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Economic importance of the Belgian ports: Flemish maritime ports, Liège port complex and the port of Brussels - Report 2014

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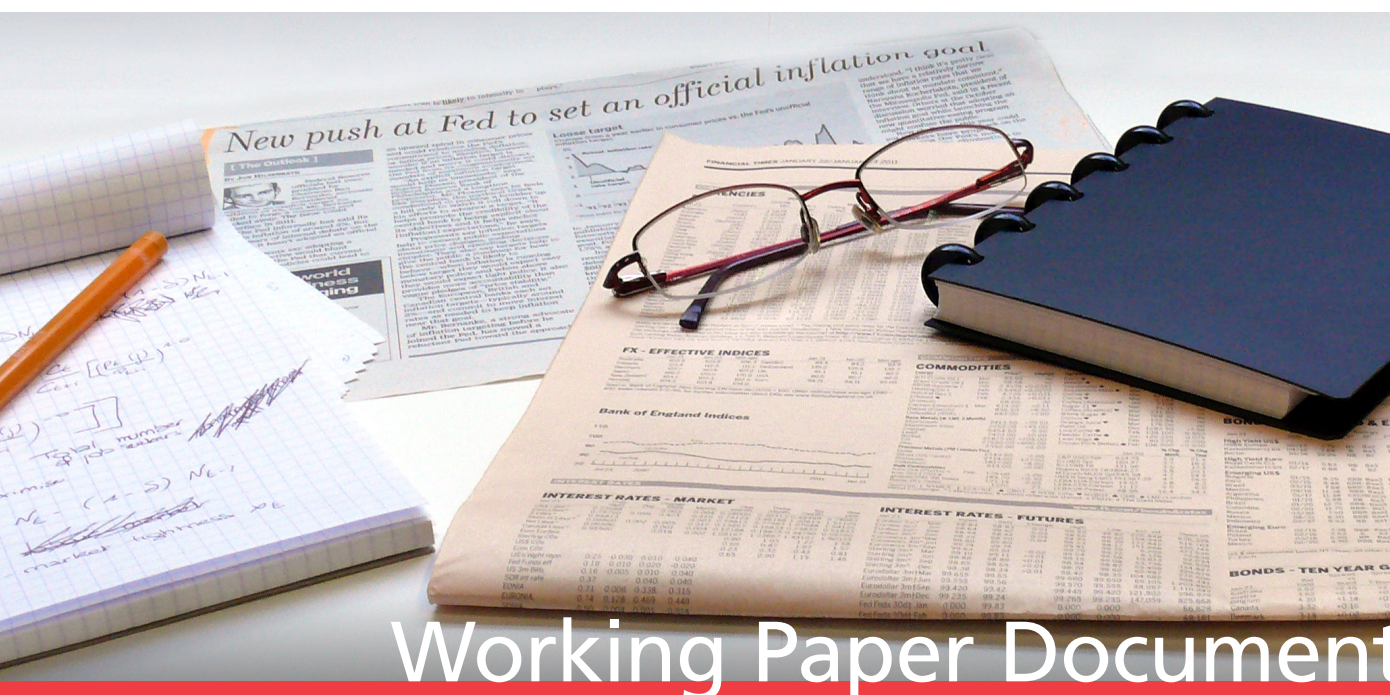
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ECONOMIC IMPORTANCE OF THE BELGIAN PORTS:

Flemish maritime ports, Liège port complex and the port of Brussels – Report 2014



Working Paper Document

by George van Gastel

June 2016 No 299

Editor

Jan Smets, Governor of the National Bank of Belgium

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Abstract

This paper is an annual publication issued by the Microeconomic Analysis service of the National Bank of Belgium.

The Flemish maritime ports (Antwerp, Ghent, Ostend, Zeebrugge), the Autonomous Port of Liège and the port of Brussels play a major role in their respective regional economies and in the Belgian economy, not only in terms of industrial activity but also as intermodal centers facilitating the commodity flow.

This update paper¹ provides an extensive overview of the economic importance and development of the Flemish maritime ports, the Liège port complex and the port of Brussels for the period 2009 - 2014, with an emphasis on 2014. Focusing on the three major variables of value added, employment and investment, the report also provides some information based on the social balance sheet and an overview of the financial situation in these ports as a whole. These observations are linked to a more general context, along with a few cargo statistics.

Annual accounts data from the Central Balance Sheet Office were used for the calculation of direct effects, the study of financial ratios and the analysis of the social balance sheet. The indirect effects of the activities concerned were estimated in terms of value added and employment, on the basis of data from the National Accounts Institute. As a result of the underlying calculation method the changes of indirect employment and indirect value added can differ from one another.

The developments concerning economic activity in the six ports in 2013 - 2014 are summarised in the table on the next page:

In 2014 the growth of maritime traffic in the Flemish sea ports was once again due solely to developments in the port of Antwerp. However, that did not necessarily mean that direct value added followed the same trend: except for the port of Zeebrugge, all other Flemish ports recorded an increase. Direct employment is continuing to decline, except in the port of Ghent where it remains steady. Investment appears to be picking up, after last year's weak figures.

