

**The inland shipping industry and its problems**

An analysis of why and how the inland shipping industry requires structural change

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# Executive summary

# The inland shipping industry contributes substantially to the trade relations between the Netherlands and Germany. The industry is different from other transport modes (rail, road and air) in that ships are more environmentally friendly and cost-effective. Yet, it faces many structural problems that require sustainable measures. Governmental cuts resulting in delays in waterway maintenance, a fractured representation of the industry, a general resistance towards sharing information and a skewed distribution of power between the market players sabotage effective cooperation that could solve many of the aforementioned problems.

The central research question of this paper is: Should there be a market regulation for the inland shipping industry in the Netherlands and Germany? To answer this question, it should be identified what the industry looks like in both countries, what the problems are, what the European Union does and what possible solutions are. Several people have been interviewed to answer the central question, while at the same time they provided the author with useful background information and their vision on the inland shipping industry.

The inland shipping industry lacks a coherent approach towards solving their problems, despite the efforts of representative organizations. Two main problems have been identified: overcapacity and opacity.

The market has a structural overcapacity and is dominated by too much supply (too many ships) and not enough demand (not enough cargo to be transported). The causes for the structural overcapacity can be found in financial motives when the economy was flourishing and a laid-back approach by the banks, granting loans to companies that did not have a decent business plan. The banks are now faced with highly financed vessels and a difficult market situation which makes it nearly impossible for skippers to pay back their debts. A solution would be to demolish ships, but this is a delicate subject on which no European consensus among representative organizations exists. Another solution could be to reintroduce the old-for-new rule, under which a new ship can only be built when an old one is demolished. Another solution can be found in more cooperation between skippers but European regulations have to be followed. Private initiatives could be the key solution to nearly all of the problems. Although it has its disadvantages for transporters, intermediaries and skippers, the advantages prevail. Finally, sustainability could help the inland shipping industry to maintain and/or improve their image as an innovative industry.

The problem of opacity has developed over the years and many elements have contributed to this, including a reluctant stance of skippers regarding sharing information, an unbalanced power structure between the market players, and a splintered representation of the industry. Possible solutions to this problem can be found in creating a uniform method to calculate the cost price and entrepreneurial trainings that could give the skipper more information on how to manage his company and, consequently, receive better tariffs.

The importance of the inland shipping industry to the European Union is unmistakable when looking at the amount of initiatives and ideas the European Commission has proposed, often in cooperation with the representative organizations of the Netherlands and Germany. The problems the inland shipping industry faces today call for a solution that will prevent these events from reemerging in the future. Sustainable solutions in combination with effective cooperation could provide leeway for an innovative mode of transport, able to compete with other modes of transport such as rail or road.

# Introduction

# The inland shipping industry historically has a relative good position on the European transport market compared to other modes of transport, when looking at cost-efficiency and environmental aspects. However, the financial crisis of 2008, the structural problem of overcapacity and the opaque market have led to many problems. Nowadays, the inland shipping industry is faced with low freight tariffs, governmental cuts, problems with the waterways, a splintered representation and a weak bargaining position in the transport chain. The problems that the inland shipping industry faces hit two European countries in particular: the Netherlands and Germany. Both countries have developed an extensive waterway network system and have invested a substantial amount of money in interconnecting the modes within the transport and logistics chain. Furthermore, both countries have urged the representative organizations to cooperate and come up with solutions for the problems in the sector.

The Netherlands and Germany were chosen because of their impact on the inland shipping industry in terms of size, initiatives and cooperation efforts. The countries suffer from actions in the bordering country (e.g. in cases of strikes) or benefit when the economic circumstances of their neighbor improve. Some of the problems in the Netherlands and Germany are more or less the same but the countries also face different problems related to the different characteristics of their industry.

The two main problems in the inland shipping industry are overcapacity and a lack of transparency (i.e. opacity) in the market. Several reports have pointed at the market structure that is counterproductive in terms of reducing the capacity and the role of the banks as a catalyst. This study will analyze the problems and give recommendations that could put a brake on the downward spiral.

The problem will be analyzed in four sub questions. First, the problems of the shipping industry in the Netherlands and Germany will be examined and compared. In the second sub question the industry is analyzed from different perspectives, including a general description, a representation analysis and a comparison between the two European countries. Thirdly, the European Union policies that are applicable to the industry will be analyzed. The last sub question answers the central research question and examines (former) solutions to the problems.

The study will be concluded with a short summary and a recommendation section with potential solutions to the problems. In the literature review, the literature on which the thesis is based will be evaluated.

# Chapter 1) A complicated industry: an analysis of the problems

## 1.1. General problems in the inland shipping industry

According to the Central Commission for Navigation of the Rhine (CCNR), the first problems that had to be solved in the inland shipping industry occurred in the beginning of the 17th century and were related to tolls. Abolishing these tolls and establishing the principle of the freedom of navigation was done by the CCNR institution whose primary tasks are to create a unified system of regulation for Rhine navigation, equal treatment and to ensure freedom of navigation. After this, several treaties (Treaty of Paris in 1814, Mainz Convention in 1831, the Mannheim Act in 1868, Treaty of Frankfurt in 1871, Treaty of Versailles in 1919) led to an expansion of the Commission’s portfolio, which now includes boatmen’s licenses, the transport of dangerous goods, police regulations etcetera. Currently, the Commission is involved in increasing European integration not only on the Rhine but in Europe as a whole (CCNR, Organization, n.p.). In October 1988, the Social-Economic Council presented a report to the European Commission. In this report, problems were identified that are similar, if not identical, to the problems that the inland shipping industry faces today. The problems and the causes of overcapacity were mentioned, one of them being a change of structure in the demand for inland shipping markets. The coal, iron and steel industry had all seen a decline, the construction sector was shrinking and energy supply had seen changes (Raad, 1988). 20 years later, when the economic crisis started in the beginning of the 21th century, the same problems returned and affected the industry. The conclusion that can be drawn from this is that the problems were never solved in a structural manner and if they are not solved now, they will reappear in the future.

A general problem that affects the inland shipping industry is the dependence on the weather. During the winter season, rivers and canals freeze and ships are stuck. It is often not possible to clean or paint the ship, resulting in maintenance delay. If there is a season with a lot of rain, the current is very strong which delays the ships sailing upstream. Another negative result is that more fuel is needed for the same distance with the same cargo, thus the skipper will need more money for the same trip. Furthermore, rivers and canals will be blocked when the water level is too high and quays and ports will overflow. Yet, if there is a draught, the water level will drop considerably, resulting in the same amount of cargo to be transported while more ships are needed. If the water level is low, it is not possible to transport the same amount of tons as when the water level is high, because the ship will run to the ground. Consequently, more ships are needed to transport the cargo when the water level is low. This is almost always a positive development for the inland navigation industry because of the so-called rule for *Klein Wasser Zuschlag* (KWZ) in Germany or *Laag Water Toeslag* (LWZ) in the Netherlands. According to the *Expertise en Innovatie Centrum Binnenvaart* (EICB), the *Laag Water Toeslag* rule ensures skippers a compensation when the water level is low. The rule was introduced to help skippers when the water level is low. It is paid by the freighters who, in turn, calculate this when they submit their price to the transporter (the end customer). Eventually, the transporter pays for this rule but only if certain conditions are met (e.g. the water level has to reach a certain deepness) (EICB, 2015).  
  
It seems hard, if not impossible, to solve the problem of the dependence on the weather. However, other modes of transport have other, similar problems related to the weather, such as air transport (wind, storm) and road transport (wind, storm). The solution would be to adapt to the weather conditions through initiatives such as the KWZ/LWZ. If a fund would be created to help skippers overcome difficult times, this could create a positive trend towards collaboration. Skippers could create a fund and divide the money according to the size of the ships for example. A skipper with a bigger ship would, consequently, pay more membership fees than a skipper with a smaller ship and the bigger ship would, in turn, receive more money than the smaller ship.   
  
Another general problem is a market development in the past decade. Until 2008, the trend was to build new and big ships and sell old ships. In practice, it meant that the new ships that entered the market were up to two or three times bigger than the normal/standard ships. Because of the favorable market conditions and a flourishing economy there was enough cargo (demand) for the ships to transport (supply). Problems arose in 2008, when the economic crisis hit and the market contracted, which resulted in overcapacity when there was not enough cargo to be equally distributed over all ships (ASV, 2012).

Overcapacity can be defined as the part of the transport capacity that does not have an economic user function over a longer period. According to an article in the Dutch newspaper *NRC-Handelsblad*, the overcapacity is currently estimated at 1.100 ships of 86 meters or longer (Groot, 2013). The ING bank, a Dutch bank, estimates the total overcapacity at 15 percent (Totaaltrans, Overcapaciteit blijft binnenvaart in de weg zitten, 2013). This structural overcapacity is one of the main problems in the inland shipping industry.

In 1988, the Social-Economic Council analyzed the structural overcapacity and stated that “there needs to be a certain overcapacity (also known as spare capacity) to guarantee the continuity of freight transport when the water level is dropping or rising, the supply of goods in ports is changing or in case of stockpiling when freight tariffs are low or waiting times are long”. The spare capacity pressures the freight tariffs and destabilizes the market. The report signals a permanent imbalance between demand and supply on the inland shipping market (Raad, 1988). In other words, if there is an expected increase in demand there is a response (more ships) yet when there is an expected decrease nothing happens. However, it is very difficult to respond to a decrease in demand because the ships are there and skippers need to make money, they cannot simply decide to stop sailing for one week and wait for better times because this would cost them a lot of money.

According to Duursma, the problem of overcapacity seems easy to be solved through demolishing ships. This, however, is far from realistic. In most cases, when skippers apply for bankruptcy, the bank brings the ships to an auction. The ships are not demolished because the banks have invested a lot of money in the ship and do not wish to see their investment gone, even though this would be better for the industry at large. The problem is that in the inland shipping industry bankruptcies will not lead to less enterprises. The overcapacity, therefore, is not solved by filing for bankruptcy. When the ship is auctioned, the bank sets a minimum price that has to be met. If no one is willing to pay this price, the bank buys the ship and decides what will happen: sell, demolish or export (Duursma, 2014).

Bart Verkade, skipper and business economist, points out that this distorts the market because the bank maintains the illusion that the big ships are still worth a couple of million euros, while there is no demand for these ships and the reality would be that they are worth only the price of scrap (Verkade, 2013).

The Rabobank is a Dutch bank that knows a lot about the inland shipping industry. According to the banks’ vision for 2015, the structural overcapacity will not disappear until 2020 and the long-term perspective for the inland shipping industry is negative. In addition, the bank signalizes that the inland shipping industry is falling behind in terms of innovation and sustainability. This is a problem because it leads to a competitive disadvantage compared to other modes of transport such as road transport (Rabobank, 2015).

To a certain extent the banks have contributed to the problem of overcapacity. According to the report of the Social Economic Council of 1988, banks and other credit providers have encouraged the skippers to invest. The financial obligations of skippers, consequently, are very high while the social and fiscal circumstances are unfavorable. Skippers are not inclined to leave the market, and have a strong, individual mindset which contributes to the stubborn nature of overcapacity (Raad, 1988).

The role of the banks is further explained in an article written by Sander Heijne for the Dutch newspaper *Volkskrant* which explains the development of the inland shipping industry and the role of the banks. According to Heijne, the banks have been laid-back in their vision for the inland shipping industry. The banks did not foresee the overcapacity even though they basically created it. It was easy for skippers to receive finance for new ships because the market conditions were favorable and it would be easy for skippers to pay the borrowed money + interest back. However, when the market collapsed in 2008, banks became restless and they advised skippers to change their variable interest rate to a fixed interest rate. Many skippers followed this advice and now paid a fixed interest rate, while the Euribor (Euro Interbank Offered Rate) collapsed and interest rates fell far below the fixed interest rate of the skippers. The result of this was that skippers could no longer pay their interest and filed for suspension of payments. It seems impossible for these skippers to ever pay off their loans. Only a significant reduction of the amount of vessels in the market could restore the market price but this is only possible if banks declare the skippers bankrupt and demolish their ships. However, this kind of mass-bankruptcy would force the banks to write off hundreds of millions on their internal shipping portfolios (Heijne, 2013). This is supported by an article in the Dutch newspaper *NRC-Handelsblad*. According to Groot, the Rabobank is granting some inland vessels (partial) suspension of repayment (Groot, 2013). This, however, cannot go on infinitely, at a certain point a skipper has to be declared bankrupt.

Hein Danser has done a lot of work for the European Barge Organization and is currently a member of the BLN-member group < 86 meters. According to Danser, if a skippers is declared bankrupt, the bank will become the owner of the ship, and will bring the vessel to an auction where the ship is (usually) sold for a lower price than for which it was built and financed. In this example, a ship was built in 2006 for 4 million euros with 100.000 euros equity capital. We assume that during the following eight years the skipper could no longer pay his interests and his debt has increased to 4,5 million euros. Consequently, the skipper is declared bankrupt. The bank auctions the ship for 2,5 million euros and takes the loss of 1,5 million euros (Danser, 2015). According to the European Commission, government guarantees aim to cover the liabilities of banks. These aid measures are temporary and are an effective tool to restore market confidence and prevent a collapse of the financial system (DG-Competition, 2010). Under these state guarantees, banks are assured of state aid when they provide a loan. According to Danser, as a result, the loss of the banks is substantially reduced when a skipper goes out of business. This allows the bank to sell the ship for a lower price than for which it was built, which enables the buyer (a skipper or a shipping company) to lower his cost price. Other skippers are faced with lower tariffs, caused by ‘cheaper’ skippers and have no choice but to lower their price too. These skippers, in turn, can no longer pay their debts and will eventually go bankrupt which starts the process all over again (Danser, 2015). According to Dirk van der Meulen, a Dutch journalist, banks hold a key position in solving the problem of overcapacity in the inland shipping industry. They prolong the crisis because they sell the ships of bankrupt entrepreneurs, which keeps the overcapacity going. The solution would be to withdraw vessels from the market, this would create a short-term solution while it reduces capacity (Van der Meulen, 2013).

Figure 1 aims to clarify the chain structure of the inland shipping industry. The green boxes at the top indicate the transporters within different categories: coal, bulk, sand, small cargo, containers, liquids and dangerous substances. The orange boxes indicate storage & transfer. The blue and red boxes indicate the intermediaries, of which the first blue box is a cooperation, composed of vessels indicated in the blue line, the second is a big professional, the third is a commission and the last box is a small intermediary. The blue line of boxes symbolizes the skippers per category: dry cargo smaller than 86 meters, dry cargo larger than 86 meters, geographic skippers, ‘free’ skippers, container ships larger than 110 meters, push barges and tank ships. The orange boxes at the bottom again symbolize the storage & transfer element and the lowest green boxes are the receiving party.

Figure 1: Chain structure of the inland shipping industry

Source: Binnenvaart Logistiek Nederland, own edit

Regarding the problem of the opaque market, the key word is cost price. The cost price should be made by subtracting the costs from the profit made per trip (in case of a ship). Yet, it is hard to have a uniform standard regarding which costs should be subtracted. Some economics plead for including the retirement costs and the costs for a disability pension, others say this should not be included. Some economics and banks divide the recurring expenses over 330 days per year, others over 365 days per year. In general, the cost price covers all costs excluding depreciation (Binnenvaart, 2013).

A blatant refusal by skippers to share information about their cost price makes it very difficult to establish a transparent system that everyone can use. Basically, if everyone would share how much money is being paid for a certain trip, other skippers could adopt this price and enhance their bargaining position in the future. However, some skippers refuse to inform their colleagues about the price they received for a certain transport. If this transport is offered again, the whole negotiating process starts all over again. Instead of enhancing the bargaining position for a colleague through sharing information, skippers choose to think only about what is best for themselves, out of fear that their colleague will underbid them when the transport is re-offered.

According to Danser, the following scenario is an example of the standard procedure for a transport offer. In this example, the transporter has 1500 tons of iron which need to be transported from Rotterdam (the Netherlands) to Köln (Germany). The transporter calls the intermediaries and asks for what price they are willing to transport this. The intermediary with the lowest price gets the deal, in this example for 7,00 euros per ton. The transporter pays the intermediary 7,00 x 1500 = 10,500 euros. The intermediary then calculates his buffer and sets the minimum price he wants to pay at 5,00 euros. Consequently, he calls a skipper and will tell the skipper that the transport will pay 3,50 euros per ton. If the skipper with a high mortgage hears about this offer, he will accept this offer because he feels pressure from his bank: the skipper has to sail. The own assets of the skipper are very low and he cannot afford it to skip one day of work. Yet, his cost price would tell him that he would have to receive at least 4,50 euros per ton, which is a loss of 1 euro per ton, a total loss of 1500 euros. Still, the skipper will decide to accept this offer because he would rather sail and lose money than stay put. At the same time, a skipper with a low mortgage senses that the intermediary is bluffing and he will ask for more money (e.g. 4,25 euros per ton). The skipper with a low mortgage can afford it to skip one day of work and this makes his bargaining position stronger. The end price for this skipper could be 4,00 euro per ton, which is 50 cent more than the price the other skipper received. It may look insignificant, but 0,50 eurocent x 1500 tons is 750 euros, and this is only a small example while some transports contain up to 3000 tons (Danser, 2015). Ideally, skipper A with a high mortgage should receive more money than skipper B with a low mortgage because skipper A needs this money to pay off his debts. However, the reality is that skipper A is nervous and worried that he will not earn enough money while in practice, if he would not give in to the first bid of the intermediary, his bargaining position and tariffs would increase while it would also improve the market conditions for skipper B.

