the process when adding value on it.



*Source: Erkki Hämäläinen, 2003*

**Figure 5 Value Based Product Hierarchies and Process Types**

## **4.2 Sweden's Steel consumption**

The steel industry is a world-wide negotiation. It is an old industry, with very historic traditions. The industry of steel is also a strong industry where global markets have over supply and capability to manufacture. The core factors of the business size are the demand of the steel products and supply. The capacity of the production is regularly greater than yield according to high volume. This demonstrates that the meaning of exports is significant as well.



Steel is a material in various items and segments, parts and structures. The biggest buyer of steel is the building industry. Great consumers are in the motor and wrapping industries. In addition, exceptional steels, metals and stainless steels have recorded significant development because of expanding interest for gadgets parts and medicinal kits. In everyday life, the steel is used in various areas such as, buildings, machines, package, electronics, ships, airplanes, cars, home appliances, bridges, small articles and accessories.

The consumption of steel is remarkable in every aspect of people's life. The whole world steel usage is calculated at 768 million tons in 2000 and 830 million tons in 2005. The calculation of "IISI (International Iron & Steel Institute)" evaluates the "annual growth of 0,7% in 15 EU countries and North America (NAFTA) (IISI 2001)". In the world scale the Northern countries – Finland, Norway, Denmark, and Sweden – are minor marketplaces standing about 0,5 to 1,0% of world utilization. In Sweden, the steel intake is more than twice of Finland and Norway's consumption. The statistics is clearly showing that the "Nordic countries have a higher per capita consumption than the average in Europe: Finland 417kg and Sweden 429kg". Comparing to "eastern bloc countries" these countries are having remarkably lower consumption: "Poland 207kg, Estonia 157kg, Russia 123kg, and Latvia 74kg".

#### **4.2.1 Sweden's Distribution channels**

Sweden's steel organizations have concentrated to specialise in various territories. Production is centred around very completed items which for the most part go for fare. Obligated and competent workers are the establishment of the steel industry's prosperity

In Sweden, the biggest operator in steel industry is SSAB Ab, which is the biggest administrative focused in Scandinavia offering work for 6910 employees. This corporation is operating in Scandinavian countries and Poland. With many ware-

houses in various locations SSAB Ab has great market value that accounts approximately 50% of multiple type of products in different areas. (Co-owners and stakeholders of jernkontoret 2016)

The fact that SSAB lists 5000 stock products of profitable steels and 3000 stock products of metals clearly shows that the corporation is a great asset for Sweden's steel markets. By widening their operations SSAB has branches in Finland, Norway and Denmark that assures the growth of the capital. The company's turnover is 55,354 million SEK in 2016 (SSAB 2016)

In Sweden is a great focus on various market niches at the steel industry. The enterprises at now are targeting on the production of various steels and these items are focused at consumers within different market niches. Sweden's part of sales to the world steel market accounts to only about three per million (2014). However, when pointing at sales to the other markets areas – on where Sweden's steel industry focuses then it looks quite different. Swedish steel enterprises have remarkable market value in many niche areas they are among the world leaders.

The steel companies are nowadays acknowledged specialists within particular areas where they make well-handled steel grades and items which are fundamentally sold in fare markets. One of this producer is Sandvik which is largest in seamless tubes. (Jernkontoret 2015)

This company is an innovative and worldwide designing gathering with approximately 3680 workers with a solid duty to improving client efficiency, productivity and wellbeing.

*“Our operations are based on unique expertise in materials technology, extensive knowledge about industrial processes and close customer cooperation. This combination, coupled with continuous investments in research and development (R&D), has enabled us achieve world-leading position in the following areas: (Tools and tooling systems for industrial metal cutting, Equipment and tools, service and technical solutions for mining and construction industries, Advanced stainless steels and special alloys as well as products for industrial heating)”*.

(<http://www.home.sandvik/en/about-us/our-company/>)

The research is clearly stating that tendency in Scandinavia has advanced towards vertical reconciliation and specialization in steel industry. Main operations as creation and dissemination are focused on expansive or specific administrators in Scandinavian countries. The improvements in Sweden is going towards a bigger One-Stop-customer by consolidating item decisions and administrations in one provider. Tibonor is a clear proof of this.