Cargo traffic in the ports of Liège and Brussels was up in 2014, but that did not result in any increase in value added. The decline in direct employment also persisted, certainly in the port of Liège.

This report provides a comprehensive account of these issues, giving details for each economic sector, although the comments are confined to the main changes that occurred in 2014.

This report is available for download at the following address <http://www.nbb.be>.

Key words: branch survey, maritime cluster, subcontracting, indirect effects, transport, intermodality, public investments.

JEL classification: C67, H57, J21, L22, L91, L92, R15, R34 and R41.

¹ Update of Van Nieuwenhove F. (June 2015), Economic importance of the Belgian ports: Flemish maritime ports, Liège port complex and the port of Brussels - Report 2013, NBB, Working Paper No. 283 (Document series). All figures have been updated. This paper is available at the following address: <http://www.nbb.be> > Publications and research > Working papers > 2015 – No. 283.

Ports		Value added (current prices)		Employment		Investment (current prices)		Cargo traffic	
		€ million	Change 2013-2014 (in p.c.)	FTE	Change 2013-2014 (in p.c.)	€ million	Change 2013-2014 (in p.c.)	x 1,000 tonnes	Change 2013-2014 (in p.c.)
ANTWERP	Direct	9,923.8	+ 1.4	60,586	- 1.2	3,229.0	+ 37.0		
	Indirect	9,035.7	+ 2.7	82,068	- 0.7				
	TOTAL	18,959.5	+ 2.0	142,654	- 0.9	3,229.0	+ 37.0	199,012	+ 4.2
GHENT	Direct	3,575.4	+ 4.9	27,602	+ 0.6	403.6	- 4.3		
	Indirect	3,898.2	+ 6.8	34,443	+ 0.4				
	TOTAL	7,473.6	+ 5.9	62,044	+ 0.5	403.6	- 4.3	25,889	- 0.3
OSTEND	Direct	492.4	+ 1.4	4,957	- 1.7	118.9	+ 56.1		
	Indirect	355.2	- 0.4	4,275	- 0.4				
	TOTAL	847.6	+ 0.7	9,232	- 1.1	118.9	+ 56.1	1,431	- 21.3
ZEEBRUGGE	Direct	935.8	- 4.5	9,365	- 3.7	220.1	+ 0.2		
	Indirect	767.4	- 2.6	10,192	- 0.8				
	TOTAL	1,703.2	- 3.7	19,557	- 2.2	220.1	+ 0.2	42,548	- 0.7
FLEMISH	Direct	14,927.4	+ 1.9	102,510	- 1.0	3,971.6	+ 29.2		
MARITIME	Indirect	13,040.2	+ 3.0	123,917	- 0.5				
PORTS	TOTAL	27,967.6	+ 2.4	226,427	- 0.7	3,971.6	+ 29.2	268,880	+ 2.8
LIÈGE	Direct	1,130.9	- 5.9	8,165	- 7.9	195.7	- 8.4		
	Indirect	1,186.0	- 7.8	11,773	- 8.2				
	TOTAL	2,316.9	- 6.9	19,937	- 8.1	195.7	- 8.4	15,001	+ 0.4
BRUSSELS	Direct	473.8	- 2.2	4,032	- 1.3	53.0	- 22.6		
	Indirect	342.2	- 3.4	3,706	- 3.8				
	TOTAL	816.0	- 2.7	7,738	- 2.5	53.0	- 22.6	4,439	+ 2.7
BELGIAN	Direct	16,532.0	+ 1.2	114,706	- 1.5	4,220.3	+ 25.7		
PORTS	Indirect	14,089.9	+ 2.2	135,736	- 1.1				
	TOTAL	30,622.0	+ 1.6	250,442	- 1.3	4,220.3	+ 25.7	288,320	+ 2.7

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs). For ports with economic linkages between them, a portion of the indirect effect calculated by port is cancelled out when the calculation is done at a more aggregate level, i.e. for a group of ports. The sum of the indirect effects by port is thus greater than the total indirect effects calculated for the ports as a whole.

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Research results and conclusions expressed are those of the author and do not necessarily reflect the views of the National Bank of Belgium or any other institution to which the author is affiliated. All remaining errors are ours.

The author would like to thank his colleagues from the Microeconomic Information department for their assistance and support as well as the colleagues from the National and regional accounts service for their input. Special thanks go to Messrs Rudy Trogh, head of department at the NBB, and Jean-Pierre Merckx of the Flemish Port Commission for their support and their comments on this paper.

