



# Master's degree thesis

**LOG951 Logistics**

**Challenges concerning VAT and customs duty for  
National Oilwell Varco Norway in production countries  
and transaction costs concerning this**

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Something for the poets:  
(They taught me all I knew);  
Their names are What and Why and When  
And How and Where and Who.  
Rudyard S. Kipling

Nothing is more practical than good theory.  
Van Weele in Molde November 2013

With love to my daughters Emma Johanne, Marta Oline and Karen  
Emilie.

## ACKNOWLEDGEMENTS

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Heidi Eriksen Rusten

## EXECUTIVE SUMMARY

In my work as a senior logistics coordinator I have experienced many challenges when it comes to unnecessary costs with VAT and customs duty triggered by trade with other countries. NOVN is a worldwide leader in the design, manufacture and sale of equipment and components used in oil & gas drilling and production, the provision of oilfield inspection and other services, and supply chain integration services to the upstream oil and gas industry. NOVN operates on a global scale, buying from the global market place and selling to the global market place. Complex logistics plans cause different problems when it comes to VAT/TAX and other types of export/import barriers. To be competitive and cost efficient in an innovative market place, the fabrication purchasers must consistently find the manufacturing company which can deliver the right product with the right quality for the best possible price. A general problem is that purchasers often only check the price for the end product and “forget” the challenges which can occur because of transport across borders and customs formalities. Therefore, it is important to increase ones competence and understand of the type of issues that can arise with regard to this type of trade.

Finding the best supplier, can often lead to changes in production countries and sub-suppliers in many different countries that participate on the same projects. For instance, NOV can have electrical cabinet production in Norway, machinery house/cabin production in Poland, winch assembly in Germany and steel structure and final assembly in South-Korea. Additionally there are challenges with Free Issued Items which are sent free of charge to the manufacturing production countries. All these items, which very often have high values, need to be customs cleared into the respective countries with special customs procedures, to avoid paying unnecessary VAT and Duties. During transport across the borders unexpected costs occur, which in many cases could have been avoided if NOVN had done everything right from the beginning.

So my research problem has been to find out more about the reasons and the causes for these unnecessary costs of VAT/TAX. I had in advance, because of my work experience, formed an opinion of what these reasons possibly could be:

I think that unnecessary VAT and customs arise because NOV's internal communication in the supply chain does not function satisfactorily and because of lack of competence in the organization in the field of purchasing and VAT/TAX.

The goal with this master thesis has been to increase insight and understanding of the VAT and customs issues for NOVN manufacturing companies regarding movement of goods. The purpose and goal is thus to increase the NOVN's expertise in the field of VAT and customs. VAT and customs comprise considerable costs, both on the expenditure side as well as the savings side.

To build competence and make procedures costs money and these types of cost elements are something which in the SCM literature is categorized as transaction costs.

The level of transaction costs depends upon three important factors; the frequency of the transaction, the size of the transaction-specific investment and the level of external and internal uncertainty (Van Weele 2010, 411).

To solve the research problem I have used Transaction Cost Analyze theory, SCM theory, out sourcing theory and communication theory. In my research design I decided to look closely into transactions towards EU (especially Poland), South-Korea and China.

My analysis includes in-depth interviews with key persons in NOVN and sister companies in South-Korea and China. Additionally, I have been collecting data through internal documents and accounting systems to carry out analysis. I have been looking for patterns, ideas and solutions.

I found that the unnecessary costs concerning VAT/TAX were approximately 2.1% of the logistics costs. This amounted to approximately 2,4MUSD in 2013 in hidden VAT/TAX costs in the accounting system from different logistics providers. This was 2,1% of the value of the checked invoices and I assume that approximately the same amounts are hidden among the invoices from the manufacturing companies directly to the purchasers.

Since I have only checked all invoices above 4000USD (appr.2800 invoices), the probability is high that the percentage costs are even higher in all the invoices with lower amounts. But because of limited capacity during the master thesis, this was not prioritized.

These are costs which increase when entering new market areas because environmental uncertainty. Usually new production countries give new challenges regarding VAT and customs duty.

I have given some recommendations on further research and as well as some recommendations to reduce these costs.

Recommendation 1: The most important one in my opinion is to continuously monitor the day to day development in VAT costs, since this is weakly managed today. One important finding in this research has been that NOVN doesn't monitor this in a satisfactory way today.

Recommendation 2: NOVN needs better software in the Logistics system which also can give information about the logistics cost per shipment. Today the accounting system is not communicating with the logistic system.

Recommendation 3: In-sourcing of customs clearance.

Recommendation 4: Create procedures on how the company can distribute the lessons learned throughout the whole organization. NOVN must create procedures per country and also have super users per country in the fields of VAT/Customs.

Recommendation 5: Insert targeted resources to improve the VAT processes to avoid that these costs occur regarding export/import to China.

I have not found many costs related to VAT and customs in connection with shipments to Brazil, but when NOVN starts to ship large projects overseas to Brazil, an increase in costs because of errors in VAT/Duty errors will most likely happen. Brazil is a very difficult country to export to, and they have also rules about local content in their production.

The work with this thesis has increased my insight and understanding of the challenges concerning VAT and customs duty for NOVN and suppliers in connection with movement of goods across borders.

## **1 INTRODUCTION AND BACKGROUND FOR CHOICE OF THESESES.**

In my work as a senior logistics coordinator at National Oilwell Varco Norway AS (from now on abbreviated NOVN), I have experienced many challenges when it comes to unnecessary costs with VAT and TAX in other countries. NOVN is producing among others, major mechanical components for land and offshore drilling rigs, complete land drilling and well servicing rigs and extensive lifting and handling equipment. The products are delivered all over the world and are produced in many different countries. Complex logistic cause different problems when it comes to VAT/TAX and other types of export/import barriers.

In order to compete on an international level, the fabrication purchaser must consistently find the manufacturing company which can deliver the right product with the right quality for the best possible price. Large, steel construction projects are of particular difficulty, since there is a limited pool of manufacturing companies to choose from in their respective countries. To decide which production site to choose for such “large” steel components, the fabrication purchaser must early in the process know where the end-product will be delivered. With a delivery address in Europe, it is generally cost-beneficial to choose European production, while a South-Korean delivery it probably best to choose a production site in Asia.

This selection method and example will be applicable with production of cranes in Poland. The Polish producer buys raw steel to use in their own production. They produce large steel components like booms, base frames, a-frames, winches and pedestals among other items. Together with these steel sections, additional components (electrical, mechanical and hydraulic), will need to be assembled and mounted. These components are delivered free of charge from NOVN to the factory in Poland. NOVN buys these components and transports the goods to the Polish manufacturer. (These components are henceforth called Free Issued Items). The Polish producer must arrange the correct import customs clearance into Poland and reexport out of Poland after production is completed. Here we are facing challenges in connection with Free Issued Items (intermediate goods) sent into foreign production from Norway. It is necessary to choose the correct customs procedure into EU in order to avoid paying unnecessary VAT and TAX to the EU because the goods are re-exported from the EU afterwards. The most used procedure is called Inward Processing

Procedure. This procedure allows the Polish manufacturer to receive the intermediate goods without paying VAT and TAX for the components. Such components can be bolts, washers, gear, engines, wires, cameras etc. These components can only be in Poland for a limited period of time before the parts will need to be re-exported together with the main components from the Polish manufacturer. The time limit is normally one year, but this period can be extended. See Figure 1 Logistics plan Norway – Europe – Norway. This particular case is thoroughly explained later in Chapter 10, Customs procedures.

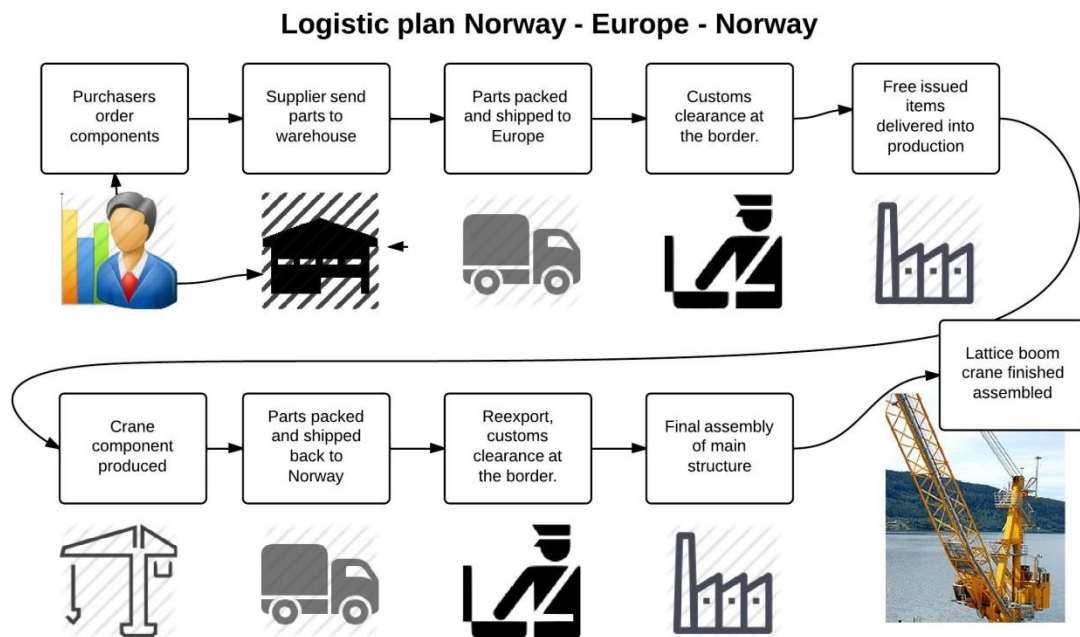


Figure 1 Logistics plan Norway - Europe – Norway (Made by author)

This issue with choosing correct customs procedure for intermediate goods is important issues both in Poland, South-Korea. In addition, China and Brazil have become “new” priority countries where VAT and TAX is particularly challenging. Any mistakes can lead to significant costs increases for the project. Therefore, the responsibility for fully understanding the VAT and TAX issues are placed in the Supply Chain Management departments because they are the ones deciding where the fabrication is going to take place. The cost of doing something wrong with VAT can be approximately 20% of the production value. In China and Brazil, these costs can be even higher. The importance of not forgetting such cost elements is underscored by Zuvich, Abad and Zaharatos. The authors emphasize the importance of coordinating customs and tax in a compliance point of view.

(Zuvich, Abad, and Zaharatos 2010)

As an example, in 2013, one particular NOVN Molde project department was deemed liable to pay an additional cost of 110 000 USD due to a VAT misunderstanding. The value of all free issued items was 500 000 USD and the risk was to pay Polish VAT on all these items because of EU delivery of the cranes. But with correct use of a special customs procedure called “Free Circulation Procedure” together with and use of a NOVN Polish VAT number, the project department avoided paying 110 000 USD in Polish VAT.

In another example, the project called for the transportation of 6 to 7 special low bed trucks to the Norwegian border for Customs clearance first and then delivery to Aberdeen, Scotland afterwards. NOVN was forced to do this in order to close a customs procedure properly because the wrong customs procedure was opened when starting the project. But because the customer was in no hurry to receive the finished product, NOVN received additional time to negotiate with Polish customs and saved 60 000 USD. This problem occurred because of lack of communication between the sales department and the project management department. The sales department knew that the delivery address was Aberdeen (inside EU), but the project management department thought the delivery address was Norway. Because of this misunderstanding, the wrong customs procedure was opened in Poland before the start of the transportation of the parts into production. This case will be more thoroughly explained in the “Elgin & Franklin” case late in Chapter 11.3 A general problem is that purchasers often only check the price of the end product and "forget" the challenges which can occur with transport and customs regulations. NOVN operates on a global scale, buying from the global marketplace and selling to the global marketplace. Therefore, it is important to increase ones competence in the VAT and TAX fields.



## 2 GOAL AND OBJECTIVES.

The goal with this master thesis is to increase insight and understanding of the VAT and customs issues for Norwegian manufacturing companies regarding movement of goods. The purpose and goal is thus to increase the NOVN's expertise in the field of VAT and customs. VAT and customs comprise considerable costs, both on the expenditure side as well as the savings side. This paper will focus on the different costs that arise, especially VAT and customs duty, from transfer of input parts and finished products across national borders around the world and inside EU. I want to create procedures and process maps that make the placement of production PO's (PO = purchasing orders) better and safer. I want to create a tool that will make it easier to avoid problems with VAT and customs issues. The goal is also to obtain a practical and workable solution that can be used by NOVN.

VAT and TAX are cost elements, which in the SCM literature, are categorized as transaction costs. I will delve further into this theoretical field to seek advice and guidance. Transaction cost analysis takes the transaction constituting the economic exchange between buyer and seller as the unit of analysis(Williamson 1981, Nov.). Specific assets, the frequency of exchange and the uncertainty surrounding the transaction represent the core dimensions of inter-firm trade and the composite of these dimensions determines the way business-to-business relationships can be effectively coordinated(Williamson 1981, Nov.).

The research problem in the thesis is as follows:

« What are the causes and consequences of those cases, where unnecessary VAT and TAX expenses occur in connection with transport across borders and how could this have been avoided? »

My hypotheses are:

1) Unnecessary VAT and customs costs arise because NOV's internal communication in the supply chain does not function satisfactorily

2) Unnecessary VAT and customs costs arise because of lack of competence in the organization

I have proposed these hypotheses because I have experienced many challenges when it comes to unnecessary costs with VAT and DUTY both at NOVN and at other companies. Many of these unnecessary costs could have been avoided if the level of competence concerning VAT and DUTY had been better understood. I mean that a successful global supply chain is characterized by having efficient and effective synchronization of both material flow and information flow by integrating companies and suppliers for a common objective to meet the requirements of the end customer. I mean that the internal communication at NOVN can be improved.

There is a lot of research and literature on streamlining logistics chains. There is considerably less literature on how to avoid paying VAT and TAX in connection with shipments across borders. And by that, I mean costs could be avoided if companies had more knowledge about VAT and TAX and had the correct procedure in place. This thesis will combine two fields; logistics and customs / VAT.

My thesis can be useful research for the following actors:

- ✓ NOVN, which can use the result of the research to better meet international competition. Cost savings, improve profits.
- ✓ For other similar Norwegian export / import companies, which have production and/or assembly of products in other countries, which lead to many transports inside the EU or to/from Norway.
- ✓ Molde University College may benefit from the insight into these types of challenges that Norwegian exporters need to solve on a day-to-day basis. These are typical tasks which logistic departments in export enterprises must solve. If Molde University College wants to educate their students in the best possible way, perhaps these issues should be included as a part of the logistics' program of study.
- ✓ The author is to apply and broaden the knowledge obtained in the MS program courses taken as a part of the Master of Science in Logistics.

### **3 COMPETENCE BUILDING.**

This phase is essential in order to approach the problem. NOVN is a large and complex organization and although I am working within this organization, I have a need for greater knowledge about the company. Building competence has been achieved by studying NOVN's intranet, policy documents, industry reports and academic literature. I have conducted interviews with employees at NOVN. I have also sought information from scientific papers. My employment title and position requires general knowledge about the rules for exports and imports, as well as specific knowledge of transport and customs regulations and tax rules. In this work environment, I have to increase my expertise in all of these fields, so that key parts of the process are not excluded.

## 4 RESEARCH DESIGN.

In this chapter I will first explain the research design I have chosen to solve the research problem. I will start with explorative research to have a flexible approach to the hypotheses. The work with the theses has shown me that different methods can be used to illuminate the problems. Afterwards, I will explain the limitations in geographical areas which need to be done in the research. Furthermore, I will look into how to collect primary and secondary data. I have used both qualitative interviews and quantitative methods to collect data. I will later in the paper have some cases studies to support the hypothesis. At the end in this chapter I will go through the project plan.

The first phase in a research project involves to work with the research issue and to plan the research project. A plan or a sketch for how the research can be conducted is called research design. The research design describes guidelines for how the researcher imagines performing the project.(Thagaard 2002)

Guidelines for the project includes descriptions of what the research will focus on, who is relevant informants, where will the research be done and how will it be performed (Thagaard 2002).

Types of research designs: The classification of research designs vary. Research design is often classified as exploratory or conclusive research. Conclusive research is meant to provide information which can be useful in reaching conclusions or decision-making. It tends to be quantitative in nature, often data which can be summarized and quantified. Exploratory research seeks to develop insights in the problem and helps to provide direction for further research. It can also be classified in three broad categories such as quantitative, qualitative and mixed methods (Creswell 2003).

My research problem will be solved by using an exploratory research design method. This keeps the necessary options open while looking for potential problems. The aim of this type of study is to look for patterns, ideas or hypothesis, rather than testing or confirming a hypothesis. In exploratory research, the focus is on gaining insights and familiarity with the subject area for more rigorous investigation on a later stage. The reason for this choice is that I do not have the opportunity to make a clear hypothesis for why these VAT/DUTY

costs arise, there can be many different reasons, but my work experience tells me that communication and knowledge are important factors. The goal of the thesis is to provide greater insight into, and understanding of, the problem. *“The characteristic of this exploratory research design is that through the data collection you must have a flexible approach. The road ahead will be constantly influenced by the knowledge we acquire through the work of the task”.* (Selnes 1995) Chapter 3

*“Explorative research requires skills, as do all types of research, but the skill requirements differ. Key skill requirements in exploratory research are often the ability to observe, collect information and construct explanation, that is theorizing”.* (Ghauri and Grønhaug 2010, 56)

Survey of reasons. I have tried to identify the different causes and then I have analyzed and sorted them by frequency or cost. When the causes are identified, the company can insert targeted resources to improve the processes to avoid that these costs occur. This needs to be further investigated in the thesis. Effective co-ordination of business-to-business relationships is an important determinant of firms' competitiveness under changing market conditions.(Buvik and Gronhaug 2000)

## 4.1 GEOGRAPHICAL LIMITATIONS

Unforeseen expenses due to VAT and Duties concerning the transport of goods across borders is a global challenge. It could be assumed that similarities occur in different countries. VAT in EU versus Asia versus South America. But it turns out that the main point for the company is to understand that you have to deal with each individual country when the consequences of one and the same situation will be considered. Easily told, one can say that the solution for export to Sweden is not necessarily the same solution as for export to Spain. In this paper I will first investigate the relationship between Norway and the EU. Afterwards, I will look into the same issues with regard to South-Korea and China. But as a starting point, I will begin with the challenge related to trade between Norway and Poland. This is because NOVN has extensive experience in international trade between the parties and possesses good knowledge in this area. Poland is the country where NOVN has the most of production in Europe, so it is of particular interest.

## 4.2 DATA COLLETION

### 4.2.1 PRIMARY DATA.

I have been using in-depth interviews as the primary source of data collection, something which should make it easier to identify the relevant challenges and costs. I have used what Selnes (1993) reviews as in depth interviews. In depth interviews is a “qualitative method which is well suited when the purpose is to give insight and understanding” (Selnes 1995, 110). In addition, I have sought additional information on the company intranet. What kind of documentation regarding this exists in the enterprise today?

### 4.2.2 SECONDARY DATA.

Internally in NOVN, I found both accounting figures and reports. I also looked for consultancy reports and strategic documents, but this was difficult to find. I have also looked among Master- and PhD dissertations. Externally I have found research reports and journal articles. Is there scientific papers related to this field? Yes, I found some articles, but only with assumptions and not many with numbers. I have not found costs for this but this is most likely because many companies keep these figures confidential. How do NOV avoid VAT and TAX becoming a cost? It can be difficult to quantify these costs, because people would rather not talk about costs that could have been avoided. As a consequence of this, it has been necessary to search through thousands of invoices to find the hidden costs.

### 4.2.3 QUALITATIVE INTERVIEWS

Qualitative researchers rely quite extensively on in-depth interviewing. Interviews can be categorized into three general types: the informal conversational interview, the general interview guide approach and the standardized open-ended interview. The researcher starts to interview the participants, but otherwise respects how the participant frames and structures the responses. This is an assumption very important when it comes to qualitative research. It is how the participant views the problem or phenomenon which is important and not how the researcher views the problem (Patton 2009).

Strengths by interviews: An interview is a useful way to get a large amount of information and data in a short period of time. This is possible trough immediate follow up and clarification of ambiguities. Interviews are appropriate methods to collect information

about complex issues. I experienced also that in some interviews, I received a lot of information about the company and a lot of advice about whom in the organization could provide more information and where to look further.

Interviewing has limitations and weaknesses: As Marshall and Rossmann write; interviews involve personal interactions and cooperation is essential (Marshall and Rossmann 1999). Some interviewees may be unwilling to or may be uncomfortable sharing everything the researcher hopes to explore. In this thesis I found out that it can be difficult to get all the answers I hoped for, because some of the answers revealed lack of competence or lack of company procedures. I experienced that not all persons want to disclose cases which let to extra costs for the company. I also found out that it is important to know key-person's views on the different export barriers, because they are in some cases decision makers or they can influence other decision makers in the organization. The quality of data which is collected by in-depth interviews has been compared and analyzed together with the output of analyzes done with the different transport companies.

### 7 stages of interview investigation.

- 1. Thematizing.** Formulate the purpose of an investigation and describe the concept of the topic to be investigated before the interviews start. The *why* and *what* of the investigation should be clarified before the question *how* – method – is posed.
- 2. Designing.** Plan the design of the study, taking into consideration all seven stages of the investigation, before the interviewing starts. Designing the study is undertaken with regard to obtaining the intended *knowledge* and taking into account the *moral* implications of the study.
- 3. Interviewing.** Conduct the interviews based on an interview guide and with a *reflective* approach to the knowledge sought and the interpersonal relation of the interview situations.
- 4. Transcribing.** Prepare the interview material for analysis, which commonly includes a transcription from oral speech to written text.
- 5. Analyzing.** Decide, on the basis of the purpose and topic of the investigation, and on the nature of the interview material, which methods of analysis are appropriate for the interviews.
- 6. Verifying.** Ascertain the generalizability, reliability, and validity of the interview findings. *Reliability* refers to how consistent the results are, and *validity* means whether an interview study investigates what is intended to be investigated.
- 7. Reporting.** Communicate the findings of the study and the methods applied in a *form* that lives up to scientific criteria, takes the ethical aspects of the investigation into consideration, and that results in a readable product

Figure 2 Seven stages of an interview investigation. (Kvale 1997)

I used the Figure 2 from Kvale as a recipe for my interview guide. This was also used as a way to make people open up and start talking about the research issue. The interviews extended my knowledge about different cases which have occurred at NOVN the last few years.

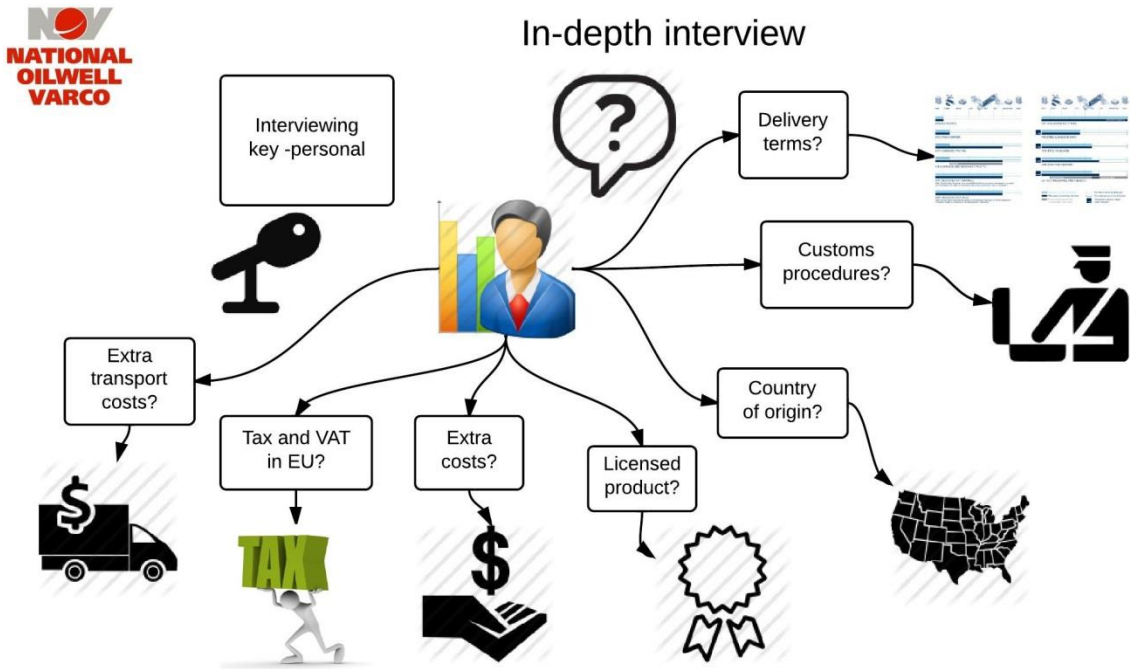


Figure 3 In-depth interview (Made by author).



Questionnaire, importance of export /import barriers									
How do you indicate the importance of this export barrier for the company's export/import?									
Name of interviewed	Work	Very Impor	Important	Moderatly Important	Of Little Importance	Unimportant	Project number	MMT no	Costs in USD / Remark
	Wrong delivery terms (incoterms DDP instead of DAP/DDU)								
	Opened wrong customs procedure in the beginning of a project.						T8596-8	379860	This was replacement of MMT 345634 & 345396, so the term should be DDP when it send from the beginning, but the Molde sent as DAP as normal cargo.
	Classification error regarding HS numbers								
	Customs clearance too late								
	Change in delivery terms from final customer						T8598	398929	1. invoice value : USD 2,339.66 2. Duty : USD 250
	Wrong authorization number								
	Wrong country of origin								
	Licensed product								
	Wrong value on the product (Same item with different value)						G4512-3	388660 362746	For item 128813 MMT 388660 : USD 18,590 MMT 362746 : USD 5,702.87
	Delivery inside EU and must pay EU VAT								
	Extra transport costs								
	Wrong or missing documents						G4512-3	387875, 388331, 387239	1. MMT 387875 & 388331: missing documents 2. MMT 387239: wrong delivery address
	Other reasons								
	Wrong net/gross weight						G4512-3	387097	Net weight : 39,733.24 kgs / Gross weight: 39,720 kgs
	Other reasons								
	Missing items when we check after delivery						T8976 G3030 G3030-1	392498, 386101, 381695	Three MMT got missing items when it arrived the factory

Figure 4 Example of questionnaire, importance of export/import barriers

The questionnaire was used in the interview as an interview guideline. In Figure 4 it is shown how the customs manager in NOV Korea has filled in the form and how he weights the importance of the different causes.

#### 4.2.4 CASES

Case studies are tailor-made for exploring new processes or behaviors that are little understood. I needed to decide for how many cases to sample and I selected seven different cases to show the diversity of errors concerning VAT and duties. Meyer also selected several cases for comparison and contrast. “*Since I had limited time available to collect data, and in my view interviews made more effective use of this limited time than extensive participant observation.*” (Meyer 2001, 340) She also wrote that people were rather reluctant to let her observe the political and sensitive processes, and I have observed the same in this thesis, since I am looking for cases where unnecessary costs have occurred.

### 4.3 PROJECT PLAN

- It is of major importance when you write a master thesis that you have tools for planning, scheduling and monitoring. It can be very helpful to make a project plan,

so the task which needs to be solved, are written in the plan. Team work inside the NOVN organization is necessary to solve and reduce the costs of unnecessary VAT/DUTY because this is a very complex and difficult problem affecting the different departments in the organization.

- Project Plan: My project plan can be seen in Gantt chart. See Figure 5. Henry Gantt (1861-1919) was one of the fore fathers of Project Management and was called the father of planning and control techniques. The other fore father was Henri Fayol for his creation of five management functions. This is discussed later in Chapter 4.3
- Team work: Using the knowledge, experience and views of the different parties involved. It is also important for the project manager to spread the knowledge of this to the parties involved. And particularly for the sales department, as this is important information that must be resolved early in the sales phase to avoid any unexpected costs.

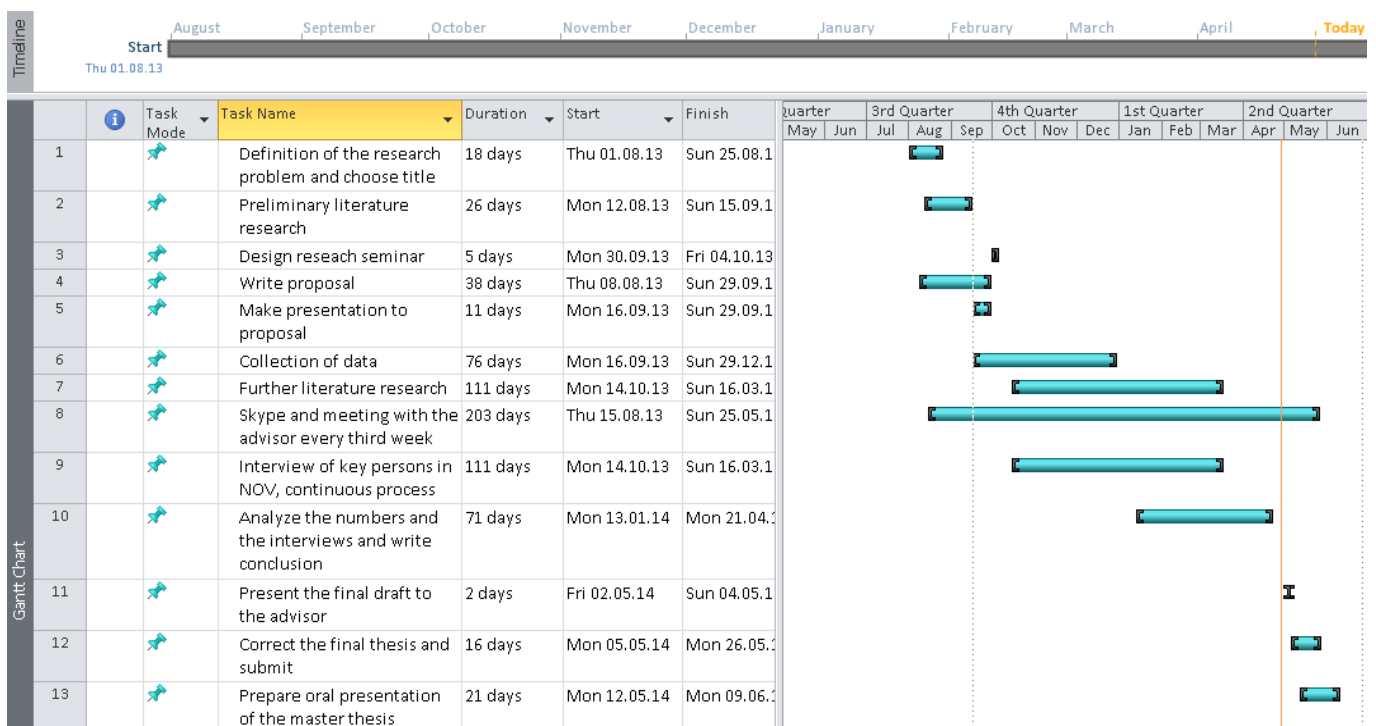


Figure 5 Project implementation of master thesis. (Made by author)

- Data.
  - o Writing a summary right after an important meeting or an observation.
  - o Always ensure that the data is accurate and current.

- Contract. Can you manage to formulate contracts so that you avoid surprises during the project implementation? (Innovasjon Norge 2006)

## 5 THEORETICAL BACKGROUND

My thesis will be based on various theories. In this chapter I will start with the theory of Transaction Cost Analysis (TCA). Then I will look into outsourcing theory before I finally end with Supply Chain Management (SCM). In large project organizations, Project Management Theory is also highly relevant. It may also be necessary to use other theories, but further work on the thesis will reveal this. I have looked into the article “ Customs-related transaction costs, firm size and international trade intensity”(Verwaal and Donkers 2003) and experienced which methods they have used to solve the problem.

### 5.1 TRANSACTION COSTS.

*Transaction costs are the costs that are associated with an exchange between two parties. The level of the transaction costs depends upon three important factors.*

1. *The frequency of the transaction.*
2. *The size of the transaction-specific investment.*
3. *The level of external and internal uncertainty (Van Weele 2010, 411).*

*“Transaction cost approach: The transaction cost approach is based on the idea of finding a governance structure to arrive at the lowest cost possible for each transaction and comparing whether to perform an activity internally or outsource the activity in the market “(Van Weele 2010, 168).*

Transaction cost analysis; Ronald Coase wrote the article "The Nature of the Firm" in 1937 (Coase 1937). Who organizes the market and why do firms exist? Transaction cost analysis aim to reduce the total cost of purchasing and transaction costs. Transaction costs are costs that often come with the purchase, negotiating, research, transport, education, monitoring, etc. Oliver E. Williamson (1975) "built" this theory and developed the theory empirical. According to Williamson, the basic assumption is that the most important reason to organize one kind of transaction in one way (for instance by tender) and other kinds of transactions in other ways (for instance with long term contract or own production) is to minimize on transaction costs. (Williamson 1981, Nov.)

**Modes of governance:** Markets and hierarchies are the two polar modes which Coase referred in his 1937 paper and are the governance alternatives on which Williamson focus in his paper on vertical integration of production.

**Market:** The syndrome that describes the market is strong incentive intensity, weak command and control at the interface, and strong (legal) contracting focus.

**Hierarchy:** The syndrome that describes hierarchy, by contrast, is weak incentive intensity, strong administrative command and control at the interface, and weak contract law regime. (forbearance law) (Williamson 2009).

*“Transaction costs are generally higher for international trade than for domestic transactions. The obvious differences are taxes and tariffs, but of course transportation costs will be higher and also costs dealing with delays and customs clearance at the borders”*(Verwaal and Donkers 2003, 257). Verwaal and Donkers wrote that the importance of international trade, can provide a competitive advantage, increase capacity utilization and raise technological standards.(Verwaal and Donkers 2003)

In my opinion (and Verwaal &Donkers, Williamson among others), it is the unnecessary costs with VAT and customs duty that escalate transaction cost. Therefore, I have tried to find the *frequency* of the transactions, the *size* of the transaction-specific investments (customization of products) and the level of the external and internal uncertainty (product complexity). The way these transactions are composed is decisive for the governance form. It will be a change from the market governance to the hybrid mode governance with more contracting.

Both Cecchini et Al and Verwaal and Donkers found that the transaction costs of customs procedures were between 30 to 45 percent higher for companies with fewer than 250 employees than for companies with more than 250 employees. This is most certainly because in large companies as NOVN they can hire specialists who can devote all their time to solve compliance activities (Verwaal and Donkers 2003, 262). *“According to transaction costs theory, the size and frequency of transactions determine the economies of scale of transactions. The idea is that the costs of transaction-specific investments will be easier to recover for large transactions of a recurring kind “*(Williamson 1985, 60). Cecchini et Al found out that the average size of the customs-related transaction costs, as a percentage of cross border trade, was 2 %.

According to Rindfleisch and Heide, 1997, transaction costs are the needed costs to ride the system. These costs can be “ex ante” – drafting and negotiation of contracts – and “ex post” – monitoring and implementation.