According to STC-Nestra, it is in the best interest of the intermediary to sell a deal as cheaply as possible to cover their price risk. A disadvantage of this system is that the intermediary negotiates with the individual skippers about a price. The negotiating power of the skippers is relatively weak because there are many skippers waiting for a transport and if skipper A is not willing to transport for this price, skipper B, C or D will. Consequently, it often turns out that skippers receive different prices for the same deal. As mentioned before, some skippers have a better bargaining position because their cost price is lower, which means they will have a better deal than the skippers with a high cost price. When skippers compare the price they received, turmoil and dissatisfaction arises when they find out that one has received a lower price than the other for the same deal (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015). This is supported by the organization for European United Barge Owners (EUBO), that claims that intermediaries do not offer skippers acceptable tariffs because they deal with approximately 100 transporters on one side and approximately 3000 skippers on the other side. Demand, therefore, will always be higher than supply and intermediaries know this, which is why they can lower their prices and play skippers off against each other (EUBO, n.p.).

An alternative for an intermediary is a corporation, where skippers work together to serve the end customer. These corporations have to meet certain criteria and the European law has to be applied. A corporation is very similar to an intermediary, the difference is that a corporation does not have a profit motive but focuses on distributing transport equally and fair. According to STC-Nestra, a Dutch example of a corporation is the *Coöperatieve Zandschippersbond* (CZB), which has 40 members and a total capacity of 40,000 tons. Its main segment is sand and stone transport. A German example of a corporation is *Tankpartner* (TPA) which has 25 members and a total capacity of 52.200 tons. It is being estimated that approximately 13 percent of the European fleet is a member of a cooperation. According to a survey held amongst members of cooperation, their membership of a cooperation has led to higher freight tariffs in crises and an easier acquisition of cargo (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015). It is surprising that only 13 percent of the market is a member of a cooperation, since the advantages seem to be clear.

Sometimes skippers have a contract with an intermediary, which means that they will receive priority when a transport is being offered. It is highly unlikely for a skipper to have a direct relationship with a transporter (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015). A direct relationship between skipper and transporter would, obviously, make the intermediary completely redundant, which is why the intermediaries will try to keep the skippers satisfied.

Erik van Toor was successively the advisor, manager and director of Kantoor Binnenvaart, director of Binnenvaart Branche Unie (BBU) and director of the Market & Economy department within Binnenvaart Logistiek Nederland. In January 2015, Van Toor left the Binnenvaart Logistiek Nederland organization to be director of a ferry service.

According to Van Toor, in the past, transporters would inform intermediaries about a certain transport from A to B. Intermediaries would then ask skippers about their price for this transport. The intermediaries would inform the transporters and receive a fixed provision rate while the transporter paid the skipper. However, the disadvantage for transporters was that they did not have a stable freight price because every skipper asked for a different amount of money. To solve this problem, transporters asked intermediaries to take over their role and guarantee a price for which something will be transported, to create stability for the transporters. This development led to a shift of transport supply and more power for the intermediaries, who could now play skippers off against each other. For skippers it takes a good entrepreneur spirit to have a good impression of the market and the interests of the intermediary as to determine an acceptable price. A good entrepreneur senses when the demand is high and will increase his stakes through pressuring the intermediary. A skipper can pressure the intermediary through not accepting the first bid the intermediary offers but asking for more money. The intermediary could, initially, refuse this by stating that this is the maximum price. However, the intermediary might be able to pay more but he does not want to give too much away. Many skippers lack this knowledge and these entrepreneurial skills and tend to believe what the intermediary tells them. This can partly be explained from the fact that skippers are growing restless when they cannot sail for a day or longer. There is a certain element of risk involved in the whole process and sometimes that means you have to wait until the intermediary gives in. The intermediary is not the enemy, yet some skippers have this impression because in the past they have not received fair prices (Toor van, 2014).

Henk van der Velde used to work as a teacher, later he held the function of secretary of the CBOB and is today the ad-interim vice-president of the European Skippers Organization (ESO). According to Van der Velde, since the liberalization of the market, the responsible associations may not meddle with any affairs related to the establishment of prices. This also blocked governments from helping the inland shipping industry when this was needed (Velde van der, 2014). The report of the Commission elaborates on this problem, saying that public intervention is unwanted and could have a negative effect on future business decisions and the restructuring effects of market forces. However, the Commission is in discussion with the representative organizations of the sector about measures (Commission E. , Towards quality inland waterway transport, 2013).

The *Algemeene Schippers Vereeniging* (ASV) is a Dutch representative organization with 50 to 100 members. In a document written by ASV, six measures are proposed to change the situation in the inland waterway transport sector:

1. Providing an instrument of market observation and information sharing about fleet capacity, freight prices and transport flows in order to increase the market transparency;

2. Harmonization of regulations in the fields of education, social security, manning requirements, the labor market and the fiscal differences between the member states;

3. Set up of legislation that avoids transportation of goods under the minimum cost price level considering all costs made by inland ships;

4. Set up of an external costs calculator for the transport sector containing costs for infrastructure, climate change, air pollution, noise, accidents and congestion ;

5. Stimulation of member states to invest in existing infrastructure taking all uses of the infrastructure into account;  
  
6. Improve cooperation and communication between member states, different river committees, European Committee and ship owners (ASV, Pamphlet: "The Value of Small Inland Shipping", 2012).

Especially the first four measures are related to the problem of opacity in the inland shipping industry. Measure three, setting up legislation to avoid transport under minimum cost price level, however, is very hard to achieve because price agreements are prohibited under the European anti-trust rules (Heijne, 2013).

# 1.2. Problems in the Netherlands

There are numerous problems that have to be solved by the Dutch inland shipping industry in order to create stable a freight market and ensure a prosperous future.

ASV, the *Algemene Schippers Vereniging*, is a Dutch, small organization with 50 to 100 members. The organization has four key objectives: a social/economic acceptable situation in the inland shipping industry, an equal division of benefits and burdens, fair competition between transport modes and maintaining independence (ASV, Ernstige verstoring binnenvaartvervoersmarkt, 2012).

According to ASV, the increase in scale during the first decade of the 21th century has led to more ships on the Dutch market with a massive carrying capacity along with high purchase costs for the ships. This development led to a huge supply increase while demand increased slower and eventually stagnated when the financial crisis began. As a result, the inland shipping sector was faced with structural overcapacity with low transport tariffs, while the financial crisis led to a decrease in demand during 2008/2009. The big ships with a large carrying capacity repressed the smaller ships that, in turn, had to accept lower tariffs. This vicious circle and the resulting problems are still present and despite efforts of representing organizations, skipper collectives and governmental initiatives the market is still opaque (ASV, Ernstige verstoring binnenvaartvervoersmarkt, 2012). This is supported by Sander Heijne, a Dutch journalist, who states that the trend was to invest in newer and bigger ships, which was encouraged by banks (Heijne, 2013). According to Erik van Toor, director of the *Binnenvaart Branche Unie*, a lot of money was invested in big ships (larger than 86 meters) between 2002 and 2008. According to Van Toor, a lot of air has been pumped into the sector and many skippers cannot repay their debts (Groot, 2013).

A second problem was raised by Sunniva Fluitsma, president of the ASV organization. In an interview with *NRC-Handelsblad*, a Dutch newspaper, Fluitsma urges the Dutch authorities to intervene, because the inland shipping industry cannot function in an open market. The long lifetime of a ship, 40 up to 50 or even 100 years, makes it almost impossible to adapt to the fluctuating market. The alleged openness that an open market would bring has not been realized because the intermediaries have all the information. According to Fluitsma, there have to be minimum tariffs and there has to be a ban on transporting below cost-price. In the same article, however, it is proposed that instead at least 200 big ships should be banned from the market. Nevertheless, this is not a realistic option and would only have a temporary effect. Collaboration is the key to solve the problem of overcapacity, but this is faced with two obstacles. First, the market observer ACM prohibits cartels and secondly skippers seem unwilling to cooperate. There is a strong ‘own-boss’ sentiment which opposes cooperation out of fear that independence will be lost (Duursma, 2014).

1.3. Problems in Germany

Klara Paardenkooper is lecturer at the Rotterdam Mainport University of Applied Sciences in Rotterdam. She teaches port competition, port management, hinterland connections, innovation in the inland shipping industry and modalities.

In Germany, Klara Paardenkooper points at the strong influence of the Deutsche Bahn. Deutsche Bahn is part of the Deutsche Bahn Group, which is a mobility and logistic company in over 130 countries with over 300,000 employees. The Deutsche Bahn is heavily state-subsidized, yet the company itself is liberalized. In other words, the company is not owned by the state but receives subsidies, meant to stimulate the transport of people. The *Deutsche Bahn* is faced with expensive rail transport from the ports of Hamburg and/or Bremen to the hinterland, whereas the Belgian/Dutch ports make more use of cheap inland navigation. For this and other reasons, the subsidies are used to finance the transport of goods. This is possible because *Deutsche Bahn* Holding is the umbrella for both types of transport and it is hard to find out if the money is spent on the right type of transport. Consequently, despite the fact that the *Deutsche Bahn* is liberalized, a lot of subsidies still end up in the transport sector.

Additionally, according to Paardenkooper, every time the inland navigation waterways were built or extended in Germany, the Deutsche Bahn built railroads next to it or improved their railroads. Indirect it is safe to assume that there is a silent war between the inland navigation industry and the railroad industry in Germany. It is Paardenkoopers’ suspicion that the Deutsche Bahn heavily pressures the German government for subsidizing the rail industry and influences decisions that the government makes regarding the waterways. An example that Paardenkooper gave was the widening of the Rhine, which is strongly encouraged by the inland navigation representatives, but the Deutsche Bahn is opposed to this idea. Widening and/or dredging the Rhine would mean that more and bigger ships could sail on the river, which would mean less cargo transport via rail which, obviously, clashes with the interests of the Deutsche Bahn (Paardenkooper, 2014).

The liberalization of the German railways and the effects on the inland shipping industry is explained in a report written by the Central Commission for the Rhine. Private operators are now active in the railway sector which has led to a downward spiral of transport prices. This development has increased the attractiveness of transport via railway which is now cheaper than transport via waterway (Kriedel, 2013). Furthermore, according to Paardenkooper, even though there are new entrants on the market, the *Deutsche Bahn* is still the most powerful (Paardenkooper, 2014).

According to Duitslandnieuws, the port of Hamburg faces serious problems:  
1. The crisis with Russia and the following embargo has hit the port with a decrease of almost four percent of container transport;  
2. Furthermore, the port of Hamburg can only be reached via the Elbe. This river is very narrow and shallow and efforts of the local authorities to deepen and widen the river have met serious resistance of environmental lobbyists. Bridges on the Elbe-Seiten Kanal which connects Hamburg to the Mittellandkanal are below the average height, which hinders the development of container barging between Hamburg and the river Rhine;  
3. Over time the size of the ships has increased, due to economic prosperity and a changing market structure. Whereas bigger ships are supposedly more cost-efficient, they face problems on the waterways connected to the port of Hamburg when the water depth is low;  
4. Another problem is the traffic jams to the port and not enough manpower to handle big ships.   
5. The competition is fierce, especially from Dutch ports. The Netherlands increased the biggest port with what is called *“De Tweede Maasvlakte”* last year, which enables big ships to moor there and has, in general, a better image when it comes to hauling in big ships;  
6. The port of Hamburg is not only having a rough time internationally, nationally the competition is increasing too. If the big waterways (the Elbe and the North-East Sea canal) cannot be enlarged, the port of Hamburg will lose serious market share to the port of Duisburg-Ruhrort and will decrease in competitive advantage (Duitslandnieuws, 2014).

In a report of the Central Commission for the Navigation on the Rhine, Norbert Kriedel argues that of all important inland shipping countries, Germany is the only country that has seen a decline in transport performance. This is surprising because Germany has the highest transport performance in the European inland shipping industry. Some explanations for this could be:

1. Germany has seen a decline in the demand of mass goods such as stones, clay and ore while this cargo is the core business of the inland shipping industry;

2. The inland shipping industry has not competed on the growth markets, such as the transport of equipment or end products. These products are usually transported in containers and the inland shipping industry has not responded to this;

3. The inland shipping industry is losing its competitive advantage because it cannot offer the same degree of flexibility as trucks. Developments such as just-in-time and shorter order cycles are a challenge for the inland shipping industry. The industry needs to try harder to adapt to these changes (Kriedel, 2013).

4. Container transport has increased but Germany cannot benefit from this because there are many infrastructural problems and the port of Hamburg, Germany’s biggest sea port, has a high loco-quote. This means that goods arriving in the port of Hamburg will be transported to the tertiary sector in the region of Hamburg and the only cost-effective way is transport via road (Kriedel, 2013).

## 1.4. Country comparison

The problems in Germany and the Netherlands are similar and could be solved by the same solution: cooperation between representative organizations. The problem with cooperation, however, is the free-riding problem. If a representative organization would accomplish something, it would accomplish this for everyone involved. Even though only the members pay contribution to the organization, everyone benefits if, for example, the organizations reach an agreement about better conditions for skippers.

According to Danser, skippers have developed a critical attitude towards representative organizations. However, according to Danser, the skippers would be worse off without those organizations because a lot is happening on the background and skippers are not aware of this (Danser, 2015).

The problem of overcapacity is present in both countries, although the structure differs. In the Netherlands private skippers sail big ships whereas in Germany big companies own push-tows. The inland shipping industry’s dependence on the weather is something that is hard to change, although the market can (and has to) adapt. The growth or decline of the coal, steel and iron industry and the effects on the inland shipping industry is sometimes hard to predict.   
Governmental cuts affect the maintenance of waterways, locks, ports etcetera, which lowers the attractiveness of the inland shipping industry. Tighter environmental regulations hit the sector hard as profit margins are small and building a buffer takes a long time. Furthermore, the engines of the ships are old and replacing them is costly.

The relationship between the Netherlands and Germany has brought the countries many advantages in their trade relationships. Yet, because the countries both depend on the same waterways and they suffer from the same problems. Governmental cuts in both the Netherlands and Germany have hit the waterways in the respective countries. For example, in 2011 Peter Ramsauer, the German minister of Traffic, announced that the maintenance of certain rivers and canals would be canceled with immediate effect due to governmental cuts. Waterways in bad repair will affect the ships that sail on the waterways because quays could deteriorate, mooring boulders cannot be used anymore etcetera. Draughts or floods hit both the German and the Dutch fleet and a contraction of the market is immediately felt in both countries.

In conclusion, it is safe to say that almost everything in the inland shipping industry is interconnected, as figure 2 shows. The figure begins with overcapacity which leads to lower freight tariffs, as explained by Danser. The imbalance between supply and demand pressures the market prices. As a result, skippers are faced with less profit and the same costs which, comparatively speaking, means there are higher costs. Following this, skippers will a) try to transport more cargo to generate more profit, which leads to overcapacity and/or b) look for cheaper workforces: social dumping.   
More expensive crew members (from Western Europe) are faced with unemployment while potential buyers of a ship are faced with an unattractive job market, which leads to the depreciation of ships. Sellers of ships are faced with this problem and will try to transport more cargo to generate more profit which, in turn, leads to overcapacity.   
  
Figure 2: Interconnection chain of problems in the inland shipping industry

Source: own edit

# Chapter 2) The transport industry landscape and the position of the inland shipping industry

The inland shipping industry in the Netherlands and Germany will be analyzed from six perspectives: 1) a general industry description, 2) the general European interest, 3) the skippers, 4) the inland shipping industry in the Netherlands, 5) the inland shipping industry in Germany and 6) a representation analysis.

## 2.1. Inland shipping industry description

According to Dierikx and Van den Berg, inland shipping transport is transporting cargo over water. Two main categories of cargo can be identified in the sector, the first is bulk transport and the second container transport. Within bulk transport, there is a difference between “wet” (oil, mud, gas) and “dry” (stones, sand, coals) bulk. Several stimulating policies have contributed to a rapid growth of container transport which led to the “containerization” of the inland shipping industry. Apart from the two main categories of cargo, there is the category “general cargo”. Here, the quantity is determined per individual item. Examples of general cargo are cars, paper, construction elements and so forth. The competitiveness of the sector depends on several factors, including the location of the supplier and the consumer, the availability and reliability of infrastructure, waterways and terminals, transport capacity and logistical capability (Dierikx & Berg van den, 2011).

In his book *The Box*, Marc Levinson describes the effect of globalization on the shipping industry and vice versa, more specifically the shipping container. Levinson challenges universal views about business, innovation and governments (Levinson, 2006). Levinson mentions two arguments about government involvement, the first one being that innovation can never happen without government involvement, the second one being that the government only gets in the way. Levinson points at the role of governments in the 1950’s and 1960’s, when the shipping companies did not have enough money to invest in new cranes and other developments needed to take maximum advantage of the new containers and ships. On the other hand, the overregulation by governments held back a lot of innovation and kept costs high (Gates, 2013). Although Levinson mainly covers the American history of inland shipping industry, Levinsons’ theory can be applied to Europe and, more specifically, to Germany and the Netherlands, where governments did and still do the same. Governmental interference is controversial because the European Union keeps a sharp eye on these practices while sometimes it is the only way to solve problems.

