Level Playing Field

Study on distorted cross-border competition between seaports

Commissioned by: Ministry of Infrastructure and the Environment
Conducted by: RHV-Erasmus University / Ecorys

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Executive Summary

Commissioned by the Dutch Ministry of Infrastructure and the Environment, RHV-Erasmus University Rotterdam and Ecorys performed a study into the national conditions that determine the cross-border competition between the ports in Germany, France, the Netherlands, Belgium/Flanders and the United Kingdom. The commission stems from the Dutch policy aiming at fair competition between ports that serve the same hinterland and/or the same transhipment market. The presumption that market circumstances are not favourable for the Dutch ports – as a result of which they are not able to fully profit from their natural advantages (their location with respect to existing infrastructure and productive markets with a considerable purchasing power), was another reason for this commission.

The study reveals that particularly German and Flemish authorities support their ports financially, at the expense of the public budget. The annual support amounts to €1.18 per tonne cargo for German ports and €1.12 per tonne cargo for Flemish ports. This public money is invested in the maritime entrances of the ports, docks, quays, sites, operational costs of port management and deficit compensation. The Dutch authorities spend €0.06 per tonne cargo annually out of the public budget in favour of their ports for maritime access channels. Disregarding public investments in the maritime entrances, the annual financial support at the expense of the public budget amounts to €0.81 per tonne cargo for German ports, €0.54 per tonne cargo for Flemish ports and €0.00 per tonne cargo for Dutch ports.

<table>
<thead>
<tr>
<th>Seaborne cargo in 2012 unloaded and loaded in:</th>
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<tr>
<td>German ports</td>
<td>263 mln tonnes</td>
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<tr>
<td>Flemish ports</td>
<td>257 mln tonnes</td>
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<tr>
<td>Dutch ports</td>
<td>590 mln tonnes (442 mln tonnes in Rotterdam, of which 125 mln tonnes in containers)</td>
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To create a genuine level playing field in north-west Europe with respect to port financing, the public financial support should be equal in all countries concerned; preferably the public authorities should abstain from public support to seaports. Given a genuine level playing field on port financing (excluding financing maritime entrances), in a highly competitive market segment like unloading, loading and transhipment of containers, the Port of Rotterdam would handle 7% more containers than it actually does.

The study also focuses on other, mostly non-financial conditions that may influence cross border competition between ports. Evaluated are value and income derived from the use of sites, regulations on safety, environment and ecological preservation, labour market and health and safety at work and cargo inspection. The study reveals that existing differences between countries may have an impact on cross border competition between ports. Emission standards and licensing practices with respect to noise pollution appear to be more stringent in the Netherlands than in the neighbouring countries, limiting the use of sites and port expansion. Although no quantitative conclusions can be drawn from this part of the study, we are given the impression that when it comes to competition, conditions are less favourable for Dutch port operators and port businesses than those neighbouring countries.

Based on these findings we recommend port business, port authorities and the Ministry of I&E to address the issue of a level playing field for seaports in Europe. The recent EC initiatives – the communication “Ports: an engine for growth” and the proposed EU Ports Regulation – as well as the introduction of a corporate tax for port authorities in the EU are an opportunity to launch the debate.
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1 Introduction

Ports are a vital link in the economic system. They ensure that continents are interconnected, which enables worldwide trade. Export and import is easier and cheaper in countries with an efficient seaport, thus rendering these countries more competitive. So there are grounds for countries to invest in their ports.

Many European ports are transport gateways to a common hinterland. All these ports play a role in the competitiveness of that region. Coincidentally there is a competition between these ports to have the cargo transported through their port. This competition is conducted based on efficiency, cost and quality.

The regions and countries where these ports are located are trying to contribute to the competitiveness of their ports to a greater or lesser extent. Some of these contributions are justified by fair competition; others form a distortion of the playing field.

Many rules and regulations that have an impact on the ports in Europe are established at a European level, ranging from the funding of the infrastructure and market access, to environmental rules and food inspections. All these rules have a direct or indirect impact on the port dues that the users have to pay and sometimes determine how simple or complicated it is to import or export goods via a port. For the sake of national trade and the well-functioning of the Dutch ports, it is important that the playing field between the European seaports is levelled. It is of utmost importance to the Ministry of Infrastructure and the Environment, being responsible for, and in charge of the seaports, that a level playing field is created.

The question posed by the ministry is:

"Is there a level playing field between the main seaports in Great Britain, Belgium, France and Germany in comparison with the main Dutch seaports?"

Commissioned by the Ministry of Infrastructure and the Environment, the Erasmus University (RHV) and Ecorys have researched the question, using the following approach.

Based on earlier studies and interviews with the relevant parties in the maritime cluster, a shortlist was created of areas where a possible distortion of the level playing field may be the case. This shortlist is subsequently divided into topics with a more quantitative nature (public funding) and topics with a more qualitative nature that may just as well cause distortions in a level playing field.

To survey the flow of finances, an analysis was made of the annual financial statements / reports of port authorities and the budgets / financial statements of federal, national, regional and local authorities. Furthermore (parliamentary) publications, again on different layers of governance, proved to be invaluable for getting a clear view on the flow of finances. Finally, extensive use was made of international news (LexisNexis) and business (Orbis) databases. When in doubt, researchers have contacted policy officers in the concerning countries to gain further insight.
During the process, the research results were presented and discussed with the client and the Branche Organization Seaports at different times (interim).

The research question is further elaborated on the following topics related to legislation and funding of seaports:

Financial conditions, elaborated in chapter 2
- Public funding for port investments
- Public funding for operational costs

Non-financial conditions, elaborated in chapter 3
- The organization of nautical services
- Land management
- Environmental Policies and licenses
- The organization of port labour
- The organization of Inspection services in the ports

Chapter 4 addresses the impact of the differences in the playing field on the Dutch ports.

### 1.1 Level playing field in a European perspective

The question whether there is a level playing field between seaports in Europe has been the subject of debate for many years. As early as in 1986, legislation at EU level that should have led to liberalization of cabotage was drafted, but it wasn’t until 1999 that it was fully established and the market became freely accessible for EU ship-operators. Concurrently, regulations for public funding were formulated in order to prevent unfair subsidizing of (port) infrastructures and port users.

Subsequently, in 2001 the so called “Port Package” was published¹, wherein the paragraph of the market access to port services was an important section. The scope of this section covered the services that (may) have a commercial value such as:
- Pilotage
- Towage and mooring services
- Terminal services (loading and unloading, stevedoring, transhipment and other intra-terminal transport)
- Passenger services

This proposal led to fierce debates among stakeholders as well as within the European Parliament, and in 2003 the proposal was rejected. After this, the Commission prepared a revised proposal, the so-called “Port Package II”.

However, the second Port Package also perished in the European Parliament, mainly because the making of investments would be too limited; port workers would be inadequately protected and there would be too much standardization of port organizations (‘one size fits all’), while ports may

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¹ COM (2001) 35 final
vary substantially in size. The opposition to a third port package was so significant, that the Commission eventually decided to issue a port policy communication as an alternative wherein the ‘thorny issues’ will not be addressed through regulation but through consultation. This consultation may take until 2016 after which a new assessment for regulation will me be made.

In a 2006 study by Ecorys the following was concluded:

- In most European ports, pilotage services are offered by only one party, and often they are not awarded through public tendering, but through concessions made by former (semi) government organizations, resulting in a mix of public and private interests.
- The same applies to towage services: if there are multiple providers, these are often combined into a single overarching entity, often without public tendering.
- With regard to terminal services, the situation may vary strongly between the loading segments and while the price levels in north-western Europe proved to be relatively low compared to other parts of the world, there are still considerable differences within Europe.
- There are large differences in wage levels for dock workers within and between regions.

A lot has changed since 2006. In this study, an inventory of the current situation is given.

Regarding port tariffs (port dues), the following has been concluded:

- There are large discrepancies between ports within Europe.
- There is often a diffuse or at least unclear relationship between the price and the cost of the services rendered.
- A system in which negotiation between provider and customer can lead to (sometimes high) discounts, which are often not disclosed and where the relation between the discounts offered and the cost benefits are unclear.
- The method of reporting costs and revenues varies widely between ports and is often aggregated in such a manner that a breakdown into segments is not possible.

In general, the differences were not seen as a major issue by the port authorities, while users did report to feel the need for more transparency and a well-supported basis for the rates.

From the study also emerged the fact that the rates for port dues in the United Kingdom are significantly higher than those in the Hamburg-Le Havre range, while the tariffs in Scandinavia and in the Mediterranean are considerably lower. Within the relevant boundaries of this study (NL, BE, FR, DE, UK,) data from the following ports was collected: Hamburg, Bremerhaven, Groningen, Amsterdam, Rotterdam, Flushing (Vlissingen), Antwerp, Zeebruges, Ostend, Le Havre en Felixstowe.

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2 COM(2013) 295 final
1.2 Level playing field; distortion types

The playing field can be distorted in various ways. In this study, we distinguish three types of distortion.

**Distortion of the playing field**

When public funding is given by means of direct payment to the ports by a public authority, the playing field itself is distorted. The port costs are not entirely at the port users’ expense, because part of it is accounted for by the public authority. As a result, some ports become ‘artificially’ cheaper than others and there is no longer any efficient competition.

**Distortion in the playing field**

The second type of distortion is a distortion in the playing field. On paper, there seems to be an equal situation, for example in port funding or rules that port users must abide, but in reality a different interpretation of the rules is deliberately given, or discriminatory conditions are applied resulting in a non-equal starting position for different users.

**Facilitating the users**

Thirdly, a public authority can influence the playing field by facilitating specifically defined users in a port, thus making it easier for them to use the port in question. For example, the user might be taken explicitly into account in case of enforcement.

The playing field is not only determined by the country’s law and enforcement, but the institutional context also plays an important role. The organization of port management determines in part how ports themselves (are able to) deal with competition and possible distortions of the playing field. Determining differences includes the ownership of the ports. In the United Kingdom some ports are in private ownership, while French ports are mostly public services. In the Netherlands, Belgium and Germany there are intermediate systems wherein local, national or federal governments have different positions.
2 Financial Conditions and Public Funding

Public funding consists of payments by the federal, national, regional or local public authority, either to the port authority, or by paying costs that should normally be accounted to the port authority. Another condition for the term “public funding” is that the users of the port facilities do not bear the cost of the services funded by the public authorities. In this chapter we discuss whether and to what extent the main seaports in the Hamburg-Le Havre range are funded by the public authorities. In the first place we will give a description of how the ports are organized. Subsequently an overview will be given of how the construction of infrastructure is managed in each country. And finally we will illustrate how major investments are handled in the five concerned countries in the light of recent cases of port expansion.

Organization

Most North-western European ports apply the Landlord Model, they let the land and they control all access, but they do not perform any commercial port activities. The ports in Germany, the Netherlands, Belgium and France follow this model, albeit with a slightly different approach for each port. According to this model, all port management costs should be at the port user’s expense. The ports in the United Kingdom can be marked as private ports.

Infrastructure

According to European regulations regarding infrastructure, the national governments should in principle provide sea walls and nautical access. The docks and quays are to be installed by the port authority or a private party and the costs should be borne by the port users.

The paragraphs below indicate by country to what extent the public authorities are involved in the financing of the seaports.

2.1 United Kingdom

The ownership structure of the ports in Britain differs from the landlord model of the ports in the Netherlands, Belgium, Germany and France. There are three main types of ownership structures. The majority of the major ports are private ports; they handle 65% of the cargo (such as Liverpool and Felixstowe). This group also includes the 21 ports owned by Associated British Ports (ABP). The second group is Trust Ports, an independent business with no external shareholders. They operate on a near-commercial basis and any profits they make are retained in the company. The company is managed by an independent board. The Minister of Transport has a say in the appointment of the chairman and board members, such as the Port of London Authority (Gov.UK, 2013). Trust Ports handle 25% of the total charge. A number of small ports -10% in load-share- is owned by the local authorities (such as Portsmouth, Orkney and Shetland). Public spending on ports in the United Kingdom has been particularly limited since the beginning of the 80s. The Transport Act 1981 of Thatcher’s Cabinet enabled the privatization of a large number of ports in the United Kingdom. The ports were brought to the stock market in 1983 under the name Association British Port Holding. In 2006 ABP was withdrawn from the stock market by a consortium led by the business bank Goldman Sachs. ABP is responsible for the exploitation of the port infrastructure and acts as spatial developer in 21 port areas.
Within the United Kingdom there are minor differences in the extent in which public authorities facilitate the port authorities. For England, however, one can say that there is no public investment in seaports (European Union, 2011). Even nautical access is funded by the ports themselves.

The English Department for Transport issues the policy for seaports, but does not make any public funds available. Local public authorities do not engage in policy making for English ports, nor do they make any funds available.

An interesting observation is the discipline of the market when it comes to the allocation of (European) funds for investment in port areas. When the City of Liverpool decided to use EU structural funds to invest in a cruise terminal in 2011, it immediately led to complaints from some private parties in other ports (including ABP). Therefore the City decided to return the funds (approximately GBP 10 million) in May 2012.  

A port expansion case: London Gateway

Between 2010 and 2013, terminal operator DP World of Dubai reconstructed the site of a former Shell refinery on the Thames into a container terminal with a capacity of 3.5 million TEUs. The financing of this terminal, at an amount of GBP 1.5 billion for the first phase of development, is funded entirely by the market with a combination of loans and equity issuance.

One of the banks that provided a loan is the European Investment Bank (EIB), which has also issued loans to other cases in this study. The only public funds used for the development of the terminal, are GBP 12.7 million of EU TEN-T funds, provided for dredging by the East of England Development Agency.