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Foreword

Every year the National Bank of Belgium publishes an update of the study of the economic importance of the Flemish maritime ports, the Liège port complex and the port of Brussels. Two aspects of the sector's economic impact are highlighted: the direct effects and the indirect effects. The former concerns the activities resulting from the presence of maritime and non-maritime enterprises and public services in or near the ports, while the latter relates to the value added and employment generated by suppliers and subcontractors serving these enterprises and based in Belgium.

The statistical data covers the period 2009 - 2014, but only the main developments recorded in the period 2013 - 2014 are discussed in detail. The number of annexes is limited to:

- the list of NACE-BEL 2008 branches.
- the definition of the financial ratios.

The methodology remains mainly unchanged: the criteria for selecting firms and the analysis are the same as in previous editions. The NACE-BEL 2008 code is used to select and classify companies by sector. Owing to the use of the latest available statistical data (see introduction), the estimates of the indirect effects may differ from those in previous publications.

Following a brief introduction, the study is split into six parts devoted to the four Flemish maritime ports, the Liège port complex, and the port of Brussels. For reasons explained in the introduction, the commentary in this study will be very brief, and the emphasis will be on the statistical section.

Introduction

Objectives of the study and some comments on the methodology

The economic importance of the ports examined is analysed from three angles, namely the purely economic angle, and the social and financial angles. The study only covers firms belonging to branches of activity which have an economic link with the ports. That link is defined in relation to both a functional and a geographical criterion.

The main developments in the period 2009 - 2014 concern the study of the following variables:

- value added at current prices²: the value which a firm adds to its inputs during the financial year via the production process. The value added of a firm indicates its contribution to the wealth of the country or region (in percentages of GDP). In accounting terms, this is calculated as the sum of staff costs, depreciation and value adjustments, the operating profit or loss, provisions for liabilities and charges, and certain operating expenses;
- employment in full-time equivalents (FTE): the average workforce during the financial year. Direct employment only covers employees on the payroll of the businesses concerned, indirect employment also includes self-employed workers.
- investment at current prices³: this corresponds to the tangible fixed assets acquired during the year, including capitalised production costs⁴.

The economic impact of the ports under review is described on the basis of these three variables. Employment and the social balance sheet are also taken into account in the analysis of the social impact. That section deals in particular with working time, labour costs, the extent to which use is made of external personnel, and the composition, movements and training of the labour force.

The financial analysis forms the third angle of the study; it is based on the examination of three financial ratios and a financial health indicator, using a model designed by the Bank⁵. The ratios in question are the return on equity after taxes, liquidity in the broad sense, and solvency. The current edition presents a financial analysis of Belgian ports taken as a whole. Readers wishing to compare the financial ratios of an individual company with its sector ratios can find this information in the company reports published by the Central Balance Sheet Office. These company reports are composed of five parts⁶, one of which is devoted to comparing the financial ratios of the company with those of its sector, and another of which is devoted to situating the company in one of the ten categories of financial health based on its composite financial health indicator. This comparison is more relevant than a comparison based principally on geographic location, which would include a variety of business activities. The financial health indicator is based on Belgian companies' annual accounts. This indicator is designed as a weighted combination of variables, created by means of a model constructed in the same way as a failure prediction model. The model takes the form of a logistic regression discriminating between failing and non-failing companies. The indicator summarizes each company's situation in a single value which takes account simultaneously of the solvency, liquidity and profitability dimensions.

² Unless otherwise stated, the text always indicates value added at current prices. Developments at constant prices (by volume) are explicitly mentioned. Value added at constant prices is calculated by means of the deflator of gross domestic product.

³ Unless otherwise stated, investment is always indicated at current prices. Developments at constant prices (by volume) are explicitly mentioned. Investment at constant prices is calculated by means of the deflator of gross fixed capital formation.

⁴ Decommissioning of assets is not taken into account.

⁵ See Vivet D. (2011), *Development of a financial health indicator based on companies' annual accounts*, NBB, Working Paper No. 213 (Document series), Brussels.

⁶ An interactive online application "Company file" is available on the Central Balance Sheet Office's website. It enables, based on several annual accounts drawn up according to a standard model for recent financial years, to analyze the financial situation of a company and to compare it with its sector. The five parts of the company report are: identifying company information, a survey of the major elements of the annual accounts, a survey of the cash flow, a comparison of company ratios with those of its economic sector, the company's positioning in one of the ten pre-defined categories of financial health based on its composite financial health indicator (See <http://cri.nbb.be>).

The microeconomic data used in this study were obtained from the annual accounts filed with the Central Balance Sheet Office⁷ and from the statistics produced by the National Accounts Institute (NAI⁸). The most recent annual accounts for the 2014 financial year included in this study were filed with the Central Balance Sheet Office in February 2016⁹. The data necessary to estimate the indirect effects up to 2014, are also published by the NAI with a low frequency and after a certain time lag. The results of the indirect effects are approximations and should be interpreted with caution. The latest updates were included in the calculations, while the methodology remained unchanged. For more information, see the 2004 report published in June 2006¹⁰.