Levinson points at the shipping container that made the world smaller and the economy bigger. Containers created the concept of “just in time” supply and manufacturing while it increased the volume of international trade enormously. Furthermore, it contributed to the rapid industrialization of China and lowered the price of consumer goods. Levinson goes on with narrating the story about the first maritime entrepreneurs that were faced with the American bureaucracy and labor unions. Globalization is a key word in Levinsons’ book as it explains the growth of the container shipping industry and its contemporary forms (Levinson, 2006).

Figure 3 shows a comparison between the Netherlands and Germany in terms of their ports and employment. Germany has more ports than the Netherlands, yet the employment related to inland shipping and the ports is higher in the Netherlands. This could be explained from the fact that the ports in the Netherlands are bigger and there is more transport via waterways, whereas in Germany the rail and road industry are bigger.

Figure 3: Country comparison of inland shipping industry

|  |  |  |
| --- | --- | --- |
|  | Netherlands | Germany |
| Amount of national ships 2013 | 7000 | 2.113 |
| Inland ports | 24 | 98 |
| Ports with container line service | 5 | 4 |
| Annual transport 2013 in millions of tons | 383,8 | 226,9 |
| **Employment** |  |  |
| Port of Rotterdam/Port of Hamburg | > 90.000 | > 50.000 |
| Inland shipping | > 12.750 direct jobs | > 7.000 direct jobs |

Source: <http://www.worldportsource.com> and www.binnenschiff.de

Figure 4 shows the modal split of inland freight transport figures for 2012. The three categories are road, rail and inland waterways and for each category the modal split is calculated. This figure shows the Netherlands as the country with the highest modal split for inland freight transport (47.1), followed by Romania, Bulgaria, Belgium and Germany. The fact that Germany does not list second can be explained from the fact that Germany is a bigger country with, comparatively, less waterways than the Netherlands, thus more trucks are needed to transport the goods from rail or waterways to other places in Germany.

Figure 4. Modal split of inland freight transport in European countries, 2013

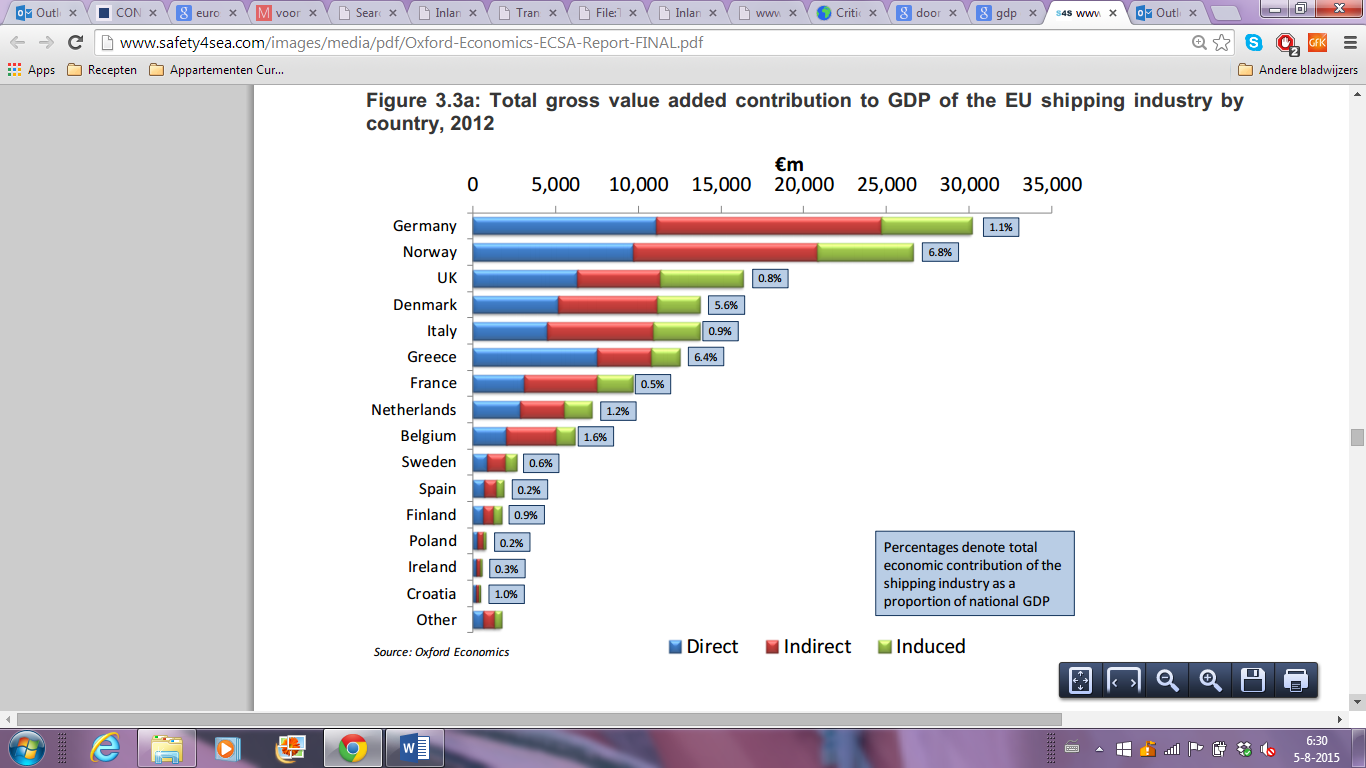
|  |  |  |  |
| --- | --- | --- | --- |
|  | Rail | Inland waterways | Roads |
| All 28 EU countries | 18.2 | 6.9 | 74.9 |
| Belgium | 11.8 | 15.8 | 72.4 |
| Bulgaria | 16.6 | 27.5 | 56.0 |
| France | 10.5 | 3.0 | 86.5 |
| Germany | 19.1 | 10.2 | 70.7 |
| Netherlands | 5.9 | 47.1 | 47.1 |
| Romania | 30.7 | 29.0 | 40.3 |
| Others: | 149,8 | 21,3 | 329,1 |

Source: Eurostat: Modal split of inland freight transport

## 2.2. General European interest

The general European interest of the inland shipping industry is big, considering the fact that the European Union was created to improve trade relations, transport conditions etcetera. European legislation on the inland waterway sector shows a strong commitment towards this sustainable way of transport, as will be explained in chapter 3, European legislation.

Figure 5 shows the total gross value added contribution to GDP of the EU shipping industry by country in 2012 in million euros. The blue box indicates the total direct contribution as a proportion of national GDP. For Germany this is 1,1 % and for the Netherlands this is 1,2 %.

Figure 5: Total gross value added contribution to GDP of the EU shipping industry by country, 2012

## 

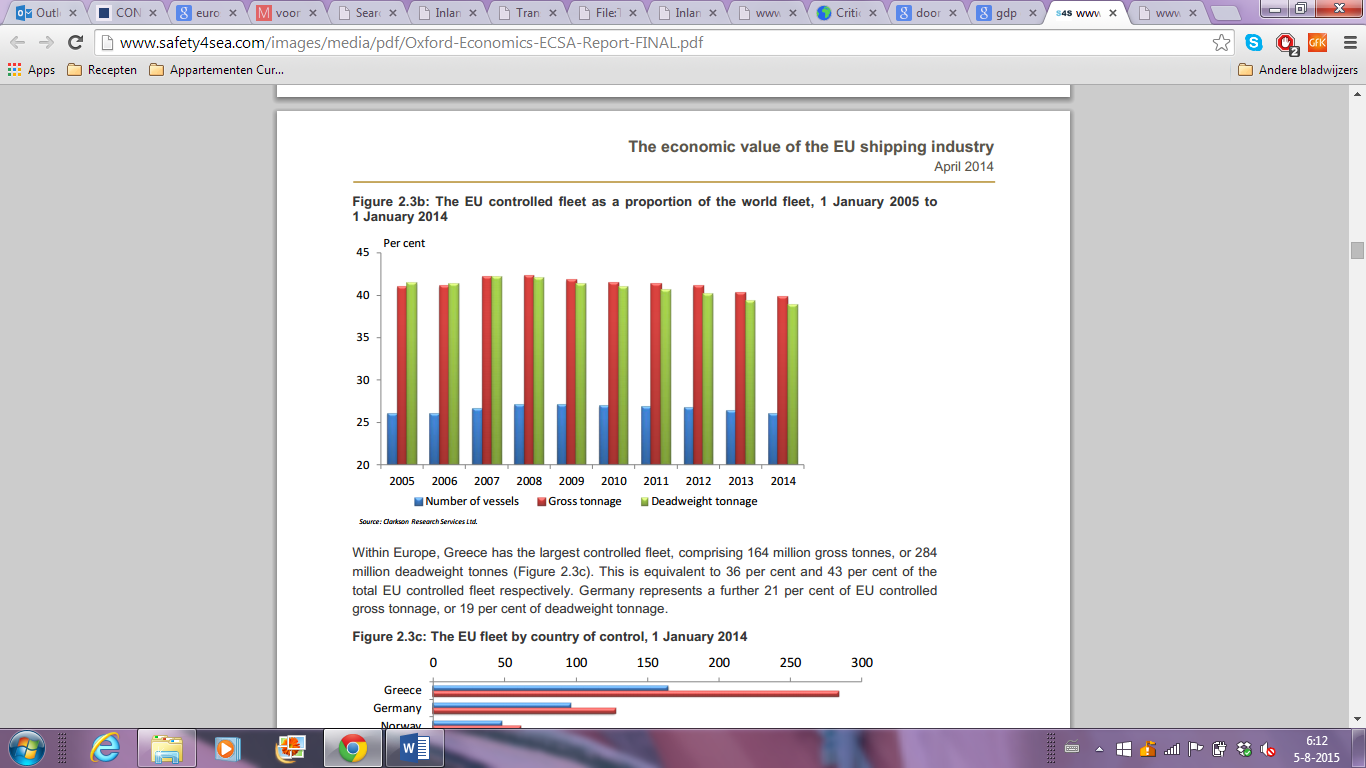
Source: Oxford Economics, the economic value of the EU shipping industry

What figure 5 shows is that Germany has the highest percentage of direct, indirect and induced GDP of all European shipping industry countries. While the inland shipping industry accounts to 1,1 percent of the German national GDP, it accounts to 1,2 percent of the Dutch national GDP.

Figure 6 shows the EU controlled fleet as a proportion of the world fleet from 1 January 2005 to 1 January 2014. The blue pillar shows the number of vessels, the red pillar shows the gross tonnage and the green pillar the deadweight tonnage. The difference between the red and green pillar is the following: gross tonnage is a measure of volume inside the vessel whereas the deadweight tonnage measures how much weight a ship can safely carry. This includes cargo weight, fuel, fresh water, ballast, provisions, passengers and crew (Economics, 2014).

This figure shows the high percentage of EU contribution to the world fleet, approximately 40 percent of all gross and deadweight tonnage in the world. The European interest of the inland shipping industry, therefore, is very high and problems will affect many, but not all, European countries.

Figure 6: The EU controlled fleet as a proportion of the world fleet, 1 January 2005 to 1 January 2014.



Source: Clarkson Research Services, the economic value of the EU shipping industry

# 2.3. Inland shipping people description

To understand the decisions taken by inland shipping entrepreneurs, a short anthropological description is necessary, because the individual decisions made by skippers are drastically influencing the market structure. Analyzing the traditional skipper and the traditional way of sailing could explain a lot about the reluctant attitude towards cooperation etcetera. A change in work attitude and mindset could solve some of the problems the industry faces, the opaque market for example. Moreover, the sector is sometimes traditional and slow in its approach towards innovation and renewal.

Erik van Toor was successively the advisor, manager and director of Kantoor Binnenvaart, director of Binnenvaart Branche Unie (BBU) and director of the Market & Economy department within Binnenvaart Logistiek Nederland. In January 2015, Van Toor left the Binnenvaart Logistiek Nederland organization to be director of a ferry service.

In an interview with the author, Van Toor points at several problems that are directly related to the skippers in the inland navigation industry.

First of all, there has not been a tradition of high-levelled education in the inland shipping industry. Entrepreneurial skills were often passed on from father to son and future skippers would learn only the maritime part at schools. As of today, future skippers follow a comprehensive education with special emphasis on entrepreneurial skills. Van Toor argues for the establishment of a life-long-learning environment to keep skippers up-to-date with the latest economic developments, further explore their leadership skills and provide the skippers with more knowledge so that they will have more power. Increasing confidence among skippers would enhance their negotiating position. According to Van Toor, skippers tend to make decisions based on their gut feeling, without or with little eye for the rational arguments. It clearly shows that some skippers lack entrepreneurial skills, a problem that can be coped with by providing trainings. Yet it is a culture that needs to be changed, and this might take a while. From an economic and rational point of view, the collaboration of inland skippers should lead to a better market position and the spreading of risks for the individual entrepreneurs (Toor van, 2014).

Secondly, according to Van Toor, skippers are known for their reluctance to change and often adopt a defensive position when it comes to change. An example of this is the implementation of an AIS system that encountered resistance of the skippers. The Automatic Identification System (AIS) is a system created to enhance the security of ships on the waterways. Using a transponder, sensors send and receive signals from other ships. These signals will be displayed on a screen so that it is visible where this vessel is and what the current speed is. The signals were also put online so that a ship could be tracked. The AIS system could be combined with the radar and waterways maps so that there would be one screen with different ‘layers’ that could be added or removed. Some skippers raised concerns about their privacy and feared that other skippers or other interested people could also see these signals and know where their ship was located or how far they had sailed in one week. The social control that is very typical for the inland skippers led to a narrow-minded opinion about a system that would actually help the skippers. Some skippers refused to implement the AIS system which led to dangerous situations, because skippers that were using the system suddenly encountered ships that they had not spotted on their screen. However, by the end of 2013 around 90% of all ships had implemented the AIS system and from then on the safety on the waterways increased significantly (E. Toor, personal e-mail, November 26, 2014).

Hein Danser has done a lot of work for the European Barge Organization and is currently a member of the BLN-member group < 86 meters. According to Danser, skippers have a narrow-minded view on their business and tend to make decisions about freigt tariffs based on their emotions. In addition, when skippers make a calculation for a certain transport, they calculate this for 24 hours per day which lowers your hourly wages instead of calculating for example 16 hours so that you have the possibility to sleep. Danser pleads for a change in the attitude of skippers so that they will behave more as entrepreneurs. An example of this is teaching young skippers that you should not make your cost price your freight tariff. Instead, young skippers should create a buffer and earn some money instead of being intimidated by intermediaries and only reach a break-even point (Danser, 2015).

According to the Dutch newspaper *de Volkskrant*, skippers and banks are to blame for the crisis. In 2011, the Dutch ministery of Infrastructure appointed inland shipping ambassador Arie Verberk to investigate the problems in the inland waterway transport. According to Verberk, skippers have a narrow-minded view which results in poor entrepeneurship, which should not be rewarded but rather discouraged through not giving them financial compensation. Furthermore, Verberk signals the skippers’ stubborn desire for freedom which hinders the establishment of a strong branch organization (Heijne, 2013).

# 2.4. The inland shipping industry in the Netherlands

According to Dierikx and Van den Berg, the Netherlands has a strong position in terms of logistics. Rotterdam is the largest port in Europe thanks to its strategic location, the port facilities, the water depth and the good connections with the hinterland. The Maasvlakte 2, which was finished in 2015, will make Rotterdam an even bigger springboard, expanding the area of the Port of Rotterdam (Dierikx & Berg van den, 2011).

The Dutch government is in many ways connected to inland navigation. The government manages the maintenance of waterways and major infrastructural facilities such as bridges, locks, berths, ports etcetera. It implements the rules as laid down by the European Union and other authorities with regards to working and resting times, the classification of waterways, the traffic signs to direct upstream and downstream navigation, speed limits etcetera. On the managing part, the government sets rules for fair competition, gathers information and comes up with solutions for existing problems (Dierikx & Berg van den, 2011).

According to Paardenkooper, the inland shipping industry is characterized by its relative low contribution to its infrastructure. Compared to the rail industry, the inland navigation industry pays next to nothing for the use and maintenance of the infrastructure (the canals, rivers, locks, ports etcetera). Even though this should lead to a comparative advantage, the inland navigation industry does not gain anything from it. Paardenkooper explains this by comparing the rail industry to the inland waterway industry. Comparatively speaking, the inland shipping industry has more disadvantages than the rail industry (e.g. long waiting times, low tariffs, overcapacity) and, thus, the comparative advantage regarding the low contribution to infrastructure is negligible (Paardenkooper, 2014).

# 2.5. The inland shipping industry in Germany

According to Van Toor, the structure of the German fleet is changing. Although there are no statistics to support this, there has been a decrease in the traditional enterprises of private skippers sailing with their wives. This change can for a large part be explained from a social perspective. The wives of the skippers have often spent a big part of their lives on the ship and their children had to go to a boarding school to receive education and housing, since it is impossible to drive your children to school every day when you are sailing. The women felt that they missed a big part of their child’s development and therefore choose to leave the ship and live in a house. Often, this house was bought as a second home to be used when the ship was far away and the skipper and/or his wife needed to be home for a certain reason. This reason is, again, often related to their children. If the ship would be somewhere on the Danube and the children would be on the boarding school in Duisburg (DE), for example, the skipper and his wife could decide to drive home to see their children. Another reason for buying this house is to catch up with your family and friends after being away for a long time (Toor van, 2014).

Particularly in Germany, there are more large-scale companies that own a specific type of ship: the push barge, see figure 7.