According to Rindfleisch and Heide, 1997 there is 3 basic transaction costs. (Rindfleisch and Heide 1997 oct)

Sources and Types of Transaction Costs			
	Asset Specificity	Environmental Uncertainty	Behavioral Uncertainty
<b>A. Source of Transaction Costs</b>			
Nature of Governance Problem	Safeguarding	Adaptation	Performance Evaluation
<b>B. Type of Transaction Costs</b>			
Direct Costs	Costs of crafting safeguards	Communication, negotiation, and coordination costs	Screening and selection costs (ex ante) Measurement costs (ex post)
Opportunity Costs	Failure to invest in productive assets	Maladaptation; Failure to adapt	Failure to identify appropriate partners (ex ante) Productivity losses through effort adjustments (ex post)

Figure 6 Types of transaction cost. (Rindfleisch and Heide 1997 oct, 46)

1. Adaptation costs (Environmental Uncertainty)
2. Performance evaluation costs (Behavioral Uncertainty)
3. Safeguarding costs (Asset Specificity)

**Adaptation costs:** Adaptation costs are especially interesting. Environmental uncertainty creates an adaptation problem. The associated transaction costs include the direct costs of communicating new information, renegotiating new agreements, or coordinating new activities to reflect new circumstances. This is a cost which may occur because not everything is known at the time of signing the contract. For instance if the company must change something in the contract or on the order, these changes ex post can sometimes lead to extra VAT and TAX costs. The environmental uncertainties with different rules regarding VAT/Duty in different countries make this an adaptation cost which are often not known or calculated into the budgets. With regard to this it is very important that the contract between the parties is written to avoid very high prices on variation orders. During design phase there can always be some small changes which can lead to other delivery address or additional cargo to ship. For example, it is important that the price per kilo steel

manufacturing after start up is agreed upon in advance; Or a price for new design; Or a fixed price for welding hours or assembly hours.

**Performance evaluation cost:** This is direct measurement costs which occur because the company maybe needs to monitor the sub-suppliers performance level. Here they need to take into consideration both supplier selection and evaluation quality. The role of these measures and metrics in the success of an organization cannot be overstated because they affect strategic, tactical and operational planning and control. According to Gunasekaran & Al, performance measurement and metrics have an important role to play in setting objectives, evaluating performance, and determining future courses of actions (Gunasekaran, Patel, and McGaughey 2004).

**Safeguarding costs:** Safeguarding costs are the direct costs of crafting safeguards. To write contracts which cover all contingencies generates typical safe guarding costs (to write a contract is time consuming and legal advice is expensive). Ex ante are costs that they know about before the contract with the subcontractor is written. Ex post transaction cost can be hidden and/or unexpected costs that emerge after the contract is written. It is a trade-off between using money on this uphead (ex-ante) and the risk to get unexpected costs which is not mentioned in the contract.(ex-post)

I must also look at search costs, contract costs, risk managements costs. How much contingency do NOVN need to add because they don't know the exactly costs?

**Risk Management costs / Quantify costs:** How much does unnecessary TAX and VAT cost the company? This may be hard to find out while this is a "new" area. It is both difficult to find how many times this happen and how big are the amounts. It is stated in the risk register for NOVN, that the risk regarding Tax and Vat in the budget is considered

to be 5,9 MUSD per Q3 in 2013.

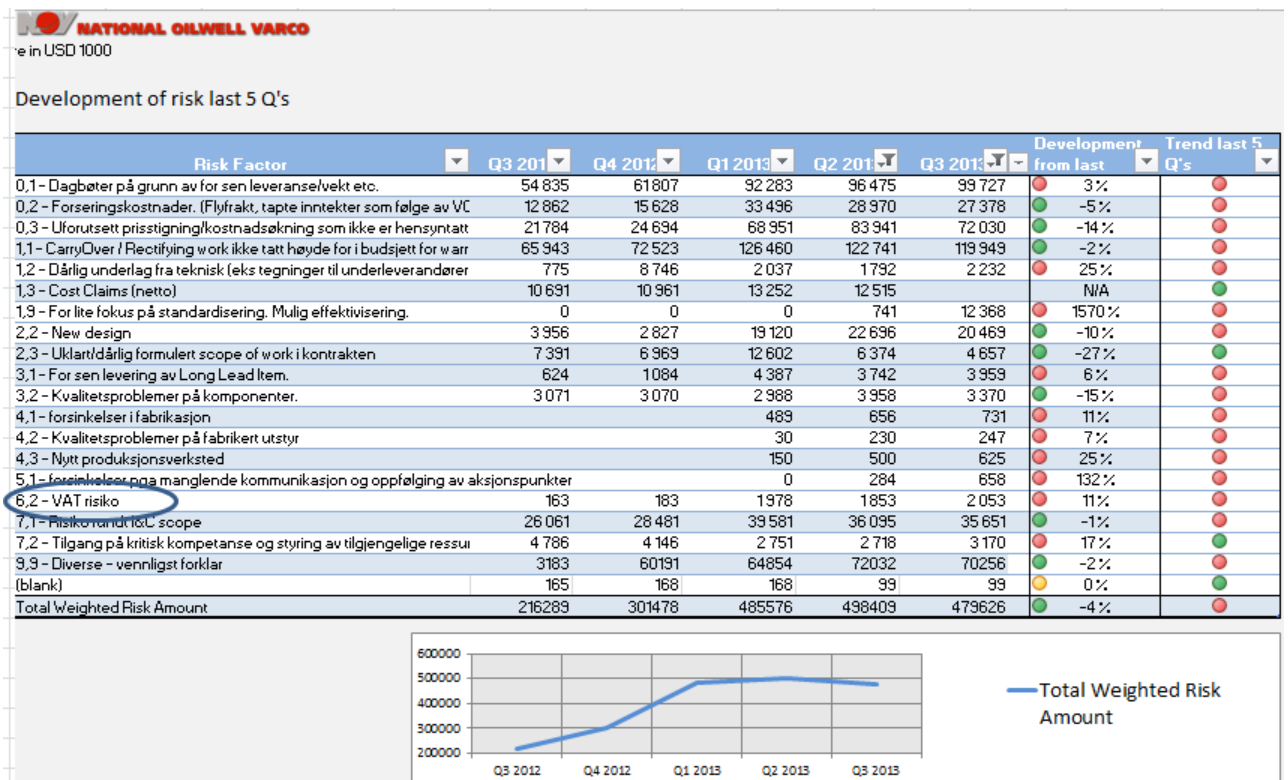


Figure 7 Risk register NOV 2013 (National Oilwell Varco Norway AS 2014a)

Figure 7 show that NOVN separates different risk factors per quarter. Risk factor 6.2 VAT Risk shows a budgeted accumulated cost at 5,9 MUSD per Q3 in 2013. These amounts are huge compared with the transport costs. Total VAT/TAX risk was budgeted to be in total approximately 7,9 MUSD for 2013.

Total value of logistics services purchased by NOV Norway 2013	
PO (USD)	73 383 048
NON PO (USD)	31 280 670
Courier services	2 000 000
NOV aftermarket	5 100 000
<b>Total in USD</b>	<b>111 765 731</b>

Figure 8 Total value of logistics services purchased by NOV Norway 2013 (Made by author)

Total value of logistics services in 2013 was: 112 MUSD

Budgeted Risk 7,9 MUSD VAT/TAX in 2013 was appr. 7% of total logistics costs.

The costs that I want to investigate can be called customs related transaction costs. In the literature there are several reports which concerns customs related transaction costs.



**Customs related transaction costs;** In the report made by Cecchini et Al (EU Commission 1988) they used a survey of 11,000 companies to quantify the customs related transaction costs in the EU before the introduction of the Single European Market. They reported that the total of the customs-related transaction costs was estimated at about 8 billion Euros. At that time it was equal to 1,8% of the value of cross-border trade in the EU(EU Commission 1988) Most of the costs occurred from frontier formalities and related delays. Additionally, other identifiable barriers in the internal market (EU) such as technical regulations and other barriers, was estimated to be below 2% of those companies' total costs. In total, it would be approximately 3,5% of industrial value-added. Compared to National Oilwell Varco Norway AS turnover in 2012 (3300 MUSD) this would equals 116 MUSD. Verwaal and Donkers used in their research only Netherlands as a research country to reduce other factors. They used 500 companies which were only import- and export companies in their research. Their research found: *“Substantial differences in customs-related transaction costs between the firms could be explained by transaction-related economies of scale, the use of simplified customs procedures and the use of advanced information and communication technology” (Verwaal and Donkers 2003, 258)*

NOV customs clearance; Earlier; approximately 5 years ago, the export customs clearance task had to be done manually. All custom tariff numbers had to be put manually into the system. Now all export customs clearance tasks are electronically transferred from ERP system to the Packaging system and then further to the Shipment system and at last to customs. This is an example of simplification leading to decreased transaction costs. So the percent that Cecchini et Al found in 1988 has probably been decreased because of better ERP solutions and transferring of data through different systems.

## **5.2 OUTSOURCING THEORY.**

*“Outsourcing definition: Outsourcing means that the company divests itself of the resources to fulfil a particular activity to another company, to focus more effectively on its own competence. The difference with subcontracting is the divestments of assets, infrastructure, people and competencies.”(Van Weele 2010, 407)*

The basic idea is that it is preferable for companies to outsource activities and processes that are not considered “core business”. A company’s core business represents those activities and processes that really create unique value and should be kept as in-house activities (Quinn and Hilmer 1994). In business the term outsourcing means putting out a portion of its business to a third party. The globalization of "business" is one of the actors

that have led to outsourcing. More and more companies are focusing on their core business and outsource departments or functions of the company to other companies which will achieve economies of scale. The common reason for this growth is that companies view outsourcing as a way to achieve strategic goals, reduce costs, improve customer satisfaction and provide other efficiency and effectiveness improvements (Van Weele 2010). In general, outsourcing is viewed as one of many approaches to maintain or develop competitive advantage.

Advantages of outsourcing: According to Larsson and Gray(Larson and Gray 2011) the advantages can be:

1. Cost reduction
2. Faster project completion
3. High level of expertise
4. Flexibility

The disadvantages of outsourcing:

1. Coordinate breakdowns
2. Loss of control
3. Conflict
4. Security issues

Insourcing: Aas, Buvik and Cakic wrote in 2008 about outsourcing of logistics activities in a complex supply chain. Building products for the offshore-industry is also complex. They wrote that many logistics activities are still kept in-house, and that it is mainly traditional logistics services such as transportation, warehousing and customs clearance that become outsourced (Aas, Buvik, and Cakic 2008). NOVN decided for approximately 3 years ago, from a compliance point of view, to insource both import and export customs clearance. They claimed that only by having complete control over all customs clearance in-house could they be sure that everything was correct when submitted to the customs authorities. Import and export customs clearance is not NOVN core competence, but the number of customs clearance transactions is more than big enough to create a department with experts in the field customs clearance. This gives NOVN economies of scale in this field in the same way or even better than most of the transport companies. This decision is very important when it comes to this master thesis problem. The customs expertise built in-house because of customs clearance helps NOVN to much better understand problems

which can occur by crossing international borders. So I am certain this expertise reduces the number of errors significantly. I will come back to this later in the thesis.

- Import customs clearance: 6392 import customs clearance in 2013
- Export customs clearance: 9482 export customs clearance 2013

### 5.3 SUPPLY CHAIN MANAGEMENT THEORY/COMMUNICATION THEORY.

This is the theory of supply chain management. The definition of this is according to Van Weele: *“The management of all activities, information, knowledge and financial resources associated with the flow and transformation of goods and services from the raw material suppliers, component suppliers and other suppliers that meet or exceed the expectations of end users to the firm”* (Van Weele 2010, 411). Another common used definition of supply chain management was developed in 1994 by members of the Global Supply Chain Forum and states that *“Supply chain management is the integration of the key business processes from end user through original suppliers that provides products, services, and information that add value for the customers and other stakeholders”* (Lambert, Cooper, and Pagh 1998, 1). In today’s SCM departments, the purchasing and the logistics are often very complex and often involve production places in many different countries. Figure 9 shows the “normal” scope of Supply Chain Management.

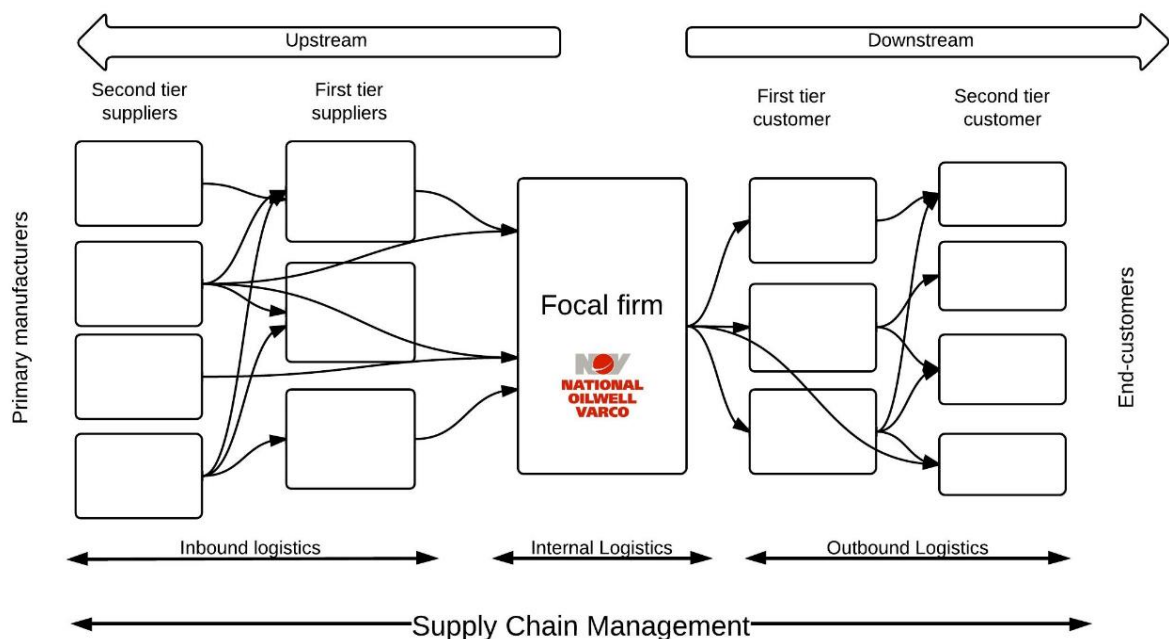


Figure 9 The supply chain network. Compiled by author based on (Harrison and Van Hoek 2011)

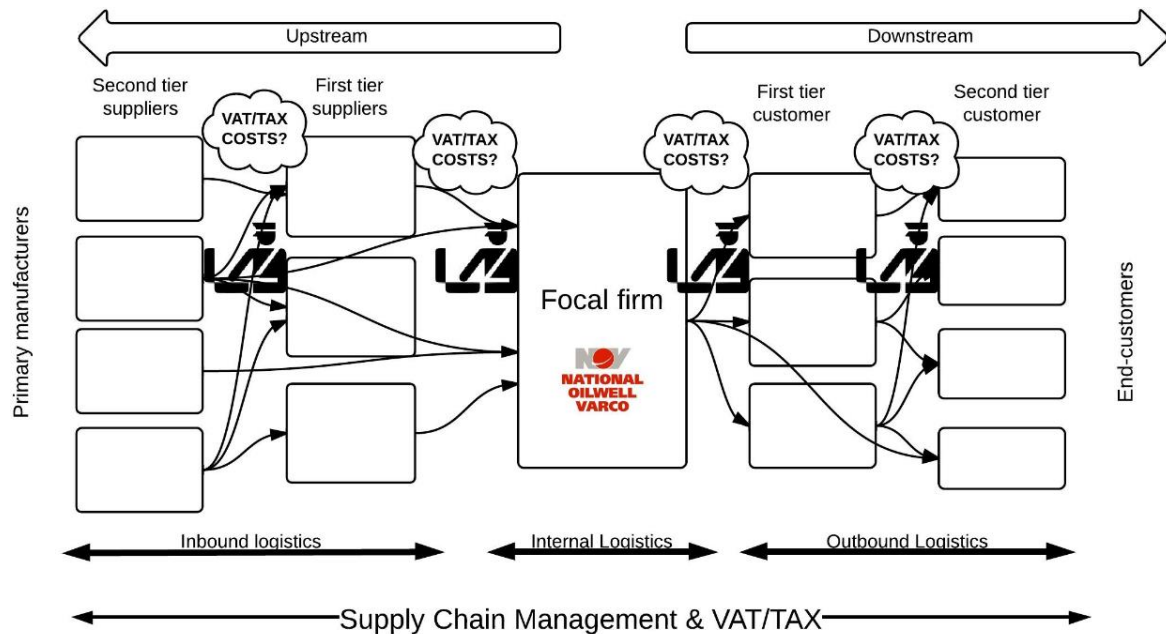


Figure 10 Supply Chain Management & VAT/TAX. Compiled by author based on (Harrison and Van Hoek 2011)

Figure 10 shows the importance of taking VAT & TAX into consideration into the Supply Chain Management in international logistics and production. TAX and VAT influences all the tiers in the supply chain.

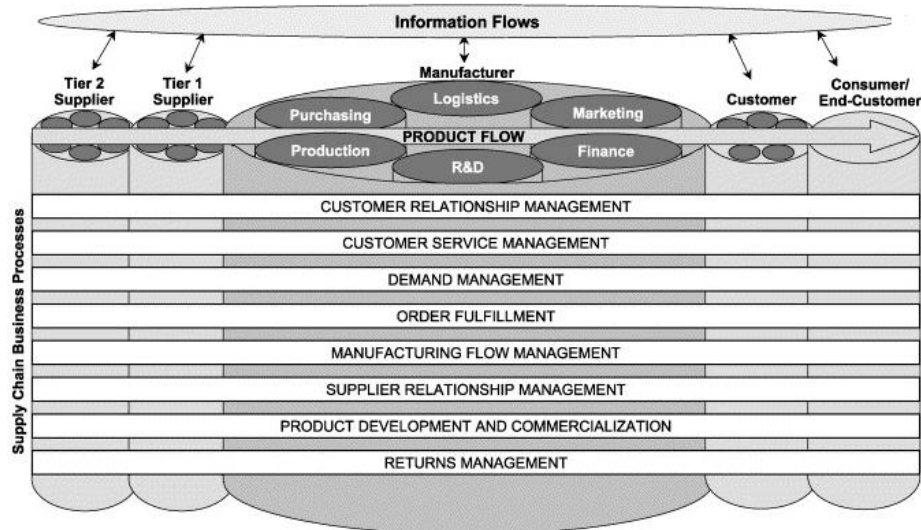


Figure 11 Supply Chain Management: Integrating and Managing Business processes Across the Supply Chain. Information Flows (Lambert, Cooper, and Pagh 1998)

Another key success criterion is the communication inside the organization and between the suppliers and sub-suppliers. Figure 11 from Lambert, Cooper and Pagh shows a simplified supply chain network structure. To manage the supply chain network you must know all the Supply Chain members. The figure shows all the departments which need to

work together and towards suppliers and customers. At the same time it shows both the product flow and the communication flow.

Three primary structural aspects of a company's network are:

- 1) The members of the supply chain, these can be suppliers, sub-suppliers, focal company, customers, end-customers. The key is to identify which members are critical for the success and who are not.
- 2) The structural dimensions of the network. These describe the vertical structure, the horizontal structure and the position of the focal company inside the horizontal structure.
- 3) The different types of process links across the supply chain. These process links are managed business process links, monitored business links, not managed business process links and non-member business process links(Lambert, Cooper, and Pagh 1998)

### **Communication theory:**

Communication theory is a field which contains both information and mathematics. In this paper the fields of communication is interesting.

Claude Shannon and Warron Weaver developed a communication model in 1949. Elements of communication are source, sender, channel, receiver, destination, message, feedback and entropic elements.

It is important to have a project communication plan that defines the information to be collected and distributed to the management, the customers and also to throughout the organization based on the company's requirements.

- *What information needs to be collected and when?*
- *Who will receive the information?*
- *What methods will be used to gather and store information?*
- *What are the limits, if any, and who has access to certain kinds of information?*
- *When will the information be communicated?*
- *How will it be communicated? (Larsen and Gray 2011, 119)*

Communication is a two way process that involves getting your message across and understanding what others have to say. Communication involves active listening, speaking and observing. Communication in organizations are important to achieve a

common language, common understanding of standardizations and processes so the whole organization can pull in the same direction. With a functional communication misunderstandings and extra work are avoided. Effective and good communication can motivate a whole organization and planning is primarily a process of communication.

As Larson & Gray emphasized about improved communication; As partners gain experience with each other, they develop a common language and perspective, which reduces misunderstandings and enhances collaboration (Larsen and Gray 2011, 431).

## 5.4 PROJECT MANAGEMENT THEORY

Project management is a methodical approach to plan and guide project from start to finish. It's a strategic competency for organizations, enabling them to tie project results to business goals — and thus, increase their competitiveness.

NOVN works as a project organization. A project is temporary and unique in that it is not a routine operation. The project team often includes people who don't usually work together, from different departments and people who have different skills and education. The employees work both in line management in their special departments (mechanical, logistics, calculations or electro) and additionally in different projects. This is called a matrix organization. Project management tools and techniques were first used systematically by the organizations in the 1950s. Henry Gantt (1861-1919), mentioned earlier, is called the father of planning and control techniques. He was famous for his use of the Gantt chart as a project management tool. Additionally we have "Critical Path Method" (CPM) and Program Evaluation and Review Technique (PERT)

Project management has five processes which can be used as follows:

- Planning; plan the execution of projects better from the beginning especially with focus on VAT and Duties.
- Organizing; inside the projects better organizing can be done, but also from the top management point of view.
- Commanding
- Coordinating;
- Controlling; introduce new procedures and implement systems that are user friendly

One challenge in a project organization is communication. How to getting different people to communicate well together, so they can pull in the desired direction. Communication is

about sending the right messages to the right people in the right way. Another challenge is to transfer information and lessons learned from one project to the next project.

In this chapter I have looked into the Transaction Cost Analysis. Further I looked into different aspects of outsourcing and afterwards I continued with Supply Chain Management. At the end I discussed the importance of communication in the organization.

## 6 EXPORT BARRIERS / TRADE COSTS

### 6.1 EXPORT BARRIERS

Richard Kneller and Mauro Pisu wrote in their research paper from 2007 about export barriers. “Export barriers: What are they and who do they matter to? Barriers to export appear to be both large and numerous. But the most important variable for the firms pointing out if the barrier is relevant or not is; the number of years the firm has been exporting. *“The results suggested the existence of a process of learning to export whereby firms learn how to cope with export barriers through direct experience in export markets.”*(Kneller and Pisu 2007, 3) What is very important in this matter, is how the company can implement and distribute the knowledge learned in one department throughout the whole organization. How can the company distribute the lessons learned to the whole organization? I will come with some recommendations later in the thesis. Procedures for each case and/or country can be made and also a solution where super users per country can be the solution.

*“Perceptions of barriers are important because they influence managerial behavior in international markets”*(Shoham and Albaum 1995, 85). Why do some firms perceive a given barrier as more important than it is for another company? One possible explanation launched could be if the firm has minimal experience in exporting; This firm will most likely report more export barriers compared to a firm with more experience.

Shoham and Albaum found in their research that the strongest predictor of the importance of barriers is cultural distance between the home and target market – the larger the distance the higher the perceived importance of export barriers (Shoham and Albaum 1995).

If differential impacts of barriers are understood, governments can design programs to reduce their impact on the behavior of potential and existing exporters (Tesar and Tarleton

1982). For exporting and importing companies this information can help them to decide how to educate sales managers, supply chain managers and logistics coordinators.

In addition to that export barriers are a central concept in theories concerning companies export behavior; These obstacles have also an important effect leading to interruptions in international trade. In particular the non-tariff barriers have become prominent distortions to world trade flows and are collectively, a source of much trade frictions (McWilliams, Naumann, and Napier 1992).

Non-tariff barriers to trade include import quotas, special licenses, unreasonable standards for the quality of goods, bureaucratic delays at customs, export restrictions, limiting the activities of the state trading, export subsidies, countervailing duties, technical barriers to trade, SPS-measures(to protect human, animals and plants against diseases and pests), rules of origin, etc.(Deardorff and Stern 1999).

***Export market experience is likely to contain three main dimensions.***

1. *The length of time the firm has been exporting.*
2. *The number of markets it serves.*
3. *The intensity with which it serves those markets. (Kneller and Pisu 2007, 8)*

**Table 3: Barriers to Exporting**

Barrier	% Firms Identifying this as a Barrier
<b>Group 1 – Networks and Marketing</b>	
Obtaining basic information about an export market	29.8
Identifying who to make contact with in the first instance	53.7
Building relationships with key influencers or decision-makers	43.5
Establishing an initial dialogue with prospective customers or business partners	42.8
The marketing costs associated with doing business in an overseas market	51.3
<b>Group 2 – Procedural and Exchange Rates</b>	
Dealing with legal, financial and tax regulations and standards overseas	42.2
Logistical problems	35.0
Exchange rates and foreign currency	41.7
<b>Group 3 - Cultural</b>	
Language barriers	36.5
Cultural differences (not language)	32.4
Not having an office or site in an export market	37.2
A bias or preference on the part of overseas customers for doing business with firms established in their own country	45.2

Source: OMB survey.

Figure 12 Barriers to Exporting. (Kneller and Pisu 2007)



Richard Kneller and Mauro Pisu informs us in their article from 2007 that if you export much or little, all the companies face problems regarding “Dealing with legal, financial and tax regulations and standards overseas”. 42.2 % have reported that this is a barrier to export. See Figure 12 Barriers to Exporting from Kneller & Pisu the 12 most important export-barriers.

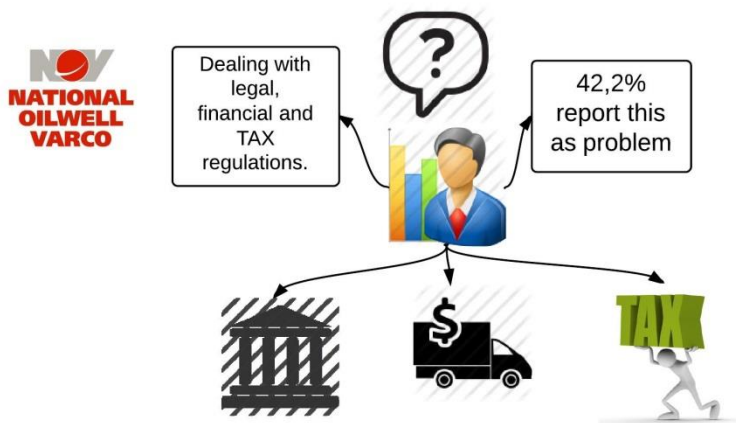
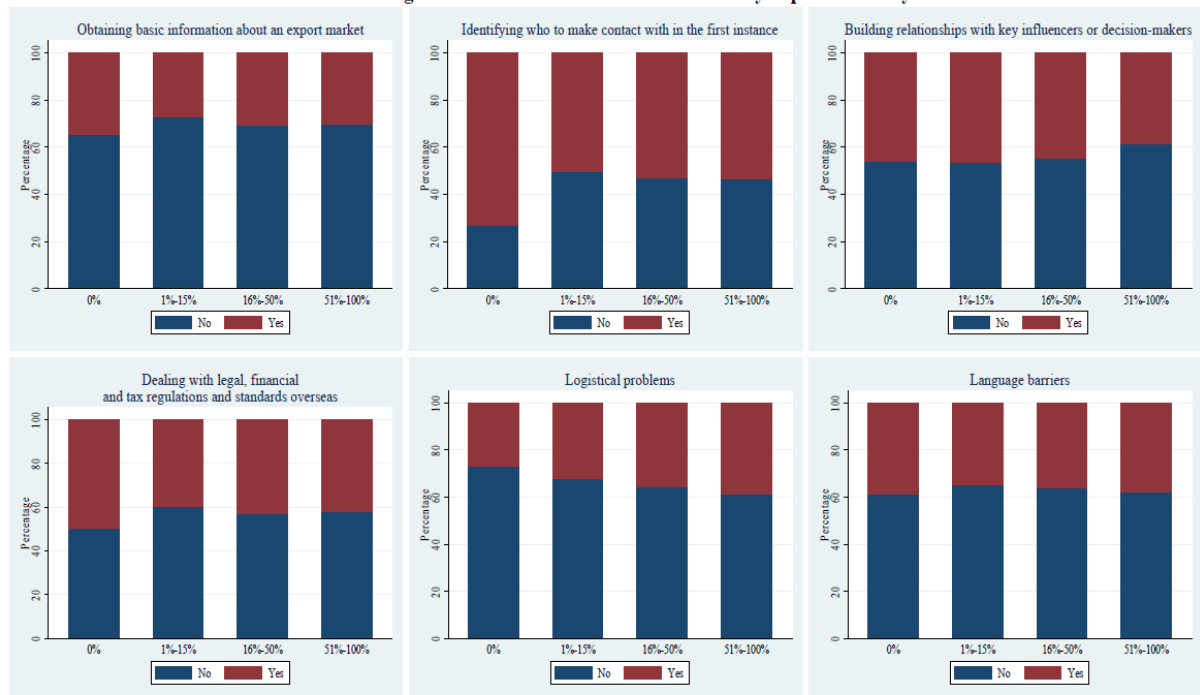


Figure 13 Dealing with legal, financial and TAX regulations and standards overseas (Made by author)

Barriers faced broken down by export intensity.

Figure 2a: Barriers faced broken down by export intensity

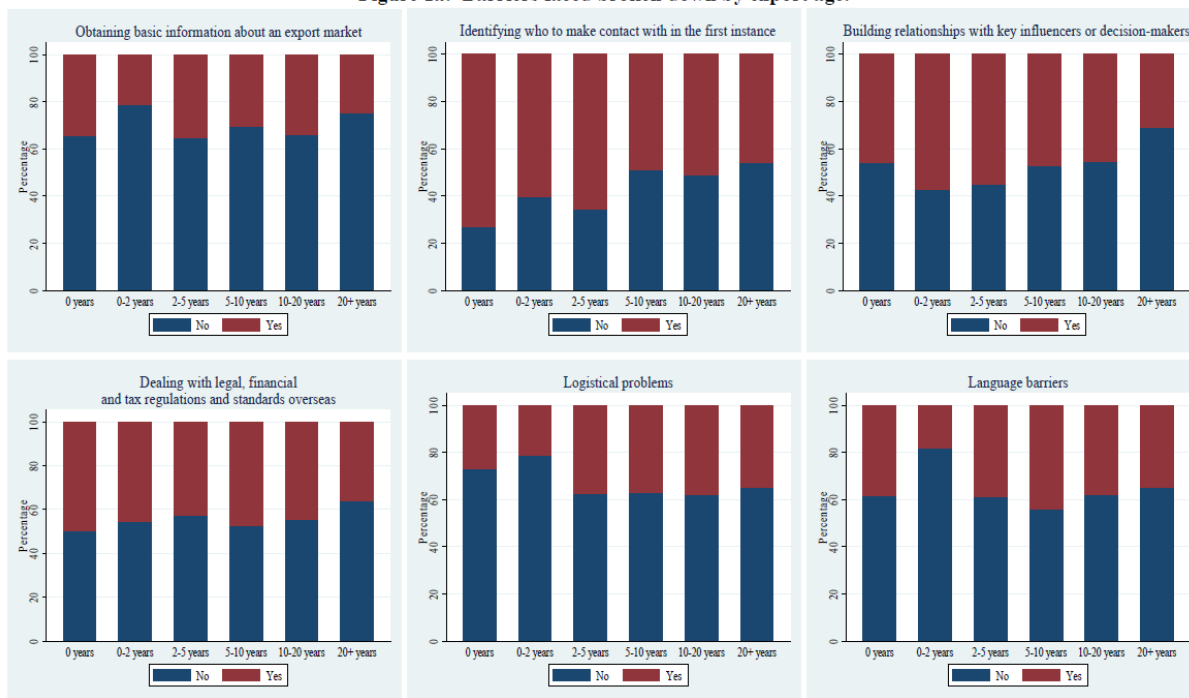


Source: OMB survey. Authors' calculation

Figure 14 Barriers faced broken down by export intensity (Kneller and Pisu 2007)

Barriers faced broken down by export experience. See Figure 15. Kneller and Pisu are concluding that export barriers such as dealing with legal, financial and tax regulation overseas, the probability of facing them is lower and decline further with the number of years of export market experience. This corresponds with what Magma wrote in 1998 (Korneliussen and Øwre 1998). Export barriers are considered as significant for companies with little experience with international activity. The reason for this is that these companies have little experience with the characteristics and the mechanics in the export process. Several researchers point out that some export barriers can be conquered when the export intensity increases (Tesar and Bilkey 1977). Tesar and Bilkey argue that firms should export initially to culturally close markets and move to more distant markets as they gain experience. They also recommend that each internationalization stage can be reached only after sufficient learning has occurred in previous stages. NOVN has long experience in exporting and importing goods and it is of great interest to find out more about these costs and frequencies.

Figure 1a: Barriers faced broken down by export age.



Source: OMB survey. Authors' calculation

Figure 15 Barriers faced broken down by export age (Kneller and Pisu 2007)

NOVN started to export already in 1951. First export was to Island to a vessel called Frøyfaksir. This was crane nr 18.

Nr. 77 og 78

Nordafar A/S,  
København.

A/L Utrustning

0/2929

2 stk. 2,5 tons portal-vippekraner (tegn. K-514-A)  
med kranbro løpende på skinnehjul, skinneavstand  
14 m.

Samlet pris levert kai Molde: kr. 208.100,-  
(Kontraktsum ÷ grabber, transportbånd m.m.)

~~kr. 208.100,-~~

Figure 16 First exports of cranes. Excerpt from Gunnar Sekkenes private notes regarding production of cranes.

Figure 16 shows information about 2 portal cranes which were delivered to Denmark as early as year 1954.