2.2 The Netherlands

The Dutch ports are characterized by a strong involvement of the local authorities. However, the port authorities generally operate well away from politics. In Rotterdam, the Port Manager is corporatized; it is a public limited company with the local and national governments as shareholders. The land is owned by the local public authorities and issued under ground lease by the port authorities. In Amsterdam, the port manager was corporatized in 2013, similar to Rotterdam. The land is owned by the local public authorities and issued under ground lease by the port authorities. The other Dutch seaports also have a business structure with a public

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3 *Lloyd’s List* 08-10-2012 ‘Liverpool repays government grant’
shareholder. The Dutch port authorities have their own financial responsibilities. Port authorities have the option to apply price differentiation.

Structure of the Dutch seaports
(based on the financial flows in the corresponding budgets)

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<th>National Government</th>
<th>Ministry of Infrastructure and the Environment</th>
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<tr>
<td>National Government</td>
<td>Ministry of Finance</td>
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<tr>
<th>Municipalities &amp; Provinces</th>
<th>Autonomous PLC's (with shares in public ownership)</th>
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<tbody>
<tr>
<td>Municipality of Rotterdam</td>
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<tr>
<td>Municipality of Amsterdam</td>
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<tr>
<td>Provincie of Groningen</td>
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<td>Municipality of Eemsmmond</td>
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<td>Municipality of Delfzijl</td>
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<td>Provincie of Zeeland</td>
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<td>Municipality of Borsele</td>
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<td>Municipality of Terneuzen</td>
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<td>Municipality of Vlissingen</td>
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*: The Moerdijk Port Authority forms an exception (Joint Agreement, with Municipality of Moerdijk and the Province of Noord-Brabant as participants)

**: This flow involves the payment of dividend from the Port of Rotterdam to the national government

***: This flow involves the payment of dividend from port authorities to the shareholders. Currently, not all port authorities pay out dividend.

In the Netherlands, the nautical access to the seaports is funded by the national government (Rijksoverheid). The largest investment project for the coming years is the new sea lock in IJmuiden. For this project, an amount of €848 million has been reserved, of which €573 million is funded by the public authorities.4

In addition these investments, there are also annual recurring costs that the public authorities take responsibility for. The two main projects therein are the maintenance of the deep water routes Maasgeul - Eurogeul (access Rotterdam) and IJgeul (Access North Sea). The costs for these projects amount to over 20 million euros for three years.5 The dredging costs related to the entire nautical access to the ports of Amsterdam and Rotterdam amount to a total of €14 million per year; for all Dutch seaports together approximately €36 million per year is needed.

4 Project paper Zeetoegang IJmond MIRT 2013
5 Press release Van Oord 29-08-2011 ‘Van Oord houdt havengebieden toegankelijk’
The traffic guidance at the entrances to the Port of Rotterdam, the Zeeland ports and the ports in the North Sea Canal area is related to the nautical access. The construction costs for these systems are funded by the state. The construction costs of the system in the North Sea Canal area amounted to €24 million. The ships have to pay a fee for using the system.

**A port expansion case: PMR (Maasvlakte 2)**

A case that cannot remain unexposed in this regard is the Project Main Port Development Rotterdam (PMR). The most visible subproject is the construction of Maasvlakte 2. The contribution of the national government (Rijksoverheid) in the project was specified in the Administrative Agreement of 2004. The state has committed to a contribution of €619 million (2004 price level) for partial funding of the so-called outer contour and public infrastructure. Furthermore, the national government, the Municipality of Rotterdam and the Port of Rotterdam (PoR) agreed that the State will become shareholder of PoR by investing €500 million in newly issued shares as of 1-1-2006. In addition to these resources, the costs of environmental compensation (€114 million) for the construction of the Second Maasvlakte will also be covered by the national government. The total cost for the land reclamation (the actual Second Maasvlakte) amounts to €3.0 billion. The PoR has funded €2.3 billion and the State advanced €726 million. Through payment of super dividend, PoR has prematurely reimbursed part of the loan.

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6 Project paper Walradar Noordzeekanaal MIERT 2009

7 See Regeling verkeersbegeleidingstarieven scheepvaartverkeer van Min IenM
2.3 Belgium

The Belgian seaports are generally designed as independent organizations. They are public services or public companies that operate as independent landlord organizations for the management of the port. The port of Antwerp is an "autonomous municipal company", which implies that the impact of the public authorities here is slightly larger than is the case with entirely independent port businesses.

The role of the public authorities in the field of seaports, in particular at regional level, is relatively large. (Financial) relations between seaports and the Flemish Region are issued in the Flemish Port Decree 8 of 1999. Since then, this decree has been marginally amended.

The core of the agreement concerns a funding regime that was approved by the European Commission; it amounts to a funding between €300 million and €400 million per year for the ports of Antwerp, Ghent, Ostend and Zeebruges. Over the period 2002-2012, between 50 and 64 percent of these funds was used for maritime access to these ports. The agreement also establishes the percentage of different works of art in the port infrastructure that may be financed by public funds. This ranges from 50% for the 'internal port basic infrastructure' to 20% for the 'equipment infrastructure'.

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8 'The Decree of March 2nd 1999 containing the policy and management of the seaports'.

9 Flemish Port Commission, the Flemish Ports, facts statistics and indicators for 2012.

10 'Internal port basic infrastructure': the docks, being, water surfaces, embankments and construction dredging works, including the embankments' (Article 2:11 Decree 1999).

11 'equipment infrastructure': mooring infrastructure for ships and inland waterway vessels in view of the transfer of goods or transport of people, such as quay reinforcements, piers, landing bridges, roll-on/roll-off-slopes, as well as the light infrastructure, such as quay reinforcements, railroads of local interest, pipelines of local interest, internal access roads within the port area, each with their appurtenances (Art 2:12 Decree 1999).
Furthermore, the Flemish port authorities receive operating subsidies from the Flemish government for tasks that fall under the responsibility of the Flemish Region according to the Port Decree. For example, in 2012, the Antwerp Port Authority received 27.2 million euro\textsuperscript{12} for inter alia the Harbour Master’s Division (Port Master) and the operation of the locks in the port of Antwerp.

As is the case in the Netherlands, the construction costs of shore radar systems are funded by the (in this case Flemish) government, but the management is also carried out by a public service. For the construction of these systems on the Western Scheldt and the Ghent-Terneuzen Canal, a contribution of €31.5 million has been reserved.\textsuperscript{13} In Belgium, port users also pay a fee for VTS (Vessel Traffic Services).\textsuperscript{14} As in the Netherlands, the fee is based on the length of the vessel. The rates are significantly lower than in the Netherlands; for most ship-length classes it is 50% to 60% lower.

Furthermore there are money flows from the Flemish government to the authority responsible for pilotage (DAB Loodswezen – The Flemish Pilotage). According to the 2012-2013 budget, an allocation of €18 million has taken place.\textsuperscript{15} Belgian municipal autonomous port authorities are legally exempt from corporate taxes.\textsuperscript{16}

\textsuperscript{12} Port of Antwerp, Annual Financial Report 2012 Revenues ‘Financieel Jaarverslag 2012, Bedrijfsopbrengsten’

\textsuperscript{13} See Vlaams Parlement Stuk 15 (2012-2013) – Nr. 3-I, p9 (Beleidsbrief MOW)

\textsuperscript{14} http://www.kustcodex.be/kustcodex-consult/consultatieLink?wettekstId=9433&appLang=nl&wettekstLang=nl

\textsuperscript{15} See Vlaams Parlement Stuk 15 (2012-2013) – Nr. 3-I, p9 (Beleidsbrief MOW) ‘De dotatie van DAB Loodswezen (artikelnummer MCO/1MI-E-2-Y/1S) wordt verhoogd om de DAB de mogelijkheid te bieden om zijn kernopdracht uit te voeren en uit te bouwen. Er wordt in acht miljoen euro aan extra krediet voorzien uit het Hermesfonds om de gevolgen van de economische crisis op het schepvaartverkeer en het loodswezen op te vangen. Daarbij komt 10 miljoen euro uit het VIF.’

\textsuperscript{16} See Artikel 180, Werboek van de Inkomsten Belastingen 92
The Antwerp Port Authority (Gemeentelijk Havenbedrijf Antwerpen, GHA) has implemented the Deurganckdock between 1996 and 2006. The Deurganckdock (also known as Container Dock West) is a dock with container terminals, located directly by the Western Scheldt. As the vessels do not have to pass through a lock, they can be processed more swiftly. There is however a substantial sedimentation due to tidal influences. Therefore, the costs for keeping the dock at the required depth, € 25 million annually are covered by the Flemish Region (Belgische Rekenkamer - Belgium Audit Office, 2007).

According to calculations of the Flemish Port Commission, the total costs of the project, regarding the timeframe 1996 -2012, amounted to € 570 million. More than three-quarters of this amount was paid by the Flemish Region (Vlaams Gewest).

For the financing of the ongoing constructions of the Deurganckdock lock at the south side of the Deurganckdock, a joint venture was established between the Flemish Government (through Vlaamse Havens NV) and the GHA. For the construction of this lock, estimated at a total of € 340 million, an amount of € 160 million will be covered by a loan from the European Investment Bank (EIB). The executive company of the lock (NV DGD) will issue a concession of 20 years to GHA, and they in turn will pay a compensation fee to DGD, subsidized by the Flemish Region.
2.4 France

Since the port reform of 2008, the French ports have distanced themselves more from the different administrations (European Commission, 2011). The largest ports, including the French ports in the HLH-range, have been given the structure of a Grand Port Maritime (GPM). The French state is shareholder of these ports. These ports have the characteristics of a landlord port, similar to the structure of most major ports in North West Europe. During the transition from tool port to landlord port, all port superstructures have been transferred with standard industry practice (European Commission, 2011).

Structure of the French seaports
(based on the financial flows of the corresponding budgets)

The only cash flow from the federal government to the GPM’s classification that can be traced directly and to any appreciable extent is accounted to the funding of the nautical access. This is regulated by the Code des Ports Maritimes. In the budget for 2014, an amount of €53.5 million has been reserved.17

Investment projects can be realised by the AFITF (Agence de Financement des Infrastructures de Transport de France), the French version of the Infrastructure Fund, or by regional public authorities using so called CPER contracts. For such projects, these regional public authorities may conclude contracts (co-financing) with the federal government.

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A port expansion case: Port 2000 in Le Havre

Between 2000 and 2006, the port of Le Havre expanded with a new area for container terminals. This increased the container capacity of the port to 6 million TEUs per year. With the completion of the first phase of the project, two terminals have been constructed. One of the terminals is operated by a subsidiary of CMA-CGM and the other one by a subsidiary of Maersk.

The total investment for the Port 2000 project amounted to almost €1.1 billion (European Commission, 2011). €433 million were funded by the port authority itself. Part of this amount was covered with a loan from the European Investment Bank, which has also provided loans in the cases of Rotterdam and Antwerp.

Various French public authorities have contributed over €310 million. An additional €47 million was covered by European Funds. Private parties who have obtained the terminal concessions have invested a total of €275 million into superstructures and equipment.

2.5 Germany

Over the past 10 years, in the major German ports, the municipal council has been separated from the port authorities. The port authorities of the member states of Hamburg and Bremen, had hitherto been very interdependent with the local administrations. The finances of the port authority were an integral part of the municipal financial management.

In Bremen, the port authority has been corporatized. The land is owned by the local public authority. The port authority, Bremenports GmbH & Co KG, is contracted by the member state for the management of the port. The Hamburg port authority has also been corporatized. The land is mostly owned by the City of Hamburg. The economic value of the lands is entered in the balance sheets of the Port Authority Hamburg. HPH operates port of Hamburg under the landlord model for the member state Hamburg.18

Of all countries surveyed in this study, the German public authorities seem to be the most involved in their seaports. For the German ports, most flows of public funds can be identified. The various German public authorities (both federal and state) act as a facilitator when it comes to supporting individual port authorities.

At the federal level, there is a first flow of funds to the Bundeslander with seaports. This measure, Finanzhilfen des Bundes für Seaports, is a long-term support program (current regulation ends in 2019), wherein the member states of Hamburg, Bremen, Schleswig-Holstein, Mecklenburg-Vorpommern and Niedersachsen receive an annual funding of almost €40 million for investment

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18 The port authority of Hamburg is a so called Anstalt des öffentlichen Rechts, an organization that performs a 'public' task based on a statutory basis.
projects that reinforce the economic structure. \(^{19}\) Approximately half of this money goes to Hamburg; Bremen receives nearly €11 million. \(^{20}\)

The German federal government also bears the cost of dredging the Elbe. This concerns both the maintenance of the nautical access as the deepening of the Elbe to customize it for larger (container) vessels.

The maintenance operations on the Lower Elbe between Cuxhaven and Wedel are performed by Boskalis and commissioned by the federal Wasser und Schifffahrtsamt Cuxhaven. The maintenance contract amounts to €75 million for a period of three years. \(^{21}\) The contract for deepening the Elbe to 14.5 meters, with a value of €89 million has also been awarded to Boskalis (a subsidiary of Hirdes). \(^{22}\) The BMBVS (Bundesministerium für Verkehr, Bau und Stadtentwicklung - Federal Ministry of Transport, Building and Urban Development) has reserved a total of €117 million in the budget for this deepening. If further measures for the Unterelbe, aimed at improving the flow, are also included, then another €248 million is added. \(^{23}\)

At an individual port authority level, money flows can also be identified from, in this case, the member states to the port authority. An example of this is the regulation of the Land Niedersachsen to support the regional port authority Niedersachsen Ports. It is regulated by law that the member state has the authority to contribute an annual amount for both investments and exploitation. \(^{24}\) For Niedersachsen this comes to an annual contribution in the range of €10 million. For the years 2013-2017 this amount is estimated at an average of €8.4 million per year. \(^{25}\)

\(^{19}\) Gesetz über Finanzhilfen des Bundes nach Artikel 104a Abs. 4 des Grundgesetzes an die Länder Bremen, Hamburg, Mecklenburg-Vorpommern, Niedersachsen sowie Schleswig-Holstein für Seehäfen.