The NACE-BEL 2008 classification is used for the purposes of selecting and ranking the companies by sector. NACE-BEL 2008 is the classification system for economic activities employed by the National Accounts Institute. The activity codes (NACE-BEL) for economic units have been harmonised between the institutions making up the NAI, which should help give a more accurate and up-to-date picture of economic reality. The harmonised NACE codes have been incorporated into the national accounts from the year 2009 on. Among all the branches of activity followed by the NAI, 8.9 % of the value added of non-financial corporations switched branch in 2012. Owing to differences in extrapolation methods from one branch of activity to another, a marginal impact on the overall GDP figure has been recorded. This harmonisation has an impact on the sample of enterprises used for the study and has also an impact on the allocation of the companies into sectors.

In December 2013 the National Accounts Institute published an input-output table for 2010. In December 2015 the input-output table for 2010 was updated with the new accounting rules of the ESA 2010 standard¹¹ and the harmonised NACE codes¹². The latest supply and use table relates to the year 2012. These tables were used to produce estimates for the years 2009 to 2014. The reader must keep in mind that indirect effects need to be interpreted with caution, and should be regarded more as an indicator of the importance of the ports for the national and local economy rather than as an absolute value.

The indirect effects have been calculated for each port separately. For ports with economic linkages between them, a portion of the indirect effect calculated by port is cancelled out when the calculation is done at a more aggregate level, i.e. for a group of ports. The sum of the indirect effects by port is thus greater than the total indirect effects calculated for the ports as a whole.

As part of the strategic plans for the port areas, the Flemish Region has established several land banks. This acquired land is a compensation for land that disappears through the port development and includes other land or results from land exchanges with farmers concerned. In this publication, the amounts relating to these land banks are not included in the investments of the public sector. The investment by the public sector to improve the maritime access to the different Belgian ports is also not included.

⁷ A service of the National Bank's Microeconomic Information Department. (See <http://www.centralbalancesheetoffice.be>).

⁸ The National Accounts Institute (NAI) set up by the law of 21 December 1994, links three institutions: the National Statistical Institute (NSI, now FPS Economy, SMEs, Self-employed and Energy – Directorate General of Statistics and Economic Information), the National Bank of Belgium and the Federal Planning Bureau. The NAI's duties include drawing up the real national accounts and the input-output tables which are needed to estimate the indirect effects. The latest available data for calculating the indirect effects in this study were the input-output table for 2010 and the supply and use table for 2012.

⁹ Belgian firms are required to submit their annual accounts to the Central Balance Sheet Office by no later than seven months following the end of the financial year. A small proportion of firms -mainly small businesses or those in difficulties- fail to meet the obligation by that date. In February 2016, that percentage was negligible and the impact on the figures is minimal.

¹⁰ The methodology is presented in the introduction by Lagneaux F. (2006) and set out in full in annexes 1 to 4. The study is available on the following address: <http://www.nbb.be> > Publications and research > Economic/financial publications > Working papers > 2006 – No. 86.

¹¹ Eurostat has formulated the European System of National and Regional Accounts (ESA) to provide a systematically detailed description of the EU economies, their components and relations with the other economies. The ESA is therefore used as the central reference point for the economic and social statistics of the EU and its Member States. The international systems of national accounts are revised from time to time to cater for new statistical requirements called for in response to changes in the contemporary economies and reflecting methodological developments.

¹² See <http://www.plan.be> > Publications > Themes > Input-output tables and <http://www.nbb.be> > Statistics > Publications > National accounts > Supply and use tables.

Some of the results for years up to 2013 may differ from those stated in the earlier studies. That is due mainly to the harmonisation of the NACE codes and in a lesser extent to the availability of more accurate data on certain firms, information that is extrapolated into the past to ensure consistent time series.

For a number of years, the National Bank's port studies have been an important statistical source for the various stakeholders concerned with their economic analysis. Since most port authorities and various government bodies provide detailed accounts of maritime activities, the Bank sought scope for efficiency and synergy. For that reason, this year's publication will place more emphasis on the statistical section. The commentary will give the general outline via the contribution from the port authorities. For the more detailed, comprehensive account of developments, see the annual reports of the Belgian port authorities and specialised publications such as those issued by the Flemish Port Commission.

International environment

Global GDP grew by 2.6 % in 2014. The advanced economies saw 1.7 % growth, roughly 0.5 percentage point higher than in the previous year. The United Kingdom and the United States recorded growth of 2.9 % and 2.4 % respectively. In the euro zone, the negative growth was converted to expansion of 0.9 %. However, growth in Russia was down by 0.7 percentage point to 0.6 %.

In the emerging economies, the growth slowdown continued, primarily owing to the disappointing performance in Brazil, where GDP growth dropped from 3 % in 2013 to 0.1 % in 2014. China's growth figure remained relatively strong (7.4 %), despite a 0.4 percentage point fall.