Norway is a little country with a small, open economy and the export and import are of vital significance. Norwegian export accounts for 35%-40% of Norway's GDP (Gross domestic product). The input of impulses and data from other countries, both of technological and market art, is strengthening Norway's international competitive power. (Korneliussen and Øwre 1998)

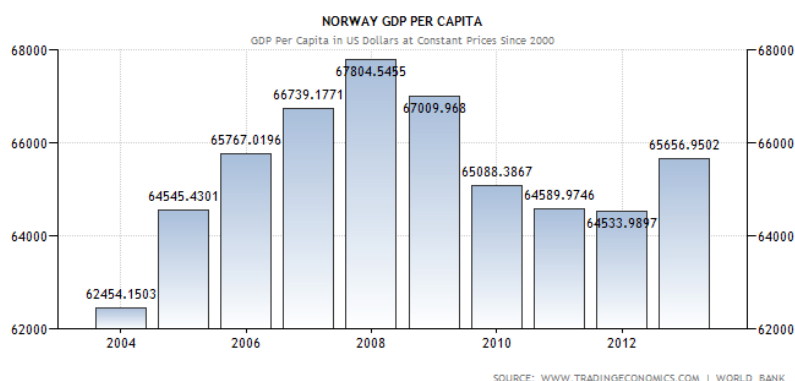


Figure 17 Norway GDP Per Capita (Trading Economics 2013)

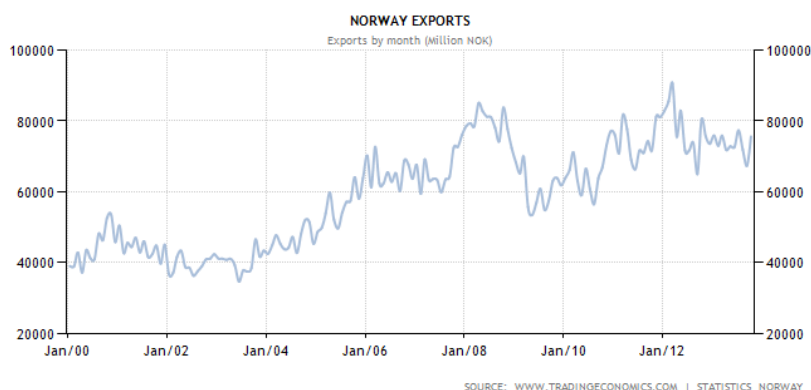


Figure 18 Norway Export (Trading Economics 2013)

## 6.2 TRADE COSTS

*“Trade costs definition, broadly defined, include all costs in getting a good to a final user other than the marginal cost of producing the good itself: transportation costs (both freight cost and time costs), policy barriers (tariff and non-tariff barriers), information costs, contract enforcement costs, costs associated with the use of different currencies, legal and regulatory costs and local distribution costs”*(Anderson and van Wincoop 2004, 691).

In their work they say that A rough estimate of the tax equivalent of “representative” trade costs for industrialized countries are 170-percent. The costs ad-valorem tax is break down to 55-percent local distribution costs and 74-percent of international trade costs.  $(1,7=1,55*1,74-1)$  (Anderson and van Wincoop 2004, 692).

This number is then broken down to 21-percent transportation costs, 44-percent border-related trade barriers and 55-percent retail and wholesale distribution costs.  $(2,7=1,21*1,44*1,55)$

The 21-percent transport costs include both directly measured freight costs and a 9-percent tax-equivalent of the time value of the goods in transit. This 9-percent is the number for import into USA. If we compare with Norway, almost everything can be imported without Duty. Norway has as a main rule that Duty applies only on agricultural products and textiles. Anyhow, free-trade agreements and tariff reductions for goods from developing countries ensure that, occasionally, some agriculture products and textiles shall not have paid VAT.

Anderson and van Wincoop found also that border costs are less than 5 percent in rich countries and between 10 and 20 percent for developing countries (Anderson and van Wincoop 2004, 693). Their estimate of policy barriers for industrialized countries (including nontariff barriers) is about 8 percent.

*“The 44-percent number they reported above consist of the following elements: an 8-percent policy barrier, a 7-percent language barrier, a 14-percent currency barrier and 3-percent security barrier for rich countries.”*(Anderson and van Wincoop 2004, 693)

Anderson and van Wincoop concluded that the costs associated with factors such as language barriers, currency barriers, imperfect information and regulation are *more*

important for trade than direct policy instruments such as tariffs and non-tariff barriers (Anderson and van Wincoop 2004).

## **7 NOVN'S SUPPLY CHAIN**

In this chapter I will explain more about the company NOVN and what their business areas are. I will also look into the supporting processes in the company and the company's flow of products. Furthermore, I will also look into the purchaser's role both regarding purchasing and logistics. I will do this because the purchasing department and the logistics department are the two departments that are mostly involved with issues concerning VAT and TAX associated with logistics across borders. In addition, the sales department has also an important role in this matter.

### **7.1 NATIONAL OILWELL VARCO NORWAY**

National Oilwell Varco is a worldwide leader in providing major mechanical components for land and offshore drilling rigs, complete land drilling and well servicing rigs, tubular inspection and internal tubular coatings, drill string equipment, extensive lifting and handling equipment, and a broad offering of downhole drilling motors, bits and tools. The products can be lattice boom cranes, knuckle boom cranes, hose loading stations, drilling equipment among others to both offshore rigs and onshore rigs. NOVN also provides supply chain services through its network of distribution service centers located near major drilling and production activity worldwide. NOVN is Norway's fifth largest export company.(NOVN Intranet 2014c)

According to NOVN's intranet page, NOVN is "The world's leading and the most innovative supplier of drilling and handling equipment and related services to the energy industry."(NOVN Intranet 2014c)

The Norwegian company National Oilwell Varco AS was founded in 1985 and has its head office in Kristiansand (Hydralift), with locations in Stavanger (Hitec), Asker (Procon) and Molde (Molde Crane). Additionally the company has also departments in Tønsberg and Trondheim and workshops in Søgne, Dusavik and Hjelset (National Varco Norway Manufacturing)

It has 60.000 employees worldwide and app.4000 employees in Norway. 80% of the employees have higher education. NOVN had a total turnover of about 23,9 billion NOK in 2012. In order to produce their final products NOVN bought goods and services for a total amount of NOK 14.3 billion in 2012. NOK 4.3 billion was purchases from companies in Norway and approximately NOK 10 billion were made from companies outside Norway.

Total turnover was MUS\$ 5 275 in 2013 and MUS\$ 3 931 in 2012

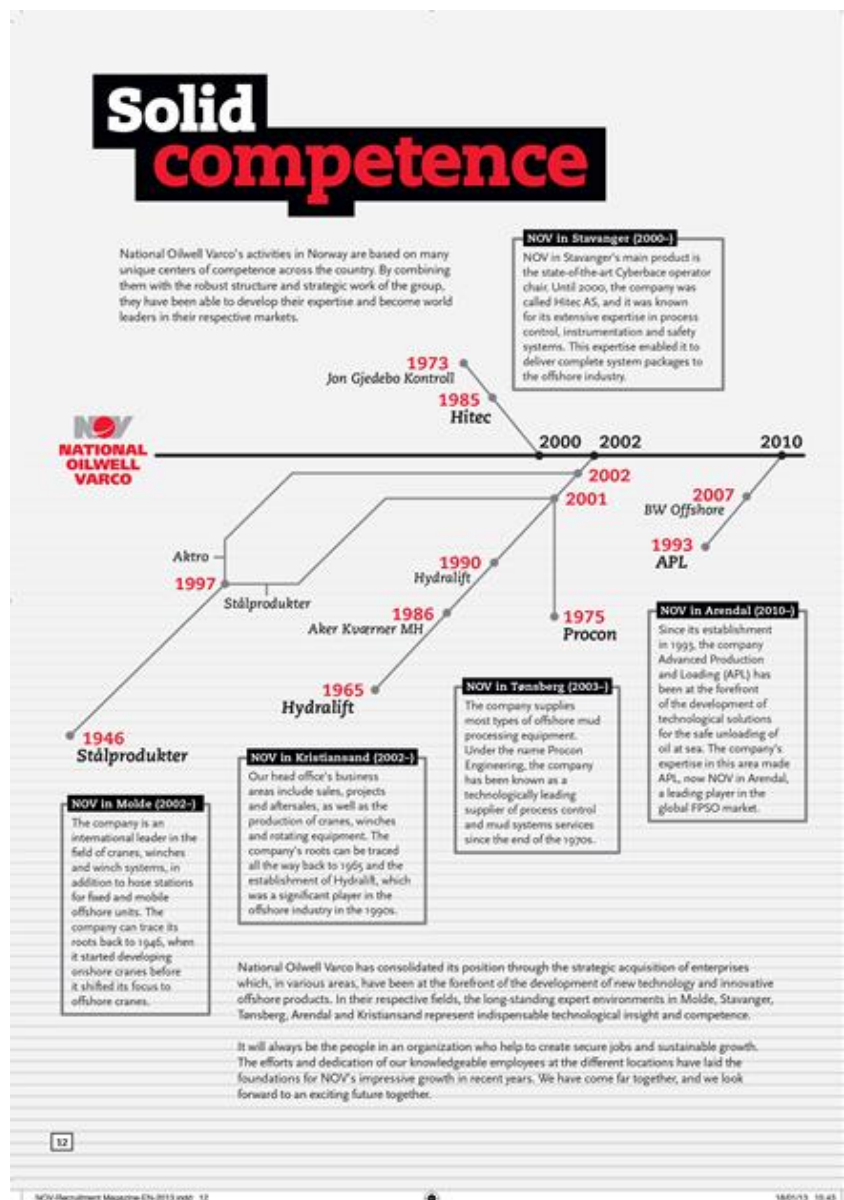


Figure 19 Solid competence (National Oilwell Varco Norway AS 2014b).

## 7.2 SUPPORTING PROCESSES INTERNALY

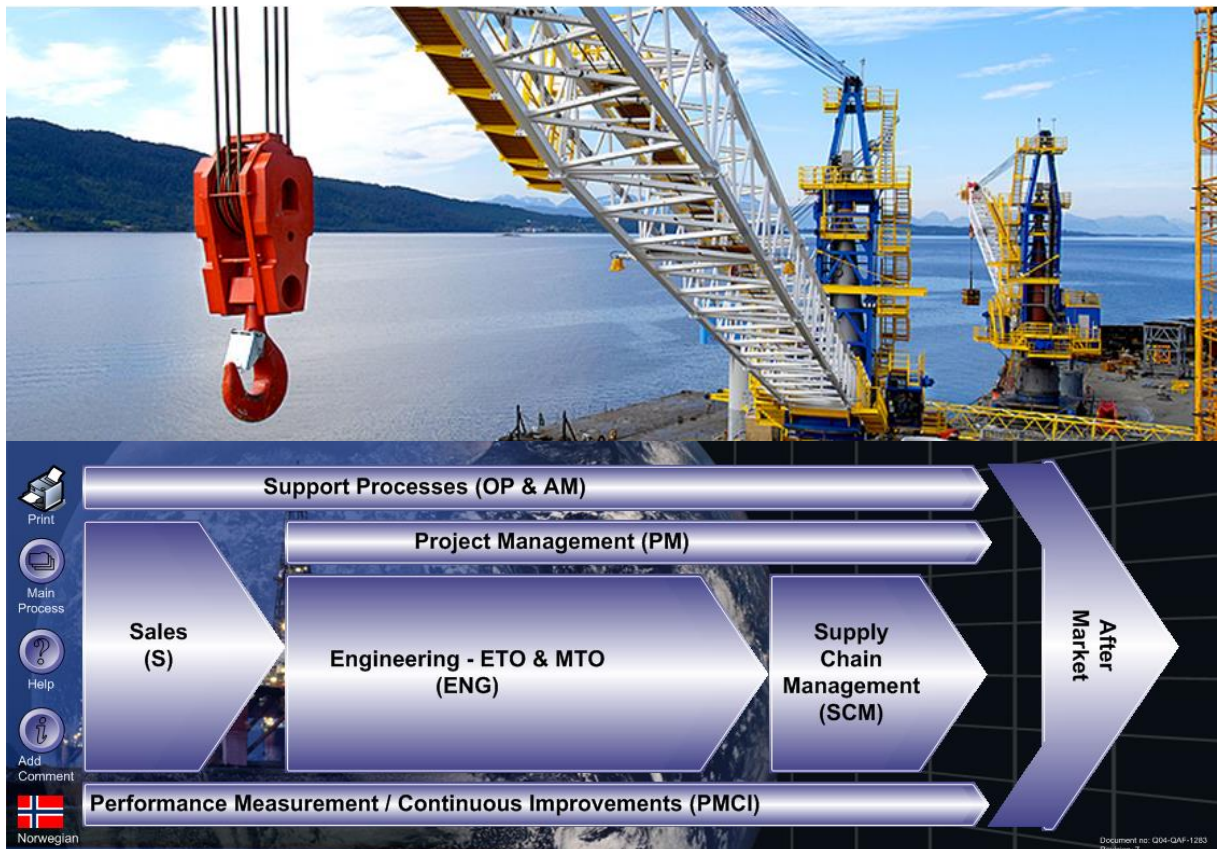


Figure 20 Support Processes (OP & AM) Source intranet NOV(National Oilwell Varco Norway AS 2014a)

Figure 20 shows an overview of all the supporting processes around the Supply Chain Management department. All the other departments also influence the output of VAT and DUTY because of interacting with the customer and /or subcontractors which can lead to change in design or other things which can influence the transport or production.

- Sales
- Technical Support
- Supply Chain Management
- Project Management
- Aftermarket

## 7.3 THE COMPANY'S PROCESS FLOW.

To better understand how the costs of TAX and VAT arise, I must clarify how the production process takes place and the transportation flow of the components is performed. It is the purchasers who purchase products in different countries and they have different

## guidelines to follow by purchasing.

QA Process: **Processlibrary - SCM**  
 Remarks: Part 1 of 2 --- ISO 9001: 2008\*  
 Process Sponsor: Director SCM

QA Domain: QA Norway  
 Document Number: Q04-QAF-1287  
 Revision: 7  
 Date [dd.mm.yyyy]: 24.10.2011

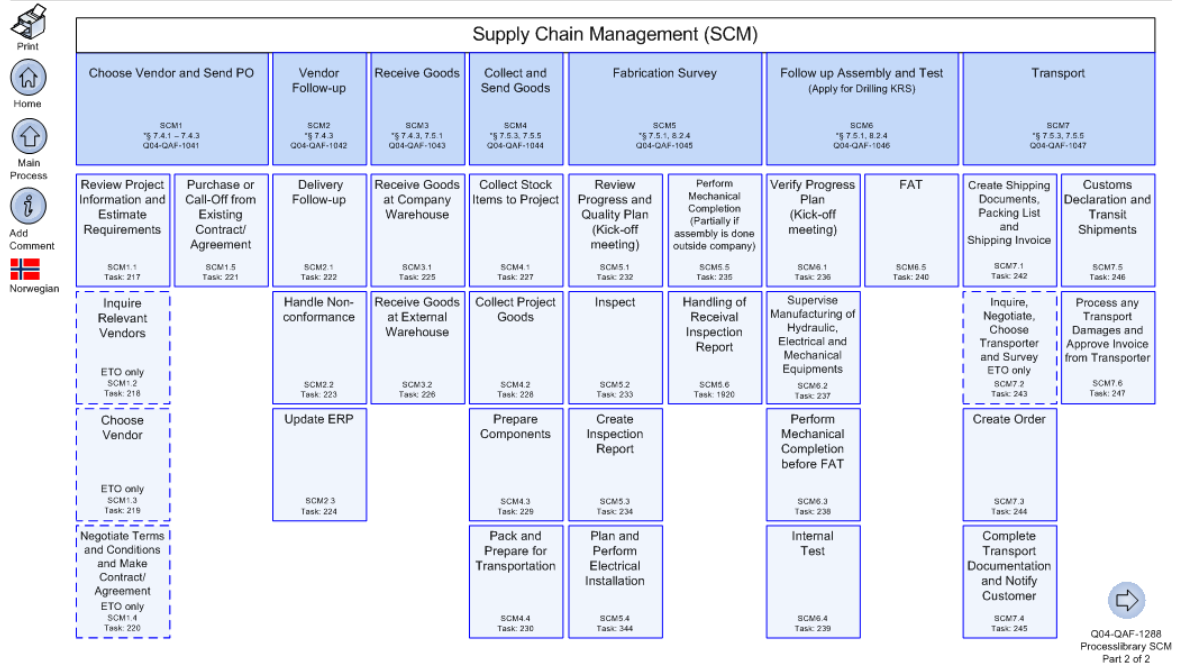


Figure 21 Supply Chain Management (NOVN Intranet 2014c).

Figure 21 shows some of the main processes in the SCM department. These processes have exact descriptions of the tasks that shall be done and who is responsible. See also Figure 22. NOVN has good procedures regarding export and import customs clearance in/out of Norway and other countries. But nothing in the BPM, (Business Process Management) tells anything about the challenges concerning Free Issued Items into other countries. This is one of the important reasons for unnecessary costs concerning VAT and Duty.

Project Management	Q04-QAF-1032	Test Follow-Up (Does not apply for Drilling KRS) / Følge opp test (Gjelder ikke Drilling KRS)	PM4.4	Punchlist Follow-Up (Does not apply for Drilling KRS)	4	Follow up punch items toward other sub-suppliers
Engineering	Q04-QAF-1056	Follow up Equipment Delivery / Oppfølging av utstyrsleveranse	E5.1	Secure Effective Communication	5	Clarifications towards Manufacturing Suppliers
Engineering	Q04-QAF-1056	Follow up Equipment Delivery / Oppfølging av utstyrsleveranse	E5.2	Follow up Plan (EPMS) and Report Progress	1	Approve the Manufacturing Schedule from the Supplier
Engineering	Q04-QAF-1056	Follow up Equipment Delivery / Oppfølging av utstyrsleveranse	E5.2	Follow up Plan (EPMS) and Report Progress	4	Report progress on activities
Supply Chain Management	Q04-QAF-1233	End Internal Manufacturing / Avslutte intern produksjon	SCM12.2	Surplus Part Handling	1	Return the Material and clean up after ended Project
Engineering	Q04-QAF-1236	Prepare Project Per Equipment / Forberede prosjekt pr. utstyr	E3.1	Verify Project Data	6	Perform Equipment Start-Up Meeting
Finance	Q04-QAF-1242	Leverandørgjeld / Leverandørgjeld	SUP-F03.1	(Translate) Opprette og vedlikeholde leverandørdata	1	(Translate) Opprette leverandør iht rutine
Finance	Q04-QAF-1242	Leverandørgjeld / Leverandørgjeld	SUP-F03.2	(Translate) Sortere bilag	2	(Translate) Behandle rentenota
Finance	Q04-QAF-1242	Leverandørgjeld / Leverandørgjeld	SUP-F03.5	(Translate) Behandle bilag og oppdatere	2	(Translate) Sjekke momscode iht rutine
Project Management	Q04-QAF-1279	Cancel, Stop, Move or Change Projects / Kansellere, stoppe, forskyve og bytte prosjekter	PM8.1	Evaluation of Consequences by Cancelling/ Changing of Project	4	Evaluation of consequence in case of cancellation/stopping/changing of delivery time for the Project
Project Management	Q04-QAF-1279	Cancel, Stop, Move or Change Projects / Kansellere, stoppe, forskyve og bytte prosjekter	PM8.1	Evaluation of Consequences by Cancelling/ Changing of Project	11	Consequence analysis on weather the canceled Equipment should be finalized to Own Stock
Project Management	Q04-QAF-1279	Cancel, Stop, Move or Change Projects / Kansellere, stoppe, forskyve og bytte prosjekter	PM8.2	Cancelling of Projects	2	Cancelling of Fabrication and Components
Project Management	Q04-QAF-1279	Cancel, Stop, Move or Change Projects / Kansellere, stoppe, forskyve og bytte prosjekter	PM8.2	Cancelling of Projects	6	Prepare Cost Consequence for the cancellation pr. Equipment
Project Management	Q04-QAF-1279	Cancel, Stop, Move or Change Projects / Kansellere, stoppe, forskyve og bytte prosjekter	PM8.3	Temporary Stop of Projects	2	Put relevant Equipment on hold



Figure 22 Purchasers tasks in SCM.



Figure 23 Vendor Follow Up, Example of different roles in SCM (NOVN Intranet 2014c).

Figure 23 shows the task “Vendor Follow-up” which roles are involved and what tasks need to be done. Some roles are responsible and other roles are involved.

## 7.4 THE PURCHASERS ROLE IN THE SUPPLY CHAIN.

Previously a buyer's role was often to buy goods needed in production or to assemble a product. Today, this role has been considerably expanded and requires larger and more targeted expertise in purchasing activities. The companies that will survive in the future must become more and more competitive. The framework are constantly changing and the product that was a sales winner last year, might be matured and outdone by competitors this year. We see that purchasing and supply chain management are gaining more and more attention from business leaders as key success criteria.

Another key success criterion is the communication inside the organization and between the suppliers and sub-suppliers.

## 7.5 QUALITY IMPROVEMENT REQUEST (QIR-SYSTEM).

NOVN has a quality-system called Quality Improvement Request. I have searched in the database for incidents/cases with VAT/Duties and almost nothing is registered. None of the big cases I have found have been reported. One report commented the lack of

competence and too little training regarding VAT. The team-leader had made a QIR and wanted more external courses or training. This QIR was reported in the fall 2013 from Kristiansand S, and support my hypothesis about lack of competence and lack of communication.

## 8 TRANSPORT FLOW OF THE COMPANY.

To better understand how the costs of customs clearance and VAT arise, I must clarify how the production process takes place and how the transportation flow of the components is performed. Figure 24 shows the logistics plan for a project that shall be produced both in Norway and Poland. Without going into the details of the Figure, is it easily and visually explained where the various main components shall be produced and where they shall be transported. I will come back to this later in the thesis.

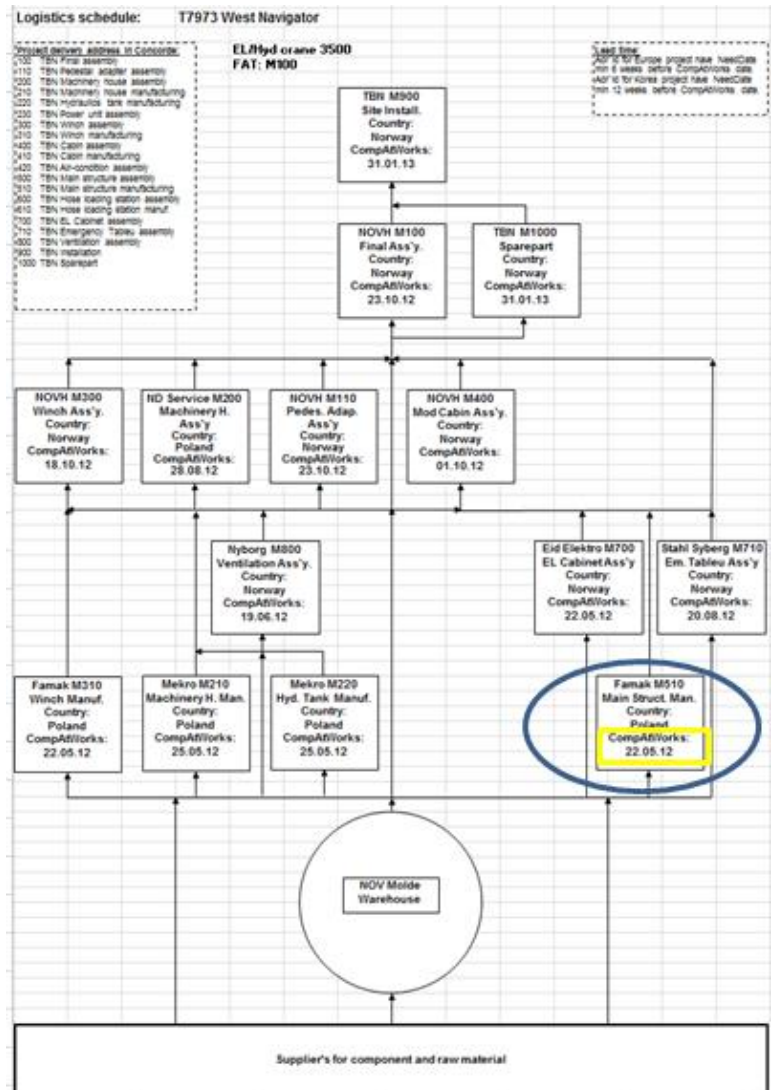


Figure 24 Logistics plan.(National Oilwell Varco Norway AS 2014a)

### 8.1 LOGISTIC PLANS

When a crane or a production is sold to a customer, the SCM department has already decided where to produce the crane. When the main subcontractors are chosen, the logistics manager is able to work out the logistics plan for the project. This plan is telling everybody in the project when the components need to be delivered to the different project delivery addresses. The product, which is named “lattice boom crane”, is normally produced at three different places.

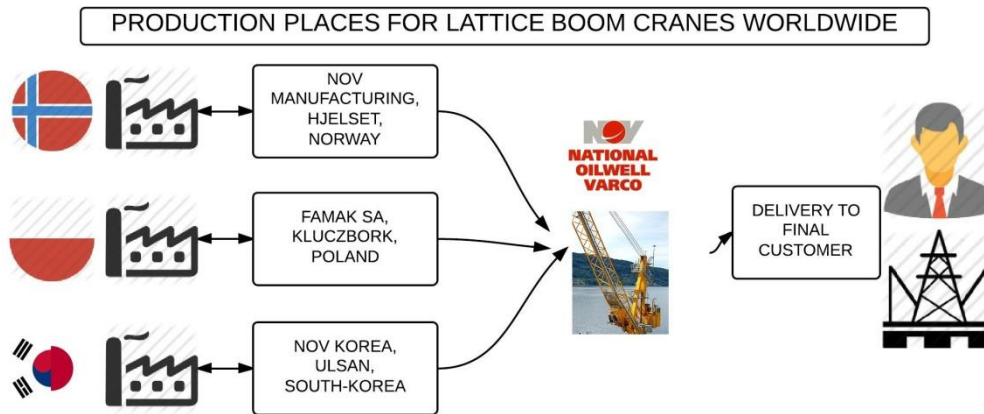


Figure 25 Production places for LBC

As shown in Figure 25, the production places are:

- 1) NOV manufacturing at Hjelset, Norway. Most of the cranes with destination in the North-Sea are built at Hjelset.
- 2) Famak SA, Kluczbork, Poland are also used when the capacity of NOV manufacturing facilities are fully utilized.
- 3) NOV Korea, Ulsan. Most of the cranes with destination in South-Korea are built here. Customers as Hyundai Heavy Industries (HHI ) and Samsung are among the customers who are particularly important for NOV.

**Project delivery addresses:** All the different stages in the production have different delivery addresses in the ERP system. For instance the main structure Manufacturing address id 510 is Famak in Poland. Then we know that all parts which need to be sent to Famak for manufacturing of the main structure need to be delivered at Famak before 22.05.2012. See Figure 24

**Lead time:** Adr.Id for Europe project have Need Date minimum 6 weeks before CompAtWorks date, which means Component At Worksite date. This is the last date a component needs to be delivered to the workshop, before the workshop needs the component for assembly. Adress Id. for Korea project have Need Date min 12 weeks before CompAt Works date. All parts which need to be ordered to adr.id M510 will be delivered minimum 6 weeks before CompAtWorks date in warehouse in Norway for transport.

The logistics plan has been made in order to get all the components to the right places to the right times (not too early and not too late). NOVN is using different sub-suppliers which are experts in their fields. They outsource some parts of the production. This leads to more transport and a complex logistic system across borders in Europe and also overseas to South-Korea.

Long lead items require particular follow-up in the logistics planning. The SCM department has analyzed and categorized the items after ABC-analyze (Pareto's 20/80), and some long lead items are A-items which NOVN follow up thoroughly to avoid delays in production.

Project delivery address in Concorde	
100	Final assembly
110	Pedestal adapter assembly
200	Machinery house assembly
210	Machinery house manufacturing
220	Hydraulics tank manufacturing
230	Power unit assembly
300	Winch assembly
310	Winch manufacturing
400	Cabin assembly
410	Cabin manufacturing
420	Air-condition assembly
500	Main structure assembly
510	Main structure manufacturing
600	Hose loading station assembly
610	Hose loading station manufacturing
700	El cabinet assembly
710	Emergency Tableau assembly
800	Ventilation assembly
900	Installation
1000	Sparepart

Figure 26 Project delivery address in Concorde (Made by author).

## 8.2 START UP

When NOVN is starting to build a crane, there are thousands of components which need to be ordered for the project. NOV has several technical departments which specify all the items and components that they need to construct and build a crane. They have component purchasers, fabrication purchasers and electrical purchasers who order these items and productions from the different sub-suppliers in our supplier base. See Figure 27.

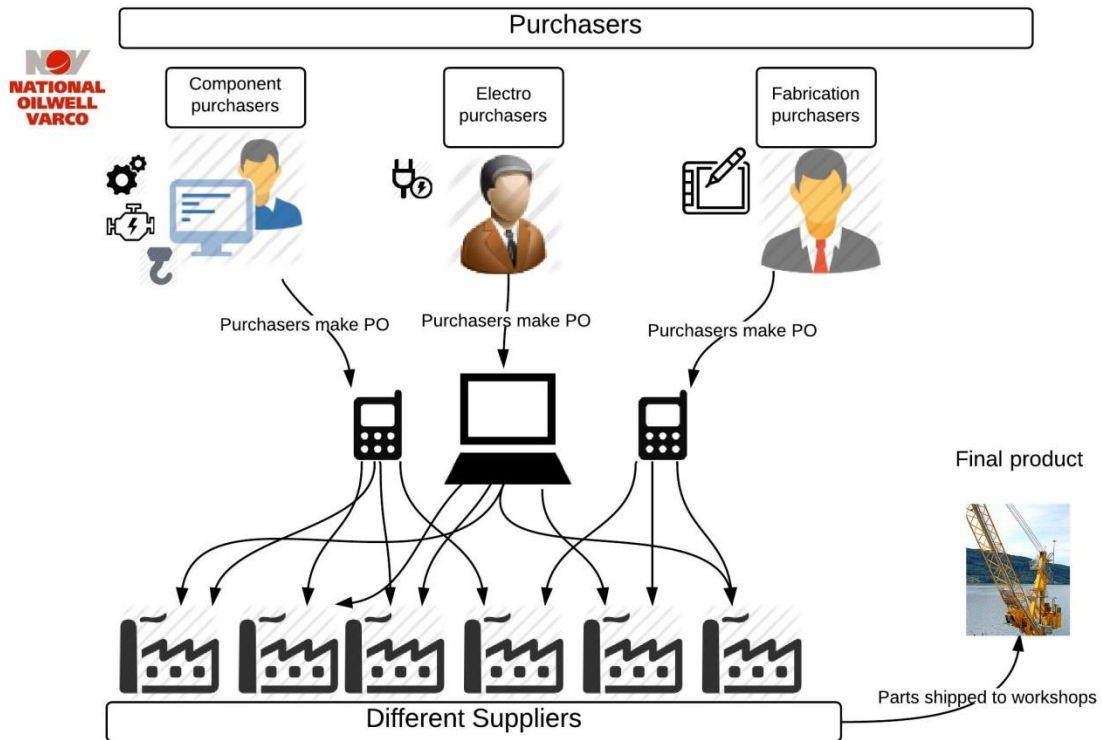


Figure 27 Purchasers make PO. Figure made by author.

### 8.3 MANUFACTURING PLACE DECISION

During the sales phase of the project, the SCM department (Supply Chain Management) decides together with sales department, where the different main components will be manufactured and assembled. Many of the items which they need to produce to build a crane can be bought from several suppliers. Other components need to be designed and engineered first and afterwards the purchase order can be placed to a suitable subcontractor. We have a machinery house manufacturer in Poland called Mekro and a machinery house assembly workshop called ND Service. When we start transport of items belonging to the machinery house assembly, we will send approximately 1500 different items to this supplier. ND Service must open a customs procedure with the Polish customs for this production. They also need to raise a bank guarantee for the whole value of all the free issued items which we ship from Norway to Poland. The value of a machinery house can be approximately 750 000 USD, and then ND Service has to arrange a guarantee for this amount.

Manufacturing place Europa versus South-Korea: Since a lot of NOV's customers are big oil companies with rigs and platforms located in the North-Sea, they use production concept Europe when the delivery address is in Europe. This means that final assembly will be at Hjelset, not far away from Molde. If the delivery address is in Singapore, China or South-Korea, NOVN has final assembly in NOV Korea in Ulsan. This flexibility gives NOVN closeness to the customer which can give them a benefit towards competitors.

## **8.4 ERP SYSTEM**

NOVN use Concorde ERP (Enterprise Resource Planning) system. When the logistics plan is settled, the need dates in the logistics plan are implemented in the ERP-system. This takes into account all the different delivery addresses and all the different delivery times.

## **8.5 FREE ISSUED ITEMS**

This is a common description of components which the contractor (NOV) supplies/ transports to the assembly site factory to enable the assembly of the crane. An example of components can be Air-Condition units which need to be installed into the machinery house. Hundreds of components need to be sent to Poland for installation and returned to Norway or sent to another country as a part of the finished machinery house. The reason why NOVN sends components as free issued items is that these components are often very expensive and Polish sup-suppliers are reluctant to buy these components themselves. Additionally it is a matter of company policy that NOVN's designers and purchasers have the core competence in ordering and buying the top quality components which are necessary to build a lattice boom crane. NOVN could have outsourced the whole machinery house for instance, but then they would have taken a high risk to outsource a core competence production.

Not-free-issued items are then for instance raw steel. For example, NOVN orders the production of two boom sections which need to be produced by Polish manufacturer, Famak. NOVN will then get a price per kilo for the finished fabricated steel. Then Famak must buy this steel from their sup-supplier directly and this transaction has nothing to do with the agreement between Famak and NOVN. The price from Famak to NOVN will probably be a function of cost price from sup-supplier \*10% markup + appr hours of manufacturing.