Figure 7: Push barge. Source: www.debinnenvaart.nl, 2007

These big enterprises negatively affect the other skippers, because the ships have the capability to transport up to four times more in one trip compared to an average ship (Toor van, 2014). The problem of overcapacity and the inflexibility of the fleet (not able to adapt when demand decreases, only when it increases) are taken to a higher level with these enterprises. It is hard for one ship to adapt to a decrease in demand, let alone for an enterprise. On the other hand, it could be easier for an enterprise to adapt because it is easier to compensate when times get better. The annual costs are usually around the same and profits can increase when the water level drops (as explained in the *Klein Wasser Zuschlag* (KWZ)) or other conditions improve.

In January 2015, the German government announced its plans to implement road taxes for the German highways in 2016 and toll collection for waterways in 2017. The plans are surprising, because the Mannheimer Akte/Revised Rhine Navigation Act of 1868 prohibits levying toll (Rhine, 2014) and it is very likely that the European Union will rule against these plans, if brought forward, because it infringes upon European legislation regarding free movement of goods, persons and capital. This measure could also be explained as market manipulation, another reason for the European Union to rule against this measure. The text in the Act of Mannheim of 17 October 1868 speaks of:

The Mannheim Act of 17 October 1868 upheld both the principle of the absence of tolls levied for navigation on the Rhine and the possibility for those States that were members of the Central Commission to adopt common regulations (subject to a veto by any State) (CCNR, Organization, n.p.).

Another governmental measure in Germany relating to the inland shipping industry is the proposed fax-obligation that requires skippers to fax their personnel files every time they cross the German border. The measure aims to establish minimum wages and the German authorities see fax equipment as the only lawful way to mail personnel files. The Dutch trade organization BLN-Koninklijke Schuttevaer has announced that they have presented the issue to the Dutch and European authorities because it sees the fax equipment as too complicated and many skippers do not even have fax equipment. The substantial amount of administration is very annoying and ineffective. Furthermore, the skippers denounce the privacy-sensitive information they have to share. BLN-Koninklijke Schuttevaer has pointed at the fact that the minimum wages of Germany and the Netherlands are almost the same and that this is an unnecessary measure that will result in nothing but paperwork (Heel, 2015). This measure has to be investigated by the European authorities because it looks like a restriction on the freedom of movement of people, goods and traffic in Europe. This matter was still under discussion when this paper was published.

## 2.6. Representation analysis

### The Netherlands In order to analyze the representation of the inland shipping industry the representing institutions will now be discussed. Three main bodies are worth considering: BLN-Koninklijke Schuttevaer, CBRB and ASV.

The BLN-Koninklijke Schuttevaer represents almost 2500 inland skippers. BLN is an abbreviation of Binnenvaart Logistiek Nederland and is a merger between BBU, Schuttevaer and CBRB-VO. BLN-Koninklijke Schuttevaer is composed of six member groups where skippers can participate to debate, ask questions and share knowledge. BLN-Koninklijke Schuttevaer is active in the following areas: environment, security, nautical-technical, infrastructure, market, economy, education and social (Nederland, 2010)

CBRB is an abbreviation for Centraal Bureau voor de Rijn- & Binnenvaart. According to its website, it is the biggest employer and entrepreneur organization in the inland shipping industry and consists of seven member groups. In reality, however, they have 100 skippers as active members and are, consequently, not the big representative organization they claim to be. The key difference between BLN-Koninklijke Schuttevaer and CBRB is that in CBRB the majority consists of charterers, whereas the majority in BLN-Koninklijke Schuttevaer consists of skippers. The decisions of both organizations, therefore, are often conflicting. Yet, this key difference is not perceived as an absolute obstacle. In the future, it is very likely that CBRB will join forces with BLN-Koninklijke Schuttevaer, although some charterers may not agree with this and may decide not to follow this course (Toor van, 2014).

ASV, the Algemene Schippers Vereniging, is a relatively small organization with 50 to 100 members. The organization has four key objectives: a social/economic acceptable situation in the inland shipping industry, an equal division of benefits and burdens, fair competition between transport modes and maintaining independence (Vereeniging, 2015).

Regarding the inland shipping industry representation in the Netherlands, there is a lot of discussion and on many occasions the organizations do not agree with each other. BLN-Koninklijke Schuttevaer is a relative new organization, coming from a merger which took a long time to be accomplished. Still, there is a lot of discussion going on in this specific representative organization regarding which course it should follow. The organizations are recommended to join the BLN-Koninklijke Schuttevaer organization so that the industry can speak with one voice.

### Germany

According to the website of the *Bundesverband der Deutschen Binnenfahrt* (BDB), this organization was established in 1974 as a merger of several representative organizations. Its seat is in Duisburg and it has a political body in Berlin. In 2013 it merged with *Arbeitgeberverband* *der Deutschen Binnenschiffahrt* (AdB) and currently has 111 skippers as members. The statutes of the organization speak of a representative organization where skippers can turn to in order to receive guidance. The organization strives to defend the interests of the members in politics, administration and other institutions. Furthermore, BDB strives to expand the waterway infrastructure while taking into account ecological concerns. BDB wants to anchor the environmental friendly performance potential of the inland shipping industry, while integrating waterways into the logistics system. Examples of this are initiatives to make ships more sustainable and enhancing the green image of the sector. BDB actively participates in shaping the economic conditions of the inland navigation industry and defends the interests of its members in collective bargaining, personnel, social and educational policy matters. Since the merger with AdB, BDB has also taken over the representation of the interests of this association. BDB is involved at a European level where decisions are being taken and works, consequently, closely together with other international inland maritime organizations such as the European Barge Union (EBU) and the Central Commission for Navigation on the Rhine (CCNR) as well the Dutch representative organization CBRB (BDB, 2014).

A competing organization in Germany is the *Bundesverband der Selbständigen* (BDS). According to its website, this organization has over 100.000 members. BDS aims to protect, enhance and maintain the independent inland skipper entrepreneur in terms of economics and companies. It represents the interests of the independent entrepreneur especially regarding traffic, economics, taxes and business developments.

BDS and BDB share a website called *Die Deutsche Binnenfahrt* where daily news in the German inland shipping industry is published. This, albeit small, collaboration between these two large representative bodies should be encouraged by the European institutions and used as an example for other countries.

### The European Union

### The Central Commission for Navigation on the Rhine was established in 1804 with as primary task to coordinate work on regulating the Rhine, setting up rules for navigation and promoting navigation on the Rhine. Gradually, the commission implemented more regulations and expanded its portfolio. The organization consists of five member states: Germany, Belgium, France, Switzerland and the Netherlands. Meetings are held twice a year at the headquarters in Mainz and each member state may elect four representatives (CCNR, Organization, n.p.).

The European Skippers Organization (ESO) was founded in 1975 as a representative body of skippers on a European level. The council is composed of Belgian, Dutch, French, German and Polish inland waterway transport organizations and its seat is in Brussels (ESO/OEB, 2015).

The ESO works closely together with the European Barge Union (EBU). This organization has its seat in Brussels and Rotterdam and was founded in 2001. According to their website, the EBU has four central aims:

1. The development of the European transport policy;

2. The improvement of the economic position of the inland shipping industry;

3. The structured cooperation with (inter)national institutions;

4. The exchange of information and experience between the parties involved (Union, 2015).

According to Van der Velde, the key difference between ESO and EBU is that the members of ESO are skippers and the members of EBU are intermediaries. Because these members have conflicting interests attempts to merge these two organizations have not been successful yet, although lately there have been some developments where intermediaries have joined ESO (Velde, 2015).

According to Van der Velde, ESO and EBU share the same vision on technical regulations, harmonization, education and infrastructure. However, when it comes to solving market problems the two institutions do not agree on one solution. Whereas ESO supports a regulated market, which includes capacity control and market transparence, EBU strongly rejects any measures related to capacity control. The two organizations can be compared to the Dutch BLN versus CBRB organizations (Velde van der, 2014).

## 2.7. Industry analysis conclusion

## The relationship between the rail industry and the inland shipping industry is twofold. On the one hand the two industries are direct competitors in that especially on long distances both train and ship are beneficial. However, according to Van Toor the rail industry is gaining popularity in terms of environmental considerations. Trains can come where ships cannot and the other way around. Both industries can be seen as complementary to each other (Toor van, 2014).

According to Paardenkooper, the traffic jams that are often caused by trucks should create a shift towards more transport via waterways, because the ships that transport cargo often carry only half of their maximum capacity. It costs a lot of money if a ship is not employed, so to speak. Consequently, skippers are willing to transport even half of their capacity as long as it covers their cost price or not even their cost price (Paardenkooper, 2014).

Additionally, the difference between rail and water transport is made clear when looking at the way they are organized. In the Netherlands, *Nederlandse Spoorwegen* is the monopolist in the rail transport industry. In Germany, the *Deutsche Bahn* is the monopolist that dominates the German rail transport market. Whereas the rail industry is characterized by big providers with a relative big share of the market, the inland shipping industry shows many small providers that do not have much market share. The strength of the rail industry is that cooperation is easier because there are less parties involved and actions of two or three parties will already have big influences on the industry, although the European Union will closely monitor this under the anti-trust legislation. The inland shipping industry, however, faces many problems in terms of cooperation and representation. The industry itself is very different from the rail industry in that ships are mostly privately owned and skippers tend to adopt a defensive/protective stance when it comes to their independence.

# Chapter 3) The European Union and its relevant policies

Initially called the European Economic Community, the aim of the international European organization was to bring economic integration among its member states, including a common market. The focus on trade, transport and a free market is clear when taking into account the three freedoms of the European Union: the free movement of people, capital, goods and services. A practical look at several regulations, directives and recommendations shows the involvement of the European Union in the inland shipping industry.

An example of a European directive that shows how the European Union occupies itself with the inland shipping industry is the directive on technical requirements for inland waterway vessels (Directive 2006/87/EC). For this directive, the Central Commission for Navigation on the Rhine (CCNR) and the European Council worked together on implementing technical requirements for inland waterway vessels. The directive sets out requirements that have to be met when sailing on the Rhine, such as alarm systems, navigation lights, safety equipment, rules for oil storage etcetera.

Another directive related to the inland shipping industry is Directive [2008/68/EC](http://europa.eu/legislation_summaries/transport/waterborne_transport/tr0006_en.htm) on the transport of dangerous goods, establishes common rules for all aspects of inland transport, including inland navigation. These rules are uniform and to be applied in all member states. The classification of dangerous goods is given as well as a transport limit for certain substances. In addition, the directive lays down the documentation obligation and its details.

In 2006, the European Commission adopted project NAIADES. The NAIADES program “focuses on making long-term structural changes in the inland waterway transport sector, to enable it to contribute fully to the Europe 2020 strategy, which aims at smart, sustainable and inclusive growth”. According to the European Commission, inland waterway transport has a high transport capacity, low transport costs, no congestion, low energy consumption and offers secure transport services. However, there are many challenges which need to be solved. The report points at 5 concrete actions for NAIADES II, namely: infrastructure, fleet, market and jobs, information and sharing. The market aspect will be reviewed because of its relevance for this paper. The Commission aims to provide market incentives for the inland shipping industry. Examples of this are promotion and awareness campaigns, support to modernize the fleet, adopting harmonized solutions and through supporting European measures to support the functioning of the market. Examples of these measures are stimulating competition and perspectives for growth for small medium enterprises in the sector (Commission E. , Towards "NAIADES II" , 2012)

Following the first NAIADES initiative, a successor was launched: NAIADES II, aiming to create the program for the period 2014-2020. NAIADES II aims to make the inland navigation transport a quality mode of transport by improving the infrastructure, environmental performance, markets, skills, jobs, innovation and the overall integration into the logistics chain. In the NAIADES II project, The European Commission “will undertake short-term actions consistent with the principles of liberalized markets” (Commission E. , Towards quality inland waterway transport, 2013). These actions, however, are for a substantial part related to technical requirements and harmonizing regulations. The action of the Commission will include: “reviewing the transitional provisions for the technical requirements of vessels, continuing analysis of market developments to inform policy-making”. Basically, all the Commission can do is inform their member states and urge them to follow some of the ideas the Commission gives.

Three main elements can be found in the NAIADES 2 project:

- An initiative called “Greening the fleet” to reduce emissions in inland waterway transport;  
- A proposal regarding technical requirements for inland waterway vessels;  
- A proposal regarding an amendment to promote inland waterway transport (Naiades, n.p.).

The bottom line of the NAIADES 2 project is:

In 2008, the European Commission initiated the PLATINA project, consisting of 23 partners from nine different countries. The PLATINA plan built on the European Commission initiated NAIADES plan, which was a broad action plan to “enhance the use of inland navigation as part of intermodal freight solutions, in order to create a sustainable, competitive and environmentally friendly European wide transport network” (Platina, 2008). In 2012, this project was finished and followed by PLATINA 2 which aimed at bringing together all relevant actors in the sector. The aim was to build a knowledge network that could be used to develop the inland navigation and make it more sustainable, while at the same time improving the competition amongst the European transport networks (PlatinaTwo, 2012)

“Systematic market observation, the extension of de minimis to waterway transport, a revision of the fuel quality directive and low-sulphur fuel, better inclusion in the European infrastructure plans and the appointment of an infrastructure coordinator for inland waterways, a funding handbook, multi-disciplinary project planning and better promotion of the transport (Europe, www.inlandnavigation.eu, 2014)”.

In the first NAIADES report, the European Commission identifies several trends that are negatively influencing the inland shipping industry. The Commission indicates the deterioration of economic and environmental prospects, the overcapacity in certain segments and continued fragmentation. This is all on top of the economic crisis since 2008 (Commission E. , Towards quality inland waterway transport, 2013).

The initiatives show the European commitment towards identifying and solving the problems in the European inland shipping industry. Even though some countries might make more use of these solutions than others, it can be assumed that all member states will benefit from a better economy in one or more of the member state countries.

Van Toor lists several advantages of the European Union and the positive effect it has had on the inland shipping industry. First of all, the free movement of people, goods and services has provided the inland shipping industry with more transport opportunities. Secondly, the European Union has set rules that apply to the whole industry, aiming to create fair competition in the market. The harmonization of the market would eliminate unfair practices, such as transporting cargo for tariffs that do not cover the cost-price. This is supported by ASV, that urges “the harmonization of regulations in the fields of education, social security, manning requirements, the labor market and the fiscal differences between the member states” (ASV, Pamphlet: "The Value of Small Inland Shipping", 2012).

According to Van der Velde, from 1998 to 2003 the so-called “old-for-new” rule was applicable to the inland shipping industry. If, during this period, a new ship was built, an old ship had to be demolished. This ensured a stable supply side, market stability and better prices for the skippers. (H. Velde, personal e-mail, November 4 2014) According to the European Council:

“the Commission expressed the view that the "old for new" rule had become indispensable for the balanced operation of the inland waterways market. Moreover, it seemed that the rule needed to be maintained in order for the effects of scrapping measures taken since 1989 not to be cancelled out by new tonnage being put into service once the Regulation expired” (Council, 1999).

According to Van Toor, there is currently a political unwillingness to reactivate this rule (Toor van, 2014). This could be explained from the entrepreneurial environment the Netherlands has. Investing is always encouraged and if the government would not start promoting the demolishment of ships, banks and investors might be scared off. In addition, banks would suffer losses if the ships in which they invested a lot of money will be demolished. However, the government or the European Union could offer compensation to the banking sector to (partly) cover their losses.

In 2013, the Central Commission for Navigation on the Rhine presented its vision for 2018. This roadmap with strategic guidelines show how CCNR will contribute to the sustainable development of inland navigation, in terms of ecological, social and economic changes. The objectives aim to tackle the problems of the inland shipping industry regarding safety & reliability, training & qualificiations, fuel consumption & emissions of greenhouse gases, emission of pollutants, changes in environmental conditions, logistics chains and social conditions. By 2018 the inland navigation should have a strong position as a safe mode of transport and the reliability of the services should have been improved to keep up with the market demands. The vision entails a substantive amount of practical objectives such as creating one single standard for technical requirements for inland navigation on the Rhine and other rivers (CCNR, Vision 2018, 2013).

Perhaps the biggest, most relevant European Union policy is the legislative framework for competition. According to the European Commission, three main pillars are antitrust, state aid and merger control (Commission E. , 2013). In a report written by STC-Nestra, the European laws that are applicable in the inland shipping industry, notably regarding its cooperation efforts, are laid out. The report mentions the tension between a possibility to form a cartel and a genuine effort of skippers to overcome their problems through cooperation. According to STC-Nestra, an agreement is not prohibited under the anti-trust rules if the position of the relevant parties is considerably low. In other words, if the agreement hardly influences competition, the agreement is not subjected to the anti-trust rules. The European Commission has ruled that a cooperation will not restrict competition if the market share does not exceed 10 percent in case of competitors or 15 percent in case of non-competitors (STC-Nestra, Versterking van de binnenvaartsector, 2015). The whole framework is explained in the report of STC-Nestra, including exceptions made for efficiency advantages and exceptions for the inland shipping industry. The following rules apply:

- Council Regulation (EC) No 1/2003 on the general antitrust procedural framework, applied to transport by rail, road and inland waterways (EUR-Lex, 2002);

- Council Regulation (EC) No 169/2009 applying rules of competition to transport by rail, road and inland waterway (EUR-lex, 2009)

Regulation 1/2003 speaks of “a need to rethink the arrangements for applying the exception from the prohibition on agreements, which restrict competition, laid down in Article 81(3) of the Treaty.” The Treaty that is being referred to is the Treaty establishing the European Community. The competition authorities of member states were given more power to apply community law and a stronger role for the European Commission is applied (EUR-Lex, 2002). The issue is very important because it concerns trade between member states, an important aspect of the European Union.