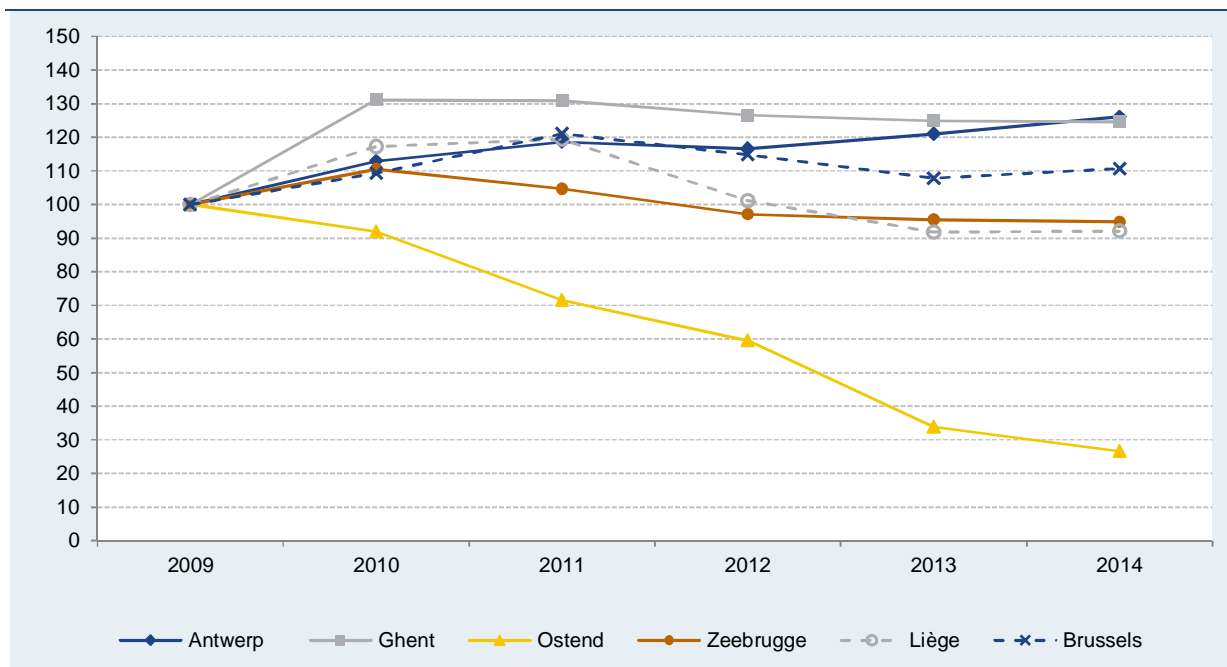
In 2014, the growth of the volume of total world trade was more or less equal to the previous year (3.4 %). World seaborne trade also increased by that figure overall. Container traffic did particularly well, with growth of 5.6 %. This was reflected to some extent in higher freight prices, though the increase was very modest owing to the persistent excess capacity.

1 ECONOMIC IMPORTANCE OF THE BELGIAN PORTS

1.1 Traffic in the Belgian ports

CHART 1 CARGO TRAFFIC IN THE BELGIAN PORTS

(indices 2009 = 100)



Sources: Port Authorities.

In 2014, maritime traffic in Flanders increased by around 2.8 % overall. That increase was due solely to the substantial growth in the port of Antwerp. However, the decline in tonnage at Zeebrugge and Ghent was modest in 2014. The port of Zeebrugge will see a decrease in 2015 owing to the tendency towards cooperation and rationalisation in the shipping companies. The continuing downward trend at Ostend is due to the port's repositioning, focusing on a number of niche activities.

The port of Brussels recorded strong growth of 2.7 % while in Liège the increase was rather modest (0.4 %).

In regard to container traffic, only two ports really count, namely Zeebrugge (representing almost 15.9 % of total traffic) and Antwerp (83.8 %). Antwerp alone recorded significant growth of 5.9 %, while traffic in Zeebrugge was more or less stable with an increase of 0.5 %. All things considered, that is still a pleasing figure in view of the said developments in the shipping companies. The expansion of container traffic in Antwerp seems to have halted the downward trend evident in recent years, so that the relative share is now up slightly at 48 % of total traffic. Furthermore, traffic has now regained its 2010 level.

Roll-on/roll-off traffic recorded a modest rise of around 0.7 % in 2014. That growth was largely due to developments at the biggest RoRo port, Zeebrugge, where this traffic was up by 4 %. In that port it is cars which account for most of the growth, with an increase of 13.2 %. The port of Ghent also saw a substantial 9 % rise in roll-on/roll-off traffic. Conversely, in the port of Antwerp the downward trend continued, with a 2 % decline.

Except at the port of Ghent, where the figure of 0.5 % implied virtual stabilisation, the pressure on conventional general cargo appeared to persist in all other ports in 2014. That category declined by more than 4.6 % overall. In the biggest port – Antwerp – traffic was down by 2.5 %. In Zeebrugge there was a notable decline of 28.8 %, but that appears to be a correction following 23.1 % growth in 2013.