## 5 RESEARCH METHODOLOGY

In this following chapter, different research and information accumulation techniques will be uncovered. Moreover, the unwavering quality, legitimacy and confinements of the exploration will be examined.

### 5.1 Research Methods

There are two principle sorts of research methods, qualitative and quantitative methods. The choice of the examination strategy is the most solid piece of the exploration procedure. Subsequently, it is essential to comprehend the fundamental components of different strategies to be capable to select the most appropriate one.

Qualitative research concentrates on understanding the respondent's perspective. The perceptions and estimations are made in normal settings and the approach is more discerning and interpretative. The information is normally gathered through meetings and perceptions and the example is considerable smaller than in quantitative research. In spite of the fact that the specimen is little the outcomes give a more profound comprehension on the theme and the researcher will probably get new experiences.

In contrast with qualitative method, quantitative research concentrates on gathering numerical information to clarify the phenomena. The data is gathered through studies and the specimen size is significantly greater than in qualitative research. The inquiries are planned such that they can be taken care of and broke down factually. Contrasted with qualitative research the approach is much legitimate and basic.

Mixed methods research is a mix of qualitative and quantitative information. It gives a more all-encompassing comprehension of the exploration of the research problem.

In this thesis, the qualitative method is used to collect more specific understanding of the potential customers in Sweden. The questionnaire is formed into seven open

questions that the target respondents could freely answer for. This survey is looking for more broad answers of the need of steel sheet products in Sweden and to reveal the previous buying experience of Finnish products among the Swedish companies.

## **5.2 Data collection**

There are two sorts of data, primary and secondary data. The decision of which information to utilize is very reliant on the research problem and data required. Moreover, it is vital to make sense of how to gather the data, from whom and how.

Secondary data alludes to data gathered by others. It must be seen that the information may have been gathered for an alternate reason. In this manner, the researcher should dependably scrutinize the unwavering quality of the data. The point of secondary data is to help the researcher to comprehend, understand and explain the research problem. Wellsprings of secondary data are books, articles, insights, and research reports. In some cases, the secondary information is sufficient to take care of the examination issue and no primary data is required. (Ghauri & Grønhaug 2005, 91-102)

At the point when the analyst is not capable to find a solution to the research problem from secondary data, primary data is required. The information gathered by the scientist himself is called primary data. Primary data is constantly special since it has been intended to discover the appropriate responses on a specific research issue. Contrasted with secondary data primary data is more predictable with the examination targets. Primary data can be gathered through studies, meetings, perceptions and analyses. It must be seen that the information gathering techniques rely on upon the examination strategy. There are various ways for qualitative and quantitative methods. (Ghauri & Grønhaug 2005, 102-104; Creswell 2003, 185)

The secondary and primary data were both used in this thesis. This research started with a hypothetical survey regarding the subject. The information utilized was gathered from books, scholarly diaries, and online information sources. The secondary information fills in as the premise for the primary information. The gathering of the primary information started in April 2017 and lasted until the end of May 2017. The

primary information was gathered through an e-survey that was sent into dozens of different companies from the construction sector in Sweden. Due to the limited time and money resources an e-survey was an only option for me to conduct the empirical research.

### **5.3 Reliability and validity**

The core idea of reliability is to gauge the consistency of the outcomes. The examination is better and more dependable when less blunders happen. Reliability is strongly identified with quantitative research. The larger the specimen the better the unwavering quality.

In this research, a questionnaire is utilized as a research method. The e-survey as a questionnaire was conducted for dozens of the construction companies in Sweden and the respondents were chosen randomly. I made a clear e-survey with seven questions that the respondents could easily answer for.