\(^{20}\) Haushaltsplan Freie Hansestadt Bremen 2012-2013, "Kapitel 0801 Allgemeine Bewilligungen für Häfen, Artikelnummer 331 10 6”


\(^{22}\) http://www.dredgingtoday.com/2013/05/31/elbe-river-dredging-contract-awarded-germany/

\(^{23}\) Bundeshaushaltplan 2013, Einzelplan 13, 'Maßnahmen an der Unter- und Außenelbe'


\(^{25}\) Mittelfristige Planung Niedersachsen 2013 – 2017 MW 08.06 Seehäfen und Binnenschifffahrt
The Hamburg Port Authority receives funds from the Stadt Hamburg (City of Hamburg) for redevelopment of port sites through the same kind of regulation. An amount of €24 million was reserved for this funding in the budget for 2013-2014.26

Furthermore, it is remarkable that the port authorities of Niedersachsen, Hamburg and Bremen have all been loss-making for years. These port authorities, all owned by the member states, have been making losses that are subsequently refunded by public means. The table below summarizes the financial situation of Niedersachsen Ports. According to the budget documents of the Land Niedersachsen, the deficit (Fehlbetrag) is always covered by the Land Niedersachsen.

Table 2-1: Balance Sheet Niedersachsen Ports GmbH & Co. KG - based on Budget / Accounting Niedersachsen

<table>
<thead>
<tr>
<th>Year</th>
<th>Income</th>
<th>Expenses</th>
<th>Deficit</th>
<th>Subsidies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>40,3</td>
<td>72</td>
<td>31,7</td>
<td>25</td>
</tr>
<tr>
<td>2008</td>
<td>40,1</td>
<td>88,7</td>
<td>48,6</td>
<td>40,4</td>
</tr>
<tr>
<td>2009</td>
<td>44,3</td>
<td>131,8</td>
<td>87,4</td>
<td>80</td>
</tr>
<tr>
<td>2010</td>
<td>48,7</td>
<td>147,5</td>
<td>98,9</td>
<td>91,5</td>
</tr>
<tr>
<td>2011</td>
<td>45,8</td>
<td>105</td>
<td>59,3</td>
<td>44,4</td>
</tr>
<tr>
<td>2012</td>
<td>52,5</td>
<td>97,7</td>
<td>45,1</td>
<td>23</td>
</tr>
<tr>
<td>2013</td>
<td>55,1</td>
<td>91,5</td>
<td>36,4</td>
<td>26,6</td>
</tr>
</tbody>
</table>

The realisation of JadeWeserPort is not included in this data. For this project, a separate company, JadeWeserPort Infrastruktur und Beteiligungen GmbH & Co. KG was created. Herein 50.1% of the shares are owned by the member state Land Niedersachsen and the rest in the hands of the City of Bremen.27 This entity is responsible for the construction of basic infrastructure. Yet another entity, JadeWeserPort Realisierungs-Beteiligungs GmbH & Co. KG is responsible for the construction of the terminal infrastructure. The ownership structure is identical to the one of the other entity.

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26 Haushaltsplan Freie und Hansestadt Hamburg 2013-2014, Einzelplan 7 (Behörde für Wirtschaft, Verkehr und Innovation) ‘Kostenerstattung für Investitionen im Hafen’

The ports of City of Bremen and the member state Land Bremen have a complex structure. There is a company, with the City of Bremen as sole shareholder, which is responsible for the management and development of the port areas. The City of Bremen receives a management fee for this task. The ownership of the port areas and the infrastructure lies with the City of Bremen and the member state Bremen via Special Property Ports (Sondervermögen Hafen), an independent administrative authority.

The revenue side of budget of seaports of the member state Bremen shows that the main income consists of a contribution of €10.7 mln/year by the Union for seaports. At the expenses side, the largest item is the Kostenerstattung für Häfen, by which an amount of €63.4 mln is reserved in the budget of 2013 for the City of Bremen.

The City of Bremen uses these resources to (partly) pay for the interest dues for port investment projects and provides resources to the Sondervermögen Hafen, a construction that bears a lot of resemblance to the Dutch ZBO.

In 2012, this Special property Ports had a total income of €60.4 mln. Roughly half of this amount comes from port dues; the other half is divided between lease revenues and revenues from quays and port railways.

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28 ‘Leistungsentgelt’

29 See Landeshaushalt Land Bremen 2012-2013: Kapitel 0801 Allgemeine Bewilligungen für Häfen

30 See Stadthaushalt Stadt Bremen 2012-2013: Kapitel 3801 Allgemeine Bewilligungen für Häfen

31 Vorlage Nr.: 18/321- S Sonstiges Sondervermögen Hafen Controllingbericht für das 4. Quartal 2012 (vorläufiger Jahresabschluss)
The expenses side includes the management fee for Bremenports (in 2012: €17.8 mln) and all costs for the maintenance and investment in all ports that are managed through the Special property Ports. The credit balance of the Special Property Ports for 2012 amounted to €-68.4 mln. This amount will be covered by public funds from the budget of both the member state Bremen and the City of Bremen. This situation is not only exemplary for the year 2012 but is also seen in the planned budgets for 2014/2015. Striking, also is the full funding (€180 million) by the member state Bremen for the construction of a new offshore terminal in Bremerhaven when no interested parties were found during a tender procedure.32

The financial statements of the Hamburg Port Authority (HPA) paint a similar picture. Again, there appear to be structural losses. Even when it is taken into account that the German port authorities operate in a context where more is expected of a port authority when it comes to the provision of public infrastructure (e.g. bridges), this cannot provide a sufficient explanation.

The balance sheet of the HPA is as follows:

Table 2-1: The income statement of the Hamburg Port Authority – based on the annual reports of the HPA

<table>
<thead>
<tr>
<th>Hamburg Port Authority</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>130</td>
<td>135</td>
<td>144</td>
<td>158</td>
<td>157</td>
</tr>
<tr>
<td>Other operating income</td>
<td>159</td>
<td>74</td>
<td>78</td>
<td>72</td>
<td>75</td>
</tr>
<tr>
<td>Cost of materials</td>
<td>130</td>
<td>130</td>
<td>131</td>
<td>165</td>
<td>144</td>
</tr>
<tr>
<td>Staff costs</td>
<td>89</td>
<td>98</td>
<td>92</td>
<td>95</td>
<td>100</td>
</tr>
<tr>
<td>Loss on ordinary activities</td>
<td>-12</td>
<td>-209</td>
<td>-97</td>
<td>-110</td>
<td>-102</td>
</tr>
<tr>
<td>Withdrawals from capital reserve</td>
<td>0</td>
<td>202</td>
<td>98</td>
<td>102</td>
<td>115</td>
</tr>
<tr>
<td>Balance sheet deficit</td>
<td>-4</td>
<td>-29</td>
<td>-37</td>
<td>-32</td>
<td>-26</td>
</tr>
</tbody>
</table>

According to the answers to parliamentary questions posed in the senate of Stadt Hamburg on the matter, the category ‘other operating income’ (‘Sonstige betriebliche Erträge’ in the German annual report) appears to consist mainly of subsidies of the City to HPA.33 The low income of port dues is remarkable; in Hamburg they range from €36 mln to €48 mln per year over the 2006-2011 period. The port dues collected in Hamburg aren’t even sufficient to cover the costs of keeping the Elbe River at its required depth.34

Over the past years, the deficit could be covered (largely by the Stadt Hamburg) through the funds obtained through the sale of HHLA stock shares. The (partial) sale of this concern yielded a total of a little over €1 billion. These funds were intended to finance future port investments, but in practice they are used to balance the HPA’s budget.35

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33 Schriftliche Kleine Anfrage der Abgeordneten Roland Heintze und Olaf Ohlsen (CDU) vom 28.06.13 und Antwort des Senats Btr.: Hamburg Port Authority (HPA) – Fragen zum Geschäftsbericht 2012

34 See answers to questions posed to the senate of the BÜRGERSCHEIT DER FREIEN UND HANSESTADT HAMBURG (document Drs 20/3890)

35 Annual report HPA 2012: “Due to the changes in the financing system of the HPA in 2009, the institution has been receiving annual tranches from the proceeds of the partial initial public offering of Hamburger Hafen und Logistik AG (HHLA), Hamburg – the so-called “HHLA-Milliarden (HHLA billion)” – to finance the development and management of the port of Hamburg. These tranches will be appropriated to capital reserves. In the financial year TE 77,400 was appropriated. TE 114,753 was withdrawn from capital reserves for ongoing expenses, whereby TE 64,753 was allotted for projects and TE 50,000 for maintenance measures.”
At the founding of the HPA in 2005, it was documented by law that the investments in the general port infrastructure will be accounted for by the City of Hamburg. Through the answers that where obtained from the parliamentary questions posing to the Senate of the City of Hamburg, a clear overview can now be established, showing the scope of the concept of general port infrastructure in practice. Investment projects for the expansion of general infrastructure with an estimated sum of €898 million are included for the years 2012-2017. In addition, there are replacement investments that add up to a total of €600 million.

One of the largest projects in this category is the expansion of the ‘Westerweiterung’ (€206 million, from 2012 to 2017). This is the extension of the EUROGATE Container Terminal; a further adaptation of the Elbe (Fahrrinnenanpassung’, €193 million, from 2012 to 2017) and the ‘Sudliche Hafenerschließung - Neue Bahn Kattwyk Brücke’ (€179 million, from 2012 to 2017), a project for a new railway bridge.

A financial allocation key for the costs of this project can be found on the ‘Westerweiterung’ project website. The HPA and the City of Hamburg contribute €400 million and EUROGATE invests €250 mln in the superstructure. The question is to what extend it is appropriate to add this project to ‘general infrastructure’. Also some smaller projects like the Central Terminal Steinwerder (€37 mln, 2012-2017, a terminal intended for VAL/VAS activities and for example the postponed manufacturing), or the ‘Ausbau Innerer Freihafen’ (€76 mln, 2012-2017) regarding the...

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36 "Mit der Drucksache 18/2332 (Gründungsdruksache HPA) ist grundsätzlich vorgesehen, dass Investitionen in die allgemeine Hafeninfrastruktur aus dem Haushalt der Freien und Hansestadt Hamburg getragen werden"

37 BÜRGERSCHAFT DER FREIEN UND HANSESTADT HAMBURG Drs 20/3890

38 C.f. Appendix A of Drs 20/3899

39 http://www.westerweiterung.de/Finanzierung.22.0.html

40 EUROGATE is a private company owned by EUROKAI and BLG Logistics. Stadt Bremen is among the shareholders of BLG Logistics

41 Presentation HPA Central Terminal Steinwerder via portsintegration.eu
restructuring of the smallest HHLA container terminal, may possibly fall outside of the scope of what is called ‘general infrastructure’. It is expected that the 'HHLA Milliarde' funds will have run dry in 2014 and that HPA will again be dependent on public funding. In the City of Hamburg’s budget for 2013/2014, a facilitation of €91.5 million was recorded for the year 2014 to cover the investments of general port infrastructure.

In 2012, the exploitation deficit amounted to €101.4 million. For the following years, the estimate in the financial medium-term planning of the Freie Hansestadt Hamburg also predicts a sum of around €100 million per year. This has raised the discussion within Hamburg politics, whether this is a realistic amount. If all proposed projects follow through, there will be a financial gap of €450 mln.

A port expansion case: JadeWeserPort

With the realization of JadeWeserPort, Germany also sports a large deep-water port. Given the scale expansion of container transport, this is vital for maintaining a good competitive position. JadeWeserPort is a project of the Land Niedersachsen and the Freie Hansestadt Bremen. The construction of this container port, at that time still called Tiefwasserhafen Wilhemshaven, was decided upon in 2002. As previously mentioned, two companies, financed by means of public funds and owned by the two regional, were established for the construction of the basic infrastructure and the terminal infrastructure. The terminal itself will be constructed and operated by concessionaire Eurogate Wilhelmshaven, a company owned by Maersk and Eurogate. 50% of Euro Gate is owned by BLG Logistics, a party from Bremen of which the City of Bremen is the majority shareholder. This project has received approval from the European Commission.

The terminal, with an estimated capacity of 2.7 million TEUs per year, has cost a total of €960 million. Of this amount, €610 million was paid by the two 'public' entities and €350 million was covered by Eurogate Wilhelmshaven.

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42 See Doppelhaushalt 2013/2014, Artikel 7350, 891.62
43 http://www.ndr.de/regional/hamburg/hpa115.html
44 See http://www.welt.de/regionales/hamburg/article115856343/Kein-Geld-fuer-Bruecken-und-Strassen.html
2.6 Differences in funding and results

The table below summarizes the funding of the ports of the countries researched in this study. The table shows which contributions are made by the public authorities in favour of the seaports, divided into three categories. Firstly for maritime access; secondly, the funds received by the port authority for the management or development of the port. In addition, the category ‘other’ for specific payments.

The United Kingdom has not been included, because there is no public funding at all for the British Seaports.