As regards liquid bulk, the total increase of 3.5 % is almost entirely attributable to the port of Antwerp (+5.6 %). The ports of Ghent and Zeebrugge recorded steep falls of 11.9 % and 5.1 % respectively.

The overall decline of 1.7 % in bulk cargo was due mainly to the 6.5 % fall in the port of Antwerp. In Ghent, the main port for dry bulk, there was an increase of 2.3 %. Zeebrugge and Ostend, both representing shares of around 4 %, respectively recorded 5 % growth and a 3.8 % decline.

TABLE 1 MARITIME TRAFFIC IN THE FLEMISH PORTS IN 2014
(in thousands of tonnes, unless otherwise stated)

	Antwerp	Ghent	Ostend	Zeebrugge	Total	Change from 2013 to 2014 (in p.c.)	Share in 2014 (in p.c.)
Containers	108,317	414	0	20,514	129,244	+ 4.8	48.1
Change 2013 - 2014 (p.c.)	+ 5.9	- 29.6	n	+ 0.5			
Roll-on/roll-off ¹³	4,470	2,149	0	13,043	19,662	+ 0.7	7.3
Conventional general cargo ¹⁴	9,885	3,175	65	1,193	14,317	- 4.6	5.3
Liquid bulk	62,834	3,412	57	6,562	72,865	+ 3.5	27.1
Dry bulk	13,506	16,740	1,309	1,236	32,792	- 1.7	12.2
TOTAL 2014	199,012	25,889	1,431	42,548	268,880	+ 2.8	100.0
Change 2013 - 2014 (p.c.)	+ 4.2	- 0.3	- 21.3	- 0.7	+ 2.8		
TOTAL 2015 (p.m.)	208,419	26,362	1,295	38,318	274,394		
Change 2014 - 2015 (p.c.)	+ 4.7	+ 1.8	- 9.5	- 9.9	+ 2.1		

Source: Port authorities and Flemish Port Commission.

1.2 Competitive position of the Belgian ports

To refine the analysis of the competitive position of the Flemish maritime ports, all cargo traffic is compared with that of the other ports in the Hamburg - Le Havre range¹⁵. The share of the four Flemish ports in that range increased slightly in 2014 from 22.9 to 23.0 %.

In 2014 the port of **Rotterdam** lost ground to some extent in favour of Antwerp, since the recorded growth was significantly lower. Owing to that development in Antwerp, the overall market share of the Flemish ports remained unchanged. Rotterdam declined in dry bulk (-0.7 %) and in liquid bulk (-2.1 %). Together these two categories account for 65 % of total traffic, so that any decline has a substantial impact on the overall figure. However, container traffic expanded strongly in 2014: +8.1 %. Conventional general cargo, in which Rotterdam is traditionally less strong, was up by 28.1 %. This primarily concerns a correction following the very weak figures for conventional general cargo in 2013. For Rotterdam, developments in 2015 nevertheless imply a strong revival.

The port of **Amsterdam** which had been expanding over the past few years recorded further growth of around 1.5 %, just below the average for recent years. There was no resulting increase in its market share. The growth was achieved in dry bulk (+2.7 %) and liquid bulk (+2.3 %), the core business of the port of Amsterdam (share of bulk: 96 %). Containers, RoRo and other general cargo declined. In 2014 total traffic came to 79.7 million tonnes.

Zeeland Seaports regained its 2011 level with strong growth of more than 6 %. Liquid bulk is the main item, in which traffic was up by 1.7 million tonnes (+12.9 %); that is also the main factor behind the overall growth of the ports of Flessingue and Terneuzen. Dry bulk, containers and RoRo also recorded an increase. Conventional general cargo, which is quite important for Zeeland Seaports with a 22 % share of the traffic portfolio, was down by 2.5 % in 2014. Total traffic came to 35.1 million tonnes in 2014.

After a very strong performance in 2011 and 2012, the port of **Bremen** recorded a decline in traffic in 2013. In 2014 there was a further decrease, albeit small. For the ports of Bremen and Bremerhaven,

¹³ Abbreviated as RoRo. Horizontal handling of goods using wheeled equipment inside and outside the ship, unlike LoLo (lift on/ lift-off), which entails vertical handling. The RoRo data presented in this report do not take into account containerised cargo, this category of goods being included in the line entitled "containers".

¹⁴ The term "general cargo" comprises the following categories: containerised goods, RoRo and conventional general cargo.

¹⁵ For the purposes of this study, the range comprises the ports of Hamburg, Bremen, Amsterdam, Rotterdam, the Zeeland Seaports complex (port of Terneuzen and Flessingue), Antwerp, Ghent, Zeebrugge, Ostend, Dunkirk and Le Havre.

containers account for three-quarters of traffic. There are regular shifts in the container market and these have a major impact on total traffic for Bremen.