Regulation 169/2009 lays down the scope of the law as well as exceptions for technical agreements and exemptions for groups of small and medium-sized undertakings. According to article 3:

*Agreements, decisions and concerted practices as referred to in Article 81(1) of the Treaty shall be exempt from the prohibition in that Article where their purpose is:*

|  |  |
| --- | --- |
| *(a)* | *the constitution and operation of groupings of road or inland waterway transport undertakings with a view to carrying on transport activities;* |

|  |  |
| --- | --- |
| *(b)* | *the joint financing or acquisition of transport equipment or supplies, where these operations are directly related to the provision of transport services and are necessary for the joint operations of the aforesaid groupings;* |

*Always provided that the total carrying capacity of any grouping does not exceed:*

|  |  |
| --- | --- |
| *(i)* | *10 000 metric tons in the case of road transport;* |

|  |  |
| --- | --- |
| *(ii)* | *500 000 metric tons in the case of transport by inland waterway.* |

*The individual capacity of each undertaking belonging to a grouping shall not exceed 1 000 metric tons in the case of road transport or 50 000 metric tons in the case of transport by inland waterway (EUR-lex, 2009).*

Under this article, it is possible to establish collaborations, if these rules are followed. During an interview with the author, Van Toor pointed at the European Law on competition that prohibits:

“The fixing of transport rates and conditions; the limitation or control of the supply of transport; the sharing of transport markets; the application of technical improvements or technical cooperation; the joint financing or acquisition of transport equipment or supplies where such operations are directly related to the provision of transport services and are necessary for the joint operation of services by a grouping of road or inland waterway transport firms.” (Toor van, 2014)

In practice, this blocks the inland skippers from taking collaborative action. Two skippers cannot make agreements on the prices for which they will transport cargo. If they were allowed to do so, however, the prices for transport would increase and the inland navigation industry could escape its vicious circle. Paradoxically, the EU regulation 718/2009 gives the industry the opportunity to cooperate in scales until 500.000 tons. This regulation is hardly used by the individual entrepreneurs (Toor van, 2014).

The problem of cooperation and the European law against cartels is supported by Heijne, who states that the easiest solution is when skippers collectively decide to refuse transportation if it does not cover their cost price. This, however, is prohibited under the European anti-trust rules (Heijne, 2013).

# Chapter 4) Possible solutions

## 4.1. Former initiatives The problems of the inland shipping industry are manifold and there is not one simple solution to create a better freight market. The problems are complex and diverse. They require an unanimous approach, but this is difficult due to a fragmented representation and a strong own-boss sentiment of the skippers. Several attempts to solve the problems have so far not created a fundamental change in the market structure of the inland shipping industry. In order to come up with potential solutions for the problems in the inland shipping industry, it is considered worthwhile to look at former initiatives and analyze their (in)effectiveness.

In August 2014, Belgium introduced a ban on transporting/storing goods against dump prices. Even though the European guideline obliges the free market and free prices, another decision showed that low tariffs are unauthorized if their aim is to eliminate competition. Belgium followed this guideline and obliged companies to transport/store goods only if it covers the cost price (Transportmedia, 2014). However, this will not solve the problem of overcapacity, because there will still be the same amount of barges on the market and this solution, therefore, is a short-term one, if it even is one.

In December 2009, the organization for European United Barge Owners was created. According to their website, EUBO was established because it sees cooperation as the only way to combat the crisis. EUBO wants to restore the power balance in the market. The organization points at the power of the intermediaries as a big cause of the current problems since they deal with maximum 100 transporters on the supply side and over 3000 skippers on the demand side. According to EUBO, this leads to a wrong power division where the skippers do not receive acceptable freight tariffs (EUBO, n.p.).

# 4.2. Market regulation as a solution? In order to answer the central question of this paper, the idea of market regulation has to be analyzed. If the market were to be regulated, how should this be done and by whom?

In September 2014, the European Skippers Organization started negotiations with the European Commission about a market observation and a system of transparence. A policy paper of September 27th shows a total of 14 proposed measures, which are the following:

1. Measures concerning the cost recovery - anti-dumping measures and transport conditions;

2. Market transparency;

3. Conducting a study on the operating costs of vessels;

4. Analysis of financial instruments;

5. The establishment of an observatory for transport rates in EU, based on the costs of the ships, to make it possible to maintain (in accordance with the law) acceptable freight rates;

6. The standardization / harmonization of the financing base of European inland shipping companies, minimum the Netherlands, Belgium, France, Germany, Luxembourg and Austria;

7. Regulating the profession of all intermediaries in transport on European level;

8. Review of the technical requirements for the existing fleet based on usefulness and necessity;

9. Promoting transparency, communication and participation concerning bringing about regulations by and in working groups of f.e. CDNI, ADN and CCR;

10. Standardization of loading and unloading conditions (waiting time and duration of loading / unloading) and the transport conditions within the European Union;

11. Old for new regulation with nuances and on the basis of a survey of the market (experts group);

12. Deactivation (measures) of fleet capacity. No financial implications for the Member States expected. Possibilities: export, adapting exploitation mode, reducing sailing time, scrapping, etc.;

13. Support for all forms of cooperation which improve the market mechanism, such as inland associations, partnerships and cooperation;

14. Modernization of crew regulations (ESO/OEB, 2015).

According to Van der Velde, the policy paper is still an ongoing story. The Central Commission for Navigating on the Rhine (CCNR) will refine the market observation system to make it an instrument for short- and long-term solutions. In addition, the ESO will soon work out the details for the last proposal about the modernization of crew regulations (Velde, 2015).

The market observation would be in hands of the Commission, which would receive all information of the involved actors. An institution for consultation and arbitration would be established and integrated in the European Market observation system (ESO/OEB, 2015). Observation in itself is not a new concept, the European Union is constantly observing, analyzing and encouraging the trade relations in the European Union. Regulating these markets, however, is an entirely different thing. While it is true that the European Union is involved in a lot of aspects of trade, it cannot simply dictate prices or interfere in markets, unless the member states ask for European rulings for example.

According to Totaaltrans, what member states involved in inland waterway transport should do is apply for the ‘structural market disruption procedure’ at the European Commission. If the member states apply for this procedure, the European Union is allowed to take capacity reducing measures. In 2009, the Netherlands initiated this but Germany and Belgium refused to follow their example. Belgium, in 2013, did not follow through with its application, even though the Belgian state secretary of Mobility, Melchior Wathelet, said that he would start the application procedure (Totaaltrans, 2013).

A market observation and/or regulation would require European involvement and regulation could expand to market interference, cartel building and/or monopolization. As mentioned before, according to Van der Velde, the European Skippers Organization and the European Barge Union do not share the same vision on market regulation or capacity reducing measures (Velde, 2015). It would, therefore, be very difficult to implement a European market regulation system if the European representation organizations would not support this.

Market regulation would, consequently, not be the solution for problems in the inland shipping industry, considering the resistance it already faces in the European representation branch and the refusal of member states to involve the European Union in their problems. Market observation, however, is already taking place and should be fully supported by all member states involved in the inland shipping industry.

## 4.3. Defining and calculating the cost price to enhance bargaining position Three key concepts have to be explained in order to understand the problem and the necessity of defining the cost price.

The first concept is the marginal costs calculation. In this concept you calculate the minimal costs per year.

The second concept is the exploitation costs. This concept covers all costs, including depreciation.

The third concept is the cost price. Basically, the cost price should be made by subtracting the costs from the profit made per trip (in case of a ship). Yet, it is hard to have a uniform standard regarding which costs should be subtracted. Some economics plead for including the retirement costs and the costs for a disability pension, others say this should not be included. Some economics and banks divide the recurring expenses over 330 days per year, others over 365 days per year. In general, the cost price covers all costs excluding depreciation.

These three concepts are often confused, when one skipper is talking about marginal costs, the other skipper is under the assumption that the cost price is being discussed. In general, the cost price is used to calculate what price the skipper should get per day for a certain transport.

Bart Verkade is skipper and business economist. In a column written by Verkade, he points at the elements that should be included in the cost price and he states that there is a lot of discussion regarding which elements should be included and which should be left out. It is, therefore, impossible to prohibit transporting/storing goods below cost price. Instead, Verkade pleads for a minimum tariff for everyone as the only option to stop people from transporting cargo when it does not cover the costs, but this is not allowed under EU competition law (Verkade, 2013). Subsequently, there seems to be a deadlock. It looks like all alternatives have been examined and none of them can provide any solution.

Four initiatives have been set up to help skippers calculate their cost price:

1. A calculation program called *Kostprijsprogramma*. This program has been developed by a skipper, is very simple and does not take details into account. This program can be used to calculate your cost price by entering your costs (e.g. fuel, labor costs) and revenues (the price you receive from the intermediary), after which the program will tell you whether you made profit on this particular trip or not;

2. Profit planner is a software program for billing and cost calculation for the inland shipping industry. It is developed by Autena Marine and builds a historical overview of all trips and shows if the cost price was covered or not. Basically, this program shows the growth or decline of your company’s profits;

3. *Bargelink + LogoS + Vaart Vrachtindicator* is a combination of three internet applications that, if used simultaneously, provide a clear overview of the cost price;

4. *Vrachtbemiddeling en Markt* is an online program that helps negotiate prices, analyzes the industry and provides insight in the costs and profits (Binnenvaart, 2013).

If these four programs would be combined, it could be possible to create one program to be used by all skippers. The enforcement of this program could be used by either punishing those who are not using it or awarding those who are.

The correct calculation of a company’s cost price would pave the way towards two achievements:  
1. It would give the skipper, on the short term, a rational argument to accept or refuse an offer made by an intermediary which would enhance the bargaining position of all skippers, as explained before;  
2. It would be a long-term solution as this would create a platform for all skippers to participate instead of doing what is best for their own.

# 4.4 Demolishing ships as a solution?

As early as in 1988, the problem of overcapacity was signaled by the European Commission and solutions were being proposed, including a mandatory demolishing fund. At the time, the writers did not have much time to prepare their proposal due to time restrictions and thus it was proposed that the current national demolishing funds would be harmonized instead of establishing an international demolishing fund (Raad, 1988). However, it could be argued that these propositions have not led to a solution of the problem of overcapacity, because the situation nowadays is almost similar to or perhaps even worse than the situation back then. Subsequently, it is time for more drastic measures which could include an international demolishing fund, mandatory for all member states of the European Union involved in inland shipping + Switzerland. In 1988, the European Commission made the following recommendation, later known as the “old for new rule”:

“All enterprises involved in transporting cargo (either privately owned corporations or shipping companies) should be obliged to   
a) demolish the amount of tonnage equal to the amount of tonnage being bought/build  
b) deposit a special contribution in a fund in case the transporter does not wish to demolish  
pay an amount of money in case they buy a new ship” (Raad, 1988).

According to BLN-Koninklijke Schuttevaer, the so-called “demolishing fund” was created in 1999 and cancelled in 2003. The money in this fund came from this so-called “old for new rule” or “old for new fine” and has increased to 34 million euros which can be spend on various affairs. Three main expense purposes have been identified:

1. Going green: for example researching new technologies for engines;  
2. Improving European representation: legislation is often passed on a European level, more money would mean a stronger lobby and more influence;  
3. In-service training for entrepreneurs: broaden the possibilities of in-service training

Both the European Skippers Organization (ESO) and the European Barge Union (EBU) need to have a unanimous recommendation for the European Commission before the money from this fund can be spent (Nederland, 2010).

According to the European Skippers Organization, a market observation system could help to reactivate the “old for new rule”. Furthermore, exporting ships could be investigated. In addition, ESO points at potential problems that could arise if a scrapping fund were to be revived. First, many skippers do not want to leave their profession, which would happen if they would put their vessel up for scrapping. On the other hand, entrepreneurs of ‘young’ vessels want to leave the profession because of age considerations. If those two facts could be combined, the skippers wanting to continue their business could do so on a ‘young’ and newer vessel. However, not all vessels that belong to the overcapacity sector can be scrapped. Most of those vessels are young and overinvested and it is not easy for banks to see their investment literally disappear before their eyes. There has been an overinvestment, both in number and in vessels. Scrapping all vessels that are, supposedly, causing overcapacity, would be very unwise and could in the future create a problem when there is more demand for these vessels. A temporary shutdown could be a better idea to stabilize the market (ESO/OEB, 2015).

# 4.5 Cooperation as a solution?

In a report, published in March 2015, Melanie Schultz van Haegen, the Dutch minister of Infrastructure and Environment, urges the inland shipping sector to foster better cooperation. The minister encourages commercial cooperation initiatives that can create more stability in all levels of the sector. The minister points at the report “Versterking van de markstructuur in de binnenvaart” (STC-Nestra, Versterking van de binnenvaartsector, 2015). This report was written by STC-Nestra commissioned by the Dutch ministry of Infrastructure and Environment. The report distinguishes between vertical and horizontal cooperation, analyzed potential cooperation methods for the inland shipping industry as well as the advantages and disadvantages of collaboration. It points at the intermediaries as strong players in the market and examines the European framework for cooperation. The main conclusion of the report was that there is need and space for cooperation initiatives on specific market divisions, considering the many advantages. Four main pillars should be created, namely:

1. Realize trust, awareness and comprehension;

2. Inform about and explore different cooperation methods;

3. Offer support for drafting a detailed business plan and statutes;

4. Enhance decision-making and market information in the inland shipping industry (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015).

These four pillars will be explained in more detail in the recommendation section. The results of the report will, hopefully, also contribute to support the meetings between parties regarding initiatives to stimulate entrepreneurs to cooperate. Involved parties are, amongst others, the representative organizations CBRB and BLN-KSV as well as the banks ING, ABN-AMRO and RAOBANK, the shipping organization EVO and the Dutch ministry of Infrastructure and Environment*.* It is essential that the cooperation initiatives aim at offering better of more efficient services to the buyer (Rijksoverheid, 2015).

The European Union funds projects that aim to enhance cooperation between member states. Examples of this are SMARTyards and RETROFIT. Smartyard aims to “create and maintain a sustainable network of small and medium-sized European shipyards, design offices, service providers and equipment suppliers” (Smartyard, n.p.). RETROFIT aims to improve the “environmental efficiency of waterborne transportation, specifically the environmental footprint of existing ships” (Retrofit, n.p.). These two projects are funded by the European Union and aim to improve cooperation especially between the Dutch and German maritime sector but also between other countries involved in the inland shipping industry. Another example is the cooperation and partnership between Netherlands Maritime Technology and the German maritime association VSM. These two organization work closely together with the Center of Maritime Technologies. Combined, these three organizations have a big knowledge database and can work together on many subjects (Technology, 2015).

In summary it can be concluded that all stakeholders on all levels underwrite the problems, the causes and the possible solutions. However, how the solutions should be implemented remains a matter of discussion. Cooperation and communication is essential to keep the process going while exchanging knowledge and creating better conditions for all parties in the inland shipping industry chain.

# 4.6 A change in the market structure as a solution?

The problem of a skewed distribution of power lies in the system. The market is structured in such a way that the skipper pays a set amount of money to the intermediary/chartered. The intermediary then tries to find a ship that is willing to transport the cargo for less than this money because the chartered needs a commission (his profit) and wants to build a buffer. The intermediary, therefore, has an interest in “selling” the cargo as cheaply as possible and because of his power position he can play ships against each other. This in itself is how the market works and is not a negative development per se. The negative consequence is that at the end of the year the charterer is left with the buffer that he keeps to himself. A solution could be a cooperation where the intermediary is an employee of the skippers. In reality, nothing will change except for that the charterer will divide the profit amongst the skippers. The skippers, in turn, would create a joint venture which would enable them to cope with the price differences. If prices fall, the skippers jointly share the losses, if prices pick up the skippers share their profit.

# Conclusion

In conclusion, the inland shipping industry in the Netherlands and Germany has developed itself as a sustainable transport mode compared to air or road transport. However, the sector is faced with general and country-specific problems that hinder the growth of this sector. General problems include the dependence on the weather, changes in the market structure, structural overcapacity and market opacity. The industry will always be dependent on the weather and it is hard to solve this. However, initiatives such as the *Klein Wasser Zuschlag (KWZ)* or *Laag Water Toeslag (LWT)* could help skippers to collectively overcome difficult times. Initiatives aimed to improve collaboration should be encouraged by the Dutch, German and European authorities.

The question that arises is whether market regulation could be solve these problems. One of the representative organizations (the European Skippers Organization) is already working on this, in cooperation with the European Commission. Fourteen measures have been proposed and are now under investigation. However, regulation per se is not the solution because the problems are various and require different solutions. It would be better if instead of market regulation market observation would take place. This could be combined with other solutions, such as improving entrepreneurial skills, demolishing ships, more cooperation initiatives and changing in the market structure.