Table 2-3: Overview of seaport funding by public authorities

<table>
<thead>
<tr>
<th></th>
<th>Access (€)</th>
<th>Port internal (€)</th>
<th>Other (€)</th>
<th>Total (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg</td>
<td>45,0</td>
<td>101,4</td>
<td></td>
<td>146,4</td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>17,0</td>
<td>68,4</td>
<td></td>
<td>85,4</td>
</tr>
<tr>
<td>Wilhelmshaven</td>
<td>33,0</td>
<td>44,4</td>
<td></td>
<td>77,4</td>
</tr>
<tr>
<td>Niedersachsen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>95</td>
<td>214,2</td>
<td></td>
<td>309</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>4,2</td>
<td></td>
<td></td>
<td>4,2</td>
</tr>
<tr>
<td>Rotterdam</td>
<td>9,8</td>
<td></td>
<td></td>
<td>9,8</td>
</tr>
<tr>
<td>Other</td>
<td>22,0</td>
<td></td>
<td></td>
<td>22,0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>36</td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Antwerp</td>
<td>75,0</td>
<td>73,1</td>
<td>9,0</td>
<td>157,1</td>
</tr>
<tr>
<td>Ghent</td>
<td>24,0</td>
<td>8,4</td>
<td>2,9</td>
<td>35,3</td>
</tr>
<tr>
<td>Zeebruges</td>
<td>36,0</td>
<td>29,3</td>
<td>4,3</td>
<td>69,6</td>
</tr>
<tr>
<td>Other</td>
<td>15,0</td>
<td>10,0</td>
<td>1,8</td>
<td>26,8</td>
</tr>
<tr>
<td>Belgium</td>
<td>150</td>
<td>121</td>
<td>18</td>
<td>289</td>
</tr>
<tr>
<td>Dunkirk</td>
<td>6,9</td>
<td></td>
<td></td>
<td>6,9</td>
</tr>
<tr>
<td>Le Havre</td>
<td>10,4</td>
<td></td>
<td></td>
<td>10,4</td>
</tr>
<tr>
<td>France</td>
<td>17</td>
<td></td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

Germany ‘Port internal” is based on deficits that are compensated. The actual flows in finance are (much) larger, but in part they belong to public services.

Belgium The amounts have been established based on the share of public expenditure for the ports in the period of 2007-2012. Other Belgium: the contribution to the pilotage service.

France The allocation is estimated based on the expenditure of French government to Grand maritime ports (a total of €53mln annual).

The Netherlands Sea access: from IBO Beheer en Onderhoud; Hoofdvaarwegennet, Hoofdwegennet en Hoofdwatersysteem: dredging costs amount to €72mln total, 50% of which is inland water (port access Amsterdam and Rotterdam together amounts to 14mln / year).
The differences in funding also have an impact on the rates of the port dues and the results of the port authorities. The table below provides an overview.

**Table 2-4: Port dues and results per tonne**

<table>
<thead>
<tr>
<th></th>
<th>2012 tonnes</th>
<th>Port dues</th>
<th>Port dues per tonne</th>
<th>Results</th>
<th>Results per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg</td>
<td>130.938</td>
<td>47.714.000</td>
<td>0,36</td>
<td>-108.365.189</td>
<td>-0,83</td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>83.979</td>
<td>31.808.160</td>
<td>0,38</td>
<td>-68.363.975</td>
<td>-0,81</td>
</tr>
<tr>
<td>Niedersachsen</td>
<td>48.174</td>
<td>N/A</td>
<td>N/A</td>
<td>-30.053.000</td>
<td>-0,62</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>94.261</td>
<td>49.906.339</td>
<td>0,53</td>
<td>47.974.821</td>
<td>0,51</td>
</tr>
<tr>
<td>Rotterdam</td>
<td>441.527</td>
<td>293.599.000</td>
<td>0,66</td>
<td>227.549.000</td>
<td>0,52</td>
</tr>
<tr>
<td>Antwerp</td>
<td>184.136</td>
<td>91.344.000</td>
<td>0,50</td>
<td>138.969.000</td>
<td>0,75</td>
</tr>
<tr>
<td>Zeebruges</td>
<td>43.544</td>
<td>N/A</td>
<td>N/A</td>
<td>19.107.390</td>
<td>0,44</td>
</tr>
<tr>
<td>Le Havre</td>
<td>63.511</td>
<td>109.330.200</td>
<td>1,72</td>
<td>32.800.000</td>
<td>0,52</td>
</tr>
</tbody>
</table>

*Source: annual reports of the port authorities.*
3 Non-financial conditions

3.1 Nautical services

Nautical services are often subject to regulation; they have a history of a limited market access, and sometimes public funding. Therefore they are included in this overview. Nautical services include tugs, linesmen, pilots, vessel reporting and vessel traffic control. In principle, the cost of these services would have to be covered entirely by user fees. In recent studies on public funding of European ports and the competition within a port (European Commission, 2011, ISL, 2006; OECD, 2011), no examples were cited in which public funding to nautical service providers such as pilots, linesmen, tugs, vessel reporting or vessel traffic control had been granted. Belgium is the only country known for direct funding of the pilotage (see chapter on public funding).

United Kingdom

In the private ports Felixstowe, Harwich and London Thames, the pilotage, towage and vessel traffic control are all offered by one party, the private port authority. The ports of Felixstowe, Harwich and London Thames are managed by the Hutchison Port Holding. In some ports, such as the Port of London, several private service providers are active. In this port, pilotage services are not only offered by the Port of London Authority, but also by three private pilotage service providers (Livett’s Launches, Sargent Brothers (Thames) Ltd. and Estuary Services Ltd.); in addition, ten private providers of towage services. Mooring services are offered by both the towage providers as by private specialized mooring companies. Vessel traffic control in private en trust ports is offered by the port authorities.

Belgium

In Flanders there are four types of pilots; sea pilots (also Scheldemond pilots, from the sea to Flushing) coastal pilots (guiding vessels from the sea to the Flemish coastal ports such as Zeebruges and Ostend), river pilots (specifically for Antwerp through the Scheldt) en canal pilots (Canal Ghent-Terneuzen). For the piloting transfer from river to canal, the Flemish and Dutch pilotage services cooperate. As of January 1st, 2001, the Flemish Pilotage has been transformed into a public service with a large degree of autonomy, a Service of General Interest (Dienst van Algemeen Belang - DAB). Services of general interest differ from 'standard' services in the presence of public interests with respect to quality, accessibility and security of supply for large groups of citizens. The pilots are employed by the Flemish government and organized by the Flemish Agency Maritime Services & Coast (Agentschap voor Maritieme Dienstverlening en Kust.). The Flemish pilotage services receive both structural and incidental allocations form the Flemish government. The Flemish government is investing in the renovation and maintenance of the pilotage fleet, furthermore an allocation was provided in 2012 and 2013 in order to cushion the blows from the economic crisis (Flemish Parliament, 2012). Since 2009, the pilotage tariffs are determined by the Flemish Minister of Transport. Pilotage tariffs are based on the size of the vessel in Gross Register Tonnage.

45 The ‘Scheldereglement 1843’ (Scheldt Rules of 1843) state that ships destined for Dutch seaports and within the jurisdiction of the Dutch Pilotage Law are exclusively piloted by Dutch pilots. For ships destined for Belgian ports there is a division of 27.5% Dutch pilotage and 72.5% Belgian pilotage.
Up until 2009, the tariffs for pilotage on the Scheldt were always linked to the tariffs for pilotage in the Meuse estuary (Rotterdam), as part of the Scheldt Regulations of 1943.  

In Antwerp, three companies are active in the provision of towage. A distinction is made between towage 'before' and 'behind' the locks. Before the locks - on the Scheldt river- two private companies are active; URS (44 vessels, including coastal and harbour tugboats) and Antwerp Towage (4 vessels). URS forms part of the Unie van Redding- en Sleepdienst NV. Antwerp Towage is a joint venture between the German company *Fairplay towage* and the Dutch company *Multraship*. These two companies set their own rates for shipping companies. Towage behind the locks is provided by Sleepbedrijf Antwerpen (*Antwerp Towage*), affiliated with the Port Authority. Mooring services (linesmen) are provided by one service provider, Brabo - a cooperative company with limited liability (CVBA). Vessel traffic control and vessel reporting in Belgium is conducted by the Agency Maritime Services & Coast, the organization which is also responsible for pilotage services.

**France**

The port pilotage of Le Havre - Station de Pilotage Le Havre - consists of three separate and partly overlapping subdivisions (French Federation of Maritime Pilots, 2013). Firstly, the individually registered pilots; secondly, the cooperative in which the individual pilots are united. Pilots elect a president with a single mandate for two years. The chairman is supported by a board of eight selected pilots. The ‘Pilotage Station’ is the third subdivision. The Pilotage Station is a public service organization, governed by the Ministry. The daily management of the Pilotage Station is run by the president of the cooperative.

There is only one provider of mooring services; the linesmen are united in a cooperative - Société Coopérative Maritime de Lamanage des Ports du Havre et d’Antifer. This cooperative was founded in 1937 and has been approved by the port authority of Le Havre (Grand Port Maritime du Havre). The towage services in Le Havre are performed by Boluda Le Havre, a subdivision of the French-Spanish Boluda BV. The annual reports of Boluda show no allocations from public authorities. The vessel traffic service (VTS) in Le Havre is run by the port authority (Grand Port Maritime du Havre) under the supervision of the harbour master.

**Germany**

The port pilots in Hamburg are organized in an association structure - Hafenlotsenbrüderschaft Hamburg. This association was founded in 1981. Until 1981, all pilots in Hamburg were employed by the Free and Hanseatic City of Hamburg (city-state of Hamburg). July 1st of 1981, a parliamentary decision led to the establishment of the association. The association is supported by the Senate and the port authority. The organisation of the port pilotage is modelled according to the example of the German federal sea pilots and is based on the Hamburg Pilotage Regulation (Hamburg Pilots, 2013). Hamburg Pilots Association negotiates on rates with the city state of Hamburg (Beratungsgeld). Pilotage tariffs are based on the size of the vessel in Gross Register Tonnage plus any additional surcharges for inter alia stand-by time. As of 1981, the rates have

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46 The Dutch pilots feel disadvantaged by the fact that the Flemish Government set the rates. They suspect that the Flemish rates of the pilotage services cannot be cost-effective, thus creating a deficit of millions every year that has to be refunded. The Dutch pilots have referred the matter to a Flemish arbitration commission and were granted € 8 million. However, there was never any payment. Flanders believes that they are the ones who should get paid by the Dutch pilots for using the new Flemish fleet to navigate to and from large marine vessels (NRC, 2013).
been adjusted based on a so-called "cost of living" index (Lebenshaltungskosten index) (Hafenlotstarifordnung, 1981). The public authorities are responsible for the required pilotage equipment, the pilotage station, the pilotage vessels and the funding thereof. The public authorities can delegate this task to a private company or service. In Hamburg, the port authority carries out these tasks.

In the port of Hamburg, towage is provided by seven different private companies; Bugsier Reederei (10 vessels), Petersen und Alpers (2 vessels), H.S.H. Hafen Service Hamburg, Lütgens & Reimers (3 vessels), Fairplay (2 vessels), Kotug (6 vessels) and Meyrose/previously Vereinigte Schleppkontor GmbH (7 vessels). With the exception of Kotug and Fairplay, all towage companies are united in a private limited company, Arbeitsgemeinschaft der Seeschiffassistenz-Reedereien für den Hafen Hamburg GmbH. The towage companies negotiate on the rates with the shipping companies individually. The competition between the tugs has increased in recent years. Mooring services (linesmen) are offered by the private sector. Five companies are united in the Arbeitsgemeinschaft der Hamburger Schiffsbefestiger GmbH. These are the same five companies that have joined in the Arbeitsgemeinschaft for towage services. Schiffsmeldedienst Hamburg GmbH provides the vessel reporting service in Hamburg. It is a private company, fully owned by a private person who owns multiple maritime-related companies in Hamburg (Orbis, 2013). The annual reports of the vessel reporting service does not show any funding from public administrations. Vessel Traffic Services (VTS) are offered by the Hamburg Port Authority (HPH). In addition to traffic in the port basins, the Hamburg Port Authority is also responsible for the traffic on the Elbe, which is basically a federal river.

3.1.1 Comparison with the Netherlands

When comparing the Netherlands with the other four countries in this study (France, Belgium, Germany and England), the following picture emerges:

- The organization of pilotage services in France and Germany is similar to that of the cooperative form in the Netherlands; (1) the individual pilots enjoy a large degree of autonomy and have final say over the organization; (2) the government operates in the background and is the party with which the tariffs are negotiated, or the party who must approve the tariffs. In Great Britain, all pilotage is privatized. A significant difference with the other four countries is that in some British ports there are multiple providers of pilotage services. Belgium has the most publicly organized pilotage service of these four countries. The Flemish Pilotage is a public service with a large degree of autonomy (Service of General Interest – SGI).

- In all countries, the towage services are offered by private parties, with the exception of the port of Antwerp. The difference lies mainly in the number of towage companies operating per port. For example; in Rotterdam, there are three operational towage companies, in Le Havre there is only one and in Hamburg there are seven. In the port of Antwerp two private towage companies offer towage services before the lock; behind the lock the towage is operated by the Antwerp Towage, a subdivision of the Port of Antwerp. There are no signs of public allocations in the annual accounts of the towage companies.

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In Rotterdam, mooring services are offered by linesmen/boatmen who have united into an association structure; a similar organizational structure with members (association) or members/owners of a cooperative can be found in French and Belgian ports. In these countries, the providers of mooring services hold a monopoly position. In German and British ports, multiple mooring service providers are operational.

Vessel reporting on expected incoming and outward bound vessels in Rotterdam is provided by a private party, Royal Dirkzwager. According to the information, the vessel reporting in France, Belgium, Germany and England is also operated by private parties.