### **5.4 Limitations**

The time was certainly a limitation on this thesis. Due to the limited time frame I was not able to reach as many companies as I would have wanted. This means that the results give only a brief understanding of the willingness to buy steel sheet products from Finland. However, I was able to target my survey to a certain type of construction companies and this way I got to know is there a potential company in this area of business. These companies were in different cities in Sweden, which ensured the geographical scope for the research. The other limitation was the resources during this research. Due to the limited money and contact resources in Sweden I was only able to use the e-survey as a tool in this research.

## 6 EMPIRICAL STUDY

This chapter of the study focuses on the empirical study of the research. The sub chapter 6.1 gives background information about the company, and sub chapter 6.2 explains the findings from the e-survey questionnaire regarding the attitudes towards the demand of the steel supply.

### 6.1 Case company: VAMM Steel Oy

VAMM Steel oy is a manufacturer of components for their client's motors, machines and devices by processing sheet metal and metal, founded in 2014. The company's productions can be divided into four sectors, sheet metal products, press parts, welding and machining welded products and rotors and stators. These applications are divided into two sectors of the production, which are the sheet metal production sector (electrical devices, fan covers for electric motors, mounting plates, brackets and various parts for industrial machines and vehicles out of sheet metal) and rotors and stators (rotor and stator hub cores) winding and maintenance for ABB group globally.

In most cases the customer's product is part of a bigger whole, so the actual functionality is extremely important for VAMM Steel and the end customer. Proudness of being part of this chain of manufacturers can be seen on the treating of daily work with the required level of accuracy and seriousness (VAMM Steel Oy 2016).

The company's basic philosophy in fact comes down to three core values. The work is done exactly according to the instructions given and the documentation is done by single marking every step that has been made during the production process. All the materials can be traced and the work stages during the process can be checked.

By continuous development of manufacturing technology and working methods VAMM Steel has built close business partnerships with customers in Europe and also in the third countries. VAMM Steel Oy is also holding strong on the co-operations with their suppliers. Supplier chain is also a network of operations where

companies are buying services from each other to be able to produce the end product for the customer. VAMM Steel Oy is a medium-sized enterprise with the work force of 50 employees, however, the company started to grow rapidly since 2014 and has then gained reputation as reliable supplier for international businesses. Although the company has faced many challenges of the delivery assurance, it keeps growing the market share by developing new manufacturing technologies and investing on automation. As a result, production process is faster and the capacity of the producing is growing.

## **6.2 Findings from survey**

The questionnaire, (see appendix 1) included seven open questions, in which the first two questions were focusing on the idea of Finland being a potential supplier in the steel processing. These questions are also delivering their interest of buying from Finland, if they have ever thought about it. The following three questions are more focused on the demand of the steel and steel sheet products. The results are conveying a message of the need of specific steel products and this way we could see the possibility to offer them the right products with the right price. Last two questions are focusing on the services that we could provide for the company. Companies are eager to outsource their work if they can get it with a competitive price and the end quality of the service is good. This way the company will save up their own time in such processes and they can focus more their actual work in the company.

These services that we are providing for the companies are the welding of the steel parts, and assembling of the steel parts to be able to reach the end products. The welding and assembly is made by following the customers' needs by using the drawings and pictures of the products.

This e-mail survey reached dozens of companies in Sweden. The respond rate was 30 % of all the companies that could answer in such a questionnaire. Some of the companies were not responding after many tries and were having a hard time of finding the responsible person to answer the questionnaire. The results that I got from the companies were surprisingly positive and honest.



The findings turned out to be useful, because the need for the companies exists. The questions formed in my questionnaire were quite direct to the subject and I could find the answers that I was hoping for.

The first question was looking for the interest of buying metal products from Finland. Results clearly show “if the time is right and the delivery time is good the interest is always there. We are looking for new partners all the time”. that the interest towards sheet and thicker metal products exists and there is always a need for suppliers if the price is right and the delivery terms are efficient. (Company X, Sweden)

Finland being a potential supplier in steel processing is evidently true, because many companies has activity abroad, and Finnish suppliers have also merged with the companies in other countries. The Swedish companies are aware of our competitiveness in steel processing. This can be seen in the responses that all the companies gave. “Yes, we are aware that there are steel manufacturers in Finland which can install also e.g.Ruukki”. (Company Z, Sweden)

All the respondents had some sort of need of steel products in various compartments. Depending on their business they had a different need for different products that they would possibly want to buy from us, if the price is right and the delivery is fast. A good example is “Woolf sheet products”. (Company X, Sweden) Some products require special expertise and instalment that we could possibly provide by pre-assembling and the rest will be installed by third company.