In **Hamburg** the upward trend peaked in 2014 with very strong growth of +4.8 %, and traffic totalling 145.7 million tonnes. In 2015 this expansion apparently came to a halt, when a very sharp decline was recorded. In 2014 growth in Hamburg occurred mainly in the sectors where the port is strong: containers (+6.2 %) and dry bulk (+2.9 %).

In 2014 the port of **Dunkirk** achieved the strongest relative growth in the range (+7.9 %), with traffic totalling 47,0 million tonnes. That growth is due mainly to the increase in dry bulk (+9.3 %), which accounts for the major part (50 %) of traffic at the port. The second largest sector, RoRo, also recorded a big rise (+13 %).

Le Havre's position was more or less stable in 2014. A loss of dry bulk was offset by relatively strong growth in container traffic (+4.9 %). Le Havre has yet to regain the level prevailing before the economic crisis. The total traffic of 67.6 million tonnes in 2014 is still well below the 2008 figure of 80.5 million tonnes.

TABLE 2 TOTAL MARITIME TRAFFIC IN THE HAMBURG - LE HAVRE RANGE (INCLUDING OSTEND AND ZEELAND SEAPORTS)
(in millions of tonnes, unless otherwise stated¹⁶)

Port	2009	2010	2011	2012	2013	2014	2015 (p.m.)	Annual average change from 2009 to 2014	Change from 2013 to 2014	Average share in the range from 2009 to 2014	Share in 2014
								(in p.c.)	(in p.c.)	(in p.c.)	(in p.c.)
Antwerp	157.8	178.2	187.2	184.1	191.0	199.0	208.4	+ 4.7	+ 4.2	16.4	17.1
Ghent	20.8	27.3	27.2	26.3	26.0	25.9	26.4	+ 4.5	- 0.3	2.3	2.2
Ostend	5.4	4.9	3.8	3.2	1.8	1.4	1.3	- 23.2	- 21.3	0.3	0.1
Zeebrugge	44.9	49.6	47.0	43.5	42.8	42.5	38.3	- 1.1	- 0.7	4.0	3.6
Total Flemish ports	228.8	260.0	265.2	257.2	261.6	268.9	274.4	+ 3.3	+ 2.8	23.0	23.0
Amsterdam ¹⁷	73.4	72.7	74.9	77.1	78.5	79.7	78.4	+ 1.7	+ 1.5	6.8	6.8
Bremen	63.1	68.9	80.6	84.0	78.8	78.3	73.4	+ 4.4	- 0.6	6.8	6.7
Dunkirk	45.0	42.7	47.5	47.6	43.6	47.0	46.6	+ 0.9	+ 7.9	4.1	4.0
Hamburg	110.4	120.0	132.2	130.9	139.0	145.7	137.8	+ 5.7	+ 4.8	11.6	12.5
Le Havre	73.8	70.2	67.6	63.5	67.2	67.6	68.9	- 1.7	+ 0.6	6.1	5.8
Rotterdam	387.0	430.2	434.6	441.5	440.5	444.7	466.4	+ 2.8	+ 1.0	38.5	38.1
Zeeland Seaports ¹⁸	28.8	33.0	35.5	34.0	33.0	35.1	0.0	+ 4.0	+ 6.3	3.0	3.0
<i>Total for the 11 ports</i>	<i>1,010.3</i>	<i>1,097.6</i>	<i>1,138.0</i>	<i>1,135.8</i>	<i>1,142.1</i>	<i>1,166.9</i>	<i>1,145.9</i>	<i>+ 2.9</i>	<i>+ 2.2</i>		
<i>Total world traffic</i>	<i>7,858.0</i>	<i>8,408.9</i>	<i>8,784.3</i>	<i>9,196.7</i>	<i>9,513.6</i>	<i>9,841.7</i>		<i>+ 4.6</i>	<i>+ 3.4</i>		
<i>Share for the 11 ports in world traffic (in p.c.) ...</i>	<i>12.9</i>	<i>13.1</i>	<i>13.0</i>	<i>12.4</i>	<i>12.0</i>	<i>11.9</i>					

Sources: For the traffic in the range: port authorities; for world traffic (tonnes loaded): Unctad, *Review of Maritime Transport 2015*.

Duisburg is maintaining its position as Europe's biggest inland port. With the exception of the port of Paris all other major inland ports recorded positive growth.

¹⁶ In principle, maritime traffic excludes bunkering. However, some ports' traffic figures do include bunkering, which may lead to minor differences in mutual comparisons.

¹⁷ The figures stated here refer to the port of Amsterdam only, and not the entire complex which also includes the ports of Beverwijk, Velsen/IJmuiden and Zaanstad.