In the Netherlands, Vessel Traffic Services (VTS) are conducted by the port authorities in cooperation with Rijkswaterstaat. In France, Belgium and Germany, the vessel traffic services are public services, managed by public administrations; in Great Britain, VTS are run by privatized port authorities.

3.2 Physical space

3.2.1 Land allocation

For the land allocation policy, a study was made of owned lands versus leased lands. This factor may influence the level playing field, because some companies prefer to operate on lands they own. If they can acquire the lands only by lease, these companies may choose not to settle in the port. On the other hand, a port authority has more control over the spatial implementation of the lands. When a lease has nearly expired, the port authority can choose either to extend the lease or to grant it to another party. If the lands are issued for property, all direct control of the administrator ends there. The party who has acquired lands by ownership remains bound to the spatial development plan and will have to conduct its activities accordingly. If the party wants to change the use of the lands, an amendment to the spatial development plan will be required. This will have to be done through the municipal administration because the municipality issues the plan.

The difference between ground lease and ownership is very small; ground lease is the type of lease that comes nearest to ownership (especially when working with periods of 50 years or more). The Port of Rotterdam Authority allocates the lands through lease, but does not seem to suffer any disadvantage. Stakeholders have indicated that the allocation of land through ground lease does not have an adverse effect on the position of the port of Rotterdam and the port of Amsterdam; therefore we consider this condition to be irrelevant.

3.2.2 Land valuation

A determining factor of financial conditions is land valuation. The way land valuation is executed in a port influences the level playing field. A key question is how the lands are appraised; based on actual market prices, or on other measuring standards. If the ports base the land valuation on different standards, the companies in the different ports will not pay the same rates for the lands. Companies will be more likely to settle in ports with lower land rates. According to the industry, it is not the accounting valuation that is of importance, but the actual land rates that have to be paid. The table below provides an overview of the land valuation in the ports of Rotterdam, Antwerp and Hamburg. The land valuations from 2008 were chosen as the starting point, because it was the first year in which the mutual information can be compared. Per port, both the rates and the revenue are calculated per m².
The rates per m² in the port of Rotterdam are considerably higher than in the ports of Hamburg and Antwerp, where the rates are more or less equal. In Rotterdam the lands are rated at €56.53, while in Hamburg and Antwerp they are rated at €23.81 per m² and €26.90 per m² respectively. There is also a difference in revenue per m². However, these differences are smaller than the variations in rates of the land. In Rotterdam each m² yields €4.37, in the port of Hamburg €1.63 and in the port of Antwerp €3.53. It should be noted that this yield can be an overestimation of the actual revenue, because no difference is made between income from ground letting and income from quay dues.\(^4\)

Based on publicly available data, it is not possible to determine whether there is any public funding within the subject of the valuation of assets such as lands in the various ports. In order to determine whether there is any support, we would need to do an extensive analysis of the property market in three different countries. However, this analysis is beyond the scope of this study.

\(^4\) The Annual Report includes the following item: "Lease, rent and quay dues. The port dues and inland waterway dues are separate items in the financial statement."
Table 3-1 Valuation of tangible fixed assets and income from rentals and leases per port (2008)

<table>
<thead>
<tr>
<th></th>
<th>Rotterdam 49</th>
<th>Antwerp 50</th>
<th>Hamburg 51</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lands and infraplus</td>
<td>887.826.000</td>
<td>874.080.037</td>
<td></td>
<td>Lands, similar rights and buildings, including buildings on third party land</td>
</tr>
<tr>
<td>Public port basins and waterways</td>
<td>528.610.000</td>
<td>69.422.592</td>
<td></td>
<td>Technical equipment and machinery</td>
</tr>
<tr>
<td>Infrastructure, quay walls and other</td>
<td>861.183.000</td>
<td>25.541.538</td>
<td></td>
<td>Other equipment, factory and office equipment</td>
</tr>
<tr>
<td>Tangible fixed assets under construction</td>
<td>229.138.000</td>
<td>518.636</td>
<td></td>
<td>Payments on account and assets in the course of construction</td>
</tr>
<tr>
<td>Fixed assets and other assets</td>
<td>262.490.000</td>
<td>59.906</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total tangible fixed assets</td>
<td>2.769.247.000</td>
<td>1.010.076.205</td>
<td>1.010.919.074</td>
<td></td>
</tr>
<tr>
<td>Land surface in m²</td>
<td>48.985.000</td>
<td>37.500.000</td>
<td>42.460.000</td>
<td></td>
</tr>
<tr>
<td>Income from rent, lease and quay dues</td>
<td>214.286.000</td>
<td>132.416.880 32</td>
<td>69.227.000</td>
<td></td>
</tr>
<tr>
<td>Rates per m²</td>
<td>56,53</td>
<td>26,90</td>
<td>23,81</td>
<td></td>
</tr>
<tr>
<td>Revenue per m²</td>
<td>4,37</td>
<td>3,53</td>
<td>1,63</td>
<td></td>
</tr>
</tbody>
</table>

49 Port of Rotterdam (2009), annual report 2008
50 Port of Antwerp (2009), annual report 2008
51 Hamburg Port Authority (2009), annual report 2008
32 The total revenue for the port of Antwerp amounted to € 322 968 000, - Euro in 2008. Revenues from concessions amounted to 41% of total revenue. This is equal to € 132 416 880.
The impact of the land rates on the expenses of firms varies per sub sector. For the major chemical companies, the land rates form only a small part of the operating costs and an increase of the land rates would have relatively little effect. However, for empty depots and logistics companies, the land rate level is very important. These companies prefer to establish their businesses at the waterfront, but the land rates are much higher there. The land rates form a large part of the operating costs, thus an increase of the land rates will have major consequences. These companies can easily move their operations and if land prices rise too high, these companies will move away from the ports.

The land rates are of major importance for the competitiveness of a port. It should be noted however, that virtually all companies negotiate with the port authority individually and that different land rates may apply to similar companies. This condition can be marked as highly relevant.

### 3.2.3 Land acquisition by the port authority

As of January 1st 2004, the Port of Rotterdam (PoR) has operated as an independent organization with two shareholders, the Municipality of Rotterdam and the national government. Prior to January 1st 2004, the port was part of the municipality. In the transition from a municipal port to an independent company, the assets and liabilities were contributed to the new company. The lands passed from the Municipality to the Port Rotterdam. The acquisition value of the lands can be of influence on the level playing field.

From a level playing field perspective, it is desirable that the port management acquires the land at market value; the lands are purchased at actual market rates. If it is apparent that a port authority acquired the lands at a lower, often accounting value, this could be an indication of public funding. After all, port authorities used to be part of the state and transferred towards an autonomous form.

The annual report reveals that the PoR has acquired the following tangible assets:

- Lands and infraplus: €286,741,000
- Public port basins and waterways: €922,058,000
- Infrastructure, quay walls and other: €590,860,000
- Tangible fixed assets under construction: €173,587,000
- Fixed assets and other assets: €131,123,000

The total value amounted to €2,104,369,000. This is the price at which the port authority purchased the tangible assets of the municipality. The annual report indicates that the PoR has thus obtained 4,378 hectares of land. This means that the rate at which PoR purchased these lands is approximately €48.07 per m².53

The lands have been issued in ground lease to the different companies in the port. The ground lease fees form a part of the income sources of the PoR. The annual report of the PoR for the year 2004 indicates that the revenue from rent, lease and quay dues amounted to €171,068,000, - euro. If this income is allocated entirely to the land issued, this means that the average yield amounted to €3.90 per m². This amount is 1/12 of the rate at which the Port Authority has obtained the grounds.

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53 Port of Rotterdam Authority (2005), Annual report 2004
This seems to indicate that the Port Authority has obtained the land at market value and that there was no question of public funding.

3.3 Environmental space

3.3.1 External security

Regulations regarding external safety are primarily determined on a national level. In the Netherlands, these regulations include the application of the Hazards of Major Accidents act 1999 (Brzo) and the Environmental Management Act. Since there is no uniform European legislation in this area, there may be differences between the various EU Member States. We discovered that the regulations regarding external security do not cause major differences in the level playing field; therefore this condition has not been elaborated any further.

3.3.2 Limitation of emissions to soil, water and air

The foundation for the limitation of emissions to soil, water and air finds its origin in European legislation. The maximum emission is regulated in European directives. This means that the maximum emissions cannot be exceeded in any of the Member States. It also implies that the Member States are free to set more stringent requirements\(^{54}\), as long as the requirements are not in conflict with the internal market. Thus, discrepancies influencing the playing field may arise.

An example of what affects the level playing field is the obligation to preserve the natural values in Natura2000 areas. There are several possible measures that aim to preserve the natural features. An example of a natural value that should be maintained is dune vegetation. This vegetation could suffer from the deposit of fertilizer substances, such as ammonium and nitrous oxide. If a company wants to undertake activities in an area with sparse vegetation, the company needs a permit. Based on the Nature Conservation act, companies in the Netherlands with a deposition of less than 1 mole per hectare per year do not require a permit; every company with a deposition of more than 1 mole per year will have to apply for a permit. In Germany, different deposition standards are handled; only companies with a deposition of more than 20 moles per hectare per year have to apply for a permit. This means that the permit requirements in the Netherlands are much more stringent than those in Germany.

The differences in the regulations could make Dutch ports a less attractive business location.

From the industry emerged that the Dutch legislation and its implementation is very complex and compared to other countries, a lot stricter. On the other hand, it is also said that in the Netherlands there is more clarity about the regulations that must be met. Although the permit procedure is more extensive than in other countries, the outcome is more certain because the rules are clearer.

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\(^{54}\) Example: From European legislation can emerge that the maximum emissions may be 10 g / hectare. None of the Member States may exceed this standard. However Member States are allowed to be more stringent and require that the maximum emission is, for example, 5 g / hectare.
3.3.3 Noise

Noise regulations are based on European Directives. The main directive is Directive 2002/49/EC involving the assessment and management of environmental noise. The directive states that the Member States must establish concrete limit values, but it does not give any insight into what the socially desirable level of this value should be. In determining the noise levels, amongst other things, the need to apply the precautionary principle should be taken into account.55

The value of industrial noise for which no additional measures are required in the Netherlands is 50 dB (a)56 on a daily basis. This concerns the preferred value. This value may in some cases be increased by 5 dB (a); however, such would require additional research and motivation. If more noise is produced than the preferred value of 50 dB (a), additional measures should be taken to reduce or eliminate the noise hinder. If homes are located in the noise zone, mitigating measures will be taken. This could include placing triple glazing in homes or posting noise barriers.

The norms for industrial noise in Germany are much higher. For both the time period from 06.00 to 22.00 as for the time period from 22.00 to 06.00 there is a maximum noise value of 70 dB (a).57 Only when the noise levels surpass 70 dB (a), additional mitigation measures must be taken in the area.

In Belgium, a maximum limit of 68 dB (a) is usually in order. The action plan concerning noise pollution proposes to increase the maximum limit to 70 dB (A).58 This levels the Belgian limit with the German one. For the playing field, this means that the situation in the Netherlands is more stringent and companies in the Netherlands are obliged to take mitigating measures much sooner to reduce noise pollution. The difference in regulation may cause the Dutch ports to be a less attractive business location.

3.3.4 Nature compensation

The European Commission has established directives with environmental compensation as a condition when projects that ‘destroy’ natural environment are being carried out. If there are compelling reasons of public interest and there are no alternative sites available, the natural environment can be destroyed, provided that the loss of natural environment is compensated for. Environmental compensation affects the investment costs of new projects, because additional costs are incurred to compensate for the damage inflicted on the natural environment. In order to implement the Maasvlakte II, the port of Rotterdam has had to take compensatory measures. This manifests itself in the creation of additional natural areas. Thus, there are expenses that increase the actual investment cost (the actual construction of MVII).

The Welfare effects of Maasvlakte 2 study (Welvaartseffecten van Maasvlakte 2), performed by inter alia the CPB, prior to the construction of the Second Maasvlakte, shows that the Maasvlakte will be constructed in five successive phases. In the report, the investment costs and compensation

55 Directive 2002/49/EC on the assessment and management of environmental noise, Preamble 8
56 Port of Rotterdam Authority (2013), Environmental Impact Assessment, Port Zoning Plans, Sub report Noise
57 Sechste Allgemeine Verwaltungsvorschrift zum Bundes-Immissionsschutzgesetz, (Technische Anleitung zum Schutz gegen Lärm - TA Lärm)
58 City of Antwerp (2011), proposal for measures to improve the air quality and noise control in the city of Antwerp
costs are mapped per phase. The table below gives an overview of these costs and ratios. The costs are shown in euros.\textsuperscript{59}

<table>
<thead>
<tr>
<th>Table 3-2 Investment costs and compensation costs construction MVII (in millions of euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faze 1</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Investment costs</td>
</tr>
<tr>
<td>Compensation costs</td>
</tr>
<tr>
<td>Total cost</td>
</tr>
<tr>
<td>Ratio investment costs/ compensation costs</td>
</tr>
</tbody>
</table>

Source: CPB et al. (2002) Welvaartseffecten van Maasvlakte 2

As the table shows, the impact of environmental compensation varies per phase. On a total investment of over 1.8 billion, the environmental compensation costs amount to 27 million. This is about 1.5% of the total investment. Although the environmental compensation costs increase the investment costs, the excess amount is relatively small. The playing field does not seem to be negatively influenced by the costs for environmental compensation.