Overcapacity in the size and number of ships developed itself under the supervision of the banks and is now one of the biggest problems the industry is facing. Because of this overcapacity there is an imbalance between demand and supply. Intermediaries, the middlemen between transporters and skippers, are faced with a few transporters on the supply side and many skippers on the demand side, which pressures the freight tariffs and gives the middlemen a lot of power to play skippers off against each other. Several solutions to solving the problem of overcapacity have been presented, such as demolishing ships and reinstating the old-for-new rule. Under this rule, if a new ship is being built, the old/former ship has to be demolished or a fine has to be paid. However, banks are unwilling to pursue the old-for-new rule because their investment in the ships is large. Demolishing ships could be a solution, especially if older ships are being demolished. This, however, should be done on a European scale as to avoid solving the problem in just one country while the problem is still present in other countries. Still, the key solution would be if skippers were to bundle their strengths and collaboratively tackle the issues.

A lack of market transparency or opacity only adds fuel to the fire. A general reluctance towards sharing freight tariffs between skippers attenuates their bargaining position. The reasons for not disclosing information about freight tariffs can be found in social-economic developments. Traditionally, skippers have not received proper trainings to develop their entrepreneurial skills. In addition, the general attitude of skippers towards collaboration could be described as narrow-minded. The solution to this problem can be found in better educating young skippers and enhancing the skills of older skippers through trainings. Another solution could be for skippers to create partnerships to enhance their bargaining position and receive better tariffs through collaboration. The best solution would be if skippers would make price agreements regarding their cost price. This cost price is used as a guideline to determine how much money a skipper should make per day. A uniform standard would create clarity for the skippers and enhance their bargaining position which should lead to better tariffs for the skippers. European guidelines, however, prohibit nearly all horizontal price agreements. A different solution would be to create collaborations to enhance the bargaining position but this is faced with resistance of some skippers. Skippers are driven by a strong desire for freedom and some argue that cooperation limits their independence and freedom. However, the flexibility offered by the cooperation gives the skippers more freedom in terms of their operational management. There is a strong role for the representative organizations in the Netherlands and Germany to inform skippers about the advantages of cooperation and teamwork. In addition, several price calculation programs help the skippers in their negotiating position and encourages their entrepreneurship. Trainings and courses could also contribute to the idea of being an independent skipper in an interconnected world.

In the Netherlands, specific problems are related to the free market that counterworks the inland shipping industry instead of encouraging it. The power of the intermediaries between skippers and transporters is big and poses a structural obstacle in establishing fair and equal prices for the skippers. Furthermore, the role of the banks in the development of overcapacity has been substantial and calls for a responsible approach towards solving this problem.

In Germany, the inland shipping industry is characterized by a larger percentage of shipping companies with bigger ships and less individual skippers, compared to the Netherlands. In addition, the inland shipping industry in Germany is faced with a strong rail transport lobby group *(Deutsche Bahn)*.

On a European level, the two largest representative organizations do not share the same vision on how the problems should be solved. This can for a large part be explained from the memberships, the European Barge Union (EBU) represents the intermediaries whereas the European Skipper Organization (ESO) represents the skippers. A consensus has to be reached regarding the problem of overcapacity but this is problematic considering the conflicting interests of the members.

Three recommendations are aimed to solve the problems in the inland shipping industry. First of all, establishing, maintain and improving collaborations could be the key to overcome difficulties. The advantages of cooperation and teamwork should be highlighted and different types of cooperations should be investigated. The report written bij STC-Nestra called *Rapport versterking van de marktstructuur in de binnenvaart*, could be used as a framework for this research.

Secondly, the old-for-new-rule should be established with the financial support of the European Union. This old-for-new-rule could be combined with the third recommendation: the introduction of a maximum life span for ships. In addition, sustainability and greening initiatives should be further encouraged.

# Recommendations

1. The first and main recommendation would be to establish, maintain and improve collaborations. The report of STC-Nestra (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015) points at reasons for collaboration. The industry needs to be more aware of the advantages in order to change things.

Based on the report and additional research, four main pillars should be created:

1. Build trust, awareness and mutual understanding between skippers, intermediaries and shippers. This will allow for win-win opportunities and a good relationship between parties. Sharing information through brainstorm sessions and meetings about efficiency, quality enhancing measures and more collaboration has already proved to be successful in the container shipping chain. A joint effort to identify bottlenecks and opportunities would benefit all parties involved. It is recommended to have those talks because they are, should be, without any obligations. Thus, the ‘freedom’ that involved parties’ experience contributes to the effectiveness of these talks. It is important to create a neutral platform, where intermediaries do not feel threatened and skippers do not feel attacked. The issues could have a sensitive character and should, therefore, be dealt with in a professional way.

2. Inform about and investigate different collaboration possibilities to solve the problem of market opacity. It is very likely that the collaboration initiatives should be market specific. No initiative is suitable for every market segment, although the foundation is the same: collaborating to create more opportunities. Every segment should find out which method works best given the particularities of that segment. Some might see talks as too informal or casual and might prefer more strict agreements. Others might perceive arrangements in an early stage as an invasion of their independence and privacy. A close investigation regarding which way works best for everyone may eliminate those fears and create a neutral base. More openness within the skipper community would encourage collaboration and would give the skippers more negotiating power. This would positively influence the freight tariffs, would spread the risks and create a better environment for the skippers. Collaborating skippers could, for example, hire a barge operator to negotiate and make acquisitions on their behalf. The advantages of working together should be highlighted, such as the reliability of collaboration which creates stability, efficiency and harmony on the long term. A cooperation is very interesting for intermediaries and transporters because they know their transport is secured by reliable partners. In addition, the cooperation can invest in value-added additional services, such as door-to-door concepts which will expand the service delivery (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015).

A cooperation between skippers could solve the problem of a lack of information which restricts the skippers in their ability to make balanced decisions. With a few exceptions, a traditional skipper is unable to plan his long-term vision due to a lack of knowledge (market opacity) and a lack of management/entrepreneurial skills and, thus, will take decisions based on his instinct. More information on the current market characteristics and competition prices would enable skippers to ask the right price in a balanced market situation. Entrepreneurial trainings and managing courses may contribute to the knowledge of skippers.

According to STC-Nestra, the following has to be born in mind when creating a cooperation:

1. Level of independence: what should be the collective target and what should be left for individual room to maneuver? Some critics argue that cooperation limits the independence and freedom of a skipper. However, the flexibility offered by the cooperation gives the skippers more freedom (e.g. it is easier to go on vacation) in terms of their operational management. There has to be a certain willingness amongst skippers to give up on some autonomy while there has to be a certain willingness amongst intermediaries to engage in long-term contracts.

2. Stakeholders: who should be involved in the process and to what extent? Should the intermediaries be a part of the cooperation? A cooperation could, eventually, bypass the intermediary and negotiate directly with the transporter. This is, obviously, a threat for intermediaries as it undermines their position. Intermediaries have, over the years, built a relationship with transporters; they have the commercial expertise and knowledge to know how things are being done. This should not be thrown away and the current situation should not be polarized because the intermediaries are not an enemy and they do not oppose the interests of skippers, while this is exactly what many skippers believe. Instead, there should be cooperation that focuses on horizontal (between skippers) and vertical (between skippers and intermediaries) collaboration.

3. Entry and resignation barriers. High barriers of resignation will enhance the reliability of a cooperation because the intermediary will know that the ships are available for a longer period of time. However, what happens if a ship decides to leave the cooperation? Skippers are taking a risk when they decide to join a cooperation because usually skippers have to buy themselves in, it might take a while before they get their money back after they decide to leave the cooperation and/or there could be a long term of notice.

Finally, the report of STC-Nestra points at the power of market knowledge. Gathering, analyzing and spreading of correct and detailed information on demand and supply could help the parties involved to make more responsible decisions, especially regarding the development of new ships. Furthermore, there is a strong role for the European market observation as it should investigate the market and give recommendations (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015).

The following table, figure 8, lists the advantages and disadvantages of cooperation from the perspective of the transporter, the intermediary and the skipper. The list is based on the Dutch report of STC-Nestra (STC-Nestra, Rapport versterking van de marktstructuur in de binnenvaart, 2015).

Figure 8: Advantages and disadvantages of cooperating

|  |  |
| --- | --- |
| ADVANTAGES | DISADVANTAGES |
| TRANSPORTER | PERSPECTIVE |
| - High reliability and transport security with pre-determined contracts (buffer for price fluctuations in case of low water level or fluctuations in fuel prices)  - Better quality and/or service, through optimization and adjusted ships/services (long-term), use of extra green ships, collaborative investments (win-win)  - Less worries and use of capacity, space to offer additional services such as storage and transfer | - Less opportunities to use low freight tariffs that are being offered in the spot market  - Committing yourself to a long-term contract means less flexibility in adapting the actual supply (ships) to the actual demand (cargo) |
| INTERMEDIARY | PERSPECTIVE |
| - Long-term contracts ensure income stability  - Ability to compete based on distinctiveness  - More added value services and efficiency for customer (transporter), better margins  - Broadening/innovating service delivery, for example through storage or transfer offers, intermodal transport | - Less opportunity to benefit from low tariffs on the spot market (e.g. water level is high, low conjuncture)  - Committing yourself to a long-term contract with skippers means less flexibility in adapting the actual capacity to the actual demand |
| SKIPPER | PERSPECTIVE |
| - More stable income, less risk  - Better market information: better investment decisions, better negotiating position  - Lower costs through collaboratively acquiring, sharing and spreading risks, sharing the profits that are made from the contracts with transporters  - If the work is planned centrally: higher occupancy/efficiency and lower variable costs (e.g. through adjust speed)  - Improvement of quality of life: more relaxed, better possibilities to go on vacation, sharing stand-ins between members of cooperation, more focus on specific tasks  - More opportunities to have work based on your distinctiveness  - Support of colleagues within the cooperation, more expertise | - Less possibilities to benefit from low tariffs on the spot market (low water level, high conjuncture)  - Restricted market and complete dependence on the cooperation and the work it obtains  - If the work is planned centrally, less freedom to choose a trip based on personal preference/needs |

Source: STC-Nestra, *Overzicht van algemene voor- en nadelen samenwerking*, own edit

2. The second recommendation is to reinstate the old-for-new rule. This rule means that if a new ship is being built, the old/former ship has to be demolished. This would kill two birds with one stone, because it would also encourage skippers to innovate their ship instead of buying a new ship. The budget that was allocated to the purchase of a new ship can be invested in the current ship. As interviews have pointed out, however, there seems to be a political unwillingness to reintroduce this rule. An explanation for this could be that notably the Dutch government stimulates investing which encourages entrepreneurs to invest on a large scale. A governmental discouragement to invest in a sector could easily flow over to other sectors and does not build trust. However, if there would be a platform where one can find information about current projects (e.g. a skipper that invests in a new engine), it could be portrayed as an innovative and pragmatic idea.

Furthermore, banks are unwilling to pursue the old-for-new rule because their investment in the ships is large. Financial support of the European Union could provide an incentive for skippers to offer their ship for demolishment if they decide to buy a new ship and it would assure banks that they get money. Additionally, the European Union could discourage skippers from building new ships through heavy taxes for example. It has to be noted that the old-for-new rule has to be installed in all countries that are involved with inland shipping. The reason for this is that if one country introduces this rule, ships from other countries could still cross borders and thus undermine the action.

It has to be noted that there is no consensus on a European level regarding the old-for-new rule. According to Van der Meulen, the two representative organizations EBU and ESO do not agree with each other on the reinstatement of this rule. The European Barge Union perceives this rule to hinder innovation while the European Skippers Organization is a strong proponent because it sees this as the ultimate measure to reduce capacity in the market (Van der Meulen, 2013).

In conclusion, more research should be done regarding the short and long term effects of the old-for-new rule and a European agreement has to be reached regarding this measure.

3. The third and final recommendation to the European Union is to introduce a maximum life span for ships and to continue promoting sustainability. The first should be a European measure because every member state involved has to cooperate. If the amount of ships decreases in only one country, ships from other countries will come to transport cargo and the system will not work. An argument for this measure is that the life span of a ship is very long. As explained before, changes in supply cannot easily adapt to changes in demand, which only contributes to the overcapacity problem. However, if a ship, once it has reached a certain age limit, has to be demolished, there will be more room for other freighters on the one hand and on the other hand old ships will slowly disappear from the market while new and innovating ships are rising. This could contribute to the positive image of the inland shipping industry as an environmentally friendly way of transport. There are already many European subsidized initiatives that aim to make ships more sustainable, such as a discount on port charges if the engine of a ship is less polluting. This should be encouraged and further developed, especially for the younger ships that will last a long time.

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# Appendices

## Appendix A: Interview Transcripts

## Danser, Hein. Interview via e-mail on August 5, 2015

1. Zou u zichzelf kort kunnen introduceren? In welke besturen zit u, hoe lang vaart u al en verdere algemene informatie?

Mijn naam is Hein Danser, geboren in 1959. Vanaf mijn 16e na mijn Mavo-examen ben ik als matroos bij mijn vader en moeder gaan varen. In die 12 jaar heb ik alle binnenvaart papieren gehaald. Daarna heb ik nog 3 jaar gewerkt als aflosser in de binnenvaart. In 1990 heb ik zelf een schip gekocht. Nu ben ik bestuurslid bij de BLN-groep kleiner dan 86 meter. Daarvoor heb ik veel werk verzet op de achtergrond voor de EUBO-coöperatie met Anton Van Megen.

2. Zou u kort kunnen omschrijven wat er in de binnenvaart precies het probleem is?

Bijna allemaal korte termijn denkers. Daar bedoel ik mee, schippers denken: wanneer ze alles kunnen betalen is de vrachtprijs hoog genoeg. In de exploitatie prognose wordt de afschrijving niet meegenomen. Dus vaart de ouwe garde te goedkoop, omdat ze toch geen nieuw schip willen en ze bouwen zo geen reserves. De "nieuwbouw schippers"  hebben een te hoge hypotheek genomen en zijn "vergeten" dat ze na 10 jaar klasse moeten maken. De banken zijn daar een paar jaar geleden blindelings ingetrapt.

De bevrachters vinden altijd wel een schip voor de prijs die zij in gedachten hebben, alleen bij uitzonderingen gaat het ‘fout’ en moeten ze vracht bij betalen. En door goede kontakten onderling lukt het hen aardig om de marktprijs te kunnen dicteren. De bevrachters en schippers werken veel te weinig samen, om de klant naar tevredenheid te kunnen bedienen. Met als nadeel vaak een te lage vrachtprijs voor de schipper. Schippers weten niet wat de klant wil en kan betalen voor een trip. Ze hebben geen markt inzicht.

3. Zou u een korte omschrijving kunnen geven van schippers in het algemeen? Met wat voor mensen hebben we te maken?

Schippers zijn een achterdochtig volk, leven in hun eigen wereld, die wereld komt op 1 en dan de klant zijn wensen op 2. Heeft schipper A een goed tarief, dan heeft schipper B nog opmerkingen over iets wat niet goed is. Deze schipper heeft waarschijnlijk een slechter tarief of onderbiedt schipper A je de volgend keer.

Schippers willen vaak geen energie steken in iets buiten hun vaartalent. Voorbeeld: Je kan voor een klant een vracht krijgen van A naar B en de klant wil weten hoeveel dat kost. Inclusief overslag, kadegeld, schoonmaakkosten etc.  De meeste schippers kunnen dan alleen een prijs noemen voor het transport en al die andere kosten moet/mag de klant zelf uitzoeken.

Door hun achterdocht en zeer goed met 2 maten kunnen meten lukt het niet om met een grote groep schippers echt goed samen te  werken. Weinig schippers gedragen zich als een ondernemer. De meesten hebben veel emotie en halen allemaal privé-dingen erbij om een vracht wel of niet aan te nemen. Bevrachters spelen daar handig op in.

4. Zou u zeggen dat de oplossing van de problemen bij de schippers ligt? Zo nee, waar ligt die oplossing dan wel?

De oplossing ligt bij de schippers, maar een mentaliteitsverandering en emotie even overboord gooien bij een groot groep schippers/mensen?? Hoe ga je dat doen? Ik weet het toverwoord niet. Zoals je zelf al zegt, er zijn meerdere oplossingen mogelijk. Maar elke oplossing valt of staat met menselijk gedrag/emotie.  
Ik denk dat we eens moeten beginnen om de schipper te leren niet te rekenen als de oude garde maar als ondernemer.  
En niet vergeten: wat kost het om een schip te laten varen per uur. En niet in dagen van 24 uur zodat je de nacht gewoon voor niets vaart.

Er wordt nu gepraat over markt transparantie zodat je kan zien hoeveel de klant betaalt en de bevrachter achter houdt op de vracht prijs. Dat gaat niet werken want de bevrachter loopt nu het risico. Dan zouden de klanten al hun werk via een soort internet beurs aan moeten bieden zoals vroeger. En daar kan je dan als bevrachter en schippers op bieden. Maar kijk ik wat klanten aanbieden qua info betreft een offerte is deze bijna altijd incompleet. Betreft maten - gewichten- datum etc. Dus hoe kan je dan daar een prijs op los laten? Op een aanvraag heb je altijd extra info nodig via telefoon of mail.

Zonder gedragsverandering bij de bevrachters heb je nog geen oplossing. Daarbij zijn heel veel bevrachters oud-schippers. Dus dat is nog een bijkomend nadeel.

Er is wel toekomst voor de binnenvaart, maar ik denk dat we door de vergrijzing straks veel mooie schepen hebben zonder goede mensen om erop te varen.

En wat ik hierboven al zei, zonder mentaliteits-/ gedragsverandering valt het niet mee om een tarief te krijgen dat wel acceptabel is.