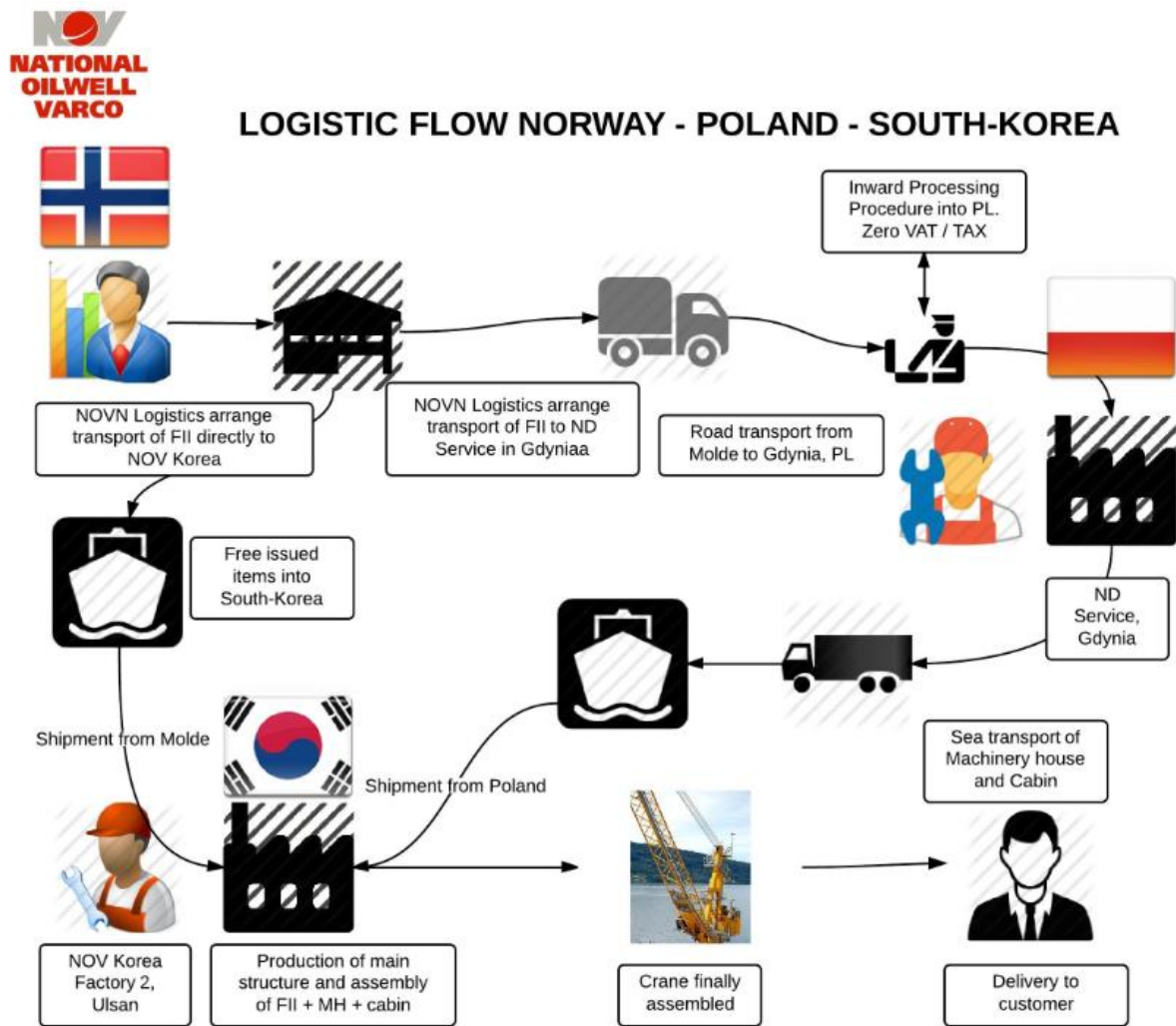
Figure 28 Picture of Lattice Boom Crane Z1318 Modularization project (National Oilwell Varco Norway AS 2014a)

## 8.6 LOGISTIC FLOWS

In this chapter I will describe some of the different logistics flows concerning the production of lattice boom cranes. To explain the complexity of the logistics and some of the challenges with VAT and Duty across the borders, I have made different logistic flow figures. The figures show some of the transport solutions and also take into consideration the VAT and Duty. It is of major importance before NOVN starts to transport any components to their sub-suppliers, the logistics scope must be clear, and the end destination to the end-customer needs to be known.



### 8.6.1 LOGISTIC FLOW 1 Norway – Poland – Export out of EU -> South –Korea



### 8.6.2 LOGISTIC FLOW 2 Norway – Poland – Norway inclusive Free issued items

This is components bought by the company, delivered free of charge to the subcontractor which shall be assembled (in)to the final production. This is one of the most used logistic plans in NOVN with delivery of cranes to the North-Sea. They have then steel production in Poland and assembly and testing of all the main components at Hjelset.

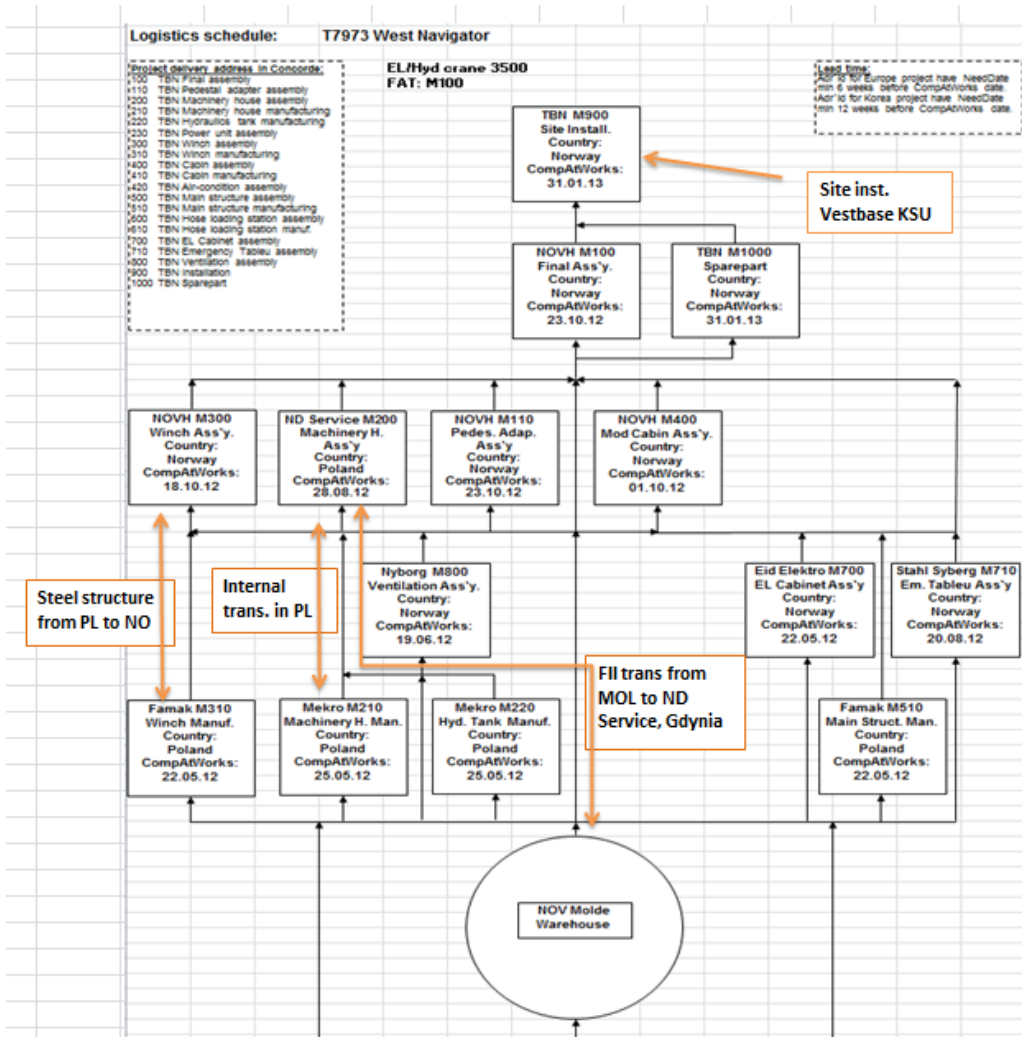


Figure 29 Logistics schedule (NOVN Intranet 2014c)

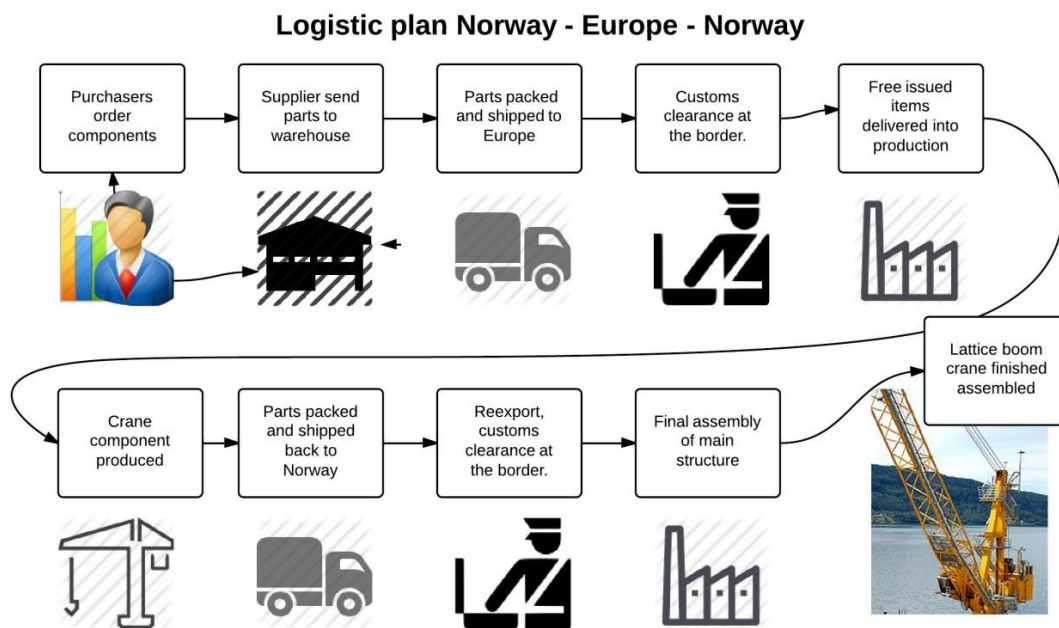


Figure 30 Logistics plan Norway - Europe - Norway. (Made by author)

### 8.6.3 LOGISTIC FLOW 3 Norway - Poland - Delivery inside EU

This is components bought by the company, delivered free of charge to the subcontractor which shall be assembled (in)to the final production. Here it is delivery address EU, for instance Rotterdam or Aberdeen. This procedure is seldom used but it is of outmost importance that the FFI is customs cleared for free circulation into EU, otherwise the whole production must first be transported out of EU, and afterwards back again.

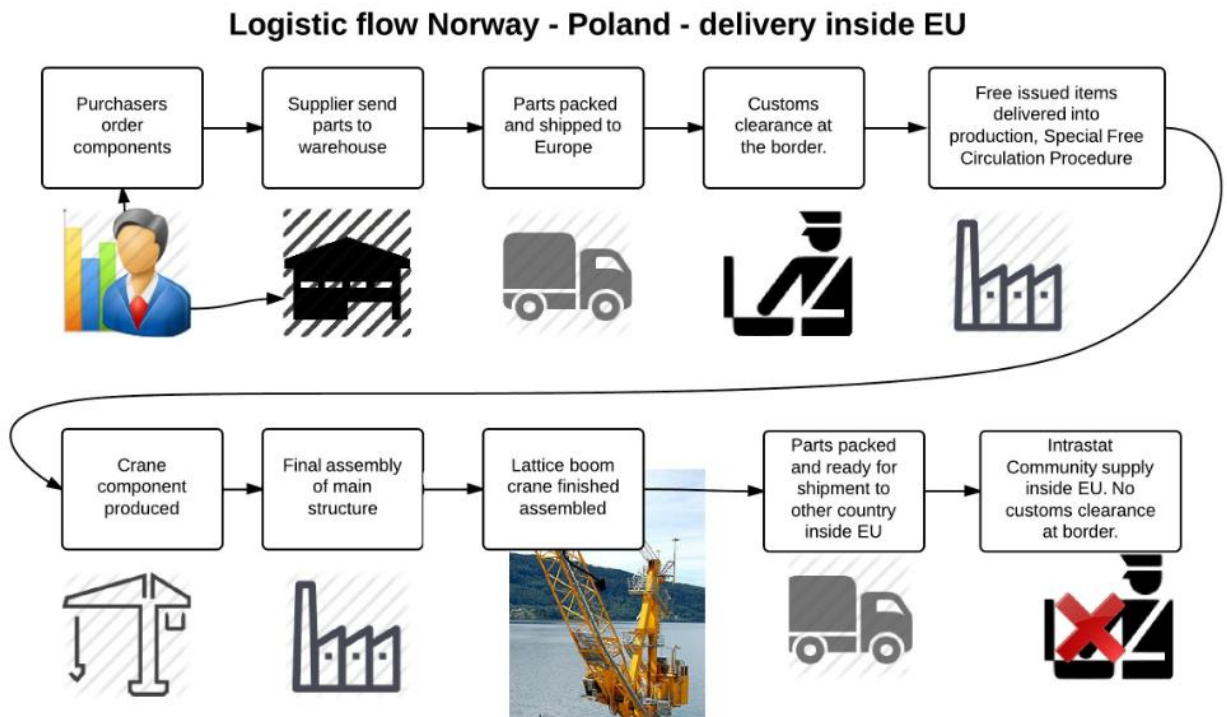


Figure 31 Logistic flow Norway - Poland - delivery inside EU. (Made by author)

## 8.6.4 LOGISTIC FLOW SHANGHAI - ULSAN

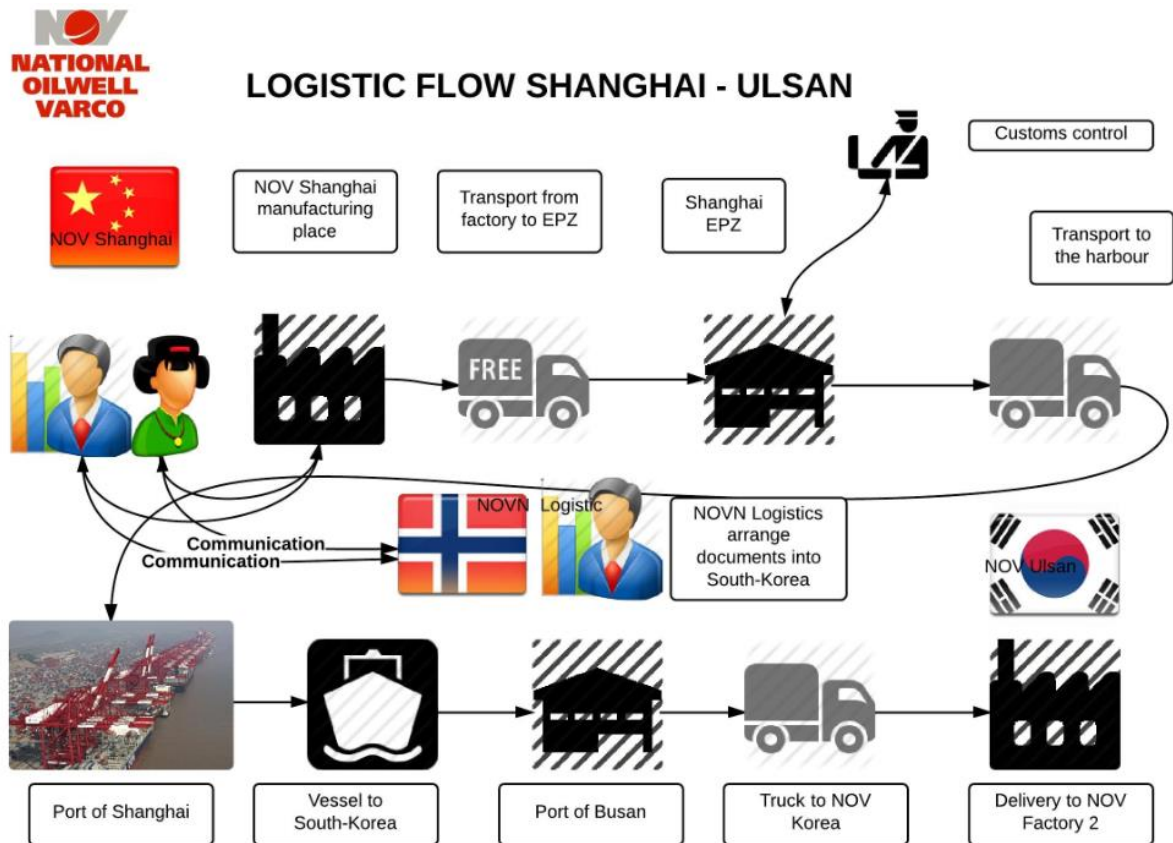


Figure 32 Logistics flow Shanghai - Ulsan (Made by author).

Figure 32 shows a new logistics concept where NOV Shanghai will produce steel components for NOVN. Here is the work of scope, steel production of components in China and then transport to South-Korea after production in China for assembly in NOV Korea. As long as NOV Shanghai arranges the export docs out of China are this transport scope easy when it comes to Duties and VAT. NOV Shanghai has to physically transport the components to EPZ (Export processing Zone) to avoid that they will have to pay Chinese VAT on the whole value on the components.

- Export processing zones (EPZs) are similar to FTZs but are set up solely for the purpose of managing export processing..
- A free trade zone (FTZ) or export processing zone (EPZ), also called foreign-trade zone, formerly free port is an area within which goods may be landed, handled, manufactured or reconfigured, and re-exported without the intervention of the customs authorities.

## 8.6.5 LOGISTIC FLOW EUROPE – SHANGHAI, CHINA

Here we see the logistic plan for a whole new logistics concept for a new modularization crane. The model is a complete redesign of the old crane and NOVN wishes to cut costs by 25 percent and lead time by 33 percent. The concept will then be production of “core competence modules” like machinery house, cabins and winches in Europe as always. But

steel production and assembly and testing will be in China and this has never been done before. The big challenge is the transport of free issued items into China from Europe and the customs clearance of these shipments. These are thousands of components and import customs clearance into China is very challenging. They can risk VAT/DUTY costs up to 30% of the value of the free issued items and if this happens it will be too expensive to produce and assemble in China. I will go further into this case later in case 11.5.

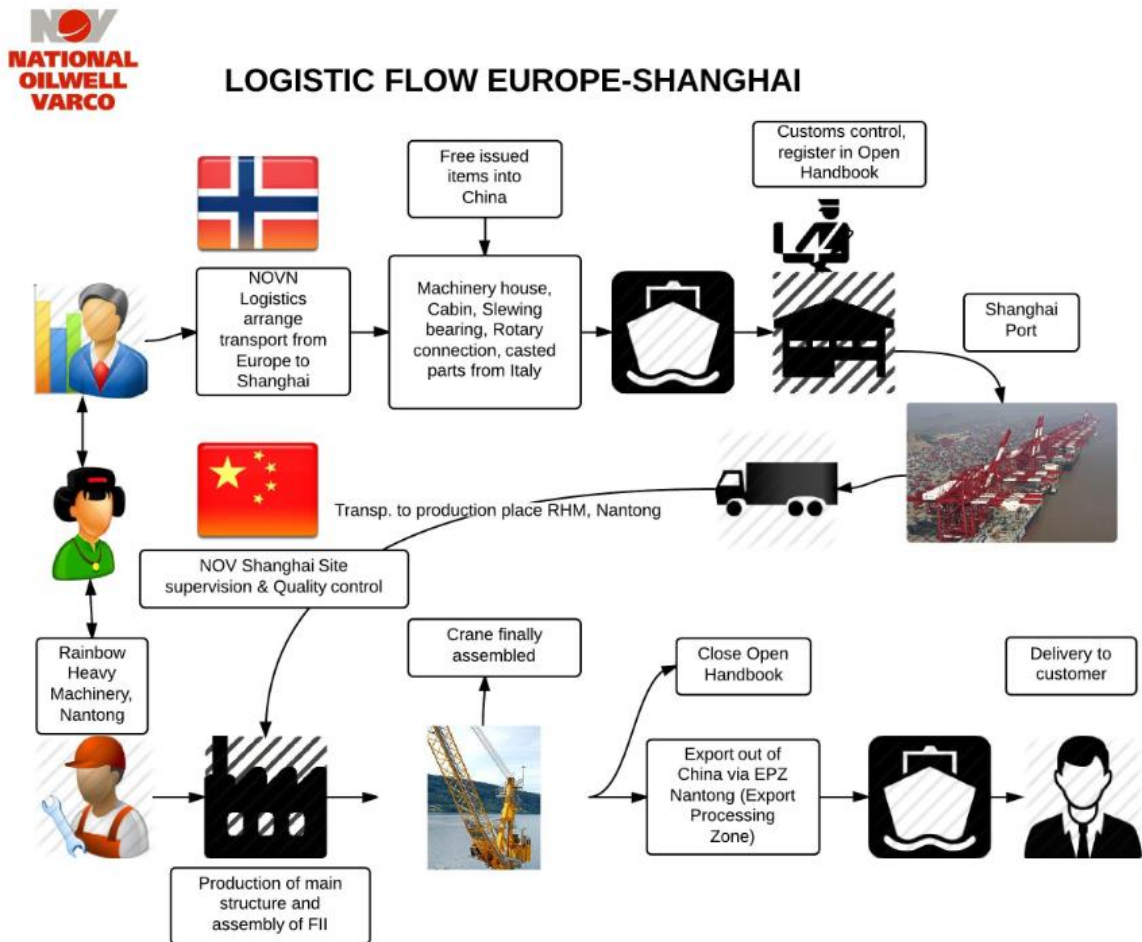


Figure 33 Logistics flow Shanghai production, assembly and testing. (Made by author)

## 9 VAT – HOW TO UNDERSTAND VAT

### 9.1 VAT DEFINICION

In this chapter I will explain more about VAT challenges in connection with purchase.

VAT definition: Value-Added Tax. A tax perceived by many countries that is very similar to a sales tax, but that is collected whenever the product's value is increased. The VAT on imports is collected at the point of entry into the country. (David and Stewart 2010)

Inward VAT; used when purchasing goods or services

Outward VAT; used when selling goods or services.

VAT as costs in the projects; if NOVN buys a component in Spain with delivery address in Norway, NOVN will not pay Spanish VAT on the component. If we buy the same component in Spain with delivery address in Romania, NOVN needs to pay Spanish VAT (21%) because the component has not left EU. Romania has 24% VAT.

EU has a common VAT system which builds on a common directive. But the different governments' act differently dealing with similar cases. EU has a common market and there is no need for customs clearance at the borders between the EU countries, but since Norway is not a part of the EU, Norwegian companies need to arrange customs clearance at the border of EU.

EU VAT: Austria 20%, Belgium 21%, Bulgaria 20%, Croatia 25%, Cyprus 19%, Czech Republic 21%, Denmark 25%, Estonia 20%, Finland 24%, France 20%, Germany 19%, Greece 23%, Hungary 27%, Ireland 23%, Italy 22%, Latvia 21%, Lithuania 21%, Luxembourg 15%, Malta 18%, Netherlands 21%, Norway 25%, Poland 23%, Portugal 23%, Romania 24%, Slovakia 20%, Slovenia 22%, Spain 21%, Sweden 25% and United Kingdom 20%. (VATlive 2014)

VAT registrations in other countries.

The challenge is that all sales and purchasing transactions (internal and external) "VAT-flow" must be classified correct, with correct rate and attributes for the correct VAT return in the correct country.

## 9.2 RULES AND REGULATION

- Norway - Act on VAT from 19.06.2009. There are special § paragraphs for deliveries of goods to oil platforms or to vessels (FPSO) Floating Production Storage and Offloading and many sales are exempted for VAT.
- EU - 6. directive + "VAT package" The councils sixth directive 77/388/EØF from 17.th of May about harmonizing of the member countries' legislation on sales tax. The common VAT system in Europe.
- OECD – Guidelines: Organization for Economic Co-Operation and Development. OECD is an international economic organization of 34 countries founded in 1961 to stimulate economic progress and world trade.

- World Trade Organization (WTO) :The international organization responsible for enforcing international trade agreements and for ensuring that countries deal fairly with one another.(David and Stewart 2010) WTO was officially created on January 1, 1995 and “replaced” GATT (the General Agreement on Tariffs and Trade) created at the Bretton Woods conference in 1944. Negotiation periods from 1944 to 2008 led to a decrease of duty rates from an average of over 40 percent in 1947 to an average slightly above 4 percent in 2008.(David and Stewart 2010)

### 9.3 EORI-NUMBER

EORI (Economic Registration and Identification) is a common customer record inside EU which contains all operators who deals with customs procedures. Every operator gets one unique identification number which shall be used in any customs operation inside EU. All Norwegian companies which have business inside EU, must be EORI registered. Norwegian companies can choose in which EU country they will apply for EORI and this can afterwards be used in all EU member countries(Innovasjon Norge 2011).

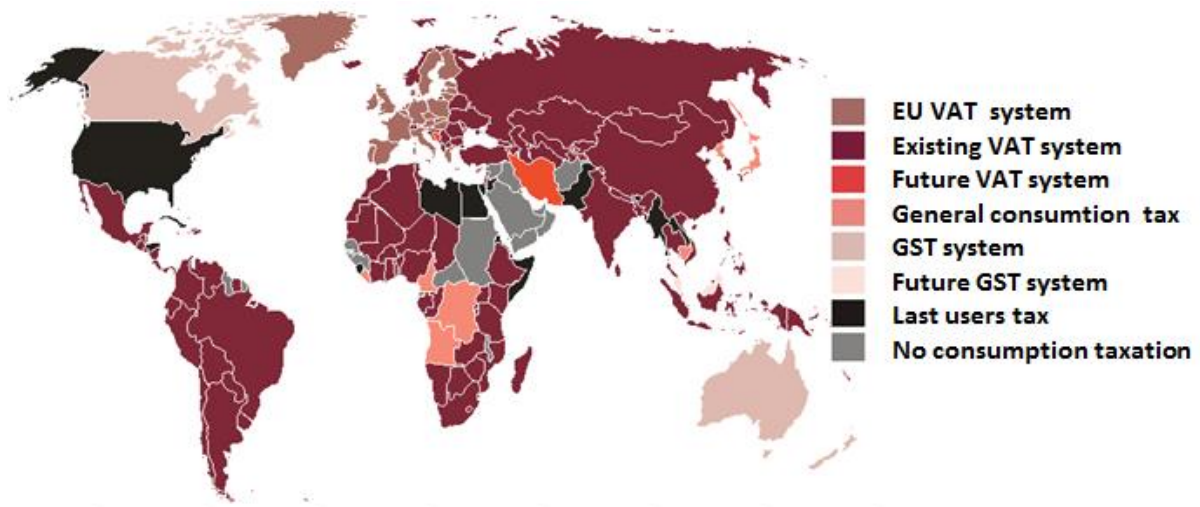
According to Innovasjon Norge there are two systems for active processing in the EU.

- 1) Suspension system means that neither customs duty nor VAT shall be paid.
- 2) Recovery system means that you pay customs duty and VAT on import, and then you seek reimbursement when the goods are re-exported

It is the suppliers who arranges these procedures in their respective countries(Innovasjon Norge 2011)

### 9.4 THE GLOBAL PICTURE

Approximately 160 countries in the world have VAT in some form.



GST= Goods and services TAX

## 9.5 VAT-PACKAGE

The “VAT-Package” came into effect 1.st of January 2010.

1. Place of supply of services. The principle of taxation at the place of consumption will be introduced as a main rule. The place of supply shifted to the place where the recipient is located.
2. Reporting obligations. Filing requirements was introduced to businesses which made intra-EU supplies for services.
3. 8<sup>th</sup> Directive refund. A new set of rules for EU businesses which they can reclaim VAT in member states where they are not established for VAT purposes was reformed.
4. Electronically supplied services



## 10 CUSTOMS PROSEDURES BETWEEN NORWAY AND EU.

In this chapter I will explain more about the different customs procedures which are mainly used. First I will look into the free circulation procedure and the challenges for the European importers. Further I will continue with the inward processing procedure, which is mostly used in our projects built in EU. Afterwards, I will explain more about temporary importation and the most common pitfalls. I will continue with the most common export documents and emphasize the importance of accuracy in these documents. In the end, I will list types of export barriers and discuss storage in Europe. Finally, I will explain the importance of having good knowledge about the Incoterms 2010 regarding VAT and customs duty.

### 10.1 FREE CIRCULATION PROCEDURE

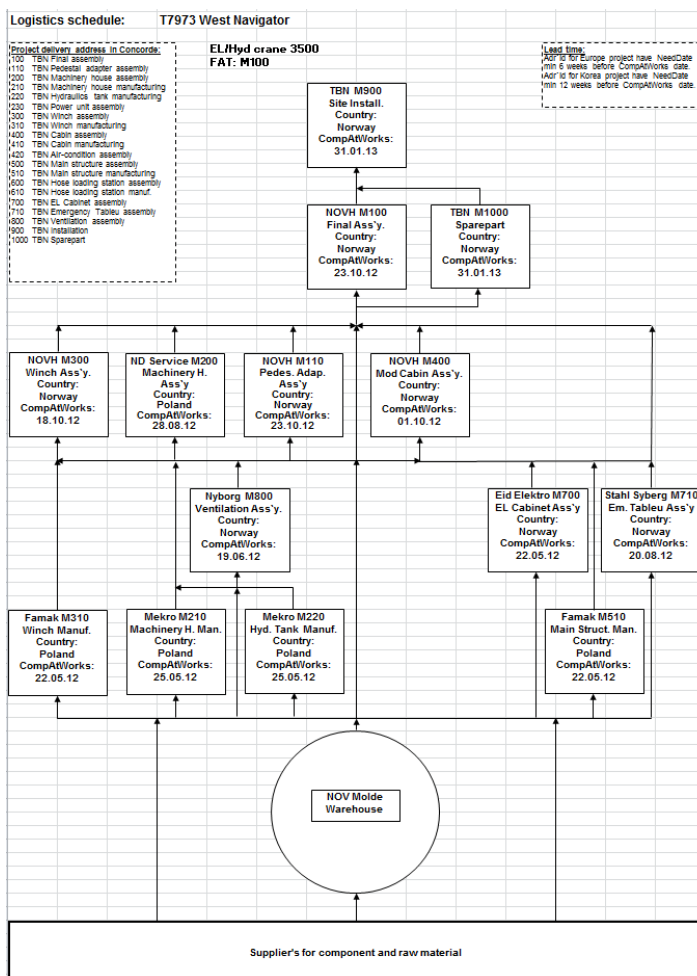


Figure 35 Logistics plan West Navigator. (NOVN Intranet 2014c)

This procedure is mostly used when the end product has a delivery address inside EU. Article 23 EC Treaty stipulates **free circulation** for Community goods throughout the European Community but also to imported goods which have been released for free circulation after payment of the import duties to which they are liable. The purpose of release for free circulation is to fulfil all import formalities so that the goods can be sold on the Community market like any product made in the EC (European Commission 2013). The Polish producer needs to pay Polish VAT and TAX when the cargo is transported into Poland. The Polish producer needs to apply to get the Polish VAT refunded. This is always time consuming and can be a difficult process. This can be a great challenge for the Polish producers because they often have poor liquidity (Nilsson 2011). Using the “Free Circulation Procedure”, the exporter always needs to send original export documents and commercial invoices, and the Polish customs authorities are very strict with controlling these shipments because they are “final” sales to a Polish customer. Documents normally attached to these shipments are: CMR, commercial invoice, packing lists, export customs clearance from Norway. CMR stands for “Convention relative au contrat de transport international de Marchandises par route”. It is a standardized document for cross-border transport of cargo by road.

Example from NOVN: NOVN built two cranes at Famak in Kluzbork, Poland where the end-customer was Maersk in Denmark and the delivery address was Denmark. The delivery term was FOB Szczecin, but because of the delivery address inside EU, NOVN needed to use Free Circulation procedure. The Polish importer needed to pay 23% import VAT and duty on all free issued items into Poland which they could deduct in their accounts. When the production was completed Famak “sold” the production back to NOVN Polish VAT number (with 23% Polish VAT). Then NOVN Polish TAX partner applied to get the Polish VAT refunded. Finally NOVN Polish VAT number will sell to Maersk Danish VAT number (with Zero VAT). This is called Intra community supply and is transactions between companies inside EU. If NOVN had forgot to arrange this special procedure, they would have received 23% Polish VAT as an extra cost in the project which was not deductible.

## **10.2 INWARD PROCESSING PROCEDURE.**

Inward processing procedure allows imported materials or semi-manufactured goods to be processed for re-export within the Community by Community manufacturers without a

requirement that the manufacturers have to pay customs duty and VAT on the goods being used. This procedure is most used by companies which produce and assemble products with a large number of free issued items from Norway ( or other countries).The Polish producer does not need to pay customs duty and VAT on free issued items which are sent from Norway to Poland. This procedure requires that the producer must apply a permit from the Polish customs at least one month before the shipment shall be import customs cleared into Poland. This information must contain extensive information about what shall be imported. Exporters name, importers name, English product name, Polish product name, weight, value, currency, delivery terms, customs tariff code (Harmonized System of classification) and Country of Origin. See Figure 37 Proforma Invoice, where all the information is shown. In the invoice it is clearly shown the HS numbers for these items with 8 digits. The first 6 digits are international, but the two last digits are special for Norway. EU has 10 numbers in total. See Figure 36 Trade Tariff with 10 digits. Additionally, the customs in Poland also need information about when the cargo arrive Poland and when it is expected that the cargo shall be re-exported out of Poland.

The screenshot shows the UK Government's Trade Tariff website. At the top, there is a search bar and a navigation menu. Below the search bar, there is a section for 'Trade Tariff' with a search input field and a 'Search' button. The search results show a list of tariff items, with the selected item being '26 Ships' derricks; cranes, including cable cranes; mobile lifting frames, straddle carriers and works trucks fitted with a crane'. The selected item is expanded to show a table of commodity codes and their descriptions.

Description	Commodity code
Overhead travelling cranes, transporter cranes, gantry cranes, bridge cranes, mobile lifting frames and straddle carriers	
Overhead travelling cranes on fixed support	84 26 110000
Mobile lifting frames on tyres and straddle carriers	84 26 120000
Other	84 26 190000
Tower cranes	84 26 200000
Portal or pedestal jib cranes	84 26 300000

Figure 36 Trade Tariff (HM Revenue & Customs 2014)

Example from NOV:NOVN has a manufacturer in Gdynia called ND Service which among others assembles machinery houses. NOVN wanted to produce a machinery house to West Navigator at ND Service and afterwards ship it to Hjelset. When NOVN started to transport free issued items, which belongs to the machinery house, they sent approximately 1500 different items to this manufacturer. ND Service needed to open the customs

procedure (Inward processing procedure) with the Polish customs authorities for exactly this project called West Navigator with project number T7973. See Figure 35 Logistics plan for West Navigator. ND Service also needed to raise a bank guarantee for the whole value of the free issued items which NOVN had shipped from Norway to Poland. The value of free issued items to the machinery house can be approximately 600 000USD and ND Service had to arrange a guarantee for this amount.

**PROFORMA INVOICE** Page: 1 of 1

Number 381933  
Date 18th of October 2013

<b>Consignee</b> ND SERVICE SP.ZO.O UL.KONTEROWA 30  PL 81-155 GDYNIA <b>Att.</b> Joanna Szymanska  <b>Our ref.</b> <b>Shipper</b> NATIONAL OILWELL VARCO NORWAY AS <b>Delivery terms</b> DAP PL - GDYNIA <b>Terms according to INCOTERMS 2010</b>	<b>Delivery address</b> ND SERVICE SP.ZO.O UL.KONTEROWA 30  PL 81-155 GDYNIA <b>Att.</b> Joanna Szymanska	<b>Buyer's address</b> ND SERVICE SP.ZO.O UL.KONTEROWA 30  PL 81-155 GDYNIA <b>Att.</b> Joanna Szymanska  <b>Customer No.</b> <b>Customer VAT Code</b>
--	--	--


MMT No. 381933

Item No.	Description	HS no.	Quantity	Unit weight [kg]	Acc. Unit Wts.[kg]	Unit price	Acc. Unit prices	Country of origin
128742	GEAR BOX, PUMP DRIVES FOR FOUR	84139100 T8971	1,00	430,000	430,000	USD 12869,56	USD 12.869,56	Italy
128742	GEAR BOX, PUMP DRIVES FOR FOUR	84139100 T8971	1,00	430,000	430,000	USD 12869,56	USD 12.869,56	Italy
156819	ADAPTOR FOR PUMP DRIVES AM 480	84139100 T8971	1,00	200,000	200,000	USD 4173,91	USD 4.173,91	Poland
156819	ADAPTOR FOR PUMP DRIVES AM 480	84139100 T8971	1,00	200,000	200,000	USD 4173,91	USD 4.173,91	Poland
198769	OIL DIPSTICK FOR TECHNODRIVE GEAR AM480	84839000 T8971	1,00	0,050	0,050	USD 17,39	USD 17,39	Italy
198769	OIL DIPSTICK FOR TECHNODRIVE GEAR AM480	84839000 T8971	1,00	0,050	0,050	USD 17,39	USD 17,39	Italy
<b>Project ID:</b> T8971								34.121,72
<b>TOTALS</b>				6,00	<b>Net weight [kg]:</b> 1260,100	<b>Value for customs only:</b> USD	34.121,72	
					<b>Gross weight [kg]:</b> 1340,000			

**Disclaimer:** All ECCN and HTS classification information received from National Oilwell Varco (NOV) is for informational purposes only and shall not be construed as NOV's representation, certification or warranty regarding the proper classification. Use of such classification information is at the Buyer's sole risk and without recourse to NOV. The Buyer is responsible for determining the correct classifications of all items prior to export and Buyer shall make its own export licensing determinations.