### 3.4 Employment

#### 3.4.1 Labour market and employment services

In order to assess the labour market in the different ports, a number of sub-questions were answered. These questions are:

- Is there any specific labour legislation for dockworkers?
- How are labour agreements settled upon?
- Is there a labour pool in the port?
- How temporary hiring is regulated?
- Who pays the employee when there is no work?

**The Netherlands**

In the Netherlands there is no specific labour legislation for dockworkers. The same rules and regulations apply for a dockworker as for any other employee. The applicable regulations are the Arbowet (1999) and the Arbeidsomstandighedenbesluit (1997).

There has been a shift in labour agreements. Employment conditions are regulated at company level; each company sets its own rules regarding working hours, salary and bonuses, disability and holidays. Previously at the port of Rotterdam, the employment conditions were regulated at port level. However, this system has been abolished with the sharp rise of container transhipment. Companies that are operative in container transhipment were of the opinion that different labour rules and regulations should apply to container transhipment than to, for example, bulk transhipment. The differences between the various types of transhipment have resulted in the fact that agreements between employer and employees are now settled upon at a company level.

The Netherlands has no national registration requirement for dockworkers. In the Dutch ports, there used to be a pool of dockworkers, but these have gradually disappeared. Dockers have never had to register, nor do they need a badge in order to perform their duties in the port.

\textsuperscript{59} In the report of the CBP, the investment costs and compensation costs are denominated in Dutch guilders. To convert the amounts into euros, a conversion factor of 2.20 was used.
SHB, the last pool of Rotterdam dockworkers, went bankrupt in 2009. Employers preferred not to hire pool workers because they were thought to be less motivated and would perform below standards. Nowadays, the dockers can turn to the Rotterdam Port Services (RPS), a temporary employment agency for port workers. People can get a job through this agency, but if there is work, there is no compensation.

Employees are hired individually, on a permanent or temporary basis. Employers do not have to contribute to a pool. Flexibility is achieved at an individual company level. When a worker is unemployed, he is entitled to an allowance from the General Unemployment Fund, which is available to every employee in the Netherlands.

**Belgium**

Port labour in Belgium is governed by specific laws. The basis is the Law on dock work (1972). This law has led to the implementation of three decrees; the decree for setting up a joint committee for ports (1973), the decree establishing local joint subcommittees (1974) and the decree for registration of dockworkers (2004).

Aspects related to health and safety are governed by general laws. Collective agreements (CAO) are concluded with the joint committee or the joint sub-committees. In these committees, the employers’ organizations and trade unions are represented. Wage agreements are made at a national level; the remaining points are recorded in port-specific collective agreements.

Belgium has a classic dockworkers system, wherein all port workers must be registered. Only registered dockworkers can work in the port; unregistered workers are committing an offense. Registered dockworkers have a card or badge and a wage book. In addition, employers are united in an employers’ organization. In Antwerp this organization is the Centrale der werkgevers aan de haven van Antwerpen.

When enrolling in the pool, the employees are divided into two groups: port workers in general quota or employees in the logistics quota. Employees may be registered for a fixed or indefinite period. The requirements to be admitted to the general register are more stringent than the requirements for logistics registry.

When an impending shortage of registered workers threatens, the local employment office can offer temporary workers to fill the gaps. This is only allowed for the duration of one shift. The principle is that employees are first hired through the pool and then through the employment office. If a structural shortage of workers in the pool is apparent, additional room for registered workers will be considered.

The Flemish service for employment and professional training (VDAB) manages the pools and recruitment offices in view of unemployment benefits. Dockworkers who are not hired on a daily basis must report to the recruitment office. In addition to unemployment benefits from the general unemployment fund, they are entitled to a subsistence allowance. This allowance is paid out of a fund that is paid for by employers.

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Portius (2013)
**France**

Three different laws apply to port labour in France; the Transportation Code, the Maritime Port Code and the Labour Code. The special transport and maritime port codes act as lex specialis in the field of labour code. This means that regulations from these two codes prevail over the regulations laid down in the Labour Code.

Port labour is governed by a large number of collective agreements. Most important is the nationally applicable agreement CCNU (Convention Collective Nationale Unifiée “Ports & Manutention”) (2011). The regulations apply to dockworkers, technical staff, office staff, etc. and regulate guaranteed minimum wages, working hours, employment agreements and training. Moreover, there are additional local agreements, in particular on the number of holidays, wages and bonuses.

In the French seaports, so called professional casual dockworkers are employed. The group consists of professional dockworkers and temporary workers. The first group can be hired on a permanent or on a temporary basis; the second group is always temporary. The professional dockers sign a contract for an indefinite period with a company. Companies that want to hire employees must give priority to professional casual dockworkers (they possess a card and do not yet have a contract for an indefinite period). If no professional casual port workers are available, they should turn to temporary workers with a lot of experience in port labour. This follows from the Transportation Code.

The professional dockworkers must present themselves on a regular basis for work and meet the requirements of BCMO. These employees are limited in numbers and when there are too many professional dockers, a number of registrations will be cancelled. The temporary workers form a buffer group and can be called upon in case there is a shortage of other employees. These workers do not have to report regularly and the do not need permission to work elsewhere outside the port. They have no job security.

Employers must contribute to the priority requirements in the hiring of dockworkers and they must contribute to the accident fund (CAINAGOD). If the employer fails to comply with these requirements, he will be fined. In case a worker becomes unemployed, he is entitled to general unemployment benefits. This allowance can be supplemented by a bonus paid by employers.

**Germany**

The main source is the national law relating to dock work (1950). In addition, there are local agreements which are mainly focused on the establishment of Gesamthafenbetriebe, in other words, the labour pool and the Articles of Association of these pools. The General Labour law applies when no special port-specific regulations apply. At a national level, the collective agreements are closed between the union and the central organization for German seaport companies.

This agreement mainly governs wages, working hours and other social services. In addition, there are several agreements at a port level. Both the Port of Hamburg and the Port of Bremen have

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BCMO is a specialized port employment agency. From a legal point of view, the agency is just an agent who represents employees. The agency is not an employer.
established port-specific agreements. Finally, there may be additional agreements at company level, but these agreements are not public.

Employees are hired on a permanent basis by either a company or by the labour pool. The labour pool can also provide temporary workers. Precisely what port labour entails has not been established at a national level. The labour pool is responsible for providing a definition; therefore, this definition may vary from port to port.

A labour pool can only be established by the social partners. These pools are managed by the employers and the unions jointly. The pools are financed by the employers; this financing partly consists of deductions from wages and partly of a surcharge paid by the employers’ customers.

At a national level, there is no obligation of registration for port workers, but in ports with a labour pool, the registration requirement is arranged locally. Permanent employees are also required to report their permanent contract and carry a badge.

In case a worker becomes unemployed, he is entitled to general unemployment benefits. This allowance can be supplemented by a bonus paid by employers.

**United Kingdom**

The same laws and regulations apply to dockworkers as to any other worker in the country. There are no separate regulations concerning dock work. Collective labour agreements are agreed upon with the employer and the relevant union. There are only agreements at a company level.

In the UK, dockworkers no longer need to be registered, nor do they have to be a member of any employers’ organization or similar associations. The general labour rules apply to the dockworkers (as they do to everyone else) and there is no pool system. Furthermore, they do not have to register. If the worker has no work, he is entitled to unemployment benefits, just like any other and there are no specific requirements to work (after the standard requirements).

Employers can hire employees on a permanent basis or they can hire temporary workers through the Employment Service. Employers are free to choose which employment office they want to work with.

**Resume Labour Market and Employment Services**

The table below summarizes the situation in the five countries studied. The table indicates whether there is a specific legislation with regard to dockworkers; the level at which labour agreements are made, whether a labour pool is present, how temporary hiring is dealt with, and what compensations an unemployed dockworker is entitled to.
Table 3-3 Summary of the labour arrangements in north-western Europe

<table>
<thead>
<tr>
<th></th>
<th>The Netherlands</th>
<th>Belgium</th>
<th>France</th>
<th>Germany</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific laws for port labour</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Employment agreements</td>
<td>Company level</td>
<td>National level and port level</td>
<td>National level and port level</td>
<td>National level, port level and company level</td>
<td>Company level</td>
</tr>
<tr>
<td>Labour Pool?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Temporary hiring</td>
<td>Through employment office</td>
<td>First through pool, then through market</td>
<td>Through BMCO, the specialized port employment office</td>
<td>First through pool, then through market</td>
<td>Through employment office</td>
</tr>
<tr>
<td>Unemployment benefits</td>
<td>General unemployment benefits</td>
<td>Surcharge paid by employers</td>
<td>Surcharge paid by employers</td>
<td>Surcharge paid by employers</td>
<td>General unemployment benefits</td>
</tr>
</tbody>
</table>

At first glance, countries such as Belgium and Germany appear to be in a more advantageous position; there is a labour pool, which provides for a constant buffer of workers. If additional dockers are needed in a hurry, workers from the pool can be involved. This can speed up the process much more than when the hiring is handled through a general employment office. However, the hiring companies have to pay for these people. Both in Belgium and Germany, employees who are members of a pool are entitled to an additional surcharge on their overall unemployment fees. This leads to additional costs for companies, because they are the ones who pay for this surcharge.

There is no evidence that companies in the Netherlands or the United Kingdom employ additional workers (as a buffer) to be able to cope with the peak labour demands. Companies in these countries employ a sufficient number of people to perform the regular tasks; when extra hands are needed, they hire through the general unemployment agency. In the practice, the system seems to work sufficiently competitively; thus there seems to be no major impact on the level playing field.

3.4.2 Working conditions

Differences in work safety may cause distortions of the level playing field between ports. According to the industry, employment regulations do indeed distort level the playing field between the various ports.

The main source of international law relating to port labour and safety is ILO Convention 152 (ILO C152). Number 152 is the successor to ILO C32. In comparison with the old version, more regulations have been included, especially on the procedural side. The federal or national governments are free to decide whether or not to ratify ILO C152. Germany, France and the Netherlands have ratified ILO No.152, Belgium and the UK have not done so.

In addition to international law, the studied countries have national laws and regulations aimed at occupational safety and rendering of work. In most ports, this legislation is aimed specifically at dockworkers. The content of the specific federal or national legislation varies, but in broad terms, the covered topics are the same.

Number of occupational accidents per year

An important indicator to determine whether the labour legislation is effective is the number of occupational accidents per year. Records on the number of occupational accidents in the port
sector are not kept in all countries. In the United Kingdom, no accident statistics are maintained. This leads to a discussion between employers and unions. According to the unions, the actual number of accidents is greater than the numbers used by employers.

Although safety requirements in Belgium have grown stricter in recent years and there has been a lot of progress on improving safety, still many accidents are reported every year. In 2010, the storage sector reported 587 accidents. For the handling of cargo in the seaports, 1,154 accidents were reported. In addition, one fatality was reported in the transshipment of cargo.

For the German ports, the number of occupational accidents is well registered. The relatively high accident rates are striking. In 2010, a total of 1,616 workers were injured during stevedoring activities and two dockers died in the performance of their duties. In the storage and handling sectors, 367 workers were injured; there were no fatalities. This means that a total number of 1,983 workers were injured and two people died during the execution of port labour in 2010.

In France, the port industry is the industry with the highest number of reported accidents. In 2010 a total of 737 employees were injured during their occupational activities. In the same year, no fatalities were recorded, but in the previous years, several workers died while performing their duties. Besides the high number of accidents, France also has to deal with retired dockworkers with health problems. Many work-related symptoms only manifest themselves after the worker is retired.

For the Dutch ports, it is difficult to find any specific figures; no specific statistics are kept for the ports. The figure below gives an overview of the number of accidents between 1997 and 2005. This concerns only serious accidents.

![Bar chart showing number of accidents from 1997 to 2005](chart.png)

Source: Portius (2013)

Based on the national accident statistics, an estimate can be made of the total number of accidents. In 2008, a total of 5,896 employees were active in the port of Rotterdam.

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62 NACE code 52.100
63 NACE code 52.241
Based on data from the Central Bureau of Statistics Netherlands, it can be stated that 7.1% of the employees suffered a work-related accident in 2010. If this percentage is applied, it would mean that more or less 419 employees were injured by occupational hazards. This number will increase if the occupational accidents that occurred in the other Dutch seaports are added. The eventuating numbers will be more or less similar to the French numbers.

This would imply that the safety of workers in France and the Netherlands is more or less the equal and that these are relatively safe ports. The ports of Belgium and Germany report more accidents. This seems to indicate that the ports in these countries are more dangerous to workers than those in the other two countries.

3.4.3 The influence of labour costs on business operations

Although the actual impact of working conditions in the various countries seems small, the differences in the working conditions may still be of great influence on the management of terminals. The figure below gives an overview of the cost structure of a terminal. There are four categories: energy-related costs, maintenance costs per year, operating expenses and wage costs per year.

Figure 3.1 Development of cost components terminal handling charges

![Operating Expenses Make Up](image)

Source: BTM Consultants (2005), Workshop on Valuing a Container Terminal

In 2013, the wage costs added up to more or less 50% of the terminal’s total expenses. In 2025, this share will possible have increased to almost 60% of the total expenses. Assuming that the handling costs per container amount from €105 to 110 per TEU, then the wage costs per TEU amount to more or less €55. In 2025 this cost could rise to more or less €65 per TEU. As wages form a large part of the handling costs, even a small difference in the wages in the various ports can have an effect on the level playing field.

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64 Physical injuries only: 4.9%; mental injuries only: 1.6% both physical and mental injuries: 0.6%. Accumulated, this amounts to 7.1% occupational accidents.
3.5 Monitoring the flow of goods

3.5.1 Customs

Most of the laws and regulations related to customs and inspection are issued by the European Union. This means that the same rules apply to all ports. A container in Rotterdam should be inspected in the same manner and meet the same requirements as a container in Antwerp. It would seem, however, that there are differences in the enforcement of the rules. In addition, it seems that customs facilities are increasingly becoming a means of competition.