In de eerste mail had je het over markt regulatie. Door vroegere slooprondes en marktregulatie is het mede fout gegaan. Je kon nieuwbouw tonnen afkopen, dat lijkt meer op maffia praktijken dan op regulatie. En bekijk het resultaat: de schepen zijn toen, ondanks de boete clausule, gebouwd en het sloopfonds zit vol met renteloos geld waar wij als schippers niet bij kunnen. Maar het is eigenlijk ons geld.

Hoe is de crisis in de binnenvaart ontstaan?

1- hebzucht van de mensen op schepen en bij banken;

2- het was nooit genoeg, daardoor kon je veel te veel lenen (mentaliteit);

3- geen echte bewustwording dat kleine politieke veranderingen grote gevolgen kan hebben op je exploitatie prognose (kolen transport).

Hoe zou je in de toekomst te werk moeten gaan, zodat de binnenvaart weer jaren vooruit kan?

Men moet actief langs de (toekomstige)  klanten om te laten zien waar ze voor betalen. Wanneer jezelf een rekening krijgt wil je ook weten waar betaal ik voor.

Men zal toch moeten proberen om de mentaliteit van schippers bij te schaven zodat ze zich als ondernemers gaan gedragen. Men moet erop blijven hameren bij de schippers dat je vrachtprijs niet moet baseren op: als ik alles kan betalen is het goed. Want dan heb je na één generatie geen nieuwbouw meer en is het einde binnenvaart.

Er is ook veel te veel emotie in de binnenvaart, kijk bv naar spitsenvaart en ander kleine schepen. Die moet blijven, kost wat het kost, omdat het zo romantisch is? Maar je kan voor de huidige vrachtprijzen geen nieuwe spits of kempenaar laten bouwen!

Dan de uitstoot van scheepsmotoren. Dit is één groot circus en heeft weinig met milieu te maken. En wordt ook dik tegengewerkt door de CCR eisen. Zouden wij in de binnenvaart gewoon euro 6 norm van de vrachtauto motoren mogen hanteren, dan kun je voor een redelijke prijs je schip ombouwen naar een groen schip.

## Paardenkooper, Klara. Personal interview on December 4, 2014

1) Could you tell me a little bit about yourself and your connection to the inland industry?

I am a lecturer at the Rotterdam Mainport University of Applied Sciences in Rotterdam. I teach port competition, port management, hinterland connections, innovation in the inland shipping industry and modalities. I studied economic and business history and worked on the NWO-founded project Outport and the Hinterland. Rotterdam Business and the Ruhr, 1870-2010 at the subproject The Box and Rotterdam’s New Hinterland; The Rise of Container Transport and Globalization, 1970-2000. In June 2014 I finished my thesis entitled: *The* Port of Rotterdam and the maritime container The Rise and fall of Rotterdam's hinterland (1966-2010).

2) What can you tell me about the German inland shipping industry? How is it different from the Dutch industry?

In Germany, the Deutsche Bahn has a strong influence. Deutsche Bahn is part of the Deutsche Bahn Group, which is a mobility and logistic company in over 130 countries with over 300,000 employees. The Deutsche Bahn is heavily state-subsidized, yet the company itself is liberalized. The German government, thus, has a strong interest in the prosperity of the Deutsche Bahn. Now, every time the inland navigation waterways were built or extended, the Deutsche Bahn builds railroads next to it or improved their railroads. Indirect it is safe to assume that there is a silent war between the inland navigation industry and the railroad industry. It is my suspicion that the Deutsche Bahn heavily pressures the German government for subsidizing the rail industry and influences decisions that the government makes regarding the waterways. An example of this was the widening of the Rhine, which the inland navigation representatives lobby for, but the Deutsche Bahn is opposed to this idea. Widening and/or dredging the Rhine would mean that more and bigger ships could sail on the river which would mean less cargo transport via rail which, obviously, clashes with the interests of the Deutsche Bahn.

Also, the traffic jams that are often caused by trucks should create a shift towards more transport via waterways, because the ships that transport cargo often carry only half of their maximum capacity. It costs a lot of money for a ship if it is not employed, so to speak. A day off costs a lot money and therefore skippers are willing to transport even half of their capacity as long as it covers their cost price or not even their cost price. There seems to be an unbalance between cargo transport via road and transport via water.

Furthermore, the inland shipping industry is characterized by its relative low contribution to its infrastructure. Compared to the rail industry, the inland navigation industry pays next to nothing for the use and maintenance of the infrastructure (the canals, rivers, locks, ports etcetera). Even though this should lead to a comparative advantage, statistics show that the inland navigation industry does not gain anything from it.

## Van Toor, Erik. Personal interview on November 3, 2014

a) In hoeverre beïnvloedt de Europese Unie de keuzes die jullie als schippers-vertegenwoordigend orgaan maken? Zijn er concrete regels waar jullie tegenaan lopen en die het proces moeilijk maken? Brengt de Europese Unie ook andere voordelen voor de schippers behalve vrij goederen en personenverkeer?

De Europese Unie is wat binnenvaart betreft het belangrijkste bestuursorgaan. Al onze lobby activiteiten hebben een directe- of indirecte link met de EU. Sinds een paar jaar werkt een ander belangrijk bestuursorgaan, de Centrale Commissie voor de Rijnvaart, samen met de EU in de zgn. Joint Working Group. Die moet het onmogelijk maken dat er twee ongeharmoniseerde regelgevingen naast elkaar zouden blijven bestaan.

Er zijn regels waar wij tegenaan lopen die processen bemoeilijken. Relevant voor jouw scriptie is de Europese Mededingingswetgeving. Die bemoeilijkt het gezamenlijke optreden van binnenvaartondernemers zonder dat zij (een deel van) hun bevoegdheden opgeven. Als voorbeeld: twee schippers mogen geen afspraken met elkaar maken over vrachtprijzen. Eén ondernemer met twee schepen mag dat voor beide schepen wel. Het is echter zo, dat de binnenvaart (en de andere transportmodi) ruime uitzonderingsposities in de mededingingswet kennen. Zo mogen schippers met een gezamenlijk tonnage van maximaal 500.000 ton coöperatief de markt opgaan. Voorwaarde is dan wel, dat zij de bevoegdheid om contracten aan te gaan afgeven aan hun coöperatiedirectie.

Het nadeel waar we op dit moment erg mee kampen is dat de grenzen binnen de EU open staan, maar dat de sociale context (en dus de kosten van arbeid) in de verschillende lidstaten significant anders zijn. De schippers (maar ook wegtransporteurs) ervaren dit als valse concurrentie. De technische eisen aan de schepen zijn in feite in alle lidstaten gelijk, maar het lijkt er op dat de onderscheidenlijke lidstaten de regels naar eigen interpretatie soepel of straf hanteren. Dat geeft ook scheve ogen tussen de schippers.

De EU kent vele voordelen voor de binnenvaart. Door het vrije verkeer van goederen en diensten is de afzetmarkt zeer vergroot en hebben de onderscheidenlijke lidstaten tot 2008 een economische groei gekend die ongeëvenaard is in de geschiedenis. Het nadeel is dat áls er economische krimp optreedt, die moeilijker kan worden bestreden.

b) Hoe ziet BLN-Koninklijke Schuttevaer de relatie tussen schippers en andere vervoerders (over land of via de lucht)? Wat is competitief gezien het voordeel van schepen en welke nadelen kleven er aan vervoer per schip?

Met luchtvaart is er geen relatie vanuit de binnenvaart en andersom. (behalve als schippers op vakantie gaan natuurlijk). Met het wegverkeer en het spoor zijn de relaties tweeledig. Enerzijds kan de binnenvaart niet zonder beiden als het gaat om complementair en synchroon-modaal vervoer. Anderzijds zijn beiden regelrechte concurrenten van de binnenvaart. Voornamelijk op de kortere afstanden is het wegvervoer zeer competitief, maar ook op milieugebied begint het wegvervoer de binnenvaart naar de kroon te steken. Het spoor is enerzijds een concurrent, anderzijds is het spooraandeel in het bedieningsgebied van de binnenvaart relatief klein. Het spoor is wel sterk op vervoersrelaties waar geen binnenvaart kan komen.

c) Hoe ziet u de toekomst van de scheepvaart over 5 jaar en op basis waarvan baseert u deze visie? Welke rol speelt BLN-Koninklijke Schuttevaer daarin?

De tankvaart krijgt het zeer zwaar. De sector kampt enerzijds met overcapaciteit die ontstaan is uit te hoge groeiverwachtingen en de wettelijk geregelde uitfasering van enkelwandige schepen. (in 2018 mogen de meeste minerale en petrochemische stoffen niet meer in enkelwandige tankers worden vervoerd). De vloot droge lading schepen langer dan 86 meter krijgt nog e.e.a. te verduren die voortkomen uit 5 jaar verminderd onderhoud en achterstallige bancaire verplichtingen. Ook neemt het aantal faillissementen daar toe, wat leidt tot zeer lage waarderingen van de waarde van de schepen. Maar het dieptepunt van de vrachtprijzen en de omzetten is achter de rug. In dat segment is de (onverwachte) toename van het kolenvervoer een soort reddende engel geweest. Het containertransport blijft op een laag pitje groeien (minder dan 1% per jaar)

De vloot kleinere schepen (86 meter of korter) heeft te maken met een uitdoofscenario omdat er wel schepen worden gesloopt en er geen schepen bijgebouwd worden. Bovendien is er deels sprake van vergrijzing van de ondernemers. De omzetten in dat segment zijn over het algemeen voldoende om ruim van te leven en de bestaande schepen te moderniseren, maar onvoldoende om op grote schaal nieuwbouw toe te passen. Naar mijn inschatting zullen de omzetten daar de komende jaren licht stijgen en op termijn zal nieuwbouw (nieuwe concepten) weer mogelijk zijn.

BLN-Koninklijke Schuttevaer speelt als brancheorganisatie een rol in het beïnvloeden van wet- en regelgeving waardoor vergroening op grote schaal zal gaan plaatsvinden. Bovendien wijst BLN de ondernemers op kansen en bedreigingen zoals (nieuwe of veranderende) ladingstromen en veranderingen in de vlootopbouw. Kolen zullen onherroepelijk weer afnemen, maar nieuwe ladingsoorten zoals grondstoffen voor 3D printers zullen daarvoor in de plaats komen.

d) Wat zijn momenteel de problemen waar de scheepvaart tegenaan loopt?

Het allergrootste probleem is de onmogelijkheid om de capaciteit van de Europese vloot in de hand te houden. Hierdoor hebben we momenteel een vechtmarkt aan de kant van de vervoerders, maar er is in 2007 / 2008 sprake geweest van een vechtmarkt aan de kant van de opdrachtgevers. (die gingen tegen elkaar opbieden om scheepsruimte te kunnen krijgen). Voor de stabiliteit en de financierbaarheid van de sector is dit een groot probleem.

e) Zou een eventuele marktobservatie een oplossing zijn? Zo nee, wat zou wel een oplossing kunnen zijn? Zo ja, hoe zou die er dan uit moeten zien?

Een goede, actuele marktobservatie helpt de ondernemers en de financiers om weloverwogen investeringsbeslissingen te nemen. Zo’n marktobservatie zou wat ons betreft achteruit moeten kijken (hoe ontwikkelde de vlootomvang zich, hoe ontwikkelden de ladingstromen zich, hoe ontwikkelden de kosten zich, hoe ontwikkelden de omzetten zich), maar ook vooruit door korte-, halflange- en langetermijnprognoses voor bovengenoemde punten te geven.

Een verdere oplossing is het reactiveren van de zgn. Oud-voor-nieuw regeling. Die regeling voorziet erin dat als er nieuwe tonnage aan de vloot wordt toegevoegd, er oude tonnage uit moet worden gehaald d.m.v. sloop. Zo’n regeling is er geweest van 1998 tot 27 februari 2003. Door rechtszaken van ondernemers die niet wilden betalen om oude tonnage te slopen, viel het politieke draagvlak weg en werd de regeling op nul gezet. Er is momenteel sprake van politieke onwil om de regeling opnieuw te activeren.

Een klein deeltje van de oplossing is om binnenvaartondernemers een life-long-learning omgeving aan te bieden zodat zij steeds op de hoogte zijn van de laatste economische ontwikkelingen, hun leiderschap verder ontwikkelen, hun werkgeverschap kunnen verbeteren en meer in staat zijn zelf hun lot in handen te nemen en te sturen. Er heerst bij een (te groot) aantal binnenvaartondernemers een Calimero houding. Door hen zelfbewuster te maken, zullen ze beter in staat zijn om te onderhandelen.

## Van der Velden, Henk. Personal interview on November 4, 2014

1)  In hoeverre beïnvloedt de Europese Unie de keuzes die jullie als schippers-vertegenwoordigend orgaan maken? Zijn er concrete regels waar jullie tegenaan lopen en die het proces moeilijk maken? Brengt de Europese Unie ook andere voordelen voor de schippers behalve vrij goederen en personenverkeer?  
  
- Prijsvorming. Sinds de liberalisering van de binnenvaartmarkt eind 20ste eeuw liggen er geen vastgestelde of bodemprijzen meer in de nationale vrachtenmarkten. Op de internationale vaart was dat toch al niet het geval, maar door een zeker evenwicht tussen nationale en vrije (internationale) markt bleven de vrachtprijzen schommelen rond een redelijk niveau. In feite was de nationale markt een beschermde markt.  
De liberalisatie houdt in dat vertegenwoordigende organen absoluut geen bemoeienis mogen hebben met prijsbepaling.  
Met lede ogen hebben we na de bevriezing van de oud-voor-nieuw regeling de vervoerscapaciteit zien toenemen tot het niveau van een forse overcapaciteit die intrad met de economische crisis in 2008.  
ESO (BLN-Koninklijke Schuttevaer) zou graag een instrument in handen willen hebben om de capaciteit in bepaalde mate te kunnen reguleren afhankelijk van marktomstandigheden.   
Het door de EU gepropageerde vrije markt mechanisme geeft de ondernemer alle ruimte en verantwoordelijkheid om zelf beslissingen te nemen over investeringen en prijsvorming. Hier wreekt zich het grote aantal zelfstandigen die de buurman op de korte termijn willen overleven.  
Dus de regels waar je tegen aanloopt zijn juist die vrije markt en de wanverhouding tussen aanbieders en vervoerders.  
  
- Emissie-eisen. Binnenvaart is van oudsher energiezuinig en heeft een grote ton/km capaciteit met nog de nodige reserves. Dit heeft ons tot een jaar of vijf geleden lui gemaakt. De voorsprong die we hadden is echter ras ingelopen door het weg- en spoorvervoer.   
De EC wil dat daarin drastische stappen worden genomen. Ontwikkelingskosten zijn echter hoog vanwege de naar verhouding kleine sector en de lange levensduur van de motoren geeft fabrikanten geen extra stimulans om nieuwe motoren te ontwikkelen.  
  
- Andere voordelen. Ca 2008 heeft de EC het NAIADES- en PLATINA-programma gestart om de sector op vijf terreinen te ondersteunen. De (internationale) brancheorganisaties zijn daarbij betrokken.  
De terreinen zijn markt, infra, innovatie, bemanning (kwalificatie/opleidingen), milieu. Dat heeft veel opgeleverd aan onderzoeksrapporten en aanbevelingen, ook de politiek is zich bewust geworden van de potentie van de sector.  
Nu is NAIADES-II van start gegaan, waarin alles geconcretiseerd moet worden en ook op ondernemersniveau moet neerdalen. NAIADES-II wordt vormgegeven via de zogenaamde TEN-T corridors. Via die weg worden ook de Europese financieringsmogelijkheden gegenereerd. In tegenstelling tot vroeger wordt nu niet meer uitgegaan van modaal-shift maar van multimodaliteit in de corridors.  
  
- Marktobservatie. Bij het ter zielen gaan van de beurzen door de liberalisering heeft de Commissie beloofd een marktobservatiesysteem op te zetten. Dat heeft de eerste jaren een zieltogend bestaan geleid, maar in 2006 heeft de CCR van COM de opdracht gekregen dit systeem vorm te geven.   
Schippers staan hier sceptisch tegenover en de organisaties ook, omdat het vooral een systeem van kennis achteraf is.  
Op dit moment wordt door COM, CCR en organisaties overlegd hoe dit meer op de dagelijkse praktijk toe te spitsen.