**Note:** FREE ISSUE ITEMS. FOR CUSTOMS PURPOSES ONLY

The exporter of the products covered by this document (customs authorisation No. NO/12-936738540) declares that, except where otherwise clearly indicated, these products are of EEA preferential origin.

  
**NATIONAL OILWELL VARCO NORWAY AS**

National Oilwell Varco Norway AS  
Servicebox 401  
N-4604 Kristiansand  
Norway

Telephone: +47 38 19 20 00

Enterprise no.: NO 936 738 540  
Swift: DNBANOKRIS  
Acc. No: 7058.06.42835  
USD Acc. No: 7007.04.42874

Figure 37 Proforma Invoice for "inward processing procedure" customs clearance (National Oilwell Varco Norway AS 2014a)

### 10.3 TEMPORARY IMPORTATION

Temporary importation are often used for goods that can be used in the Community without payment of duty or VAT under certain conditions and re-exported in the same state as they were as they were imported. Special tools are often sent in this way. Some of the tools that the service engineers are using are expensive tools and may have values around 50 000 USD. ATA-carnets are frequently used for very expensive tools towards countries in the A.T.A. International Guarantee Chain. 67 countries are members of the

ATA Guarantee Chain. For instance, if they send an expensive tool, such as a boltmike to China for temporary importation, NOVN has to pay appr. 10 000 USD as a deposit to the Chinese customs and the customs clearance take at least three weeks. Most of the money will be refunded when they reexport the boltmike after finishing the work. If NOVN doesn't have the time to wait for this procedure, they will have to arrange a normal import customs clearance and pay VAT/duty approximately 25-30% of the value. Unfortunately NOVN can't apply to get any refund afterwards. These tools are not part of the sub-suppliers scope, and shall often be returned long time before the crane is completely finished. In these cases, they need to have a temporary importation customs clearance.

#### **10.4 PITFALLS; VAT-NUMBER, PO'S AND CHANGE IN DELIVERY ADR.**

Vat-numbers to the final customer, production orders and change in shipping address are pitfalls for exporters.

To sell anything to a company inside the European Community, it is required that the customer have a valid VAT-number in the receiving country. A transaction (sales/purchase) between a supplier and a customer located inside two different countries in EU is called Intra-community supply. The supplier can sell the product to a customer in another country and calculate zero in VAT. This means instead of paying VAT and apply to get a refund afterwards, the companies in EU can report the sale in the same scheme and deduct at the same time. The goods have to be transported from the supplier's country to the customer's country. Seller can then calculate zero in VAT. Buyer calculates VAT of the purchase-value after the local TAX rate and deduct in the same scheme. This is called the Zero cash flow effect. If NOVN sells a product, which has been produced in Poland by one of their manufacturers, with delivery address to Estonia, the buyer needs to have a valid VAT registration number inside Estonia. Otherwise NOVN needs to pay Polish VAT on the production in Poland. The only way to avoid this VAT cost is to physically transport the commodity out of EU (for instance into Norway) and make an import customs clearance into Norway. NOVN have to pay VAT on this product, but this is deductible. Afterwards NOVN can transport the commodity to Estonia. This leads to extra transport costs and is not an optimal solution. Otherwise you need to calculate this Polish VAT into the production costs in advance and add the costs in the calculation towards the end-customer. All purchasers need to know the answers on all these three issues before they can place a purchase-order to a manufacturer abroad.

## **10.5 RULES OF ORIGIN**

FTA = Free trade agreement. Commodities can often be exported to another country, and the importer in the import country can avoid paying import taxes with the correct use of EUR-certificate or authorization number. Norway has several Free Trade Agreements with different countries. If you issue a EUR-certificate or an authorization number on the export invoice when you make an export to EEU, the customer will in most cases not need to pay duty into EEU, because of the EEU-agreement. The EEU-agreement allows that most of the Norwegian commodities can be imported into EEU area without duty. The EUR-certificate and the authorization number is the documentation needed for the customs authorities in the import country, proving that the Norwegian commodities are EEA-product. (Innovasjon Norge 2012 a)

## **10.6 EXPORT DOCUMENTS**

In this chapter I will explain more about the different export documents because they are very important both for the export customs clearance and for the transport of the finished product. Small details wrong in these documents can lead to huge extra costs. If any of the documents are missing during transport or in connection with the customs clearance, this can among others lead to delays in the delivery time and extra costs with storage or extra VAT/Duties can occur.

## 10.6.1 Cmr

1 Avsender - Absender (Name, Address, Land)		INTERNASJONALT BILFRAKTBRV INTERNATIONALER FRACHTBRIEF		CMR	
NATIONAL OILWELL VARCO NORWAY AS GRANDFJÆRA 24		13 Fraktører - Frachtführer DSV Road AS Setesdalsveien 214 NO 4618 Kristiansand		Ref. No. 340098	
NO 6415 MOLDE		LINJEDEKLARERT TVINN (TK) EKSP:061090-2012105876 ID:936738540 NATIONAL OILWELL VARCO Dato: 20.09.2012 Selvens: 61821		13 Fraktørers særlige betingelser Vorbälle und Bemerkungen des Frachtführers	
2 Mottaker - Empfänger (Name, Address, Land)		3 Sted og dato for overtakelse av godset - Einladestelle des Gutes, Datum		4 Utsvevingssted - Ausladestelle des Gutes, Land	
FABRYKA MAZYN I URZADZEN FAMA FABRYCZNA STREET 5		MOLDE 20.09.2012		POLICE	
PL 46-200 KLUCZBORK		5 Merke og nr. - Zeichen und Nr.		6-8 Antall og art av kull og varselag Anzahl der Koll, Art der Verpackung und Bezeichnung des Gutes	
Leveringsadresse - Lieferadresse (wenn eine andere als die des Empfängers) STALKON SP. Z O.O. UL. PIOTRA I PAWLA 1		2		2 Dynafor LLX 50 T. Serienr: H03082	
PL 72-015 POLICE		10 Bruttovekt, kg Bruttogewicht		9 Mål, m3 Umfang	
3 Sted og dato for overtakelse av godset - Einladestelle des Gutes, Datum		36,0		36,0	
4 Utsvevingssted - Ausladestelle des Gutes, Land		11 a-b Avsenders instruks Anweisungen des Absenders (Zoll und sonstige amtliche Behandlung; sonstiges)		14 Å betale Zu zahlen	
POLICE		11 c Fraktatorkonfrift - Fraktatorkonfrift DAP PL- POLICE		av avsender vom Absender	
		14 Å betale Zu zahlen		Valutalag Währung	
		FRAKT FRACHT		av mottaker vom Empfänger	
		FRADRAG ERHÄSSIGUNGEN			
		NETTO NETTO			
		TILLEGG NEBENBÜHREN			
		FRAKTETTERKRIV FRACHTNACHNAME			
12 Særlige avtaler - Sonstige Vereinbarungen		DIVERSE SONSTIGES			
		TOTAL GESAMT			
16 Utbedessted og dato Ort und Datum des Ausfertigung		17 Utbedessted og dato Ort und Datum des Ausfertigung		18 Godset mottatt (Sted og dato) Gut empfangen (Ort und Datum)	
20.09.2012 Kristiansand, Norway NATIONAL OILWELL VARCO NORWAY Geir-Ove Briksdal (Avsenders stempel og signatur) (Unterschrift/Stampel des Absenders)		20.09.2012 Kristiansand DSV Road AS (Fraktørers stempel og signatur) (Unterschrift/Stampel des Frachtführers)			

Figure 38 CMR from National Oilwell Varco Norway as Intranet

CMR stands for “Convention relative au contrat de transport international de Marchandises par route”. It is a standardized document for cross-border transport of cargo by road (BusinessDictionary.com 2013). For Intra-community supply, delivery from one EU country to another EU country, this signed CMR is the proof of delivery and is important for delivery of components inside EU without VAT.

### **10.6.2 Commercial invoice.**

The invoice sent by the seller to the buyer, detailing the goods purchased and the amount due. In international trade, a commercial invoice should be quite detailed and include all of the pertinent information (David and Stewart 2010). If NOVN sells a product and they ship it to Poland and the final address is also Poland, the customs requires a commercial invoice. This document must be an original and signed by the exporter in Norway with blue ink. If the original commercial invoice disappears on its way to the customs office, the Norwegian exporter must send new “original documents” by courier to the customs office. This often results in delays and extra costs.

### **10.6.3 Proforma invoice.**

A proforma invoice is a very common international document. This is not an invoice but a quote. Different countries treat commercial invoices and proforma invoices in different ways. For instance if NOVN sends free issued items to Poland and this is for an inward processing procedure ( the shipment is temporarily in Poland for reexport out of EU within one year), the customs authorities require a proforma invoice. See Figure 37



## 10.6.4 Certificate of Origin


<p>1 Exporter (name, address, country) - Exportateur (nom, adresse, pays)</p> <p>National Oilwell Varco Norway GRANDFJ/ERA 24</p> <p>NO 6415 MOLDE</p>	<p>2 Number - Numero 344967</p>
<p>3 Consignee (name, address, country) - Destinataire (nom, adresse, pays)</p> <p>MAERSK OIL QATAR AS AL JAZI TOWER ASIA STREET (950) ZONE 60 WEST BAY POBOX 22050, DOHA QA 60 DOHA</p>	<p><b>CERTIFICATE OF ORIGIN</b> <b>CERTIFICAT D'ORIGINE</b></p>
<p>4 Particulars of transport (where required) - Renseignements relatifs au transport (le cas échéant)</p> <p>DHL.</p>	<p>Exporter's declaration - déclaration de l'exportateur *) As exporter(s) of the goods described below, I (we) do hereby declare that the said goods are of Norwegian origin.</p> <p>Je (nous) soussigné(s), exportateur(s) des marchandises ci-après désignées, certifie(ons) que ces marchandises sont d'origine norvégienne.</p> <p><b>ON BEHALF OF</b> National Oilwell Varco Norway Signature: <i>Ted Ruse</i> 07.11.2012</p>
<p>5 Marks and numbers; number and kind of packages; description of the goods Marques et numéros; nombre et nature des colis; désignation des marchandises</p> <p>SO-729700 / QPO-148396 1</p> <p>34644 - PRESSURE RELIEF VALVE / COO USA 44880 - COUNTERBALANCE VALVE / COO USA 50207 - FLOODLIGHT / COO FRANCE 146140- HAND PUMP COMPLETE / COO NORWAY 222968 - PRESSURE TRANSMITTER / COO GERMANY 223436 - PRESSURE COMP / COO SWEDEN</p>	<p>6 Gross weight - Poids brut 127,0 KGS</p> <p>7 optional - facultatif</p>
<p>8 Other information - Autres renseignements</p> <p>SO-729700 / QPO-148396</p> 	<p>It is hereby certified that the above mentioned goods originate in NORWAY. Il est certifié par la présente que les marchandises mentionnées ci-dessus sont originaires de NORVEGE.</p> <p>CERTIFYING BODY - ORGANISME AYANT DELIVRE LE CERTIFICAT <b>THE CUSTOM HOUSE OF AALESUND, NORWAY</b></p> <p>Stamp - Timbre Place and date of issue - Lieu et date de délivrance MOLDE/NORWAY 07.11.2012</p> <p>Authorized signature - Signature autorisée</p>

Figure 39 Certificate of Origin. (NOVN Intranet 2014c)

A document provided by the exporter's chamber of commerce that attests that the goods originated in the country in which the exporter is located. Certificate of Origin can be stamped both from Chamber of Commerce in Norway or from the Norwegian customs. Before stamping the documents, the goods need to be customs cleared for export, and an export customs clearance needs to be submitted to the customs. Weight, collie numbers and commodity must match between invoice and Certificate of Origin. As a main rule we can say that the origin of goods is the country where the goods were manufactured or the

country where the goods had significant material processed. This document is very important during import customs clearance in the receiving country. In some cases the importer can achieve less duty or no duty at all on the goods because of this certificate.

### 10.6.5 Export customs clearance ( TVINN )

<b>NORGE</b>		Ref.: 402129		<b>1 DEKLARASJON</b>		<b>LINJEDEKLARERT TVINN (TK)</b>	
3	8	2 Avsender/Eksportør nr. 936738540		EU	1	061090-2014039168	
		NATIONAL OILWELL VARCO NORWAY AS GRANDFJÆRA 24		3 Blanketter	4 Lastelister	Id: Org.nr.: 936738540 MVA	
NO 6415 MOLDE		5 Vareposter	6 Antall koller	Dato: 04.04.2014 Sekvens: 102862			
8 Mottaker nr.		2	1	7 Referansenummer T8971			
STALKON SP. Z O.O. UL. PIOTRA I PAWLA 1		9 Den økonomisk ansvarlige					
PL 72-015 POLICE				12 Verdiopplysninger		13 F.L.P.	
14 Deklarant/representant nr. +47 38 19 20 00		15 Avsender-utførselsland		16 Kode avs./utf.land		17 Kode best.land	
NATIONAL OILWELL VARCO NORWAY KORSVIK INDUSTRIOMRÅDE N-4638 Kristiansand, Norway Org.nr.: 936738540 MVA						PL	
18 Transportmidlets identitet og nasjonalitet ved avgang/ankomst		19 Cont.		20 Leveringsvilkår		21 Det aktive transportmidlets identitet og nasjonalitet ved grensepassering	
		0		DAP   PL-POLICE		NO	
25 Transportmåte ved grensen		26 Transportmåte innerlands		27 Løststed/Løststed		28 Fakturert valuta og totalbeløp	
30						USD   13200,00	
29 Utpasserings-/innpasseringstilsted		30 Varens lagringssted		23 Omregningskurs		24 Transaksjonstype	
3		8		6,050000		5	
FREDRIKSTAD/SVINESUND				28 Finansielle opplysninger og bankdata		00402129 03.04.2014	
32 Varepost		33 Varenummer		34 Kode oppr.land		35 Bruttovekt (kg)	
1		843149		30		36 Preferanse	
Merket og nr. - Containernr. - Antall og vareslag		EX, ADR		37 PROSEDYRE		38 Nettovekt (kg)	
1 BX 85 tons green pin shackle				10		288	
40 Summarisk deklarasjon/Tidligere dokument		41 Mengde i annen enhet		42 Varens pris		43 VF	
44 Tilleggsopplysninger/ Fremlegte dokumenter/ Sertifikater		45 Justering		46 Statistisk verdi			
		150		6351			
47 Beregning avgifter		48 Kontonr. for tollkredit		49 Lagerkode/Godsnummer			
Type		Grunnlag		Sats		Beløp	
Sum:							
50 Hovedansvarlig		Underskrift		C AVGANGSTOLLSTED			
51 Planlagte transitterings tollsteder og land		representert ved		Sted og dato:			
52 Garanti gjelder ikke		Kode		53 Bestemmelsestolsted (og land)			
D/J KONTROLL VED AVGANGS-/BESTEMMELSESTOLLSTED		Stempel:		54 Sted og dato		04.04.2014	
Resultat:				Kristiansand, Norway		Deklarantens navn og underskrift:	
Forsøglinger, antall:				NATIONAL OILWELL VARCO NORWAY		Heidi Rusten	
kode:						heidi.rusten@nov.com	
Tidfrist (dato):							
Underskrift:							
© Timtex AS							

Figure 40 Example of export customs clearance.(NOVN Intranet 2014c)

All goods that are shipped from Norway to other countries need to be export customs cleared. Also all goods from NOVN sub-suppliers in EU need to arrange export customs clearance before they transport cargo from their country.

### 10.6.6 Customs authorization number/Country of Origin

This statement on an invoice is very important between Norwegian countries and the EU. This is also important for other countries which Norway has a trade agreement with. (Bilateral trade agreement) This statement on the invoice on an expensive shipment between Norway and Denmark can provide that no duties need to be paid in Denmark. This depends on the classification of the tariff numbers on the merchandise and the Country of Origin. See Figure 41.

- **The exporter of the products covered by this document (customs authorization No NO/12-936738540) declares that, except where otherwise clearly indicated, these products are of EEA preferential origin.**
- **The exporter of the products covered by this document (customs authorization No NO/12-936738540) declares that, except where otherwise clearly indicated, these products are of NORWEGIAN preferential origin.**

**NOV COMMERCIAL INVOICE** Page: 1 of 1

Number: 357932  
Date: 20th of March 2013

<b>Consignee</b> ND SERVICE SP, Z O.O. UL. CZECHOSLOVACKA 3 PL 81-969 GOYNIA Atł. Wojciech Fedzich Duv ref. <b>Shipper</b> NATIONAL OILWELL VARCO NORWAY AS Delivery terms DAP PL - GOYNIA Terms according to INCOTERMS 2000	<b>Delivery address</b> ND SERVICE SP, Z O.O. UL. MONTENEROWA 38 PL 81-155 GOYNIA Atł. Wojciech Fedzich	<b>Buyer's address</b> ND SERVICE SP, Z O.O. UL. CZECHOSLOVACKA 3 PL 81-969 GOYNIA Atł. Customer No. Customer VAT Code 9581649800
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MHT No. 357932

Item No.	Description	Project	Quantity	Unit weight [kg]	Acc. Unit weight [kg]	Unit price	Acc. Unit prices	Country of origin
PG1607E	LIFTING ARRANGEMENT HELS	G1607	1,00	135,600	135,600	USD 2430,00	USD 2.430,00	Norway
PG1608E	LIFTING ARRANGEMENT HELS	G1608	1,00	135,600	135,600	USD 2430,00	USD 2.430,00	Norway
<b>TOTALS</b>				Net weight [kg]	271,200		USD 4.860,00	
				Gross weight [kg]	713,000			

Note: FREE ISSUE ITEMS.

The exporter of the products covered by this document (customs authorization No. NO/12-936738540) declares that, except where otherwise clearly indicated, these products are of EEA preferential origin.

National Oilwell Varco Norway AS  
Sensalder 401  
N-1624 Kvernberget  
Norway  
Telephone: +47 38 19 20 00

Emergency No: NO 806 720 040  
Swift: DNBAW03005  
Acc. No: 3039 06 42011  
USD Acc. No: 3039 06 42014

Figure 41 Example of authorization EEA (National Oilwell Varco Norway AS 2014a)



COMMERCIAL INVOICE

Number 289920
Date 21st of December 2010

Consignee
GS HYDRO SP. Z.O.O.
HYTNICZA 40 STREET
PL 81-061 GDYNIA UL. HUTNICZA 1LD
Att.
Our ref.
Shipper NATIONAL OILWELL VARCO NORWAY AS
Delivery terms DDU PL-GDANSK
Terms according to INCOTERMS 2000

MMT No. 289920

Table with 2 columns: Delivery address and Buyer's address. Delivery address: GS-HYDRO SP. Z O.O., UL. MARYNARKI POLSKIEJ 96, PL 80-955 GDANSK, Att. JOANNA SZYMANSKA. Buyer's address: GS HYDRO SP. Z.O.O., HYTNICZA 40 STREET, PL 81-061 GDYNIA UL. HUTNICZA 1LD, Att. Andrzej Drzysga, Customer No., Customer VAT Code.

Table with 10 columns: Item No., Description, Quantity, Unit weight[kg], Acc. Unit Wts.[kg], Unit price, Acc. Unit prices, Country of origin. Includes items like EXHAUST SILENCER, CONICAL MOUNTING RD415, SET CAT TOOLS FOR ENGINE C18, DIESEL ENGINE, CATERPILLAR, AIR FILTER COMPL, etc. Total value USD 235,643.00.

Note: LOOSE ITEMS FOR T7691 / T7692 MAERSK GUARDIAN / MAERSK GIANT
THE EXPORTER OF THE PRODUCTS COVERED BY THIS DOCUMENT (CUSTOMS AUTHORIZATION NO.
NO/07-936 738 540) DECLARES THAT, EXCEPT WHERE OTHERWISE CLEARLY INDICATED, THESE
PRODUCTS ARE OF EEA PREFERENTIAL ORIGIN

Figure 42 Country of origin USA (National Oilwell Varco Norway AS 2014a)

Figure 42 shows a commercial invoice for a shipment with delivery address inside the EU. Delivery address for the project after assembly at GS Hydro, Gdansk will be Maersk Giant in Denmark,(Inside EU). Therefore NOVN has made a commercial invoice because of free circulation procedure into EU. This means customs duty and VAT need to be paid by the Polish manufacturer when NOVN transports the parts to Poland. In this case there are expensive parts (engines) with origin USA. USA does not have an agreement with the EU so DUTY needs to be paid on the engine. According Figure 43, the tariff number on the engine is 84089000, and this will give an extra cost on 4,2% because the engines have origin U.S.A. This will result in appr 10.000 USD extra costs in duty only because of the delivery address for the project is inside EU. If the delivery address for the project was Norway or outside EU NOVN could have used inward processing procedure and could

have avoided the duty and the VAT.

**Tullverket**  
Taric

Startsida | Varukoder klassificering | **Import Export** | Rapporter | Varuhandböcker | Övrigt | Hjälp

Varukod detaljer | Förändrade varukoder | Växelkurser | Kodförteckning | Meursing | Hjälp

Varukod: 8408 90 67 90 \*SökVarukod Beskrivning Valuta: (Avgiftssats)

Land: Amerikas förenta stater(US) Import: (alla) Export

Frågedatum: 2012-02-13 \* Tilläggskod:

Giltighet	20060101-	Extra mängdenhet	Styck
Fotnoter			Produktgrupp
Antal åtgärder: 2	Grupp	Avgiftssats	
Tredjelandstullsats	1011	4.2 %	
Luftvärdighet-tullsuspension	1011	0 % (CD333)	

Figure 43 Duty into EU on engine (Tullverket SE 2014)

## 10.7 TYPES OF EXPORT BARRIERS, VAT AND TAX ERRORS.

- Wrong delivery terms (incoterms DDP instead of DAP/DDU)
- Opened wrong customs procedure in the beginning of a project.
- Classification error regarding HS numbers
- Customs clearance too late
- Change in delivery terms from final customer
- Wrong authorization number
- Wrong country of origin
- Licensed product
- Wrong value on the product

Many of these export barriers can lead to extra costs, but they are difficult to find in the accounting system.

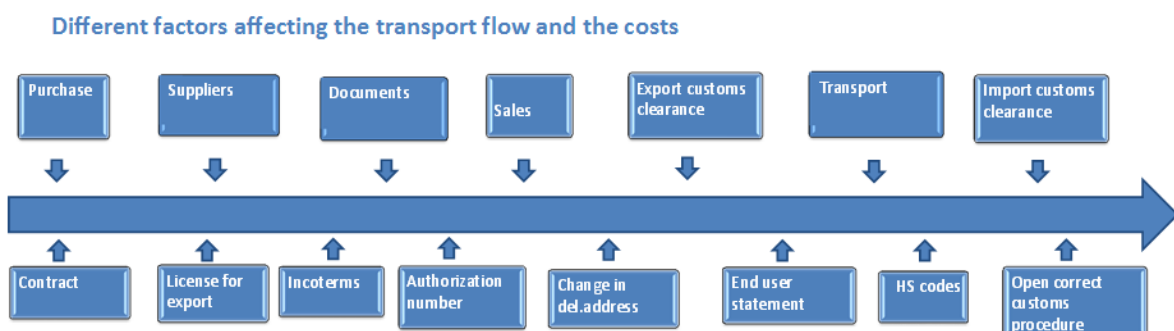


Figure 44 Different factors affecting the transport flow and the costs. (Made by the author)

## 10.8 STORAGE IN EUROPE

Background: Some NOVN clients are not always able or willing to take delivery at agreed time, and are asking NOVN to arrange storage until delivery can be made. In addition to extra warehousing and transportation costs, this raises a customs issue if goods are sold abroad and declared for export, both for export from Norway and the EU.

Previous situation: For export from EU, until December 2012 we had the possibility to “export” the shipments to “free port” in Hamburg, Germany, and store the goods there until shipment or delivery. This way the manufacturer/exporter would receive proof of export and documentation for valid sale exempt from VAT. The storage period in the “free port” was in principle unlimited.

Situation from 01/01-2013: The EU has decided that the system with “free ports” is to be discontinued. So there are no longer “free ports” in the EU, it is now required that all goods sold for export, will have to be physically exported no later than 3 months from time of delivery.

Implications: Failure to comply with this regulation and omitting to export within 3 months will result in VAT and taxes being imposed on the goods. The VAT will be charged according to the rate valid in the country they are to be exported from. The tax will be charged to the exporter, and will not be deductible. This in turn will be charged to NOVN and their client, and represent an uncalculated cost and loss of profit.

## 10.9 INCOTERMS 2010

A set of standardized terms of trade was created in 1936 by the International Chamber of Commerce (ICC). These terms of trade specifies the responsibilities of the exporter and the importer in an international transaction. The incoterms tells the exporter and the importer who is going to pay for what.

Incoterms define several aspects of an international sale;

- Which tasks will be performed by the exporter/importer
- Which activities will be paid by the exporter/ importer
- When the transfer of responsibility for the goods will take place.

Choosing the DDP Incoterms is the ultimate in customer service on the part of the exporter. The exporter handles everything for the importer, including shipment to the customer's plant and import customs clearance. If you sell a component with the delivery terms DDP, you need to pay for «almost» everything. The 2010 rules were implemented 1<sup>st</sup>. of January 2011. They changed from 13 terms to 11 terms.

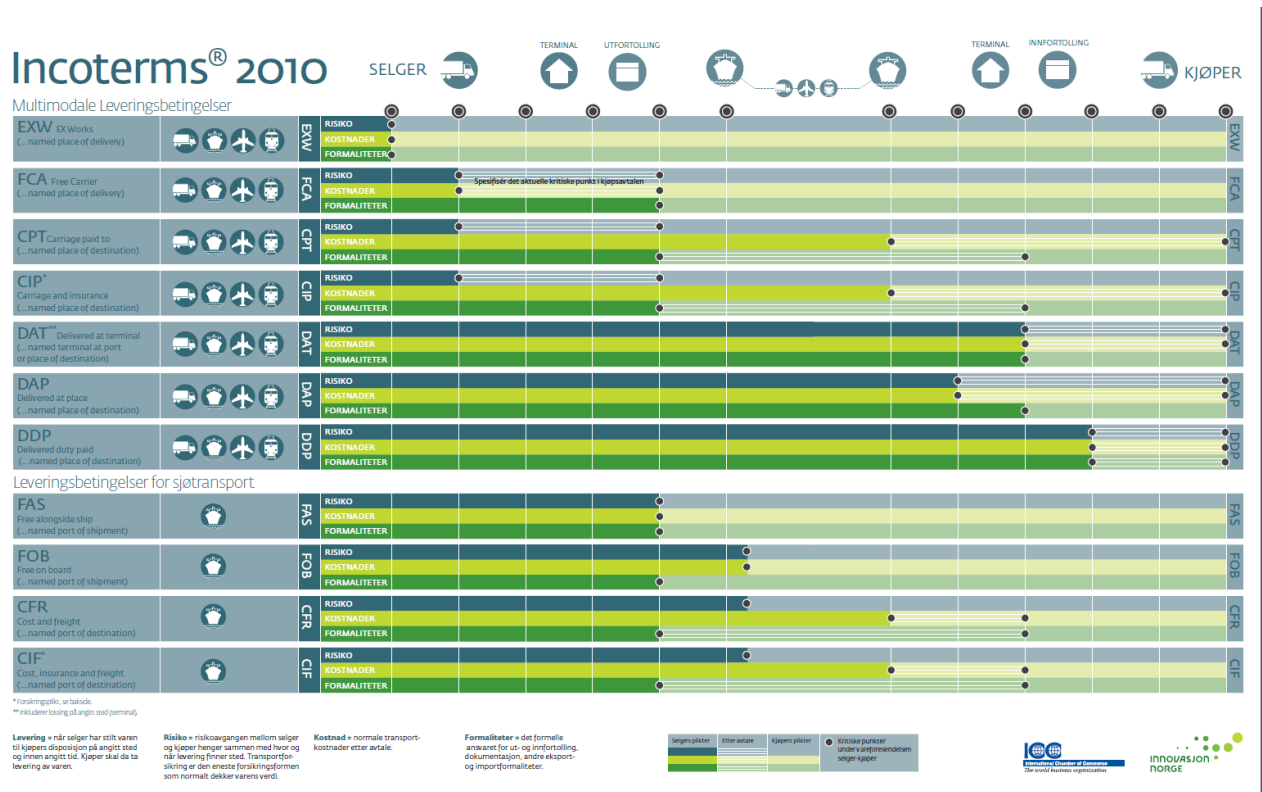


Figure 45 Incoterms 2010 ICC (Innovasjon Norge 2013)

It is of major importance that sales managers, purchasers and logistics coordinators have sufficient knowledge about delivery terms since the Incoterms decide who is going to pay for what.

## 11 CASES

Case study: In this chapter I have described some of the cases that I have been discovering as a part of the field work at NOVN. These are all cases which each one explains different parts of the problem, and together they give a good overview of the diversity of the problems. All in all, there are many different types of errors which are useful to investigate, so similar errors can be avoided in the future. As explained in Chapter 5 Theoretical background, a case study will focus on one or more groups or organizations inside the organization with the purpose of analyzing the surroundings and the processes which are involved in the research problem. The detailed observations in the case study

give us the possibility to study many different aspects and to study them in connection with each other (Meyer 2001). Case study is a useful research method when the research topic is little known. In this type of research method we will often ask the questions why and how (Ghauri and Grønhaug 2010, 109). I needed to decide for how many cases to choose and I selected seven different cases to show the diversity of errors concerning VAT and duties. I observed during my work with the thesis that some people were rather reluctant to let me observe the political and sensitive processes, since I am looking for cases where unnecessary costs have occurred.

#### REASONS:

1. Lack of license.
2. Purchase inside Czech Republic without having a valid VAT-number.
3. Change in delivery address and EU trade.
4. Not correct closed export documents by transport company.
5. Customs clearance into China, Open Handbook.
6. DDP delivery in all countries, especially South-Korea.
7. Missing steel certificates.

### **11.1 CASE 1: ANDØYA ROCKET LAUNCH**

#### Problem description:

Some years ago NOVN received an order to produce a ramp to a weather rocket launch. The product was ordered and thereafter produced by a Polish manufacturer named Famak. When the steel ramp was finished produced, the logistics department clarified all the necessary export documents in order to transport the rocket launch ramp up to Andøya which is located far north in Norway. The customs tariffs code which was used on the rocket launch ramp was the same used for weapon and other products for military purpose. To export this ramp, the Polish exporter needed to apply for a permit in advance, which they didn't know about. As a consequence of this, the logistics responsible was prosecuted in court, ordered to pay a large fine, and was actually put in jail. All the parts belonging to the shipment was confiscated and later scrapped. The ramp was not built for a military purpose, but for weather research. Because of the "scary" name Rocket Launch, the wrong customs tariffs number was used.

#### Lesson learned / Solution:



The end of the history was that NOVN had to make a new Rocket launch ramp which was produced by BLRT Marketex OU, Tallin, Estonia. This time they called it the “TOFU crane” named after the purchaser, and no further problems ensued.

The problem issue: Lack of export license.



Political Map of Europe showing the European countries.

Figure 46 Political Map of Europe showing the European countries. (Nations Online Project 2014)

## 11.2 CASE 2: SALZGITTER STAHLHANDEL / UNEX

### Problem description:

In 2004 NOVN entered into a contract with a Czech company, Unex, regarding production of three steel cranes. The cranes were planned to be exported out of Czech Republic after the final assembly. NOVN was responsible for buying and delivering all the steel (raw materials) needed for this production. To fulfill this obligation, NOVN consequently entered into a contract with a Czech subcontractor, Salzgitter Stalhandel. The goods were

delivered directly to Unex for processing. NOVN is not registered for VAT purposes in the Czech Republic. After the delivery of the steel, Salzgitter invoiced NOVN with Czech VAT (for 2004 and 2005). Czech VAT is not refundable in Norway. And the 19% VAT would therefore be a final cost to NOVN. For the year 2005, NOVN applied for and was granted a refund of the VAT paid to Czech VAT authorities. However, for invoices paid in 2004, the application was rejected due to the fact that NOVN should have applied for the refund within 6 months after the end of the calendar year, but they applied too late. The Czech VAT with the amount of 52 332,74 EUR was never refunded and became a cost for NOVN. Czech Republic became a member of EU in 2004. See Figure 46.