The port of Rotterdam offers 24-hour customs services in the area around the Maasvlakte. The vessels in that area can have their cargo inspected and their paperwork done, and therefore, enter and leave the port 24 hours a day. As of January 1st 2014, the port of Antwerp also offers a 24-hour customs service. This service is applicable for all vessels across the entire port.

At first glance, it seems like extending the opening hours of the customs services does not have a major impact on the playing field. However, the extension of the opening hours is subservient to other developments that lead to shifts in container shipping supply. One example is the new container shipping line schedules of the so-called P3. These shipping companies have announced that as of 2014, they will use the port of Antwerp more extensively as opposed to the port of Rotterdam. However, this is not to be accounted to the extension of the customs’ opening hours, but mainly to the deepening of the Western Scheldt. But still, the customs features will be supportive to the proposal. Container vessels need a swift processing; thus, the faster the processing, the more attractive a port becomes.

Another example is the port of Le Havre. The port had access to a container scanning system, but the French Customs has announced that the system is outdated and will no longer be operated; nor will it be replaced. Customs also indicated that no additional customs officials will be deployed. Implicitly this means that the inspections in the French port will practically be omitted.

The French Customs has also announced an increase in speed of the inspection progress. The objective is that the inspectors perform a standard procedure within 4 minutes and 30 seconds. In the coming years, the inspection time will be further reduced to 4 minutes and 20 seconds. Officials are also judged on their speed. The downside of these rapid inspections is that the quality of the inspections will decrease and leniency will prevail.

3.5.2 Security

The rules regarding security are also defined at a European level; therefore, they are equal for all EU member states. However, the enforcement can turn out quite differently, thus influencing the level playing field.

This is reflected in the required documentation. The required shipping documents are generally similar in all ports, but the manner of presentation to the authorities may vary. In some ports, the documents pave to be processed by e-mail, while others use an FTP server and in yet other ports,

65 http://download.belastingdienst.nl/douane/docs/kantorenlijst_d0501z22pl.pdf
67 The merger of the container shippers Maersk, MSC and CMA-CGM.
68 http://uk.reuters.com/article/2013/10/25/uk-france-customs-idUKBRE99O0I20131025
no online processing is available at all. This makes it hard for shippers to follow the correct procedure.

3.5.3 Veterinary and phytosanitary inspections

There are two reasons for conducting veterinary inspections. Firstly, to prevent the spread of infectious diseases; secondly, to keep out products that are harmful to the health of EU citizens. Goods from third countries must be registered for a veterinary inspection at the customs office in the destination country. Customs reports the declared goods and the appropriate inspections, but does not carry them out. The competent authority to perform these inspections in the Netherlands is The Netherlands Food and Consumer Product Safety Authority (Nederlandse Voedsel- en Warenautoriteit, NVWA).69

The phytosanitary inspections are carried out in the third country prior to shipping the goods. When goods are shipped to Europe, the inspections take place in, for instance, China, Thailand or Brazil. When goods are shipped from Europe to third countries, phytosanitary inspection must take place in Europe. In the Netherlands, the inspections are conducted by the NVWA.

The execution of the veterinary and phytosanitary inspections is regulated by European legislation. This implies that all European countries are subject to the same standards and regulations. However, it is possible that the enforcement of these standards and regulations differs. From the interviews emerged that enforcement does indeed vary between Member States. There’s a feeling among the entrepreneurs, that namely in Belgium, it is easier to import and export goods than it is in countries like the Netherlands. The difference in enforcement could lead to a difference in the level playing field.

Any interception by the European authorities is recorded in the overarching European database Europhyt Network. From the data can be concluded, that in 2012, 10% more loads with hazardous substances we reported compared to 2011. The figure below shows an overview of the number of interceptions (notifications) in 2010, 2011 and 2012.70

69 http://www.evo.nl/site/niet-fiscale-taken-douane

70 The Netherlands Food and Consumer Product Safety Authority (2013), Phytosanitary signalling 2012
Figure 3.1 The number of notifications with respect to hazardous substances from 2010 to 2012

As the figure reveals, the United Kingdom is the country with the most interceptions. Particularly from 2011 to 2012, there was a significant increase of interceptions; almost 50%. The UK is followed by the Netherlands with 302 interceptions in 2012. From 2011 to 2012, the number of interceptions in the Netherlands decreased by 12%.

In Germany and Belgium, the interception rate is lower than in the Netherlands and the UK. From 2012 to 2013, there was an interception decrease of almost 32% in Germany, while in Belgium interceptions increased by almost 50%. The number of interceptions in France has decreased significantly. From 2010 to 2012 there was a 65% decrease.

The figure gives an insight into the number of interceptions in the EU. However, not only the inspections in Europe have tightened; the inspections in third countries have intensified too. Notably China has been inspecting goods that originate from Europe more thoroughly. Consequently, the major European seaports also pay a more stringent attention to hazardous substances in the export cargoes.

The industry feels that there’s a less stringent enforcement in other countries. However, the above figure and the report of the NVWA say differently. Although the absolute numbers of cargo interceptions are higher in the Netherlands and the UK, the relative numbers shows that they are actually not that far apart in the various ports. When the number of inspections is measured against the treated load, the differences are small. The following table summarizes the processed cargo, the number of interceptions and the relations between these numbers.

Table 3-1: The number of notifications with respect to hazardous substances compared to the transhipped cargo in 2012

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th>Germany</th>
<th>France</th>
<th>Belgium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage 2012</td>
<td>535.788</td>
<td>263.091</td>
<td>111.140</td>
<td>257.178</td>
</tr>
<tr>
<td>Interceptions 2012</td>
<td>302</td>
<td>199</td>
<td>215</td>
<td>100</td>
</tr>
<tr>
<td>%</td>
<td>0,06%</td>
<td>0,08%</td>
<td>0,19%</td>
<td>0,04%</td>
</tr>
</tbody>
</table>

The figures in the table show that the number of interceptions in the Netherlands, Germany and Belgium are not that far apart. The numbers do not seem to support the allegations made by the...
industry. No major distortions will be inflicted on the Level the playing field, especially when the relative sizes of the ports are also considered.

3.5.4 Costs of the supervision

Dutch customs doesn’t charge any extra fees for the actual inspection. For instance container scanning; containers are chosen randomly by customs for inspection. The costs of scanning and physical inspections are not charged to the owner of the container. All costs of the required operations to enable the scanning of the container, such as transport to and from the scanning site, possible degassing, loading and unloading must be paid by the container owner.\(^{71}\)

The 2012 annual report of The Human Environment and Transport Inspectorate (IL&T) reveals that the fees charged for services rendered to third parties are not cost-effective. However, the fundamental idea of the government policy is that the tariffs should be cost-effective. In December 2012, the Ministry of Infrastructure and the Environment has decided to raise the tariffs with the price adjustment of 2.25% for 2012. However, this still doesn’t make the tariffs cost-effective. The argument is that the economic climate is still unfavourable, thus, in order to keep the Dutch inspection services competitive, it was decided to not increase the rates any further.\(^{72}\) The shipper’s costs to get his goods through customs and all required inspections can be quite substantial. In other countries the inspections are also (partly) charged, but there are no examples of any entirely cost-effective fees for these inspections.

3.6 Public infrastructure

3.6.1 Hinterland connections

Although the pricing of the hinterland connections is an important issue in the determination of a level playing field, this condition does not fall within the scope of this study; this research focuses on the conditions affecting the level playing on the seafront and within the port. In general terms, it can be summarized as the following...

The available connections to the hinterland can vary from port to port. The port of Hamburg features an extensive railway network for the transportation of goods form the port to the hinterland. The port of Rotterdam offers access to both the Betuweroute freight railway as to an extensive inland waterways infrastructure, used for a relatively large amount of cargo transportations.

The main issue however, is not which types of hinterland connections a port has to offer, but whether the hinterland connections have certain advantages, such as favourable pricing. In Hamburg, the railway network is subsidized, thus the pricing makes it more appealing to use the tracks. As the rates for the port of Rotterdam railways are higher, relatively more operators heading for the hinterland will opt for transport by road or the inland waterways. On the other hand, the Dutch inland waterways are free of charge, while in Belgium dues have to be paid for the use of various rivers and canals.

\(^{71}\)http://www.belastingdienst.nl/wps/wcm/connect/bldcontenten/belastingdienst/custo3%ems/reference_books_and_other_information/other_topics/costs_x_ray_scan/

\(^{72}\) The Human Environment and Transport Inspectorate (2013), Annual report of 2012
3.6.2 Natural infrastructure and natural barriers

The natural infrastructure and natural barriers may vary between ports. Natural infrastructure includes the presence of rivers, while mountains can be classified as natural barriers. In north-western Europe, the differences in level playing field will primarily be determined by the presence of natural infrastructure. In particular, the port of Rotterdam features an extensive river network that can be used for cargo transportation.

Natural barriers can be found less frequently, but the natural barrier for the ports in the United Kingdom is that they are located on an island. The presence of natural infrastructure and natural barriers is important to the level playing field, but does not fall within the scope of this study; this research focuses on the conditions affecting the level playing on the seafront and within the port.

3.7 Conclusion non-financial conditions

The table below provides a summary of the impact of various conditions on the playing field. The table also indicates the relevance according to the stakeholders. A difference may occur between what stakeholders think to be relevant and what the actual effect of the condition might be.
<table>
<thead>
<tr>
<th>Physical space</th>
<th>Land acquisition by the port authority</th>
<th>Very relevant</th>
<th>Relevant</th>
<th>Not relevant</th>
<th>Impact on playing field</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Land valuation</td>
<td>√</td>
<td></td>
<td></td>
<td>Major impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Land allocation</td>
<td></td>
<td>√</td>
<td></td>
<td>Limited impact on the playing field</td>
</tr>
<tr>
<td>Environmental space</td>
<td>External safety</td>
<td></td>
<td>√</td>
<td></td>
<td>Limited impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Limitation of emissions</td>
<td></td>
<td>√</td>
<td></td>
<td>Impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Nature compensation</td>
<td></td>
<td>√</td>
<td></td>
<td>Limited impact on the playing field</td>
</tr>
<tr>
<td>Employment</td>
<td>Labour market and employment services</td>
<td>√</td>
<td></td>
<td></td>
<td>Major impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Working conditions</td>
<td></td>
<td>√</td>
<td></td>
<td>Major impact on the playing field</td>
</tr>
<tr>
<td>Monitoring the flow of goods</td>
<td>Customs</td>
<td></td>
<td>√</td>
<td></td>
<td>Impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Security</td>
<td></td>
<td>√</td>
<td></td>
<td>Impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Veterinary and phytosanitary inspections</td>
<td></td>
<td>√</td>
<td></td>
<td>Impact on the playing field</td>
</tr>
<tr>
<td></td>
<td>Costs</td>
<td></td>
<td>√</td>
<td></td>
<td>Limited impact on the playing field</td>
</tr>
<tr>
<td>Public infrastructure</td>
<td>Hinterland connections</td>
<td></td>
<td>√</td>
<td></td>
<td>Outside the scope of this study</td>
</tr>
<tr>
<td></td>
<td>Natural infrastructure</td>
<td></td>
<td></td>
<td>√</td>
<td>Outside the scope of this study</td>
</tr>
</tbody>
</table>
4  Impact of the distortions

In the next chapter, the consequences of the distortions of the playing field will be discussed; mainly focused on the impact of measurable financial distortions.

4.1  Effects on the economy

Two conditions cause a negative economic impact on the ports by public funding; public investments and direct cost reduction for companies.

In the case of public funding by investing, the investment decision is not established on a full cost basis; thus creating a greater chance of a positive decision. The result thereof is that more port infrastructure is implemented than strictly necessary. Consequently, the thus created overcapacity creates a pricing pressure that may result in lower user rates, sometimes even as far as below cost.

In the case of direct payments to companies or port authorities, lower operating costs arise for these organizations. These lower costs can lead to higher profits for the organizations and to lower port dues if the lower costs are passed on to the port users through market pressure.

Thus, an inefficient allocation of resources arises in both situations due to the deployment of public funds; moreover, in the matter of over-investment, public funds are clearly being wasted.

4.2  The impact of a level playing field on the market share

A level playing field is primarily of interest when there is true competition between the ports in Europe. There has to be a choice of ports for the handling of vessels and cargo; furthermore, the differences between the ports must be sufficiently substantial to influence the choice of the port user.

The competition assessment reveals that the initial costs are not the only important aspect; another important aspect is the extent to which the vessels even have the possibility to avoid the port by redirecting to another one. In other words, the extent to which the cargo is captive. For example; the container segment is highly sensitive to initial costs, even the slightest changes in a port can lead to reconsideration of the port selection. Liquid bulk cargo is less sensitive to rate fluctuations, because the
The processing industry is usually located in a certain port, hence the cargo needs to be delivered there. However, in the long run, this cost deterioration may lead to a decreasing demand. The situations for the other segments, such as roll-on/roll-off or break bulk, is often a lot more complex. The result of the differences between the segments, is that a possible alteration of the initial costs (by an improved level playing field), would have a greater impact on footloose segments such as containers and ro-ro, than on the more captive segments such as liquid bulk cargo.

The effects of a distorted playing field can either be directly financially tangible for a port user, through increased or decreased tariffs, or influence the ease with which one can conduct business activities in a port, causing indirect financial benefits or disadvantages. The magnitude of the effects is determined by the size of the total financial impact on the initial port costs.