The questionnaire clearly gave the answer for the question that which products have the biggest demand in their companies. They clearly stated what products would bring the most benefit for them if they could buy its more cheaply from us. “Frame steel of house construction” would be the most beneficial for them. Over a half of the respondents had also need for steel sheet products that VAMM Steel has specialized for. (Company Y, Sweden)

This survey brought also direct questions from (Company Y) that was one of the respondents. “Can your company Manufacture Corten ceilings / facades of sheet metal approximately 1,5-2 mm? “revealed the company’s true interest towards us.

Our company have also a special expertise in welding and this survey was also asking the need for welded structures in the companies. All the respondents needed welding services and structures that we could weld here in Finland, which brings more value to our company.” Once and while for bridges and constructions of steel beam buildings”. We are welding according to the drawings of their needs, when we all the work can be done at the same place. We gain more benefit by doing welding and only sending the finished products to our customer. (Company Z, Sweden)

Assembling in some cases is a part of the service that we are providing for the companies. When cutting and bending steel these are formed in the way that they can be assembled later to reach the formation of the end product. In this section, the respondents were also interested our capability to assemble, because this would ease their process as well, if some parts of the whole product could be assembled beforehand and installed later. Companies usually are willing to pay for good service, if it is efficient and fast. The quality must be competitive as well. All the respondents had some sort of need for assembling, but these can be too big and complicated for us to do here in Finland, because the structures can grow so big that it is quite challenging to transport From Finland to Sweden. This kind of product was “prefabricated house bodies”. The assembly can be made for smaller sized products that can be shipped in bigger quantities. (Company Y, Sweden)



## 7 CONCLUSION

Writing this thesis was a learning experience from the beginning until the end. It was also an educational experience for me and the topic was getting more important to me the more I was putting my effort into it.

The theoretical part discussed with the Swedish market behaviour today. The Theme discussed about the customers in Sweden and how they buy, why, and where. The chapter also discussed about the industries, how they buy and what are the corner stones in what they value from supplier. The automated machines were also brought into this chapter, because it a remarkable asset for the company in the long run. The following chapter is going deeper on the metal industry in Sweden and how the future in metal industry is forecasted. It also consists some opportunities for companies, and the weaknesses that the suppliers might have to take into consideration.

The final theoretical part discusses with the role of distributing to Sweden. It conveys deeper knowledge about the value creation process and heavy logistics. These are both very significant factors in the end price when supplying to Sweden. The steel consumption and distribution channels are good to know before you think about distributing into another country.

The empirical section describes the research methodology and the choices of tools used in this research. This research is made using quantitative research method via e-mail survey that consisted seven open questions. The validity of this questionnaire is slightly questionable due to the sample size and the respond rate of this survey. This factor lowers the reliability of this questionnaire, because the specimen of the research was quite small. However, this research was made for real companies, that gave real answers. The ones that responded had an interest in Finnish steel manufacturing and were aware of the skills of Finnish steel factories. Despite these factors the research can be considered as a useful piece of work since it did respond to the research problems. This research was not able to find the actual price for any exporting product, instead this research found out that there is a true need for steel and steel sheet products with the competitive price at the Swedish market. They are

willing to accept the offers from the products according to their need, and discuss further about the delivery terms of different product and other services.

### **7.1 Suggestions**

This topic of the research can be studied more profoundly. I started this research from scratch and I had no previous data from Swedish metal industry not to talk about the construction industrial companies in Sweden. I chose the construction side of the metal industry and this can be studied more broadly of the other industries as well.

This research was specifically made for VAMM Steel Oy to know about the business opportunities in Sweden. This research was only focusing on the potential customers that have a need for specific products in the Construction industry.