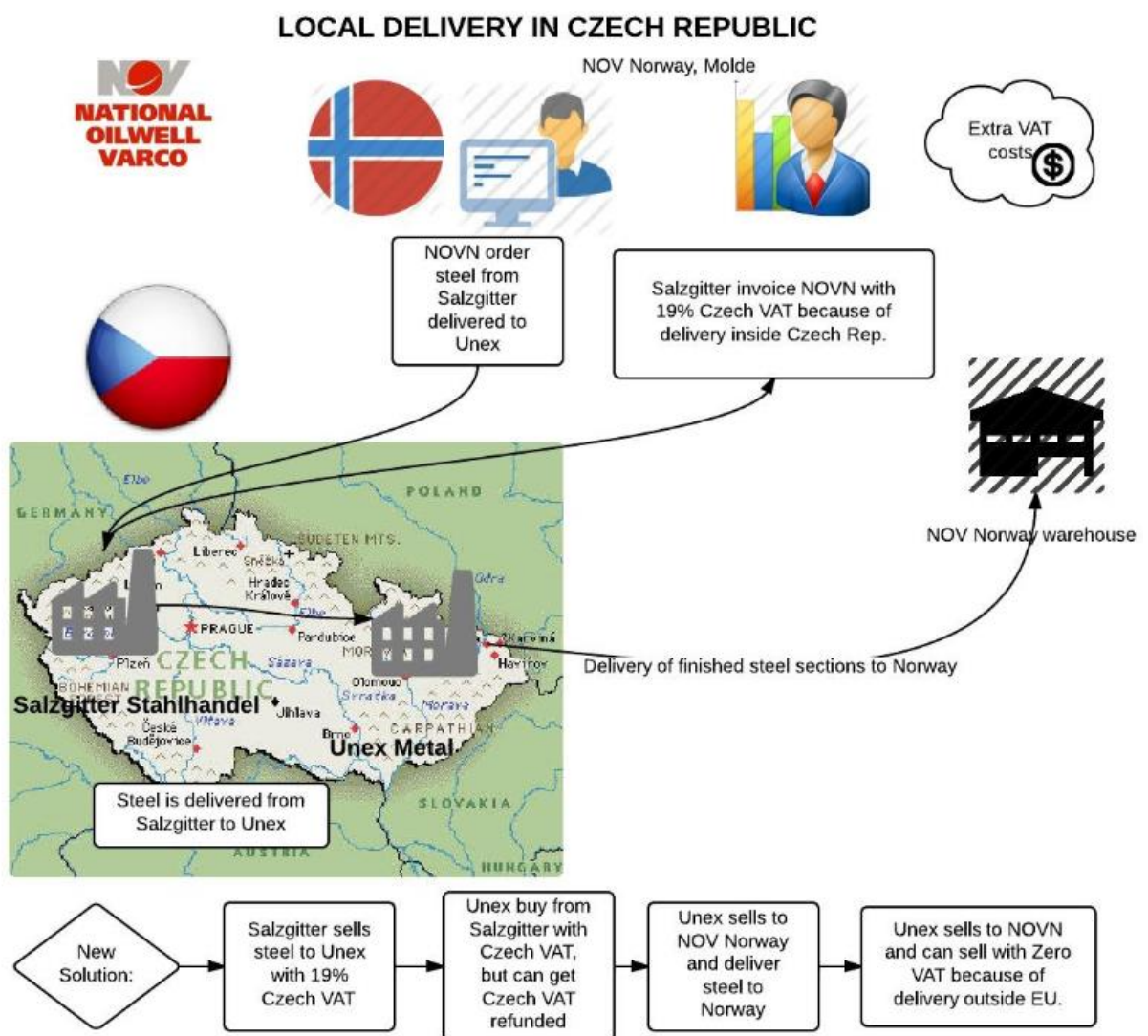


Figure 47 Local delivery in Czech Republic. (Made by the author)

Lessons learned:

Allow Salzgitter Stahlhandel to sell steel and invoice Unex directly. Then Unex will be able to claim the 19% Czech VAT from the Czech Tax authority. NOVN will only make a

contract with the producer (Unex) in the future. From this case and also similar cases, lessons learned for NOVN is that NOVN will not supply steel for production through a contractual agreement. It is safer and easier to buy the out-put product, which in this case means finished crane components. This price is then agreed as a price per kg steel produced or a price per production. We buy this FCA production site and transport the steel structure to Norway. The Czech producer can invoice NOVN without 19% Czech VAT.

The problem issue:

NOVN took responsibility for buying of raw material without knowing the consequences of the VAT problems.

### **11.3 CASE 3: ELGIN AND FRANKLIN**

Problem description:

The Polish supplier is at risk for paying EU VAT on all free issued items (See Chapter 10.1) shipped from Norway to Poland. Some Norwegian companies use Polish manufacturers to produce the rough steel sections in Poland. If expensive items need to be installed/assembled into the products, the Norwegian companies often choose to buy these components and ship them to the production site. The value of these components can be very high and most of the Polish manufacturers refuse to cover the cost for importing this into Poland. The Polish authorities have facilitated this so it is possible to import components from other countries without paying Polish VAT and TAX on the shipment. However, the Polish importers need to raise a bank guarantee for the total value of all the free issued items which are shipped from Norway to Poland.

This procedure is called inward processing procedure and is thoroughly explained in chapter 10.2. This procedure is often used when the production is going to be sent out of EU after the products is finished. This procedure is a kind of temporary import customs clearance and the items need to be re-exported out of Poland within one year.

To use the inward processing procedure (IPS), the Polish customs need to be informed at latest, one month before the shipment arrives Poland. Otherwise, there is the likelihood of potential delays during customs clearance. 4-5 years ago NOVN experienced incidents whereby full-loaded trucks would be delayed in customs for over a week if NOVN had failed to inform the customs agent early enough.

In the Elgin / Franklin case, the logistics department was informed from the project management that the boom sections (7 big steel sections) were to be transported outside the EU after the booms were finished assembled at Famak in South of Poland. NOVN started the production in Poland and shipped free issued items to Famak based on an IPS procedure. The delivery terms were EXW fabrication site, Poland. This means that it is the buyer of the boom sections that are responsible for the transport out of Poland. When the manufacturing of the booms were almost finished, the logistics department in NOVN were informed from the project management department that misunderstandings had occurred and the delivery address had been changed. See Figure 48.

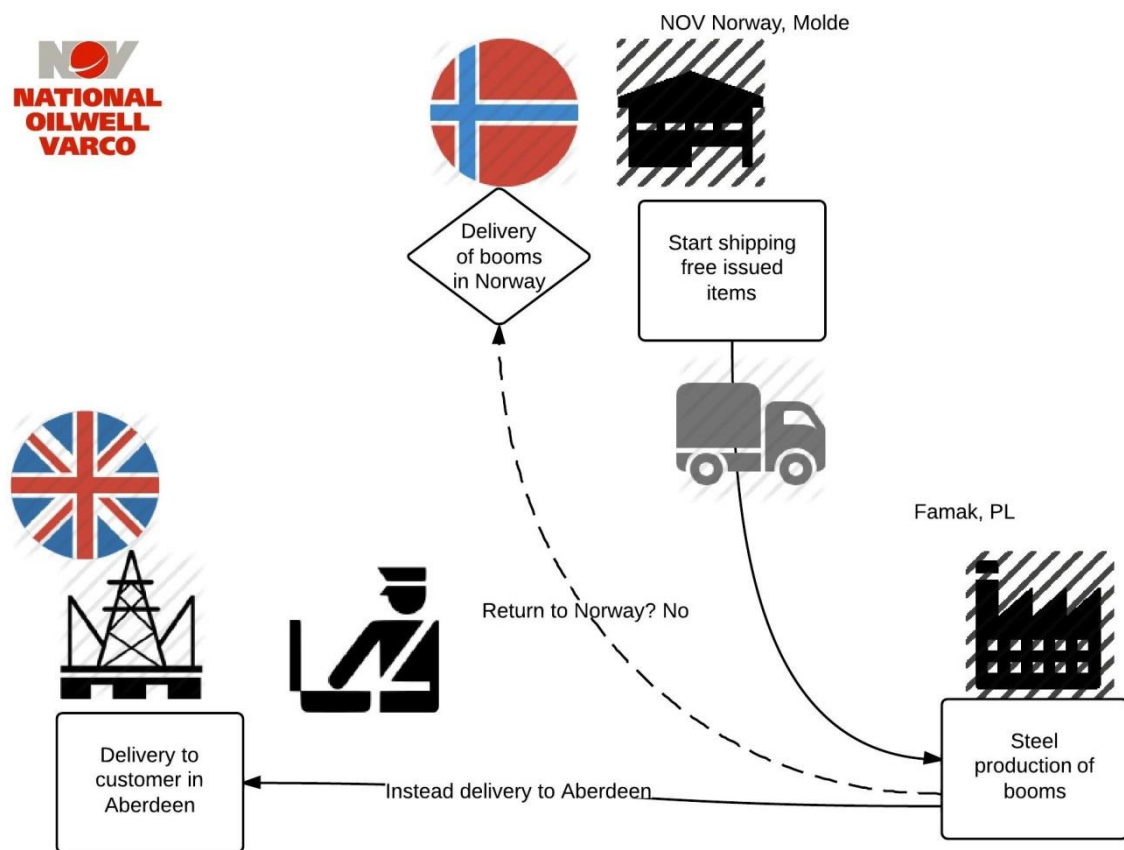


Figure 48 Delivery inside EU, change in delivery address. (National Oilwell Varco Norway AS 2014a)

The booms were now not going out of EU as first agreed but, were instead going to be delivered in Aberdeen in the UK, (Inside EU). And of course this was not agreed to contractually, so nothing was stated in the contract about this. The consequence was that NOVN was in danger of paying Polish VAT on the whole production in Poland and additionally of paying TAX and VAT on all the free issued items shipped to Poland with the purpose of being exported out of the EU within one year. This represented a cost of

approximately 110 000 USD. To reduce this cost, the only solution was to first arrange a transport of all the seven big boom sections out of EU, before transporting them to Aberdeen. And NOVN had to pay for this transport because this was not covered in the contract. The cost for this transport was agreed with the customer's transport company and they required 60 000 USD for this transport. The companies agreed on this solution.

Lesson learned/solution:

In the same time period (March 2012) there were gas leaks which lead to a fire on the Elgin platform. This accident led to a delay in the receiving of the cargo from the customer's side. Because of this delay NOVN had the opportunities to investigate this thoroughly together with specialists in VAT-issues in Poland and the producer in Poland.

1. After some time they found a solution to change the Inward Processing Procedure to Free Circulation procedure on the Free issued items. NOVN paid the outstanding Polish VAT.
2. Famak issued corrective invoices for all the purchase orders for the Elgin & Franklin project and they added 23% of Polish VAT. All the invoices were issued for NOVN Polish VAT number. This was then changed to a domestic sale for the Polish producer Famak.
3. NOVN with Polish VAT number reported this as an EU-trade from Poland to Aberdeen. NOVN needed to get a proof (a signed CMR), that the cargo had been delivered to Total.

This was only possible since they changed the procedure before they transported the booms from Poland. All costs avoided.

The problem issue:

Wrong customs procedure was used, because of lack of communication between the sales department and the SCM department.

In the QIR database (Q0501070), I found a similar case from a hose loading station T9780/81 from 2009. The hose loading station were purchased against the Norwegian VAT-number and not the Polish one which would have been correct. The equipment was delivered within EU and due to this we had to ship the equipment to Norway to avoid paying VAT on the production. This gave the project an extra cost of NOK 206.667.-

Solution: Make sure to purchase against correct VAT-number. Implement new checklist/procedure in BPM. VAT Guidelines for Different Countries.

#### **11.4 CASE 4: TRANSOCEAN DEEPWATER**

Problem description: The Polish supplier is in risk for paying EU VAT for a delivery from Gdansk to Singapore. The Polish supplier needs a “proof of export” so he can invoice NOVN without charging Polish VAT on the whole production. Transocean Deepwater is NOVN’s customer and they have appointed Ceva Freight UK to arrange the transport. The transport company Ceva Freight is located in Aberdeen and want to transport the cargo through Aberdeen for export to Singapore. Early in the shipping process HACO, the Polish producer, is telling the transport company that they need a proof of export out of EU.

Proof of export: To sell a product without VAT requires a proof of export in most countries. In Norway the tax authorities require a signed and stamped export declaration from the transport company that has transported the cargo out of Norway. This is a project where the delivery terms are EXW Gdansk. This delivery term can create trouble if the place of delivery is inside the EU. The product is a Service and Access Basket and the Polish producer’s name is HACO SP ZO.O. located in Pruszcz Gdanski.

Delivery term EXW Gdansk: The delivery term is EXW Gdansk Incoterms 2010. This means that it is the buyer who is responsible for the transport from HACO out of European community. In this case the customer, Transocean Onshore Support Service, is located in Aberdeen and wants the local transport company CEVA Logistics in Aberdeen to transport the cargo out of European community. Meanwhile, the Polish producer HACO needs a proof of Export out of the EU for the Polish TAX authorities.

Lack of communication: Here we have communication problems because no party clarifies exactly what document is needed to get this approved by Polish TAX authorities. HACO has made an export from Poland directly to Singapore. They need to do this otherwise they are forced to invoice NOVN with Polish VAT 23% on top of the purchase order. HACO need a confirmation from the transport company Ceva freight that the export customs clearance (made in Poland) was closed on the GB000067 border customs office at Aberdeen Airport when the Service and Access Basket was physical exported out of UK.

CT Office Code	CT Office/Sub-Place	Office Type Main (1) Sub-Place (2)	Post-Code
GB000067	Rosyth	2	KY11 2XP
GB000067	Prestwick Apt	2	KA9 2PX
GB000067	Edinburgh Apt	2	EH12 0AL
GB000067	Aberdeen Apt	2	AB2 0DU
GB000067	Aberdeen	2	AB9 2DY
GB000072	Hull	1	HU9 5PW
GB000072	Goole	2	DN14 5RB

Figure 49 Example of border customs offices in UK. (HM Revenue & Customs 2013)

**IE599 declaration:** Ceva Freight UK failed to export the goods on the same documents started by HACO, so the clearance was not done and proof of closed customs procedure could not be sent. The Polish exporter needed to receive a IE599 declaration in the customs system before a certain date, otherwise they were forced to charge their client NOVN for full VAT on the shipped order value. And that was unfortunately the result of this case. Cost for not handling the transport docs correct: Value of the service and access basket: 147 600 USD \* 23% Polish VAT = 33948 USD

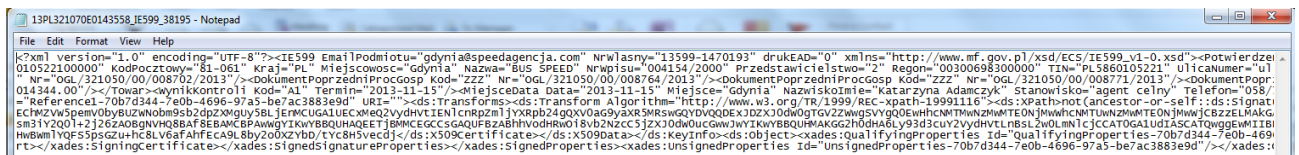


Figure 50 IE599 Confirmation of export (Example from exporting winch from Gdansk to China)

IE599 is an official confirmation of export, a statement. It is provided in an electronic form (xml) and sent by the customs agency to the exporter. IE599 is necessary in order to apply the 0% VAT rate with regard to an export transaction. The statement IE599 has a XML file form and it is the only form accepted by the TAX Office. See Figure 48.

## 1. Electronic Messages

### 1.1 Declarant at Export

There are eleven messages associated with the Declarant at Export, two to be submitted by the declarant to Revenue and nine to be received by the declarant from Revenue:

1. The Export SAD declaration message [IE515];
2. The Export SAD declaration rejection / Export SAD Cancellation Request Rejection message [IE516];
3. Permission to print the EAD and release of the goods message [IE529];
4. Confirmation to the declarant of exit/non-exit of the goods from the European Community [IE599];
5. The Export SAD Cancellation Decision message [IE509];
6. The Export SAD Cancellation Request message [IE514];
7. The Export SAD Not Released for Export message [IE551];
8. The Export SAD Control Decision Notification message [IE560];
9. The Fallback Export SAD Acknowledgement message [X28];
10. The Correction Export SAD Acknowledgement message [X29];
11. The Supplementary Export SAD Acknowledgement message [X27];

Figure 51 Electronic messages from and to customs. (Revenue Irish Tax and Customs 2013)

In the final negotiations with the transport company they tried to send an equivalent document called S8 which is also a proof of export in the UK. But unfortunately the Polish VAT authorities didn't approve this document. See Figure 49 for different electronic messages from and to customs. See below the answer from a customs officer in Aberdeen.

"Find attached to this mail, an e-mail confirmation from a UK HM & Revenue Customs officer confirming that ***The GB Export Control System does not generate IE599 messages, which is essentially confirmation for the GB exporter that the goods have exited the EU. This process is covered by the departure code in CHIEF provided by your S8 report.***" "

Here we have communication problems because the involved parties (exporter, customer, transport company) in the participating countries think they are referring to the same documents, and the parties fail to solve the issue until it is too late. The European VAT becomes a cost for HACO who will charge NOVN, who might be able to charge the customer. Cost=33948 USD

Lessons learned/Solution: Educate the sales department about the importance of the delivery address concerning the delivery inside or outside EU.

The problem issue:

Change in delivery address from outside EU to inside EU led to problems for the logistics company and the export was never "closed". Polish VAT became a cost.

## **11.5 CASE 5: CUSTOMS CLEARANCE INTO CHINA, ASSEMBLY AND TESTING**

In chapter 8.6.5 I briefly described a new logistics concept for a modularization crane for NOVN, which is a standardized crane NOVN wants to sell to customers mainly in the Asian market. In order to capitalize on the emerging markets in Asia, Brazil and Mexico, NOV is developing a new, standardized crane. This production will be a serial production, and both logistics and production methods are taken into account in a more thorough way, compared to older projects, during the design phase. The large structures are designed to fit into 40' containers or onto 40' flat racks to make sure the logistics costs will be minimal. The big challenge is, as earlier mentioned, the customs clearance into China. NOVN will send free issued items, some core competence components like machinery-house, cabin and winches, in addition to hundreds of small items like bolts, washers etc. to



China. The value of these components can be approximately 1,1 MUSD for one crane. Figure 52 shows the approximately value of the components (FII) to the new standardized crane. All these components need to be transported to China and import customs cleared into China. The higher value of the FII, the higher is the risk related to duty into China, which can vary from 5% - 128%. VAT is 17%.



Figure 52 Value of FII into China. (Made by author)

Open Handbook: In China they have a customs procedure called Open Handbook procedure. The Chinese import company needs to apply to the customs authorities and arrange this Open Handbook procedure. The Open Handbook is very detailed and has as a function to get foreign components/parts into China without paying VAT or DUTY on equipment which later shall be re-exported together with a whole rig or vessel. See Figure 53. Typical users of the Open Handbook are Dalian Shipbuilding Industry Offshore Company Ltd., National Oilwell Varco Petroleum Equipment and other ship building industries. The challenge with this Open Handbook procedure is that it must be very accurate otherwise the Chinese Customs will charge VAT and DUTY on the whole shipment.

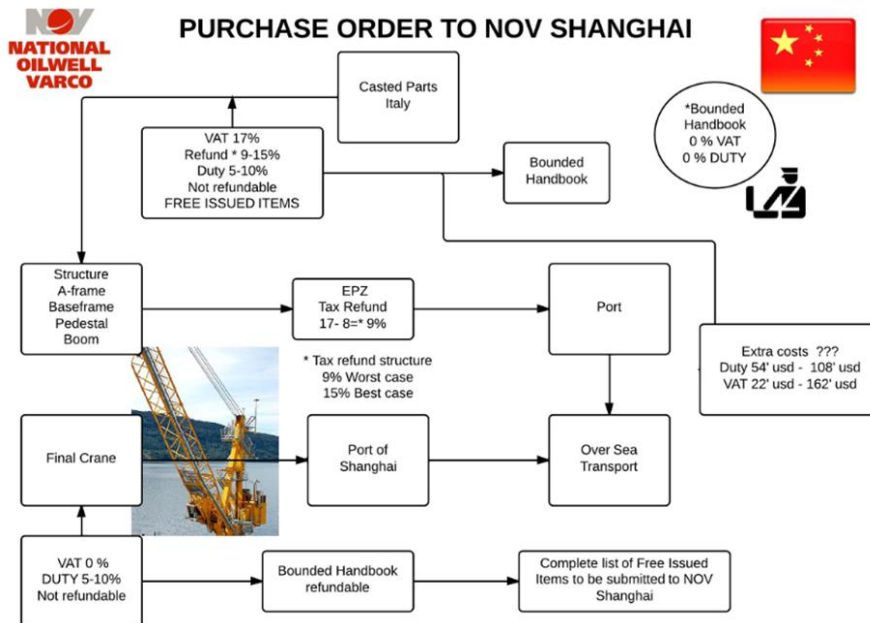


Figure 53 Purchase order to NOV Shanghai. (Made by author)

Partial shipment: If there are delays in the production, there can be problems. In the contract between NOVN and the Chinese customer, it is specified “Commodities Descriptions / Equipment list” item no 1, item no 2 etc. It is often written in the Open Handbook that main shipment consists of the following deliveries:

**EQUIPMENT LIST**

1. DERRICK & ACCESSORIES
1.1 Derrick
1.2 Travelling Block
1.3 Deadline Anchor
1.4 Top Drive
2. DRILLFLOOR EQUIPMENT AND HANDLING TOOLS
2.1 SSG Draw work
2.2 Drill line Spooler
2.3 Rotary Table
2.4 BX Elevator
2.5 Power Slips
2.6 Hydraulic Power Unit
3. PIPEHANDLING EQUIPMENT
3.1 Hydra racker
3.2 Fingerboard
3.3 Monkeyboard
3.4 2 <sup>ND</sup> Monkeyboard
3.5 Iron Roughneck – Main
3.6 Iron Roughneck – Standbuilding
3.7 Mousehole
3.8 Hydraulic Cathead
3.9 Catwalk Shuttle
3.10 Service and Access Basket – Vertical Travel
3.12 Wireline Unit
4. DRILLERS CABIN WITH INSTRUMENTATION
4.1 Drillers Cabin and Hvac + etc, etc, etc

If NOVN is delayed with one expensive part to one of the productions and this item is not specified in the Open Book procedure, the risk is very high that NOVN needs to pay both VAT and customs on this item into China. DUTY can be from 8-12% of the value and VAT 13-17% of the value. European fasteners can have up to 128% DUTY into China.

Partial shipment is important to specify in the contract in case of delays in NOVN's production. See Figure 54 (NOVN Intranet 2014c)

<p><b>11. DELIVERY:</b></p> <p>a. All the Commodities shall be shipped out at the Port of Shipment on or before the date as stipulated in Annex D hereof</p> <p>b. Trans-shipment is allowed and partial shipment is allowed (unless specified elsewhere of this contract or prior consent from the Buyer)</p> <p>c. A vessel flying / A aircraft painted the flag of the country that the Buyer cannot legally accept shall not carry the contracted Commodities. The Buyer shall provide any flags that cannot be legally accepted by the Buyer to the Seller on or before 90 days of each shipment.</p>
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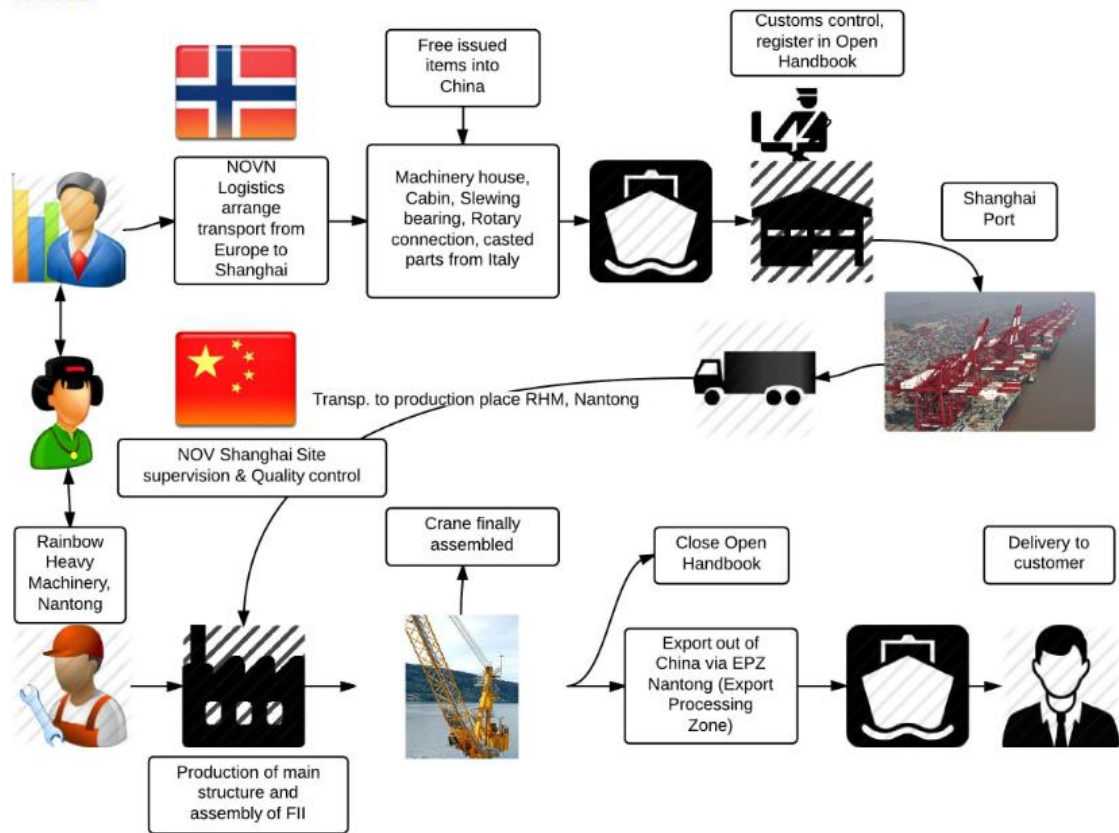
Figure 54 Excerpt of contract (NOVN Intranet 2014c)

DUTY AND VAT IN DALIAN 2008				
PCF 2008	Currency	Agent	Duty	VAT
1	USD	843	803	33 047
2	USD	2 691	8 065	21 169
3	USD	3 294	3 823	10 821
4		4 296	21 578	38 435
5	USD	13 107	1 640	4 968
6	USD	2 898	2 149	4 121
7	USD	978	2 572	5 217
8	USD	785	277	668
9	USD	508	137	457
10	USD	1 630	2 739	8 755
<b>Total</b>	<b>USD</b>	<b>31 029</b>	<b>43 785</b>	<b>127 656</b>
<b>Total Duty and VAT in USD</b>				<b>171 441</b>

Figure 55 Duty and VAT in Dalian(NOVN Intranet 2014c).

Figure 55 shows some NOVN projects in China from 2008 where this problem already was addressed. In the logistics world Brazil is said to be the most difficult country to deal with customs issues in, and after Brazil comes China.

## LOGISTIC FLOW EUROPE-SHANGHAI



Solution: Arrange special logistics groups to target the competence into specific countries. For instance could two logistics/VAT coordinators have responsibility and special competence on one specific country.

The problem issue: Costs often occur when components are not on the list, (not mentioned in the Open Handbook), due to inaccurate contracting or costs can also occur if delays happen and parts of bigger packages is sent after the main shipment.

### 11.6 CASE 6: DDP DELIVERY IN OTHER COUNTRIES (delivered duty paid)

Problem: If NOV Norway is delayed with a shipment or a delivery of some oil equipment, it may happen that the customs procedure into the yard has been closed. This means that if NOVN sends shipments to NOV Korea for assembly production, but the equipment has mistakenly been sent to the NOV Korea instead of delivery directly to final customer in South-Korea, this shipment can't be import customs cleared into NOVK customs account. The result of this is that NOVN needs to change the delivery terms to DDP and then

NOVN needs to pay all the duty and VAT on these products. Duty and VAT are in these cases not deductible.

ORIGIN	DEST.	PIECES	WT (KGS)		
HOUSTON	DALIAN	7	3,271	OCEAN FREIGHT CHARGES	\$1,515.00
PLACE OF DELIVERY/ULTIMATE DESTINATION DALIAN				B.A.F.	\$584.00
Container Number Type Seal # APZU3248638, 20DC, UL2383301				INLAND FUEL SURCHARGE	\$375.00
				CHASSIS	\$40.00
CARGO DESCRIPTION OILWELL SUPPLIES				ALAMEDA CORRIDOR SURCHARGE	\$39.00
REMARKS MMT305068 1438/F1538/F1436/F15 36-PARTS FOR ITEMS 16T & 28 CONTRACT NO.DSIC-JU2000E09-PO-001, DALIAN, P.R.CHINA CONTRACT NO.DSIC-JU2000E10-PO-0001 DALIAN, P.R.CHINA PO#576443/576445				DESTINATION CHARGES	\$150.00
				GENERAL RATE INCREASE	\$240.00
				DOCUMENTATION	\$50.00
				DELIVERY DUTY PAID	\$930.00
				DUTIES/TAXES-CHINA	\$20,484.84

Service Type: Express

PO#: 699776

Shipper: NATIONAL OILWELL VARCO NORWAY AS KORSVIK INDUSTRIOMRAD KRISTIANSAND S NORWAY 4639 NO	Consignee: NATIONAL OILWELL VARCO PETROLEUM EQUIPMENT (SHANGHAI) CO, LTD DALIAN BRANCH CN 116113 DALIAN CONTACT: WILLIAM CAO PHONE +8641184489566 +8641184483575 WILLIAM.CAO@NOV.COM		
Origin: HOUSTON	Departure: 10-Sep-13	Destination: DALIAN	Arrival: 18-Sep-13
Pieces: 2	Master: 403-73280852	Weight (Chargeable Kgs): 2303	House: USHEE86426
First Flight: PORFS/10	Remarks: OILWELL SUPPLIES VOL WEIGHT: 648 kgs 1 @ 88 X 45 X 43 INCHES 1 @ 281 X 14 X 17 INCHES	Second Flight: PO997/12	

Charge Description	Remarks	Taxable	Amount
DDP Charges		No	170,739.81

Figure 56 Two examples of transport invoice with DUTIES/TAX (NOVN Intranet 2014c)

These are two examples on invoices which NOVN has received, but could have avoided. Delays in production are the reason for the extra costs. Both amounts are in USD. In this case the delivery place is correct, but the delayed equipment has been part of bigger shipments which already have been reported delivered in the Open Handbook. Therefore the Chinese customer demands change in delivery terms to DDP, so they don't need to pay any extra VAT and Duties into China.

Solution: Arrange the Open Handbook into China more detailed to avoid paying VAT and customs duties on delayed shipment which are not mentioned in the Open Handbook. Also start to register VAT/ Duties in the accounting system correctly so NOVN can actually

check the size of the amounts I am discussing in this thesis. Currently all costs are hidden in the accounting system because they are invoiced mainly from different transport companies. Because of this, these costs are expensed as logistic costs instead of financial costs like VAT/Duties. NOVN also needs to get all the transport companies to invoice NOVN with VAT/Duties specified and separated from other logistics costs. In 2013 NOVN had 634 shipments from different places all over the world with the delivery terms DDP. This amount of delivered duty paid shipment leads to huge uncertainties concerning VAT and customs duties in the receiving countries. This is because NOVN will also pay the VAT and the Duties into the receiving country, and these tariffs and rules are difficult to calculate.

Total value of logistics services purchased by NOVN in 2013: Appr 120 MUSD

### **11.7 MISSING STEEL CERTIFICATE IN TO CHINA**

Problem: Missing documents.

During import customs clearance into China, NOVN was informed from the consignee in China that some steel certificate was missing. This was the fifth shipment with the same cargo and there had been no problems with the first four shipments. The first four shipments were shipped by vessel but the last shipment was sent as air-cargo because it was urgent. This time NOVN received a bill for 120 000 USD because of the missing certificates. 50 tons of steel was kept at the airport until the steel supplier could obtain the correct certificates. It took one month to solve the issue. The costs for storage, heavy lift, trucking fee, customs clearance, custom exam, delivery fee, CIQ goods sample and exam charge, airline warehouse charge and wooden packages destroy fee amounted to appr.120 000 USD. There are no financial limits for different cost types in these types of cases.

The problem issue: Lack of certificates.

Solution: Always make sure to have the correct certificates on shipments to China.

## 12 BARRIERS BETWEEN EFTA AND SOUTH-KOREA

In 2005 EFTA and South-Korea signed an agreement with the goal to lower the customs duty between the countries. At that time South-Korea was the third largest country Norway exported goods to in Asia after Japan and China. The export value was 3.5 Bill NOK. In 2005 the average taxcost was 7.5%. Today South-Korea is Norway's second biggest trading partner in Asia. The Norwegian export to South-Korea was in 2012 increased to 25.5 Bill NOK. The ship yard industry and maritime technology in particular, connects Norway with South-Korea. See Figure 57 EFTA States' Trade with South Korea.

After the bilateral trade agreement between EFTA and South-Korea become operative, exports increased with 51% in the first three months in 2007, compared with the numbers from 2006. The agreement entered into force 1.09.2006. This agreement removed the tariffs on more than 99% of all Norwegian industrial goods. This led to savings on customs duties worth several millions of NOK and has made Norway more competitive. Norway exported in 2005 commodities for 5.1 billion NOK ( 5.1 mrd). This agreement was the second agreement between EFTA and Asia after Singapore. This shows how important it is to remove the customs barriers between countries.

**EFTA STATES' TRADE WITH SOUTH KOREA, 2009-2012**

	2009	2010	2011	2012	2010/09 2011/10 2012/11		
	In thousand US dollars				Annual percentage change		
<b>IMPORTS</b>							
Iceland	15,768	16,419	26,562	30,539	4.1	61.8	15.0
Norway	1,321,595	2,350,722	2,408,229	816,725	77.9	2.4	-66.1
Switzerland	381,828	422,857	559,157	871,955	10.7	32.2	55.9
EFTA	1,719,191	2,789,998	2,993,948	1,719,219	62.3	7.3	-42.6
Share in EFTA's tot. imports	0.75%	1.08%	0.99%	0.60%			
<b>EXPORTS</b>							
Iceland	11,890	14,347	10,662	14,354	20.7	-25.7	34.6
Norway	2,318,415	2,053,405	1,555,483	4,417,904	-11.4	-24.2	184.0
Switzerland	1,757,200	2,183,589	2,622,432	2,573,693	24.3	20.1	-1.9
EFTA	4,087,505	4,251,341	4,188,577	7,005,951	4.0	-1.5	67.3
Share in EFTA's tot. exports	1.39%	1.29%	1.05%	1.79%			
<b>IMPORTS + EXPORTS</b>							
Iceland	27,658	30,766	37,224	44,893	11.2	21.0	20.6
Norway	3,640,010	4,404,127	3,963,712	5,234,629	21.0	-10.0	32.1
Switzerland	2,139,028	2,606,446	3,181,589	3,445,648	21.9	22.1	8.3
EFTA	5,806,696	7,041,339	7,182,525	8,725,170	21.3	2.0	21.5
Share in EFTA's total trade	1.11%	1.20%	1.02%	1.29%			

Source: GTI, Global Trade Atlas (last update: March 2013)

Figure 57 EFTA States' Trade with South Korea, 2009-2012 (EFTA 2013)

Several studies shows that the size of the firms studied, the size was relatively unimportant for the export behavior (Tesar and Bilkey 1977). They also advised exporters to search for information regarding export barriers, to be aware of what must be overcome during the firm's export development process.