## Appendix B: The role of trade organizations in the logistics chain.Logistieke keten

Road transport

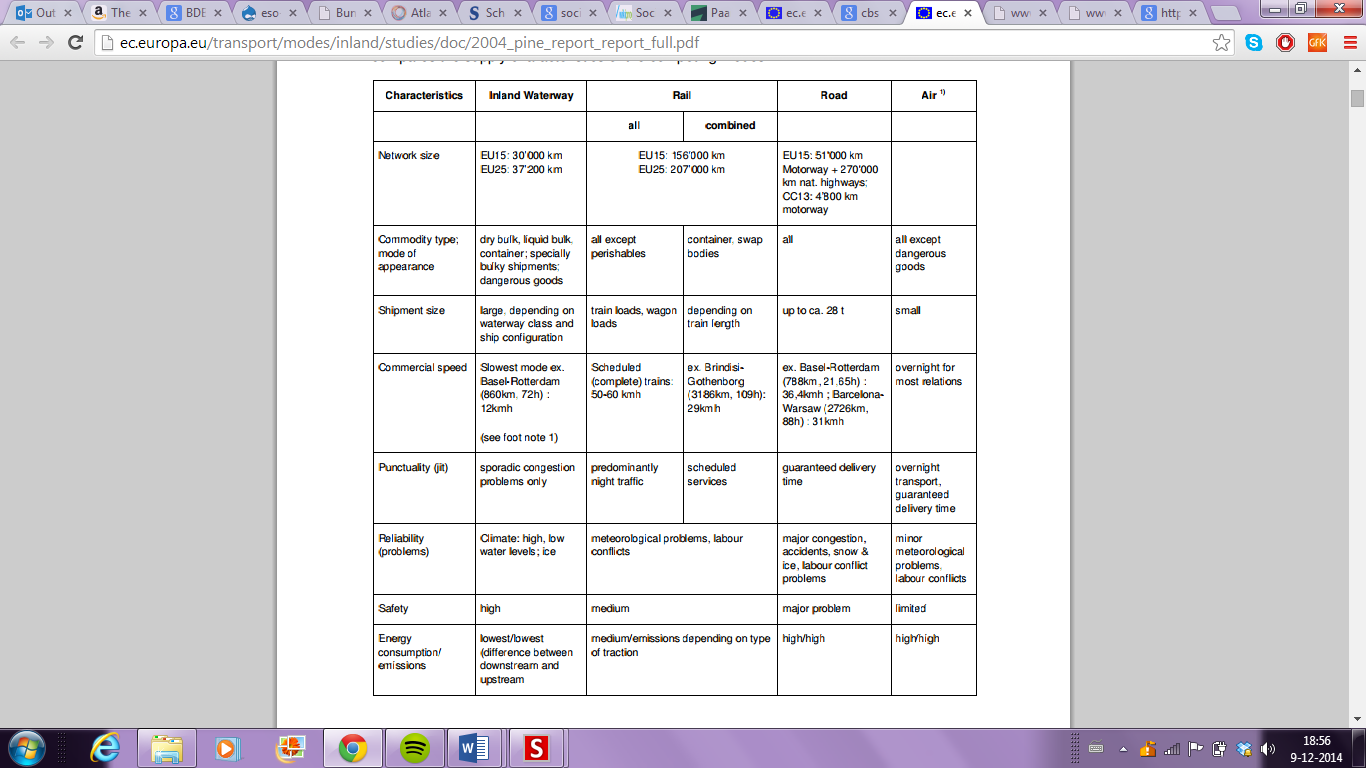
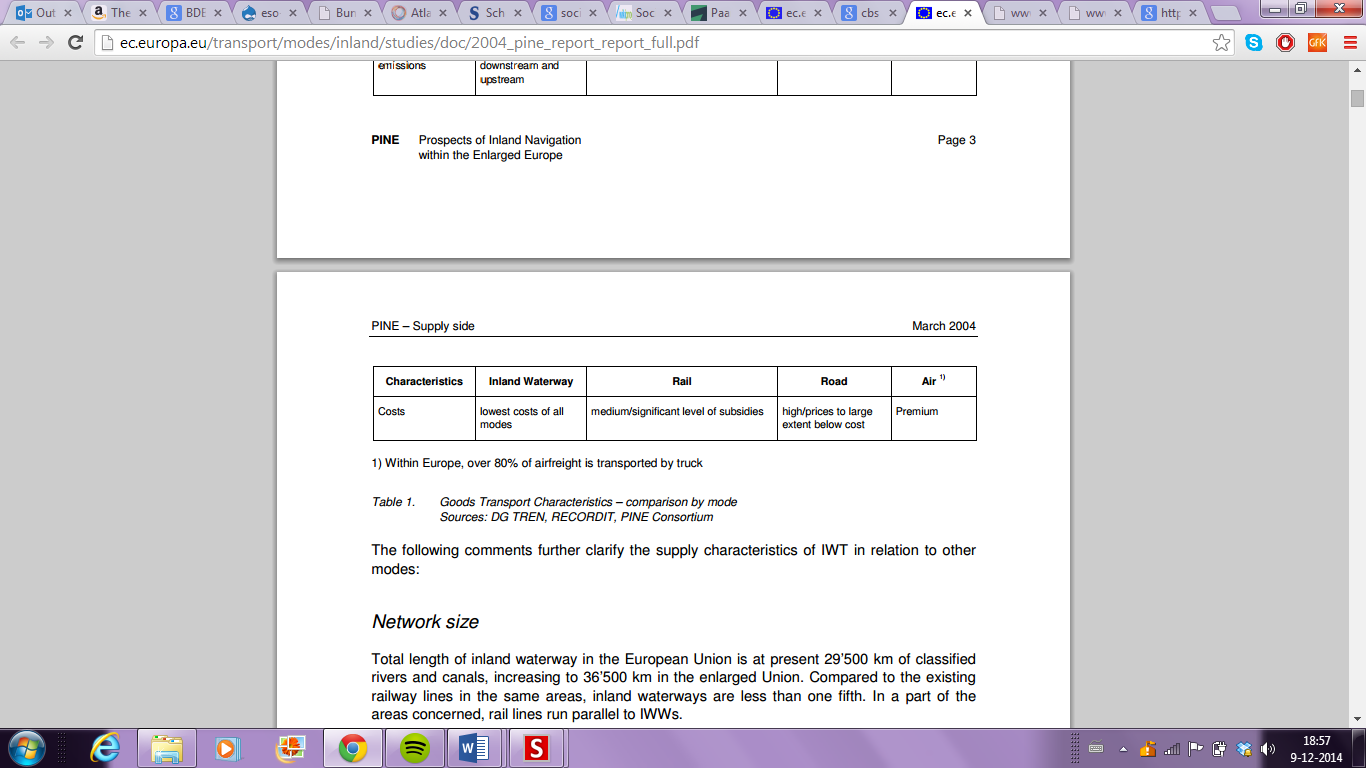
Transfer company

Inland shipping enterpreneurs

Intermediaries

Transporters

Source: www.bln.com, own edit

Appendix C: Inland industry comparison table

## Appendix D: Transport comparison per transport mode

Inland shipping industry :

Road transport:

Air transport:

Source: own edit

# Literature Review

The literature on which the thesis is based will now be reviewed. The purpose of this review is to evaluate the sources that have been used and analyze what the thesis has contributed to the scientific literature. The sources have been categorized according to their expertise. First the sources from the representative organizations have been analyzed. Secondly, the sources related to European and national law have been evaluated. The third category is the category with sources that do not fall in the first or second category such as newspapers, articles etcetera. Lastly, the interviews have been examined.

Representative organizations:

ASV. (2012, October 13). Ernstige verstoring binnenvaartvervoersmarkt. *Ernstige verstoring binnenvaartvervoersmarkt*. Rotterdam, Zuid-Holland, Nederland: ASV.  
 *Summary*

ASV, the Algemene Schippers Vereniging, is a relative small organization with 50 to 100 members. The organization has four key objectives: a social/economic acceptable situation in the inland shipping industry, an equal division of benefits and burdens, fair competition between transport modes and maintaining independence (www.algemeeneschippersvereeniging.nl).

This source is a letter to the *Ministerie van Economie, Landbouw en Liberalizatie* and the minister of *Infrastructuur en Milieu* in 2012. The letter points out several structural problems in the inland shipping industry, including liberalization which has led to a lack of market transparence and an unequal division of market power. Following Directive 96/75/EG of the European Commission, freight division systems and minimum tariffs in the inland shipping industry were abolished to enhance the competitive position of the inland shipping industry. However, ASV points out that this made the market opaque and gave the charterers a substantial amount of power. The demand and supply sides were now relying on charterers to know how the demand-supply relationship was. The result was that for some players in the sector the prices fell up to 30 percent (ASV, 2012)

*Relevance*

The letter is contributing to the explanation of how the system works and how the problems have developed. It urges the minister to take action and points at the Directive that gives the intermediaries a lot of power. The problems that ASV points out were laid out in the thesis and have been evaluated.

*Critical note*

In the past, ASV has on many occasions raised concerns and sent letters. It is, however, difficult to indicate outcomes that have resulted from ASV’s actions. In other words, in the inland shipping industry ASV is perceived as an organization with a big mouth but little action. This could partly be contributed to the fact that it now only has 50 members.

BDB. (2014). Retrieved from www.binnenschiff.de: http://www.binnenschiff.de/

*Summary*

This source is a German inland shipping representation organization. The website contains a lot of information on German initiatives and news.

*Relevance*

In order to find out how the German representation landscape looked like this website was consulted. The website was useful in terms of investigating the size of the German inland shipping industry. It provided a substantial amount of facts and figures as well as information on the inland shipping industry in general.

*Critical note*

The website did not contain information on the amount of members so it was hard to tell if this was a big organization with a lot of power or not. An email correspondence pointed out that BDB currently has 111 members, a negligible amount of skippers when looking at the number of entrepreneurs in Germany.

CCNR. (n.p., n.p. n.p.). *www.vision-2018.org.* Retrieved from Vision 2018: http://www.vision-2018.org/pdf/VisionEN.pdf

*Summary*

This source contains a document with a vision for the inland shipping industry in 2018. The Central Commission for Navigation of the Rhine (CCNR) has set itself these objectives to contribute to a sustainable mode of transport. The subjects are the following: safety and reliability, training and qualification, fuel consumption and emission of greenhouse gases, emissions of pollutants, changes in environmental conditions, logistics chains and application of the reference social conditions.

*Relevance*

The report showed the commitment of CCNR to help the sector improve their reputation through measures such as reducing fuel consumption and emissions of greenhouse gases. A sustainable future can be achieved through following the example of CCNR and through implementing the goals set.

*Critical note*

The report does not contain any details explaining how the objectives will be worked out. However, this will probably be published later when negotiations between the parties are finished.

EBU. (2013/2014). *Annual report 2013/2014.* Rotterdam: EBU.

*Summary*  
  
The European Barge Union (EBU) represents the inland navigation interest on a European level. In their annual report of 2013/2014 the organization points at the changes in the European landscape regarding the inland shipping industry. Furthermore, the report points at problems in the inland shipping industry with regards to the waterways and related infrastructure.

*Relevance*

The relevance of this report lies in the European aspect. It shows the European commitment towards doing what is best for the inland shipping industry through creating frameworks and launching initiatives. The report has a practical approach in that it proposes plans that are feasible and down-to-earth. Moreover, the report shows the European relevance of the inland shipping industry to all countries involved in the industry, around the Danube, Rhine and their tributaries.

*Critical note*

If anything, it could be argued that the report is rather short and does not provide much details on how exactly the objectives should be met. However, since it is a report made by CCNR in cooperation with the European Commission, it is clear that the member states should be responsible for the implementation of these guidelines, following the European framework.

What can be said about the representative organizations in general is that they are all making great efforts to change things. The seriousness of the problem is not understated by anyone and it seems that there is a strong consensus regarding what should change. However, in reality, interviews have pointed out that the representative organizations are not as harmonized as it seems. They conflict with each other on many points, especially because some organizations represent different stakeholders (e.g. CBRB) that have different interests than other stakeholders (BLN-Koninklijke Schuttevaer).

**European law:**

Commission, C. C. (2008). *Market observation for inland navigation in Europe.* Strasbourg: n.p.

*Competition in transport by rail, road and inland waterway*. (2011, March 3). Retrieved from www.europa.eu: http://europa.eu/legislation\_summaries/competition/specific\_sectors/transport/cc0010\_en.htm

Council, E. (1999, March 29). *Council Regulation (EC) on a Community-fleet capacity policy to promote inland waterway transport.* Retrieved from www.eur-lex.europa.eu: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999R0718>

EC. (2013). *Towards quality inland waterway transport.* Brussels.

EC, E. C. (2014, October 07). *Infrastructure - TEN-T - Connecting Europe*. Retrieved from EC Europa EU: http://ec.europa.eu/transport/themes/infrastructure/index\_en.htm

Eurostat. (2014, July and October n.p.). *Freight transport statistics*. Retrieved from www.epp.eurostat.ec.europa.eu: http://epp.eurostat.ec.europa.eu/statistics\_explained/index.php/Freight\_transport\_statistics

Raad, S.-E. (1988). *Advies inzake een EG-ontwerp-verordening betreffende structurele sanering van de* binnenvaart, The Hague, n.p.

What can be said about the European literature is that the legislative framework for the inland shipping industry is quite extensive. Interviews have pointed at the competition law that hinders effective cooperation initiatives but the other laws, drafted by the European Union, seem to have the best intentions for the inland shipping industry. It has been discovered that many skippers have a negative image of the European Union, they feel as if the EU is restricting them in their independence and free movement. However, maybe there needs to be more attention for the good things the European Union has accomplished for all skippers so that a community will be created.   
  
**Other:**  
Dierikx, M., & Berg van den, M. (2011, December 8). *Rivers of the World.* Retrieved from www.riversoftheworld.nl: file:///C:/Users/Tamara1993/Downloads/RiversoftheWorld\_Atlas.pdf

Duitslandnieuws. (2014, October 30). *www.duitslandnieuws.nl*. Retrieved from 9 problemen die de haven van Hamburg bedreigen: http://duitslandnieuws.nl/archief/2014/10/9-problemen-die-de-haven-van-hamburg-bedreigen/

Duursma, M. (2014, November 20). Het water op, de ruimen leeg. *NRC*, pp. E4-E5.

Heel, v. L. (2015, January 13). *Binnenvaart is verbolgen over Duitse faxplicht*. Retrieved from www.ad.nl: http://www.ad.nl/ad/nl/5597/Economie/article/detail/3828722/2015/01/13/Binnenvaart-is-verbolgen-over-Duitse-faxplicht.dhtml

Scheepvaartkrant, D. (2014, November 12). ESO praat met EU over marktobservatie en transparantiesysteem. *De Scheepvaartkrant*, p. 3.

STC-Nestra. (2014). *Versterking van de binnenvaartsector.* Rotterdam: STC-Nestra.

STC-Nestra. (2015). *Rapport versterking van de marktstructuur in de binnenvaart.* n.p.: Maverick.

Transportmedia. (2014, August 18). *Nederlandse VeTron vraagt wet tegen prijsdumping in wegvervoer*. Retrieved from www.transportmanagement.be: http://www.transportmanagement.be/nederlandse-vetron-vraagt-wet-tegen-prijsdumping-in-wegvervoer/

Verhoef, S. (2014, November 12). Motie over afschaffen overbodige CCR ROSR-eisen aangenomen. *De Scheepvaartkrant*, p. 1.

A remarkable insight in the field of inland shipping industry comes from the STC-Nestra association. Two reports written by this institution have been used for this paper. The most recent one, written in 2015, was an elaboration on the report of 2014. Both reports display a considerable amount of practical and theoretical knowledge. The second report *(Versterking van de marktstructuur in de binnenvaart)* points at critical elements that are typical for the inland shipping industry, such as a weak bargaining position when there is a low conjuncture and the exact opposite (a strong bargaining position) when there is a high conjuncture.

As for the other sources, they have been used to illustrate the problems in the inland shipping industry and the political landscape in which multiple stakeholders try to determine what is best for the inland shipping industry.

**Interviews:**

Danser, H. (2015, August 6). Problems in the inland shipping industry. (T. Blonk, Interviewer)

Duursema, H. (2015, January 16). The problems in the inland shipping industry. (T. Blonk, Interviewer)

Paardenkooper, K. (2014, December 4). Structural problems in the inland shipping industry. (T. Blonk, Interviewer)

Toor van, E. (2014, November 3). Een marktobserverend orgaan voor Nederland en Duitsland, een goed idee? (T. Blonk, Interviewer)

Velde van der, H. (2014, November 4). Secretary of the ESO (Europese Schippers Organisatie). (T. Blonk, Interviewer)

Velde, H. v. (2015, August 10). The difference between ESO and EBU. (T. Blonk, Interviewer)

What the interviews pointed out was that there is a strong consensus regarding which problems the industry is facing. Everyone agrees on how the market has developed the way it has and there seems to be a strong harmony regarding how the problems can be solved.

Overcapacity is pointed out as a strong catalyzer in the vicious circle, while it seems that there is no way out except for demolishing ships (influence supply side) or trying to influence the market conditions (influence demand side). It seems that politics could play a major role in the latter, subsidies, taxes etcetera could positively influence the market conditions for the inland navigation industry. However, considering the strong anti-protectionist rules imposed by the European Union, it seems virtually impossible for national governments to drastically change market conditions, even though this is necessary to save the inland shipping industry.

Another problem mentioned by all interviewed experts is the opaque market. Instead of a transparent market where prices are clear and information is shared, stakeholders close their ranks and stand opposed to each other instead of together against the rest. An important recommendation made by several interviewed experts is that there should be more emphasis on connecting instead of alienating elements. Furthermore, especially the ex-skippers point at the strong power of intermediating parties that top of a lot of the profit that is being generated.

The interviews summarize the problems and solutions that were discussed in the thesis. It is not remarkable that the opinions are not conflicting because many reports have been published on the market structure and the problems of the inland shipping industry. Denying the problems is not possible anymore due to the relative high degree of media interest not only in specialist newspapers but also in national newspapers. Politics and market are highly intertwined and a balance needs to be found to ensure a fair market with competition that does not distort the market. Many interviewees point at the skippers as the ones that can solve the problems, through cooperation and agreements. Not many point at politics to solve this, which is a logical line of thought coming from a free market principle. However, this free market seems to have created a vicious circle and now maintains this circle. Governmental interference should, possibly, be investigated, a point no one seems to make.