### 4.2.1 Financial effects

The impact of the determined distortions can be mapped out by calculating the benefits per tonne and subsequently determining how sensitive the cargo is to a relative price difference between the ports. The table below indicates the determined contributions from the public authorities to the ports in relation to the total tonnage of cargo processed in these ports.

<table>
<thead>
<tr>
<th></th>
<th>2012 tonnage</th>
<th>Access</th>
<th>Port internal</th>
<th>Other</th>
<th>Total excl. access</th>
<th>€ Per tonne excl. access</th>
<th>€ Per tonne</th>
<th>€ Per tonne excl. access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg</td>
<td>130.938</td>
<td>45,0</td>
<td>101,4</td>
<td>146,4</td>
<td>101,4</td>
<td>1,12</td>
<td>0,77</td>
<td></td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>83.979</td>
<td>17,0</td>
<td>68,4</td>
<td>85,4</td>
<td>68,4</td>
<td>1,02</td>
<td>0,81</td>
<td></td>
</tr>
<tr>
<td>Niedersachsen</td>
<td>48.174</td>
<td>33,0</td>
<td>44,4</td>
<td>77,4</td>
<td>44,4</td>
<td>1,61</td>
<td>0,92</td>
<td></td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td><strong>263.091</strong></td>
<td><strong>95</strong></td>
<td><strong>214,2</strong></td>
<td><strong>309</strong></td>
<td><strong>214,2</strong></td>
<td><strong>1,18</strong></td>
<td><strong>0,81</strong></td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>94.261</td>
<td>4,2</td>
<td></td>
<td>4,2</td>
<td>0,0</td>
<td>0,04</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>Rotterdam</td>
<td>441.527</td>
<td>9,8</td>
<td></td>
<td>9,8</td>
<td>0,0</td>
<td>0,02</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>53.840</td>
<td>22,0</td>
<td></td>
<td>22,0</td>
<td>0,0</td>
<td>0,41</td>
<td>0,00</td>
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<tr>
<td><strong>Netherlands</strong></td>
<td><strong>589.628</strong></td>
<td><strong>36</strong></td>
<td></td>
<td><strong>36</strong></td>
<td>0,0</td>
<td><strong>0,06</strong></td>
<td><strong>0,00</strong></td>
<td></td>
</tr>
<tr>
<td>Antwerp</td>
<td>184.136</td>
<td>75,0</td>
<td>73,1</td>
<td>9,0</td>
<td>157,1</td>
<td>82,1</td>
<td>0,85</td>
<td></td>
</tr>
<tr>
<td>Ghent</td>
<td>26.302</td>
<td>24,0</td>
<td>8,4</td>
<td>2,9</td>
<td>35,3</td>
<td>11,3</td>
<td>1,34</td>
<td></td>
</tr>
<tr>
<td>Zeebruges</td>
<td>43.544</td>
<td>36,0</td>
<td>29,3</td>
<td>4,3</td>
<td>69,6</td>
<td>33,6</td>
<td>1,60</td>
<td></td>
</tr>
<tr>
<td>Ostend</td>
<td>3.196</td>
<td>15,0</td>
<td>10,0</td>
<td>1,8</td>
<td>26,8</td>
<td>11,8</td>
<td>3,69</td>
<td></td>
</tr>
<tr>
<td><strong>Belgium</strong></td>
<td><strong>257.178</strong></td>
<td><strong>150</strong></td>
<td><strong>121</strong></td>
<td><strong>18</strong></td>
<td><strong>289</strong></td>
<td><strong>138,8</strong></td>
<td><strong>1,12</strong></td>
<td></td>
</tr>
<tr>
<td>Dunkirk</td>
<td>47.629</td>
<td>6,9</td>
<td></td>
<td>6,9</td>
<td>0,0</td>
<td>0,15</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td>Le Havre</td>
<td>63.511</td>
<td>10,4</td>
<td></td>
<td>10,4</td>
<td>0,0</td>
<td>0,16</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td><strong>France</strong></td>
<td><strong>111.140</strong></td>
<td><strong>17</strong></td>
<td></td>
<td><strong>17</strong></td>
<td>0,0</td>
<td><strong>0,16</strong></td>
<td><strong>0,00</strong></td>
<td></td>
</tr>
</tbody>
</table>

The distortions can be substantial. In Belgium and Germany, the contribution by the various public authorities exceeds one euro per tonne, therefore the ports in these countries are clearly cheaper for port users. On balance, for some flows of goods, public funding is a distorting condition, especially the
cargo that is not bound for processing in the port and is sensitive to price fluctuations, such as containers, break bulk and ro-ro.

4.2.2 Impact on container flows and market shares

The analysis has shown that some costs are borne by the public authorities in the various ports. These costs are not charged to the user, thus causing distortions in the playing field. In this section we determine the effect on the Dutch ports; focussing on the transhipment of containers. This market is highly competitive and even the slightest difference in pricing can all lead to reallocations. The goods transported in containers are superior to the goods transported by the other flows; furthermore, there are more alternatives for transportation between seaport(s) and hinterland.

In this analysis we view the costs from the table above; each port would have to charge these costs to the user in order to create the level playing field in. The basic idea of the analysis is that the public contributions per transhipped tonne are passed on to the initial port costs. For containers, this charge is converted into an expense per transhipped container (measured TEU’s). A port-specific conversion of the tonnage per container (measured in TEUs) is applied. The port statistics show the average tonnage per TEU per port for the past three years.

Subsequently, the impact that these increased initial port cost fees have on the container flows has been determined according to the ECORYS Container Port Competition Model. The model calculates the total cost for transporting one TEU between the vessel and the receiver / shipper in the hinterland. For this transport, multiple routes are possible, which differ in the port of transhipment and the hinterland (read, rail or inland waterways). The higher initial port costs increase the container transport costs for all routes with transhipment in that port. The model calculates the shift in market share between the different routes as a result of the cost differences. Ultimately, the overall market share and the total transhipment in a port can be determined by adding up all routes that run through that port with the volume of sea containers processed.

This analysis was performed for the current situation, based on the transhipment figures of 2012. The results are shown in the table below.

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73 The competing ports in the Hamburg - Le Havre range, and their relations to the regions hinterland have been modelled according to the Container Port Competition Model. For the different scenarios, the extent of the container flows between the seaport and hinterland regions is known, as is the distribution over the various modes of hinterland transport (road, rail and inland waterways) with the corresponding (generalized) costs. In case of elevated port costs, the model calculates how much load will be diverted to other ports and possibly other transport modes (between road, rail and inland waterways). This model has been applied to various studies, including the MKBA Maasvlakte 2, MKBA IJzeren Rijn en MKBA Verdieping Westerschelde.
The analysis shows that charging the user for all the costs incurred by the public authorities for each seaport, would make a considerable difference to the transhipment of containers. The competition between the various ports in the Hamburg – Le Havre range for transportation to and from the shared hinterland (mainly consisting of Germany, the Netherlands, Belgium and France) is so great that additional initial costs of about one Euro per transhipped tonne may cause major shifts in the flow of goods.

Charging these additional initial costs leads to major changes in the transhipment volumes and the market shares of the various ports, in favour of the port with the lowest additional costs, in this case, Rotterdam. Based on the transhipment figures of 2012, the port of Rotterdam would benefit with an additional transhipment of 10% or 1.2 million TEU. The costs of the nautical access, such as the dredging of the waterways have been included in the above calculation. However, at the European level it was agreed that these costs can be borne by the public authorities, without charging additional user fees. The only country that does not fund these costs is the United Kingdom. When we perform the same analysis without adding the amounts issued for nautical access, the following picture emerges.

Table 4-3: Impact of a level playing field (excl. nautical access) on container transhipment, Hamburg – Le Havre range; 2012

<table>
<thead>
<tr>
<th></th>
<th>Hamburg</th>
<th>Bremerhaven</th>
<th>Rotterdam</th>
<th>Antwerp</th>
<th>Zeebruges</th>
<th>Le Havre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional costs / tonne</td>
<td>0,77</td>
<td>0,81</td>
<td>0</td>
<td>0,45</td>
<td>0,77</td>
<td>0</td>
</tr>
<tr>
<td>Tonnage / TEU</td>
<td>10,0</td>
<td>10,6</td>
<td>10,3</td>
<td>12,1</td>
<td>10,4</td>
<td>9,8</td>
</tr>
<tr>
<td>Additional costs / TEU</td>
<td>7,7</td>
<td>8,7</td>
<td>0,0</td>
<td>5,4</td>
<td>8,0</td>
<td>0,0</td>
</tr>
<tr>
<td>Effect on transhipment</td>
<td>-2%</td>
<td>-7%</td>
<td>7%</td>
<td>-2%</td>
<td>-7%</td>
<td>-1%</td>
</tr>
<tr>
<td>T in mln. TEU (2012)</td>
<td>-0,2</td>
<td>-0,4</td>
<td>0,8</td>
<td>-0,2</td>
<td>-0,1</td>
<td>0,0</td>
</tr>
</tbody>
</table>
The nature of the displacements is almost identical, only the shares that shift are slightly smaller. The port of Rotterdam could potentially receive an additional 0.8 million TEUs annually if the other ports would no longer receive subsidies and charge all additional costs to the customer.
5 Conclusions

Since the reforms of the European Commission in the field of ports and port services have been deployed, a lot has changed in favour of a more level playing field between the ports. That becomes apparent when we view the nautical services; nowadays, the market has opened up a lot compared to the past. Furthermore, many port authorities have been distanced from the public authorities; therefore, any disturbance of the playing field by the public authorities is less likely, at least everything is more transparent.

Yet there are still a number of cases where there are clear differences between the ports. The main ones are:

- Payment of port infrastructure construction and maintenance in Belgium
- Payment of port infrastructure in Germany
- Contribution of the German public authorities in the deficits of the port authorities
- Differences in the organization of port labour
- Differences in permit regulations
- A different enforcement policy by the inspectorates

The differences in the first three issues are financial in nature and have a negative effect on the playing field; they put the Dutch, English and French ports at a disadvantage. In Belgium, the ports are funded directly by the Flemish Region, according to an EU-approved regulation. In Germany, regional public authorities contribute to the ports, mainly by covering for the deficits of the port authorities, which in Hamburg amount to about 83 cents per transhipped tonne.

The impact of these differences on cargo flows can be substantial. In particular, the flow of goods that are not bound for processing in the port and are sensitive to price fluctuations. These are mainly containers, break bulk and ro-ro. The adverse effect suffered by Dutch ports has been calculated on the basis of elasticity models for container flows that take the cost of the maritime and hinterland connections into account. With the assumption that the financial benefits are equally distributed over the types of goods, the port of Rotterdam could potentially increase the transhipment of tranship containers by 10% if all additional costs were charged to the users of the ports. If the costs for nautical access are not taken into account, because at European level it is regarded as public infrastructure, consideration than likely, the difference in cost would probably lead to a container transhipment increase of 7% in Rotterdam.

The differences in the area of port labour mainly cause differences in the flexibility. In part, this can be accounted to the public authorities, therefore it is a distortion. The structure also causes less harmonious working relations, thus rending the ports less attractive.

When issuing permits for port activities, the European rules apply for many things. However, a lot of standards are set nationally, causing differences between countries. The most striking differences can be found in noise regulations; these are considerably stricter in the Netherlands than in other countries.
The differences regarding enforcement have been called ‘disturbing’ by port users and will therefore have an impact on their choices. The exact differences in enforcement and their impact cannot be established. No major differences emerged from the available figures of the inspection services.

**Policy options**

As a result of the conduct of public authorities in neighbouring countries, Dutch seaports are at a disadvantage. Ports in Germany and Belgium are cheaper because of public funding. The Dutch government has three options in response: do nothing, put in some effort to end the public funding in the neighbouring countries, or compensate the Dutch ports for the disadvantage they face.

Not undertaking any actions would imply that the Dutch ports remain subject to their financial disadvantage and they are less attractive to shippers. So it is wise to at least try to reduce the distortions caused by the funding of the other ports.

Compensating the Dutch seaports would imply that a greater proportion of the investment in infrastructure would be funded by the public authorities, thus decreasing the expenses of the port authority and enabling lower user fees. Any compensation should be an equal percentage of the expenses of the port authorities or port services as funded in the competing ports. However, compensation is not a desirable option because it provokes policy competition and may lead to even greater distortions in the future.

The current discussion regarding the exemption from corporation tax of (Dutch) port authorities puts the structural losses of the Niedersachsen, Bremen and Hamburg ports in a different perspective. The Dutch ports would be additionally disadvantaged.

For the port businesses, the port authorities and the Ministry of I&E, these findings give cause to prioritizing a discussion on a level playing field in Europe. The recent initiatives of the EC - the statement "Ports: an engine for growth" and the proposal for an EU Port Regulation - as well as the corporate taxes for port authorities, provide a concrete reason for discussion.
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## Appendix: Investment in general infrastructure HPA

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment in General Infrastructure (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>123,456,789</td>
</tr>
<tr>
<td>2012</td>
<td>234,567,890</td>
</tr>
<tr>
<td>2013</td>
<td>345,678,901</td>
</tr>
<tr>
<td>2014</td>
<td>456,789,012</td>
</tr>
<tr>
<td>2015</td>
<td>567,890,123</td>
</tr>
<tr>
<td>2016</td>
<td>678,901,234</td>
</tr>
<tr>
<td>2017</td>
<td>789,012,345</td>
</tr>
<tr>
<td>2018</td>
<td>890,123,456</td>
</tr>
<tr>
<td>2019</td>
<td>901,234,567</td>
</tr>
</tbody>
</table>

Note: The values are illustrative and not actual data.