<b>Varebeskrivelse</b>	<b>Jan. – mars 2006</b>	<b>Jan. – mars. 2007</b>	<b>Økning 06/07</b>
<u>Totalt</u>	1127	1699,3	51%
Maskineri	659,4	1078,7	63,6%
Optiske instrumenter	162,1	209,2	29%
Elektrisk maskineri	27	97,2	260%
Jern og stål	33,9	84,7	150,2%
Fisk og sjømat	65,9	81,2	23%

Figure 58 Norway's export to South-Korea 2006-2007 (Nærings og fiskeridepartementet 2014)

See also attachment 2



**EFTA STATES' TRADE WITH SOUTH KOREA BY SELECTED COMMODITIES (HS)**

	2010	2011	2012	2010	2011	2012	2012/11
<b>IMPORTS</b>	<b>In thousand US dollars</b>			<b>In per cent</b>			<b>% Change</b>
<b>Iceland</b>							
Total imports from South Korea	16,419	26,562	30,539	100	100	100	15.0
<i>In per cent of imports from the world</i>	0.46%	0.59%	0.69%				
HS 87 Vehicles (not railway)	6,033	10,843	14,612	36.7	40.8	47.9	34.8
HS 85 Electrical machinery	5,241	9,007	3,183	31.9	33.9	20.3	-31.4
HS 03 Fish, crustaceans	842	1,004	3,899	5.1	3.8	12.8	288.5
<b>Norway</b>							
Total imports from South Korea	2,350,722	2,408,229	816,725	100	100	100	-66.1
<i>In per cent of imports from the world</i>	3.04%	2.65%	0.95%				
HS 85 Electrical machinery	203,997	289,737	293,078	8.7	12.0	26.9	1.2
HS 89 Ships, boats and floating structures	1,946,606	1,812,472	234,151	82.8	75.3	28.7	-87.1
HS 84 Machinery, mechanical appliances	64,026	102,144	10,476	2.7	4.2	12.3	-1.6
HS 87 Vehicles (not railway)	23,830	75,667	75,297	1.0	3.1	9.2	-0.5
HS 40 Rubber	21,733	18,436	25,023	0.9	0.8	3.1	35.7
HS 90 Optical, medical, surgical instruments	10,129	13,948	16,629	0.4	0.6	2.0	19.2
HS 39 Plastic, plastic articles	5,246	8,474	7,902	0.2	0.4	1.0	-6.7
HS 73 Iron and steel products	9,405	13,984	7,133	0.4	0.6	0.9	-49.0
<b>Switzerland</b>							
Total imports from South Korea	422,857	559,157	871,955	100	100	100	55.9
<i>In per cent of imports from the world</i>	0.24%	0.27%	0.44%				
HS 85 Electrical machinery	94,049	77,448	345,383	22.2	13.9	39.6	346.0
HS 87 Vehicles (not railway)	98,515	195,745	215,802	23.3	35.0	24.8	10.3
HS 84 Machinery, mechanical appliances	45,017	82,548	97,189	10.7	14.8	11.2	17.7
HS 39 Plastic, plastic articles	44,255	47,958	44,087	10.5	8.6	5.1	-8.1
HS 29 Organic chemicals	26,745	23,383	22,829	6.4	4.2	2.6	-2.4
HS 90 Optical, medical, surgical instruments	14,618	18,257	21,866	3.5	3.3	2.5	19.8
HS 91 Clocks and watches	9,298	10,102	17,992	2.2	1.8	2.1	78.1
HS 32 Tanning, dye, paints, putty, inks	10,312	7,194	13,190	2.4	1.3	1.5	83.4
HS 40 Rubber	16,095	12,287	12,467	3.8	2.2	1.4	1.5
HS 72 Iron and steel	5,878	9,957	8,526	1.4	1.8	1.0	-14.4
<b>EXPORTS</b>	<b>In thousand US dollars</b>			<b>In per cent</b>			<b>% Change</b>
<b>Iceland</b>							
Total exports to South Korea	14,347	10,862	14,354	100	100	100	34.6
<i>In per cent of exports to the world:</i>	0.32%	0.20%	0.28%				
HS 03 Fish, crustaceans	11,509	7,908	10,114	80.2	74.2	70.5	27.9
HS 84 Machinery, mechanical appliances	589	757	1,956	4.1	7.1	13.6	158.6
HS 89 Ships, boats and floating structures	0	0	601	0.0	0.0	4.2	n/a
<b>Norway</b>							
Total exports to South Korea	2,053,405	1,555,483	4,417,904	100	100	100	184.0
<i>In per cent of exports to the world:</i>	1.57%	0.98%	2.78%				
HS 27 Mineral fuels, oil	61,835	235,419	2,271,864	3.0	15.1	51.4	865.0
HS 84 Machinery, mechanical appliances	1,149,717	583,282	1,247,688	56.0	37.5	28.2	113.9
HS 90 Optical, medical, surgical instruments	167,263	160,518	245,558	8.2	10.3	5.6	53.0
HS 85 Electrical machinery	110,698	54,662	160,152	5.4	3.5	3.6	193.0
HS 73 Iron and steel products	139,935	63,043	133,915	6.8	4.1	3.0	112.4
HS 03 Fish, crustaceans	85,658	99,593	78,793	4.2	6.4	1.8	-20.9
HS 75 Nickel and articles thereof	40,335	62,933	60,802	2.0	4.1	1.4	-3.4
HS 28 Inorganic chemicals	46,511	80,904	28,523	2.3	5.2	0.7	-64.7
<b>Switzerland</b>							
Total exports to South Korea	2,183,589	2,622,432	2,573,693	100	100	100	-1.9
<i>In per cent of exports to the world:</i>	1.12%	1.12%	1.14%				
HS 30 Pharmaceutical products	478,127	523,005	623,092	21.9	19.9	24.2	19.1
HS 84 Machinery, mechanical appliances	637,677	740,556	541,962	29.2	28.2	20.0	-30.5
HS 91 Clocks and watches	295,256	448,856	514,403	13.5	17.1	20.0	14.6
HS 85 Electrical machinery	148,347	187,744	212,099	6.8	7.2	8.2	13.0
HS 90 Optical, medical, surgical instruments	151,874	193,100	181,951	7.0	7.4	7.1	-5.8
HS 71 Precious stones and metals	69,074	111,046	135,624	3.2	4.2	5.3	22.1
HS 29 Organic chemicals	70,156	62,887	80,008	3.2	2.4	3.1	27.2
HS 39 Plastic, plastic articles	24,935	32,718	32,413	1.1	1.3	1.3	-0.9
HS 42 Leather articles, saddlery and harness	25,985	29,795	25,564	1.2	1.1	1.0	-14.2
HS 32 Tanning, dye, paints, putty, inks	15,181	19,450	20,908	0.7	0.7	0.8	7.5

Source: GTI, Global Trade Atlas (last update: March 2013)

Figure 59 EFTA States' Trade with South Korea by selected commodities (HS) (EFTA 2013)

In the Figure 59 “EFTA states’ trade with South Korea by selected commodities” it is shown how exports have increased the last years, maybe because of removing the taxes?

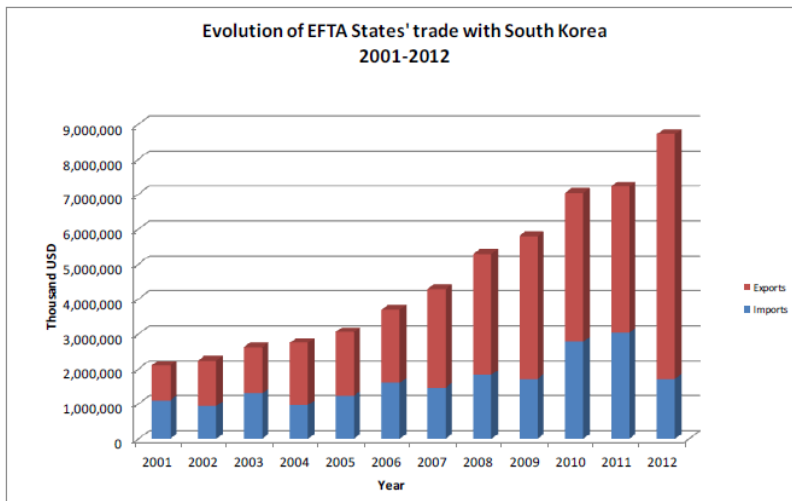


Figure 60 Evolution of EFTA States' trade with South Korea (EFTA 2013)

Reference to NOVN logistics figures South-Korea is the main delivery country and 37% of the MMT’s in 2013 have delivery address in South-Korea. It is of major importance that different export barriers between Norway and South-Korea are minimalized. See Figure 61. The count of gross weight show that 71% of the weight had delivery address South-Korea. See Figure 62.

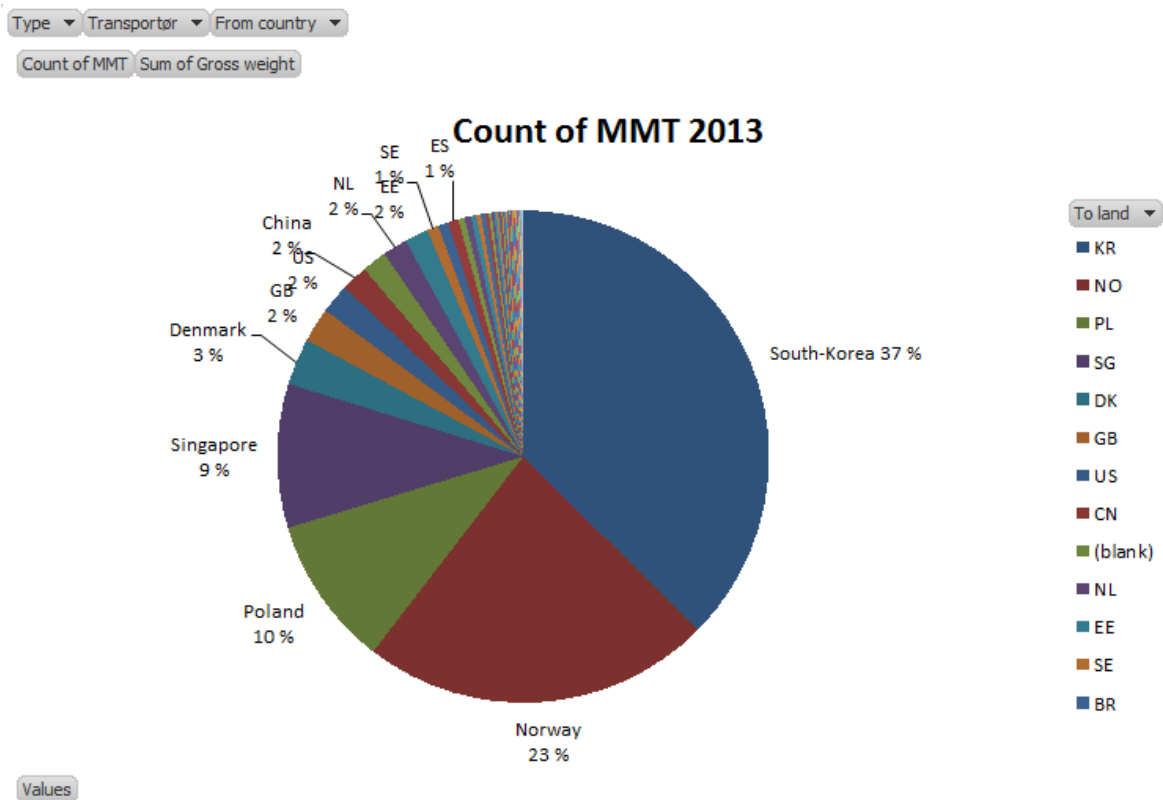


Figure 61 Count of MMT/shipments in 2013. (Made by author)

Type ▾ Transportør ▾ From country ▾  
 Sum of Gross weight

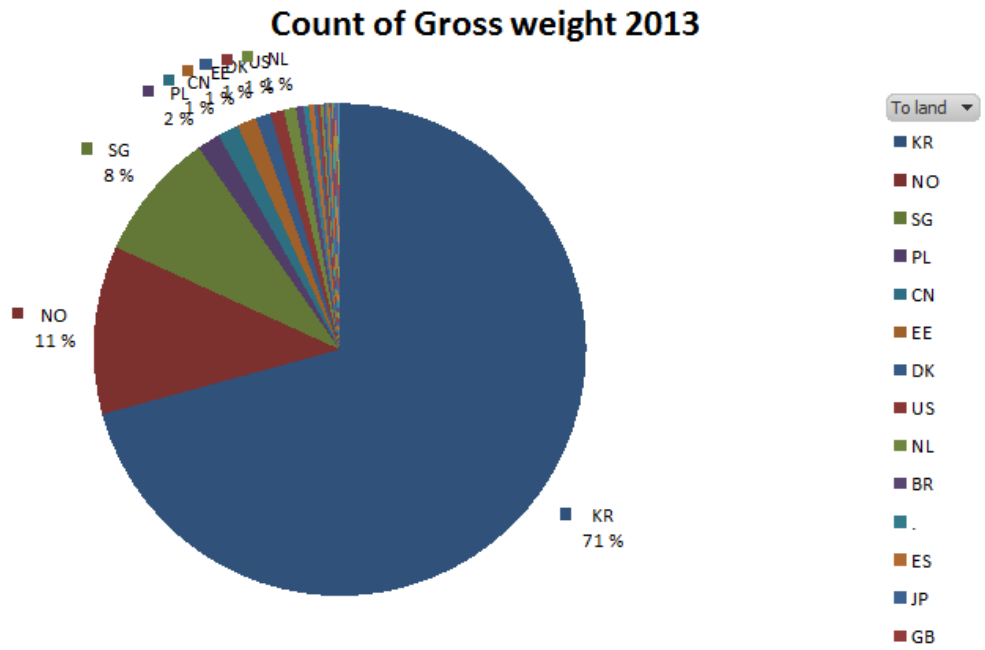


Figure 62 Count of Gross weight 2013. (Made by author)

## 13 ANALYSIS

In this chapter I will analyze some of the numbers I have revealed during this research. First, I will look into how much logistics costs NOVN has per project. These logistics costs have to be deducted from closed projects and not ongoing projects. Then I will be able to find out how big the logistics costs are compared to the total costs. Afterwards, I will look into who are the transport companies delivering logistics services to NOVN. Furthermore, I will take the largest companies and looked closely at their accounts. (Domestic logistics providers have not been examined.) In the end, I will provide some of the costs I have found per Logistics Company.

### 13.1 NUMBER OF LOGISTICS INVOICES

Year	Number of received logistics invoices	Total amount in USD	Average amount per invoice	Estimated number of invoices with logistics costs 120 000 000 usd in total in 2013	Checked number of invoices	Checked value of invoices	Checked number of invoices in % of total	Checked value of invoices in % of total
2012	8182	USD 70 293 469	USD 8 591					
2013	11665	USD 75 956 286	USD 6 511	18 429	2747	USD 37 543 911	14,91 %	31,29 %

Figure 63 Number of received logistics invoices (Made by author)

NOVN received approximately 19848 invoices regarding transport in 2012 and 2013.

The challenge is to control all these invoices manually for unnecessary duty and VAT costs.

Total transport orders in 2013 were approximately 5500 per year. This means approximately 105 transports per week. NOVN received approximately 20 000 logistics invoices in 2013.

Import customs clearance: 6392 import customs clearance in 2013

Export customs clearance: 9482 export customs clearance in 2013

This means that NOVN receives 4 invoices per registered logistic order. Many of the shipments are performed and booked by our suppliers. NOVN informs the supplier through the purchase order that the shipment shall be booked directly to the air transport company or to express company. If there are big shipments, the supplier notifies the logistics department in NOVN, and they decide who will perform the transport.

<b>Total value of logistics services purchased by NOV Operation</b>					
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
PO (USD)	52 280 719	56 830 758	37 511 905	57 673 809	73 383 048
NON PO (USD)				12 627 117	31 280 670
Total in USD	52 282 728	56 832 768	37 513 916	70 302 938	104 665 731
Increase in %		8,0 %	-51,5 %	46,6 %	32,8 %

**Rusten, Heidi E.:**  
missing numbers from  
accounting because of  
change in accounting  
system

Figure 64 Total value of logistics services purchased by NOV Operation. (Made by author)

<b>Total value of logistics services purchased by NOV Norway</b>	
<b>2013</b>	
PO (USD)	73 383 048
NON PO (USD)	31 280 670
Courier services	2 000 000
NOV aftermarket	5 100 000
Total in USD	111 765 731

Figure 65 Total value of logistics services purchased by NOV Norway 2013 (Made by author)

Total value of logistics services in 2013 was: 112 MUSD

Budgeted Risk 7,9 MUSD VAT/TAX in 2013 was appr. 7% of total logistics costs.

The largest transport company Pentagon has approximately 42 MUSD in total in 2012/2013, so I started to check this transport company.

In my analysis I will try to find out how much cost NOVN pays in DDP costs, unnecessary VAT and Duties. First I have found all the transport costs per project. See Figure 66.

		Total	9 610 822	4 739 827	377 382 550	228 689 496	2,5 %	2,1 %	
		Values							
REPORTNUMBER	REPORTNAME	Kategori	Sum of BUDGET1 COST	Sum of ACTUAL COST	Sum of BUDGET1 COST TOTAL	Sum of ACTUAL COST TOTAL	Frakt Budsjett mot total Budsjett i %	Frakt Budsjett mot total Actuals i %	
A7380	WEST LINUS	Frakt kost	284 297	286 851	9 271 387	8 724 983	3,1 %	3,3 %	
A7465	JORDBAER	Frakt kost	278 611	138 642	7 923 966	7 567 084	3,5 %	1,8 %	
A7470	GULLFAKS C	Frakt kost	431 807	237 634	4 555 547	4 381 618	9,5 %	5,4 %	
A7963	NJORD UPGRADE	Frakt kost	15 910	24 822	2 284 156	1 898 524	0,7 %	1,3 %	
A7970	WEST NAVIGATOR	Frakt kost	288 318	306 298	10 321 659	10 367 793	2,8 %	3,0 %	
A7975	VALEMON	Frakt kost	180 634	181 399	5 260 676	5 325 264	3,4 %	3,4 %	
A8291	COMPLETE WINCH - AFTERMARKET M	Frakt kost	0	712	60 000	53 599	0,0 %	1,3 %	
A8292	HOISTING WINCH - AFTERMARKET	Frakt kost	0	0	-	1 608	0,0 %	0,0 %	
A8370	ELDFISK 2/7 S	Frakt kost	436 798	583 503	11 437 017	11 012 117	3,8 %	5,3 %	
A8390	NOBLE TOM PROSSER	Frakt kost	259 284	104 887	6 791 142	5 746 416	3,8 %	1,8 %	
A8395	NOBLE DRILLING RIG 6	Frakt kost	233 611	89 826	6 961 672	4 171 495	3,4 %	2,2 %	
A8510	OFFSHORE CRANE EKOL	Frakt kost	168 099	168 683	5 910 692	5 527 984	2,8 %	3,1 %	
A8520	GOLIAT	Frakt kost	162 032	179 793	10 886 793	10 819 971	1,5 %	1,7 %	
A8536	GUDRUN	Frakt kost	81 573	81 572	5 513 464	5 265 113	1,5 %	1,5 %	
A8560	NOBLE REGINA ALLEN	Frakt kost	148 922	150 989	7 274 843	6 979 475	2,0 %	2,2 %	
A8565	NOBLE MICK OBRIEN	Frakt kost	98 329	107 427	6 813 355	6 367 144	1,4 %	1,7 %	
A8570	NOBLE HOUSTON COLBERT	Frakt kost	50 467	56 515	6 619 430	5 932 244	0,8 %	1,0 %	
A8575	NOBLE SAM TURNER	Frakt kost	82 046	72 565	6 999 208	6 427 107	1,2 %	1,1 %	
A8580	P58 RISER PULL-IN SYSTEM	Frakt kost	79 673	81 199	4 119 243	3 928 331	1,9 %	2,1 %	
A8585	GOLIAT RISER PULL-IN SYSTEM	Frakt kost	40 126	40 307	3 414 173	3 167 737	1,2 %	1,3 %	
A8590	P62 RISER PULL-IN SYSTEM	Frakt kost	51 424	57 438	3 495 871	3 227 614	1,5 %	1,8 %	
A8595	SHELL KULLUK	Frakt kost	303 954	298 278	9 497 725	9 214 897	3,2 %	3,2 %	
A8920	IVAR AASEN	Frakt kost	168 082	0	5 516 673	881 736	3,0 %	0,0 %	
A8925	GINA KROG	Frakt kost	173 604	0	6 877 750	166 276	2,5 %	0,0 %	
A8930	GULLFAKS C	Frakt kost	255 732	0	5 611 022	75 216	4,6 %	0,0 %	

Figure 66 Excerpts of transport costs per project in % compared to total costs ongoing. (Made by author)

These numbers will not be correct because there are ongoing projects, and all the transport costs are not expensed into the accounts. Therefore, I have looked into randomly chosen projects which are completed. See Figure 67. Here we see that the transport costs vary between 2,5–2,7 % of the total costs in the projects. If I can find out approximately how much DDP costs/VAT and Duties NOVN pays compared to the transport costs I can assume how much NOVN pays in total.

		Total	3 174 365	2 877 459	121 349 585	112 716 618	2,6 %	2,6 %	
		Values							
REPORTNAME	Kategori	Sum of BUDGET1 COST	Sum of ACTUAL COST	Sum of BUDGET1 COST TOTAL	Sum of ACTUAL COST TOTAL	Freight budget against total budget in %	Freight budget against total Actuals in %		
		Transport costs	TRANSPORT COSTS	TOTAL	TOTAL				
WEST LINUS	Frakt kost	284 297	286 851	9 271 387	8 724 983	3,1 %	3,3 %		
JORDBAER	Frakt kost	278 611	138 642	7 923 966	7 567 084	3,5 %	1,8 %		
WEST NAVIGATOR	Frakt kost	288 318	306 298	10 321 659	10 367 793	2,8 %	3,0 %		
VALEMON	Frakt kost	180 634	181 399	5 260 676	5 325 264	3,4 %	3,4 %		
ELDFISK 2/7 S	Frakt kost	436 798	583 503	11 437 017	11 012 117	3,8 %	5,3 %		
NOBLE TOM PROSSER	Frakt kost	259 284	104 887	6 791 142	5 746 416	3,8 %	1,8 %		
OFFSHORE CRANE EKOL	Frakt kost	168 099	168 683	5 910 692	5 527 984	2,8 %	3,1 %		
GOLIAT	Frakt kost	162 032	179 793	10 886 793	10 819 971	1,5 %	1,7 %		
GUDRUN	Frakt kost	81 573	81 572	5 513 464	5 265 113	1,5 %	1,5 %		
NOBLE REGINA ALLEN	Frakt kost	148 922	150 989	7 274 843	6 979 475	2,0 %	2,2 %		
NOBLE MICK OBRIEN	Frakt kost	98 329	107 427	6 813 355	6 367 144	1,4 %	1,7 %		
NOBLE SAM TURNER	Frakt kost	82 046	72 565	6 999 208	6 427 107	1,2 %	1,1 %		
SHELL KULLUK	Frakt kost	303 954	298 278	9 497 725	9 214 897	3,2 %	3,2 %		
WEST MIRA	Frakt kost	89 156	76 805	7 208 124	5 065 344	1,2 %	1,5 %		
B347-MSC-CJ70-150	Frakt kost	312 314	139 765	10 239 536	8 305 926	3,1 %	1,7 %		

Figure 67 Transport costs per project in % compared to total costs. (Made by author)

Row Labels	Sum of Gross weight	Sum of Packages	Count of MMT
DHL GLOBAL FORWARDING	937	6	5
DHL Express	7632	702	613
DSV AIR & SEA AS	47362	38	13
NOV CHARTERING GROUP	87299	2	1
TOLLPOST GLOBE	764130	4550	3153
EXPEDITORS INTERNATIONAL	1210790	1555	687
NTN SHIPPING AS	1475270	288	71
PANALPINA	4177224	3158	1070
Seafont Projects AS	5028769	209	41
KUEHNE NAGEL	5686953	4584	1375
PENTAGON FREIGHT SERVICES	5789990	4581	1782
DSV ROAD AS	6581264	7880	2147
SLADE SHIPPING INC.	9277330	3896	630
SHANGHAI JET GLOBAL CORPORATION	9560145	557	95
<b>Grand Total</b>	<b>49695095</b>	<b>32006</b>	<b>11683</b>

**OVERVIEW OF SHIPMENTS 2010**

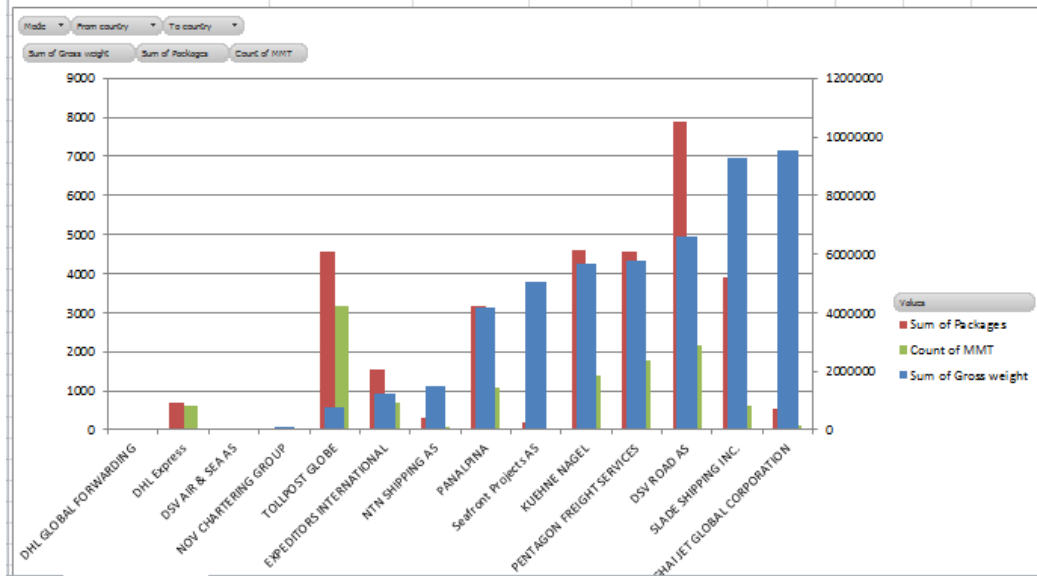


Figure 68 Overview of number of shipments and packages and shipped weight 2010. (Made by author)

Row Labels	Sum of Gross weight	Sum of Packages	Count of MMT
DHL Express	11803	678	608
TOLLPOST GLOBE	343938	2674	1793
EXPEDITORS INTERNATIONAL	427037	864	571
PANALPINA	2381872	1620	727
SHANGHAI JET GLOBAL CORPORATION	2691190	229	40
KUEHNE NAGEL	3074552	1995	1018
NOV CHARTERING GROUP	3832763	603	94
SLADE SHIPPING INC.	4494199	1885	525
PENTAGON FREIGHT SERVICES	6566845	7078	2270
DSV Road AS	6572507	7374	2185
<b>Grand Total</b>	<b>30396706</b>	<b>25000</b>	<b>9831</b>

**OVERVIEW SHIPMENTS 2011**

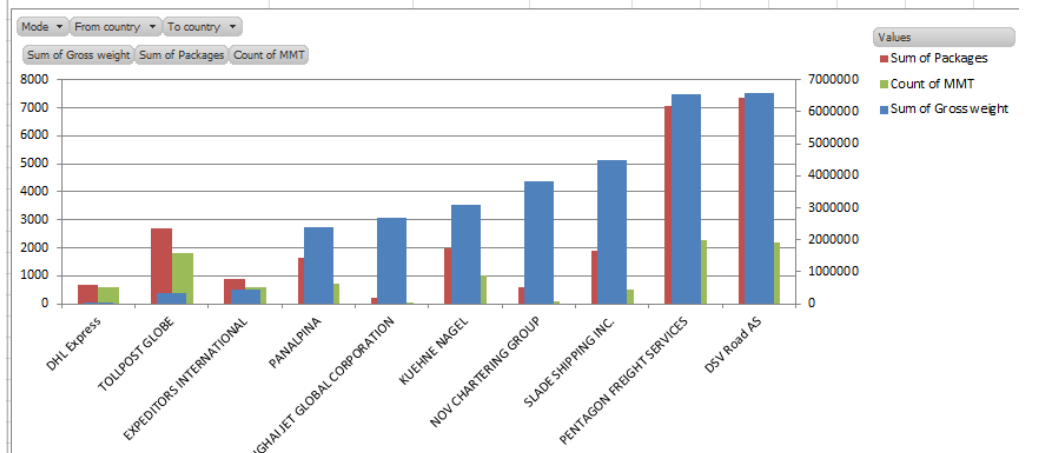


Figure 69 Overview of number of shipments and packages and shipped weight 2011. (Made by author)

				OVERVIEW OF SHIPMENTS 2012
Row Labels	Sum of Gross weight	Sum of Packages	Count of MMT	
DHL Express	18742	833	736	
Air Cargo Shop	29791	322	84	
DHL GLOBAL FORWARDING	35224	114	57	
EXPEDITORS INTERNATIONAL	175875	314	225	
TOLLPOST GLOBE	629374	3419	2032	
PANALPINA	3177148	3216	1459	
SLADE SHIPPING INC.	4380515	1744	472	
DSV Road AS	11856259	14341	3356	
SHANGHAI JET GLOBAL CORPORATION	12786838	789	119	
NOV CHARTERING GROUP	18895415	1746	246	
PENTAGON FREIGHT SERVICES	23159260	19746	4022	
<b>Grand Total</b>	<b>75144441</b>	<b>46584</b>	<b>12808</b>	

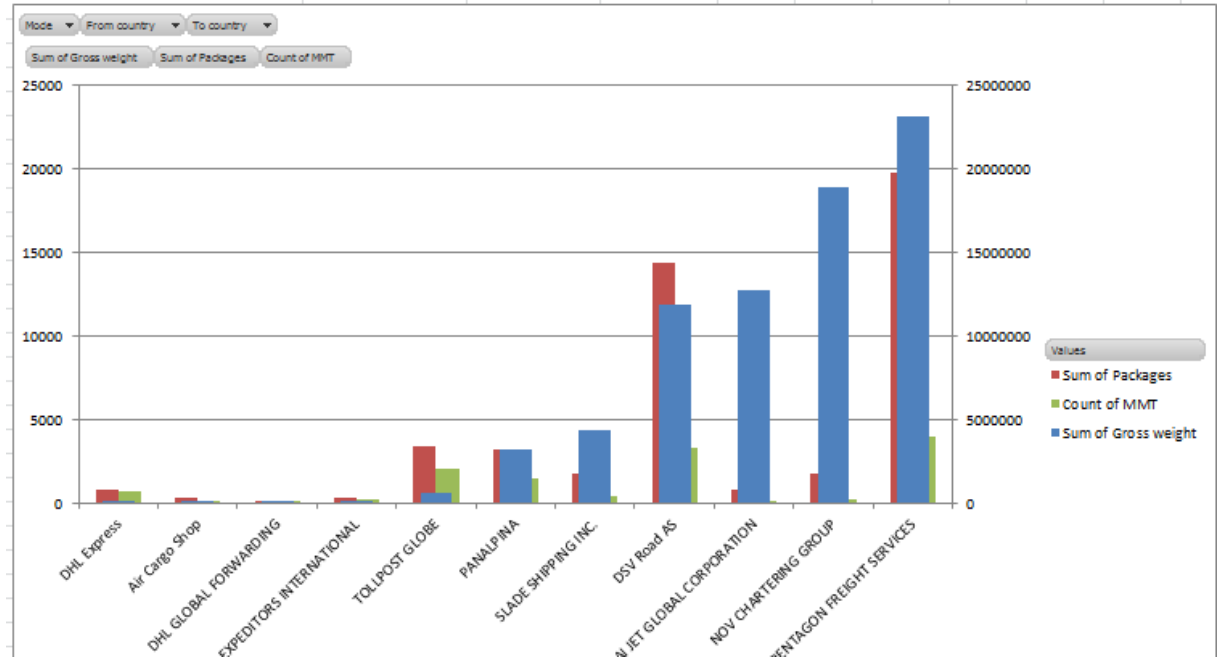


Figure 70 Overview of number of shipments and packages and shipped weight 2012. (Made by author)

All these tables show the count of MMT's, sum of gross weight and sum of packages. This has nothing to do with the value of the shipments or cost of the transport. These are tables made out of data from our logistics program called Timpex. The same program has also a customs clearance module.



Row Labels	Sum of Gross weight	Sum of Packages	Count of MMT
DHL Express	1267	98	97
EXPEDITORS INTERNATIONAL	50 050	20	14
DHL Global Forwarding	360 858	296	126
SLADE SHIPPING INC.	891 735	341	108
PANALPINA	1422 323	985	275
DONG BANG TRANSPORT LOGISTICS C	1535 019	21	12
DSV Road AS	1958 660	2632	634
GENERAL FORWARDING CO.,LTD.	22 415 399	1643	415
GEO SEONG SHIPPING & ENGINEERING I	131 958	56	28
GREENCARRIER FREIGHT SERVICES DK	1586 321	27	4
HUMEX SHIPPING & AIR FREIGHT CORP	496 308	37	7
SHANGHAI JET GLOBAL CORPORATION	8 563 498	532	64
PENTAGON FREIGHT SERVICES	14 636 706	6222	1545
NOV CHARTERING GROUP	19 319 876	1537	232
SCANDINAVIAN SHIPPING KRISTIANSAN	87 831	9	3
SEAFRONT LOGISTICS AS	2 503 995	73	17
<b>Grand Total</b>	<b>75 961 804</b>	<b>14589</b>	<b>3581</b>

**OVERVIEW OF SHIPMENTS 2013**

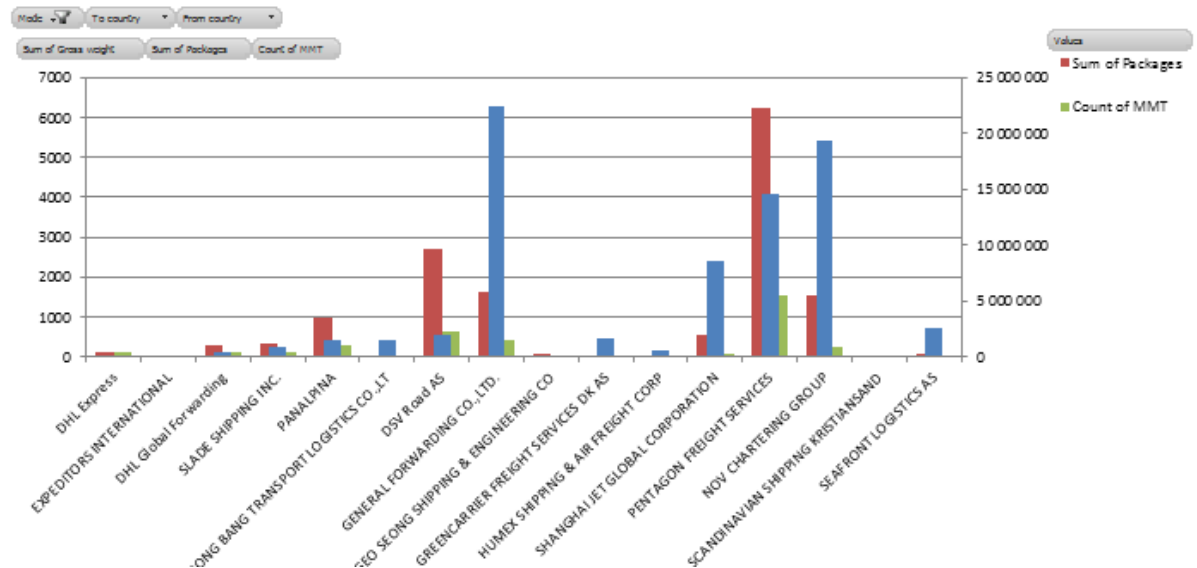


Figure 71 Overview of number of shipments and packages and shipped weight 2013. (Made by author)

In Figure 71 Overview of shipments and packages and shipped weight 2013 shows only the logistics forwarders with biggest turnover. The registered tonnage transported in 2013 was approximately 144 000 tons, but much of this transport has also been transported by the forwarding agents of the customers. The amount of MMT registered was almost 6000 MMT in 2013.