The future studies can be made for all the other industries and also to deepen the knowledge about the competitive price of a certain metal product areas in Sweden.

## REFERENCES

About Factors influence industrial buying behaviour.

<http://www.civilserviceindia.com/subject/Management/notes/industrial-buyer-behaviour.html>, Phadtare, Milind T.,2014

About Crude steel production

<http://www.met.kth.se/asialink/Curriculum/Royal%20Institute%20of%20Tech-KTH/Swedish%20steel%20industry%20in%20english-Birgita.pdf>,Jernkontoret, 2007

About Sweden's Steel Output

<http://search.proquest.com.ezproxy.puv.fi/docview/1717363212/48834C67973945A8PQ/1?accountid=27304>, National sources, BMI

About Sweden's Metal industry view 2015-2017

<http://search.proquest.com.ezproxy.puv.fi/docview/1717363212/48834C67973945A8PQ/1?accountid=27304>, BMI Industry View

About Consumer today, modern consumer

[http://www.sas.com/en\\_us/insights/articles/marketing/modern-consumer.html](http://www.sas.com/en_us/insights/articles/marketing/modern-consumer.html), Sahal Laher, Seven characteristics of the modern consumer

About Industrial buying behaviour, 2014

<http://www.civilserviceindia.com/subject/Management/notes/industrial-buyer-behaviour.html>

About Automated machines in metal industry

<http://vammsteel.fi/>, VAMM Steel 2016

About Characteristics for Sweden's metal industry

<http://www.met.kth.se/asialink/Curriculum/Royal%20Institute%20of%20Tech-KTH/Swedish%20steel%20industry%20in%20english-Birgita.pdf>, Jernkontoret 2007

About forecast for the Sweden's metal industry

<http://search.proquest.com.ezproxy.puv.fi/docview/1717363212/48834C67973945A8PQ/1?accountid=27304>, Forecast for metals industry in Sweden

About distribution channels

<http://www.jernkontoret.se/globalassets/publicerat/om-jernkontoret/jernkontoret-co-owners-and-stakeholders.pdf>, Co-owners and stakeholders of jernkontoret 2016

About SSAB

<https://www.ssab.com/company/investors/financial-information#!di=discover473DF3926C864F87B43C796A961371BF>, SSAB 2016

About Sweden's steel distributors

<http://www.jernkontoret.se/en/the-steel-industry/the-market-for-steel/world-leaders-in-steel/>, Jernkotoret 2015

<http://vammsteel.fi/tuotteet-arkisto/roottorit-ja-staattorit-2/?lang=en>

<http://search.proquest.com.ezproxy.puv.fi/docview/1717363212/48834C67973945A8PQ/1?accountid=27304>

<https://en.portal.santandertrade.com/analyse-markets/sweden/reaching-the-consumers>

<http://www.civilserviceindia.com/subject/Management/notes/industrial-buyer-behaviour.html>

<http://www.met.kth.se/asialink/Curriculum/Royal%20Institute%20of%20Tech-KTH/Swedish%20steel%20industry%20in%20english-Birgita.pdf>

Sutherland and Canwell 2004, 1

Swann, Dennis, The Economics of Europe 2000

(Bahtisen Kavak, Niray Tunel 2015, Vol 6, No 6)

Erkki Hämmäläinen, Evolving Logistic roles of Steel Distribution

Ghuri, Pervez & Grønhaug, Kjell. 2005. Research Methods in Business Studies. 3rd Edition. Great Britain. Pearson Education Limited.



## **APPENDICES**

**1 Is your company interested in buying steel sheet or other steel- products from Finland?**

**2 Have your company ever thought about Finland being a potential supplier in steel processing?**

**3 Which kind of need for steel products would you possibly have and in which compartment?**

**4 What kind of parts of the steel products would your company have the biggest demand?**

**5 Does your company have a need for possible steel sheet products?**

**6 Is there a need for welded structures?**

**7 What kind of assembly services we could provide for your company?**