**13.2 LARGEST LOGISTICS SUPPLIERS.**

Reference to TCA earlier mentioned in the thesis the; level of transaction costs depends upon three important factors, the frequency of the transaction, the size of the transaction-specific investment and the level of external and internal uncertainty(Van Weele 2010, 411). Therefore I started to investigate the largest logistics supplier to try to find out the frequency of the customs-related transaction costs.

Sum of TOTALAMOUNT_USD NAME	Year	2012	2013	Grand Total
Pentagon Freight Services Inc.		6 814 761,74	9 968 110,63	16 782 872,37
General Forwarding Co., Ltd		6 037 622,65	8 889 532,60	14 927 155,25
Pentagon Freight Services AS		3 734 188,97	10 694 328,13	14 428 517,10
Ikke i bruk - Pentagon Freight Serv		8 507 041,79	1 920 816,53	10 427 858,32
Slade Shipping Inc.		4 670 821,44	4 482 577,23	9 153 398,67
BBC Chartering & Logistics GmbH		5 529 108,98	3 594 905,39	9 124 014,37
DSV Road AS		3 909 441,95	4 711 918,16	8 621 360,11
Panalpina AS		3 314 270,16	4 891 093,31	8 205 363,47
SAL Heavy Lift GmbH		3 234 664,95	2 199 641,55	5 434 306,50
Maersk Norge AS		1 384 531,50	3 271 541,69	4 656 073,19
Jet Global Hong Kong LTD		2 012 871,00	2 472 016,80	4 484 887,80
CHR.TH.BOE & SON A/S		2 978 573,61	859 784,52	3 838 358,13
Pentagon Freight Services PLC		2 183 316,84	911 697,45	3 095 014,29
DHL Global Forwarding (Norway) AS		2 137,07	2 885 430,88	2 887 567,95
Thorco Shipping AS			1 781 956,96	1 781 956,96
Chipolbrok America Inc.		305 171,14	1 393 039,93	1 698 211,07
Tollpost Globe AS		953 832,01	649 689,78	1 603 521,80
Seafont Chartering AS		1 434 961,36	154 402,78	1 589 364,13
Rickmers-Linie GmbH & Cie. KG		553 083,88	889 239,67	1 442 323,55
Ugland Construction AS		1 346 955,51		1 346 955,51
<b>Grand Total</b>		<b>58 907 356,54</b>	<b>66 621 723,99</b>	<b>125 529 080,54</b>

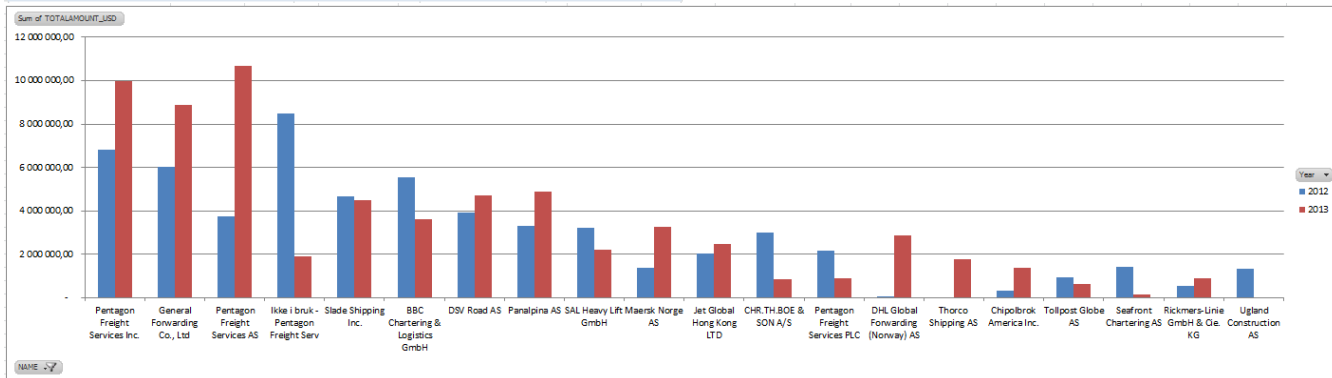


Figure 72 20 largest logistics suppliers to NOVN 2013/2012

Figure 72 shows information about some of the largest logistics suppliers to NOVN in 2012 and 2013. Total logistics costs in USD are the total amount the transport company has charged NOVN in USD.

I have not looked into General Forwarding because they have only domestic transport inside South-Korea. BBC chartering is only charging sea freights and never customs clearance, the same with BBC Chartering and SAL Heavy lift.

Supplier name	Year	Total logistics costs in USD	Total numbers of invoices	Value of VAT/DUTY	Value of checked invoices	Checked all invoices above NN USD	Number of checked invoices	% compared to all checked invoices	Total value of VAT simulated on all transports
Pentagon Freight Services PLC	2012	6 953 548	1565	117 702	5 597 567	4 000	306	2,10 %	USD 146 215
Pentagon Freight Services PLC	2013	2 561 390	483	29 820	2 048 711	4 000	123	1,46 %	USD 37 282
Pentagon Freight Services AS	2012	3 170 321	445	0	2 721 537	5 000	153	0,00 %	USD 0
Pentagon Freight Services AS	2013	15 553 428	4997	289 037	11 709 530	5 000	750	2,47 %	USD 383 919
Pentagon Freight Services INC	2012	5 469 372	102	108 658	5 369 077	4 000	82	2,02 %	USD 110 688
Pentagon Freight Services INC	2013	13 827 449	270	204 143	13 451 355	4 000	597	1,52 %	USD 209 851
Panalpina AS	2012	5 457 686	575	5 823	2 353 973	4 000	150	0,25 %	USD 13 501
Panalpina AS	2013	7 519 071	1269	0	6 654 204	4 000	340	0,00 %	USD 0
Slade Shipping	2012	2 594 373	249	1 167	2 377 471	4 000	83	0,05 %	USD 1 273
Slade Shipping	2013	4 033 779	455	0	3 680 111	4 000	165	0,00 %	USD 0
		<b>67 140 417</b>	<b>10410</b>	<b>756 350</b>	<b>55 963 536</b>		<b>2749</b>	<b>1,35 %</b>	
Total figures	2012	23 645 300		233 350	18 419 625	Average	2012	1,27 %	Total value of VAT simulated on all transports
Total figures	2013	43 495 117		756 350	37 543 911	Average	2013	2,01 %	
<b>NOVN freight costs for 2013</b>	<b>USD</b>	<b>120 000 000</b>							<b>USD 2 417 489</b>

Figure 73 VAT/DUTY costs from the transport companies. (Made by author)

In Figure 73 the researcher has registered all the unnecessary VAT and DUTY found in the invoices from the logistics companies. Almost 3000 invoices have been manually checked.

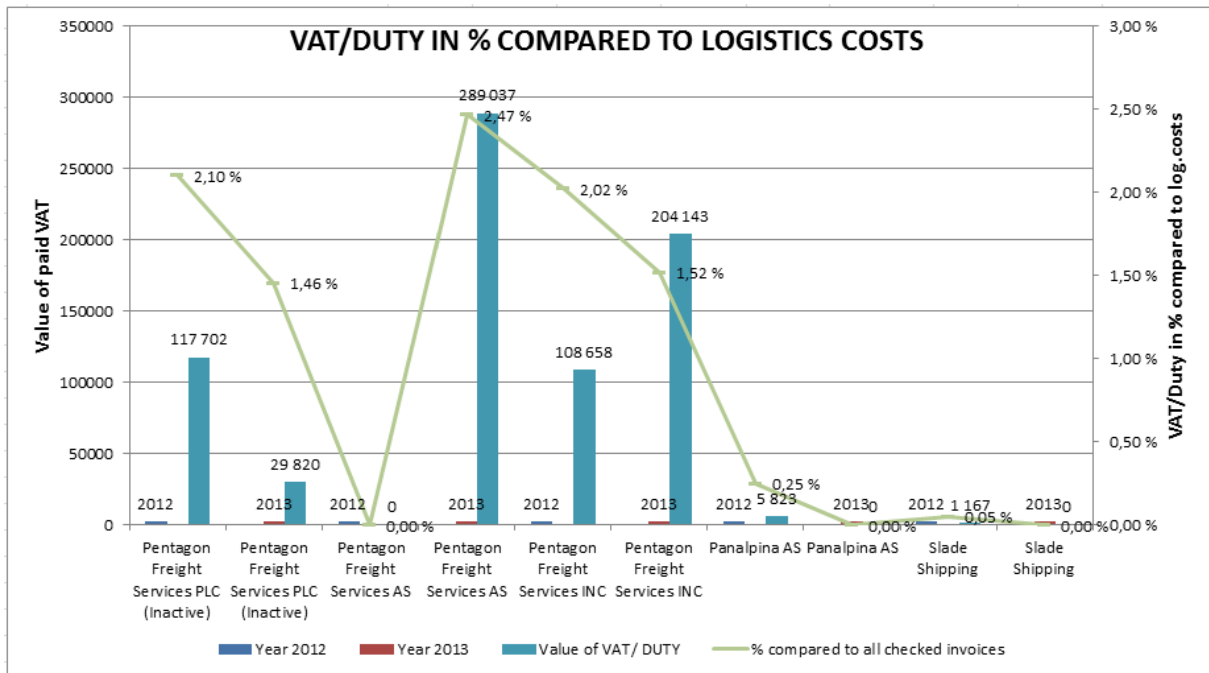


Figure 74 VAT/Duty in % of logistics costs. (Made by author)

Figure 74 shows the costs that occur in percent of logistics costs per logistics provider.

Pentagon Freight Services has invoiced NOVN for the largest amount of VAT in 2013. The amount was 289 037 USD. This was 2,47% of the logistics cost of all the invoices which I checked. It was 4997 invoices from Pentagon Freight Services AS in 2013 and I checked all invoices above 4000USD for VAT costs. The number of invoice above 4000USD was 750. 279 invoices were found with unnecessary VAT. I will look more into what the problem issue was in the 279 invoices with registered VAT/Duty.

Since the amount of invoices is so huge, it will be impossible for me to check all the approximately 20 000 logistics invoices that NOVN has received the last two years. I have only limited time in the master thesis, so I have checked about 15% of the total invoices and about 32% of the invoiced value. This will provide a representative sample.

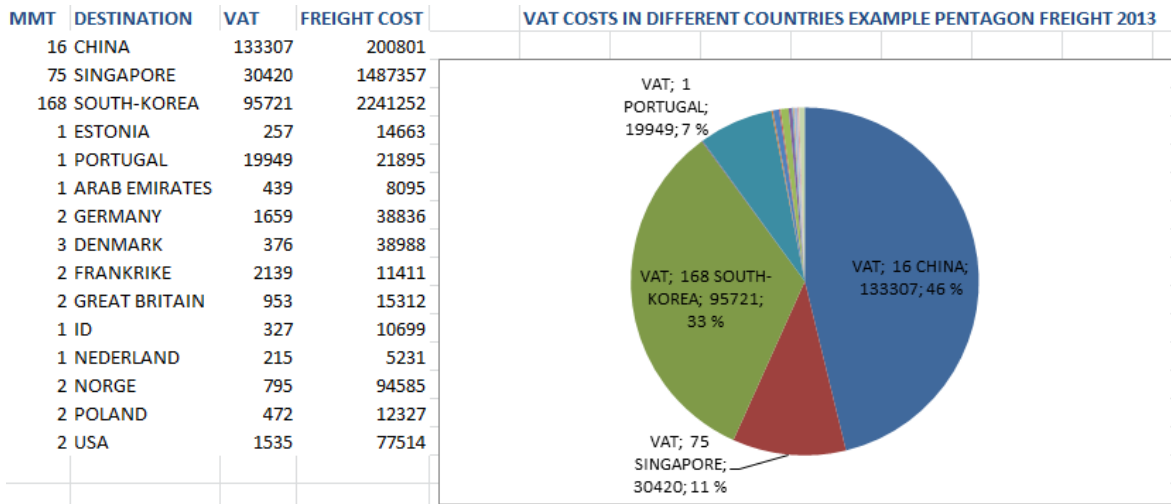


Figure 75 Vat costs in different countries 2013 example Pentagon Freight 2013.(Made by author)

In Figure 75 I have found out the distribution of VAT costs per country. 46% of the VAT costs invoiced from Pentagon Freight Services were shipments to China, 33% to South Korea. This supports my experience and assumptions that import customs clearance into China is difficult and expensive.

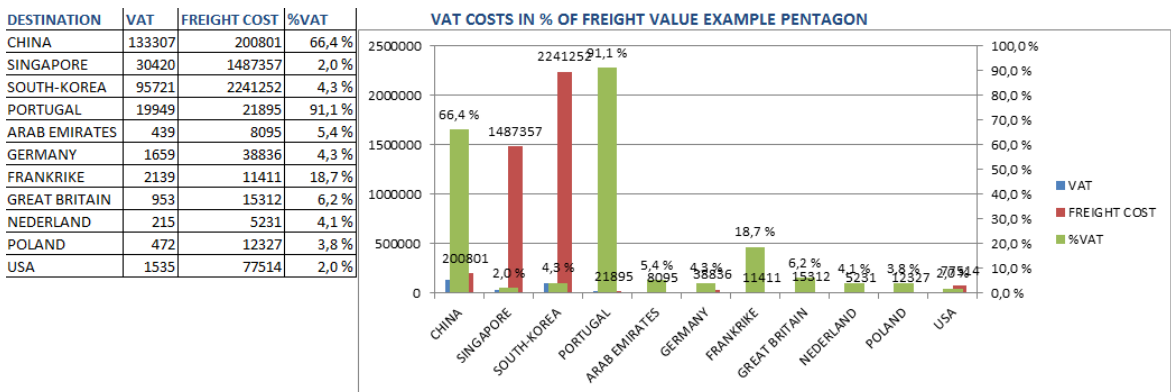


Figure 76 VAT in % of freight cost example Pentagon 2013 ( Made by author)

In Figure 76 it is shown that the VAT costs are 66,4% of the freight costs into China for all the shipments with VAT findings. So here we see a strong tendency in extra VAT costs into China. The shipment to Portugal is a single finding, so I can not see a tendency that problems with VAT/Duty in connections with shipments to Portugal. But it could have been avoided if the purchaser and the logistics coordinator had more knowledge in the fields of VAT and duty.

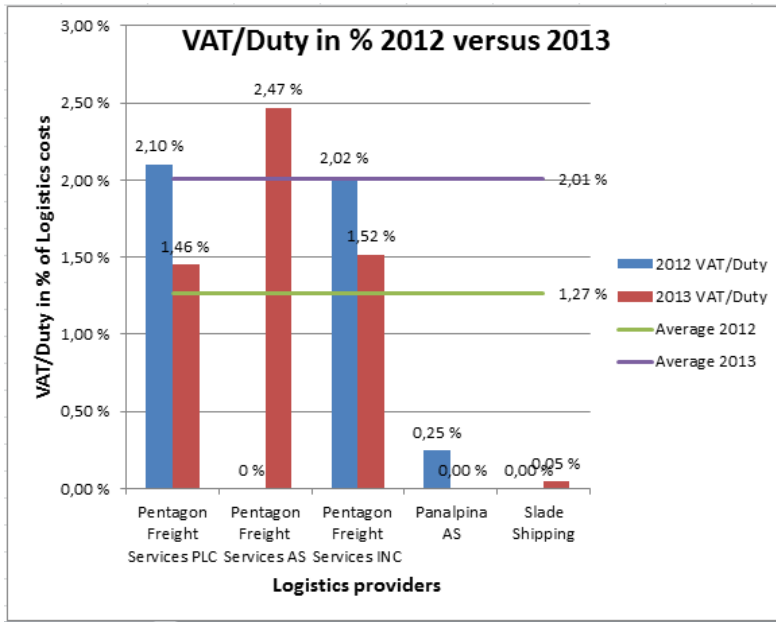


Figure 77 VAT/Duty in % of Logistics costs. (Made by author)

My research has revealed that the average number of unnecessary VAT and customs cost was 1,27% in 2012 and 2,01% in 2013.

How did I find these unnecessary costs?

First I started with the accounting department. I inquired if they knew how much unnecessary DUTY and VAT costs NOVN pays per year. They didn't know the amounts, but they had an account called 4170 custom duty. Almost nobody uses this account because only 2812 USD was expensed in 2013 and 2014. See Figure 78.

Project	Department	Cost center	Account	Sect/Act
			4170	

Result columns										
<input checked="" type="checkbox"/> Errand number	<input checked="" type="checkbox"/> Invoice number	<input checked="" type="checkbox"/> Voucher number	<input checked="" type="checkbox"/> Purchase order number	<input checked="" type="checkbox"/> Supplier	<input checked="" type="checkbox"/> Supplier ID	<input type="checkbox"/> Company	<input type="checkbox"/> Status	<input type="checkbox"/> Previous errand handler		
<input checked="" type="checkbox"/> Due date	<input type="checkbox"/> Invoice date	<input type="checkbox"/> Created date	<input type="checkbox"/> Payment date	<input type="checkbox"/> Posting date	<input checked="" type="checkbox"/> Amount					
<input type="checkbox"/> Current errand handler	<input type="checkbox"/> Invoice comment	<input type="checkbox"/> Invoice supplier	<input type="checkbox"/> Order identifier	<input type="checkbox"/> Agreement number	<input type="checkbox"/> Invoice type					
<input type="checkbox"/> KID number	<input type="checkbox"/> VAT NOK	<input type="checkbox"/> TUM amount								

Print	Errand	Invoice number	Voucher number	Order number	Supplier	Supplier ID	Due date	Amount	Currency
<input checked="" type="checkbox"/>	317010	OSL2584654	7289812		DHL Express (Norway) AS	102127	30/03/2014	1.023.75	NOK
<input checked="" type="checkbox"/>	295720	202899	7284370		Nikosax AS	212128	22/02/2014	5.013.00	DKK
<input checked="" type="checkbox"/>	268544	5809	7277724		Þlesund Handelskammer	132047	21/12/2013	7.781.25	NOK
<input checked="" type="checkbox"/>	244944	OSL2546714	7271562		DHL Express (Norway) AS	102127	30/11/2013	2.355.61	NOK
<b>Sum total amount:</b>									2.812.80 USD

Figure 78 Customs duty NOVN 2013/2014

NOV Norway ex AM 2012	Incoming freight	Account 4150	21,4 MUSD
NOV Norway ex AM 2012	Outward freight	Account 4160	41,3 MUSD
NOV Norway ex AM 2013	Custom duty	Account 4170	0,002812 MUSD
NOV Norway Ex AM 2012	Annual sales	Total	3408 MUSD
Transport costs in percentage of total sales in 2012			1,84 %

Figure 79 Transport costs in percentage of total sales 2012. (Made by author)

The number 1,84 % is an interesting number. In the Cecchini report from 1988 the authors claimed that “The direct costs of frontier formalities and associated administrative costs for the private and public sector are estimated to be of the order of 1,8% of the value of goods traded within the Community.”(EU Commision 1988, 3). So the customs related transaction costs was 1,8% in 1988 and the total logistics costs was 1,84% in 2012.

Secondly, I contacted all the largest logistics companies and I told them I wanted statistics for all VAT and DUTY they had invoiced to NOVN the 3-4 last years. This was not very successful. Few of the logistics companies had good statistics and some of them claimed they hadn't invoiced NOVN for VAT/TAX invoices at all. Some logistics companies invoiced often LUMPSUM total and is was impossible to separate VAT costs from other transport costs without looking at each and every invoice.

Thirdly, I continued to investigate these costs against the transport companies. They are the parties most likely part to send an invoice to NOVN for extra costs regarding VAT/TAX. So I found out who are the largest logistics suppliers to NOVN. See Figure 69. I started with the biggest logistic company ”Pentagon Freight Services”, sorted all the invoices from the 2012 and 2013 after value. NOVN received 2112 invoices from Pentagon in 2012, so I decided to check all invoices above 4000 USD.

But even more difficult was it to find out if the customers/consignees or the manufacturing places send invoices directly to the purchasers in NOVN. These costs will probably be expensed into the purchase price on the production or product and not as a VAT cost.

I also looked into where does NOV Norway purchase their supplies. Most of NOV's supplies are bought from USA, 890 MUSD or around NOK 5 billion. NOV's purchases in South Korea and China amounted to USD 570 million (NOK 3.2 billion) and USD 170 million (NOK 930 million). 67.5% percent of the purchases take place internally within the company. (Fjose, Holmen, and Gulbrandsen 2013) To know where NOV purchase their supplies will make it easier for the management to target resources regarding VAT and Duty issues.



Figure 80 Geographic spread of NOV Norway's purchases abroad in 2012 (Fjose, Holmen, and Gulbrandsen 2013)

## 14 CONCLUSION

I have investigated approximately 32% of the logistics invoices (value) NOVN received in 2012 and 2013. In my opinion, this gives a representative sample for the different logistics companies in how they are invoicing VAT / Customs Duty towards NOVN, and a very good indication of the size of these costs. When I interviewed different people in the organization, “everybody” agreed that this was a topic they did not know much about although all had “heard” about big costs in different cases. The percent that the research revealed was approximately 2 % of the logistics cost, and I assume that the hidden VAT costs paid by purchasers and project managers are approximately the same percent 2%. This gives in total 4% and an amount on approximately 4,8 MUSD for 2013 in NOVN.

### **Recommendation 1:**

I recommend that NOVN must continuously monitor the development in VAT costs month to month. Today this is weakly managed. NOVN must in their accounting routines make sure that all costs regarding transport and customs clearance which are customs related costs need to be expensed in the accounting as VAT costs. The account exists today but nobody is using it. So here we see a typical lack of information and a lack of knowledge problem. More information about this account will lead to better expensing/logging of the VAT-costs, which will make it easier for the management to target further resources to continuing education and training. The work to find these unnecessary VAT invoices among all the other logistics invoices has been challenging and time consuming.

### **Recommendation 2:**

NOVN also need software where they can get information about the logistics costs per shipment. They do not have this information today. For instance, it is not possible to find neither the average logistics cost or VAT cost per kg from Norway to South-Korea transported by air? I recommend that they should have a program which communicates with the accounting department, so all costs from the logistics invoice can be linked to the MMT (shipment) so they can make statistics per shipment and per kg and compare the different logistics providers.



### **Recommendation 3:**

Continue with import and export customs clearance in-house. The decision concerning in-sourcing of customs clearance is very important when it comes to this master thesis problem. This keeps customs competence in-house and gives NOVN great advantages concerning difficult VAT and customs issues.

### **Recommendation 4:**

How can the company distribute the lessons learned to the whole organization? I recommend that procedures for each case or country can be made and also create two super users-per country. *“Further progress in this field of enquiry would benefit from additional research on how specific export impediments change as the firm adds new export destination or export new products.”* (Kneller and Pisu 2007, 25). This is also an important result of this paper, because production sites are changing and products are manufactured by different sub-suppliers in different countries far away, which lead to changes in existing procedures as well as the addition of new export-barriers.

### **Recommendation 5:**

I recommend that NOVN insert targeted resources to improve the processes to avoid that customs related transaction costs occur regarding export/import to China. This corresponds with what the transaction cost theory states, that for every new geographical market, there will most likely occur new kinds of transaction costs when a company starts to work with new production in new countries.

Anderson and van Wincoop concluded that the costs associated with factors such as language barriers, currency barriers, imperfect information and regulation are *more* important for trade than direct policy instruments such as tariffs and non-tariff barriers (Anderson and van Wincoop 2004). It is interesting that the cost I have found in this paper is considered less important than the barriers pointed out by Anderson and van Wincoop. It means that the other barriers are of considerable big expenses.

Furthermore, NOVN can reduce costs by consolidating shipments, thereby increasing transaction-related economies of scale. They have already created an internal NOVN Chartering group, whose main objective is to consolidate shipments over 2000 metric tons worldwide. Such policies will become more important in the near future with the

optimization (reduction) of the delivery times on the products, decreasing of the inventory levels and increasing the product variety.

My research has also showed that there are many different types of error and the costs of doing anything wrong can lead to considerable sums. It has also showed that even though WTO has done major work to harmonize and reduce the tariff barriers all over the world other non-tariff barriers are replacing the tariff barriers and create significant trouble.

The work with this master thesis has increased my insight and understanding of the challenges concerning VAT and customs duty for NOVN and suppliers in connection with movement of goods across borders. I hope with my thesis I have illuminated this important field in the SCM which has not been done before and pointed out the importance of having good procedures regarding VAT and customs duties.

I wanted to create a procedure or a check list that would make it easier for production-purchasers, sales managers and also logistics coordinators to avoid the most common errors. I have made a proposal for this regarding trade to Poland as an example. See Figure 81.

Suggestion of Check list for NOVN sales and purchasing before exporting to Poland.

Suggestion of Check list for sales department and purchasing. Production place Europe				
	CHECKED	YES	NO	INFORMATION
1 Production place Europe	X	X		Famak
2 Check delivery terms. If DAP, DDU, no problem because NOVN will handle the transport.	X		X	
3 Check delivery terms. If EXW, FCA, FOB or FAS you need to check when the goods will be picked up.	X	X		Pentagon
4 With delivery terms EXW, FCA, FOB or FAS NOVN are dependent of the customer when pickup will happen				
5 You need to add in the contract that any costs related to late pickup will be charged the customer.	X		X	Needs to be added!!
6 These costs can be extra costs for storage, extra costs on mobile cranes, or extra costs for transport out of Europe.				
7 Storage in Europe;				
8 New rules from 1/1-2013, extra costs for storage, the goods needs to be exported				
9 out of EU latest e (Three) months after agreed date in the contract.				
10 Otherwise 23% VAT will be charged on the whole production				
11 Make sure that this cost will be mentioned in the agreement between NOV and customer	X			Needs to be added
12 Check delivery place.				
13 Delivery place outside EU?		X		
14 Normal inward processing procedure		X		
15 Logistic department must be informed 8 weeks before starting shipping FI ( transport.mol.no@nov.com)		X		Latest 15.09.2014
16 Information must be sent to manufacturer 6 weeks before starting shipping FI		X		Latest 01.10.2014
17 Proplan must be sent to manufacturer at least 6 weeks prior to shipment				
18 After delivery, get proof of export from manufacturer to avoid any VAT-trouble three months later.	X	X		Estimated 01.02.2015
19 Delivery place inside EU?			X	
20 Customer needs to have VAT registration inside EU in the country delivery will happen.			X	
21 Customer has not VAT registration inside EU, charge EU VAT on whole production			X	
22 Special customs procedure; Free circulation procedure			X	
23 Logistic department must be informed 8 weeks before starting shipping FI			X	transport.mol.no@nov.com
24 Information must be sent to manufacturer 6 weeks before starting shipping FI			X	
25 Proplan must be sent to manufacturer at least 6 weeks prior to shipment			X	
26 If production in Poland, our Polish VAT number must be used, and we will need to pay Polish VAT			X	
27 Purchase order must have VAT code 21?? And Hildegunn Hanssen must have a copy of PO.			X	
28 Hildegunn will inform our Polish VAT company to apply to get the VAT back			X	
29 We will have an intra community supply, and need CMR as a proof of delivery.			X	
30 Copy of CMR needs to be sent to Hildegunn Hanssen, see procedure 123456789			X	
31 Other questions?				
32 Contact super-user Poland	Contact: NN	E-mail: <a href="mailto:n.n@nov.com">n.n@nov.com</a>	Phone: +47 .....	
33 Special VAT questions?	Contact: Finn Strømme	E-mail: <a href="mailto:finn.stromme@nov.com">finn.stromme@nov.com</a>	Phone: +47 38192459	
34 How to fill in correct VAT code in the Purchase order?	Contact: Hildegunn Hanssen	E-mail: <a href="mailto:hildegunn.hanssen@nov.com">hildegunn.hanssen@nov.com</a>	Phone: +47 38192005	

Figure 81 Check list for sales department and purchasing. (Made by author)

Today, the role of purchasers and logistics coordinators has been considerably expanded and requires larger and more targeted expertise in their purchasing activities. We see that purchase and supply chain management is gaining more and more attention from business leaders as key success criteria.

The devil is in the details and I stress the importance of seeing all the different transaction costs which occur that could have been avoided; if NOVN project organization had enough knowledge. I also mean that if the communication inside in the organization had been better, several of these events could maybe have been avoided. I mean that both hypotheses have been supported.

On the other side, I will point out, that I have attended several external and internal logistics seminars and VAT-courses and then I have got the confirmation that NOVN logistics department is working very well with VAT-issues and are among the “best in the class”. However to stay competitive in today’s global market, it is imperative that manufacturers embrace change and innovation.

## **15 CHALLENGES WITH THE MASTER THESIS AND FURTHER RESEARCH**

The findings of unnecessary VAT/TAX cost that this survey has revealed, is in many of the cases, costs that could have been avoided. This is unexpected expenses that suddenly appear in connection with customs clearance into the country of destination or upon delivery of the project that not any NOVN department has calculated into the budgets. These are costs that arise because the products are moved across borders and because the cost of this is most likely not calculated into the transport cost. This becomes part of the transaction costs and is usually probably “hidden” among the transport costs. It can be difficult to quantify these costs, because people would rather not talk about costs that could have been avoided. Here it has been necessary to search through thousands of invoices to find the hidden costs.

Additionally, I have also seen the usefulness to interview different people in the organization. They have come up with several practical real life examples which support the hypothesis in this thesis. A lot of costs could have been avoided if some VAT/logistics procedures had been made.

### **15.1 WEAKNESSES WITH THE METHOD.**

When you want to study an issue closely, you need to choose a method to do the work. All methods have both strengths and weaknesses. I chose, in this thesis to use explorative design, with in-depth interviews as an important tool. I assumed, based on my experience and competence and the time I had available, that this was the best methods to get as much information as possible in shortest possible time.

These errors can occur:

- Some interview subjects don't know the answers you are trying to find the answers on.
- Some interviewees filter their responses and do not disclose certain data.
- The interviewer manipulates the interviewee to give certain answers.

Most studies of export barriers have been done through postal surveys. Korneliussen and Øwre recommend that in some cases a qualitative research with personal interviews is more suitable. A qualitative approach can also be useful to try to find out the overall effect of that a company meets different types of export barriers in a market(Korneliussen and Øwre 1998).

## **15.2 WEAKNESSES WITH GEOGRAPHICAL FRAMEWORK.**

Writing a master thesis within the time frames requires some limitations. I have limited my research to Europe, South-Korea and China. This is a weakness, but my findings also show no or few events outside this scope. I expected to find costs in connection with shipments to Brazil, but I didn't. Further research needs to include Brazil, because this is a market that the sales department point out is coming up. Many Brazilian companies will often arrange the transport by them self and they have experience in importing into Brazil, so they manage to avoid the biggest pitfalls.

## **15.3 RESEARCHER FROM THE ORGANIZATION.**

Another issue which can be a weakness is that the researcher is working inside the organization which is investigated and therefore a part of the research problem. This can make it challenging for the researcher to obtain the necessary distance to the research problem without going too much into details. It has been important to try to observe the organization and the research problem from a "bird-view". An advantage is of course that researcher has deeper insight into the different problems inside the organization.

## **15.4 FURTHER RESEARCH.**

The researcher has asked different key-persons in NOVN and in sister companies in South-Korea and China. Mostly transport coordinators and customs coordinators have been consulted during this thesis. Further research can be to contact project managers worldwide and also logistics coordinator in U.S.A. to reveal other costs which I have not been able to find.

In my research I have found some cases with significant costs, most of them are connected to deliveries to China. This corresponds with what the transaction cost theory states, that for every new geographical market, there will most likely occur new kinds of transaction costs when a company starts to work with new production in new countries. The logistics case named "Customs clearance into China, assembly and testing" chapter 11.5. is especially interesting. NOVN already know that much more research about Chinese customs, open handbook and customs procedures needs to be done before serial production of standardized crane in China can start up.

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## ATTACHMENTS

### Attachment 1

#### These has been interviewed and consulted:

- Finn Strømme: Head of indirect tax, KRS
- Hildegunn Hanssen: International VAT accountant, KRS
- Gøril Hanaas: Risk Manager, KRS
- Frank Iversen: Manager Controlling Operation, MOL
- You Mingyang, Compliance Manager, KRS
- Yoona Choi, Customs Coordinator, NOV Korea
- Kyuhee Kim, Customs Manager, NOV Korea
- Glen Vabø, Director Special Projects, KRS
- Børre Andreassen, Manager Accounts payable
- Jan Gunnar Nomeland, Senior Logistic coordinator
- Joanna Szyman`ska, Customs operation Manager, ND service, Poland
- Yngvar Ørebekk, Project Coordinator, Subsea
- Caspar Fabini, Spesialkompetanse, Team International Trade Regulation, Innovasjon Norge
- Gunnar Gule: Senior Manager Global Sourcing, Asia, MOL
- Erik Holm: Senior Manager Procurement, MOL
- Knut Kloster: Chief Accounting Manager, KRS

## Attachment 2

### Export and import of goods, main trading partners to Norway

#### Imports of goods, main trading partners

	NOK Million			Share in per cent
	2011	2012	2013	2013
<b>Total</b>	508 630	507 601	527 767	100.0
Sweden	68 038	68 729	70 271	13.3
Germany	60 962	62 885	65 448	12.4
China	46 452	46 962	48 357	9.2
United Kingdom	28 435	31 097	33 809	6.4
Denmark	32 167	31 513	32 164	6.1
United States	27 250	27 332	28 554	5.4
Netherlands	21 112	19 834	20 461	3.9
France	16 519	16 445	17 651	3.3
Poland	13 140	15 382	17 086	3.2
Italy	13 177	14 159	15 647	3.0
Finland	12 907	14 078	13 382	2.5
Canada	20 857	14 577	11 737	2.2
Japan	11 062	11 907	11 365	2.2
Belgium	9 297	10 214	9 953	1.9
South Korea	13 493	6 573	9 822	1.9

StatBank source table 08804

Figure 82 Import of goods, main trading partners to Norway 2013 (Statistisk sentralbyrå 2014)

#### Exports of goods, main trading partners

	NOK Million			Share in per cent
	2011	2012	2013	2013
<b>Total</b>	898 593	935 292	906 398	100.0
United Kingdom	252 554	247 675	218 657	24.1
Germany	95 462	112 031	156 638	17.3
Netherlands	104 903	114 533	97 497	10.8
France	58 399	55 707	64 623	7.1
Sweden	58 134	59 300	52 811	5.8
Belgium	24 762	26 735	47 792	5.3
United States	50 349	45 983	40 411	4.5
Denmark	33 279	38 670	31 482	3.5
China	16 374	13 900	16 248	1.8
Poland	15 695	14 142	16 191	1.8
South Korea	8 876	25 953	15 539	1.7
Spain	13 191	14 841	10 677	1.2
Singapore	6 179	7 066	10 068	1.1
Italy	20 643	21 329	7 407	0.8
Finland	14 127	13 647	9 555	-30.0
Ireland	9 785	9 595	9 417	-1.9

StatBank source table 08804

Figure 83 Export of goods, main trading partners 2012-2013 (Statistisk sentralbyrå 2014)