¹⁸ Zeeland Seaports = ports of Flessingue and Terneuzen

TABLE 3 CARGO TRAFFIC BY SHIP IN THE PORTS OF DUISBURG, PARIS, LIÈGE AND BRUSSELS

(in thousands of tonnes, unless otherwise stated)

Port	2009	2010	2011	2012	2013	2014	2015 (p.m.)	Annual average change from 2009 to 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)
Duisburg ¹⁹	34,500	49,200	50,400	38,200	47,200	51,100	n.	+ 8.2	+ 8.3
Paris	20,214	20,865	22,338	22,600	21,200	20,100	20,550	- 0.1	- 5.2
Liège ²⁰	16,287	19,095	19,455	16,477	14,947	15,001	14,605	-1.6	+ 0.4
Brussels	4,011	4,385	4,855	4,606	4,324	4,439	4,364	+ 2.0	+ 2.7

Sources: Port of Duisburg, Port of Paris, Liège Port Authority and Brussels Port Authority.

1.3 Direct and indirect value added in the Belgian ports

The direct growth of value added recorded in the Belgian ports (+1.2 %) was almost entirely in line with GDP growth. The increase is due primarily to growth in the ports of Ghent and Antwerp. Ostend also recorded expansion.

The noteworthy rise in Ghent was due mainly to strong expansion in the non-maritime cluster. In the port of Antwerp there were widely varying growth figures, and the increase came mainly from developments in shipping companies and the chemical sector.

In Zeebrugge, the maritime cluster recorded an increase but that growth was negated by the decline in the non-maritime cluster, and more particularly by the departure of an industrial firm in the electronics sector.

In the port of Ostend, growth figures were generally positive with the exception of trade.

In the port of Liège there was an overall decline in both clusters, one factor being developments in the metalworking industry, a key industrial sector.

Finally, in the port of Brussels, trade was the only sector to record a favourable trend.

As regards indirect value added, the downward trend which had begun in 2010 was reversed. For all ports together, growth came to 2.2 %, driven mainly by shipping companies, chemicals and the metalworking industry.

In 2014 direct value added of the Belgian ports accounted for 4.1 % of Belgium's GDP (and 7.6 % including indirect value added).

¹⁹ The traffic considered here is the total of the cargo handled in all Duisburg Ports, thus, totalling the Duisport Group and the private company ports.

²⁰ The traffic considered here is the total of the cargo handled on the public and the private quays. As from 2015 the traffic of the Liège Port Complex will only include the public quays. The private quays are gradually managed by the Autonomous Port of Liège.

TABLE 4 VALUE ADDED IN THE BELGIAN PORTS

(in € million - current prices)

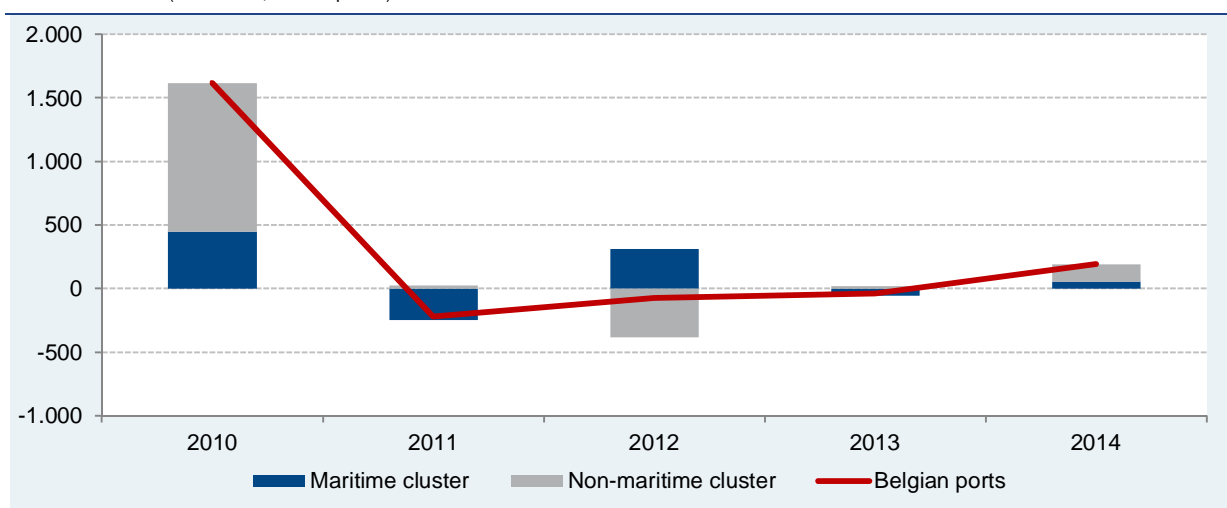
	2009	2010	2011	2012	2013	2014	Relative share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
1. DIRECT EFFECTS	15,061.1	16,680.9	16,459.3	16,382.5	16,340.5	16,532.0	100.0	+ 1.2	+ 1.9
Antwerp	8,794.5	10,006.4	9,710.8	10,020.9	9,782.0	9,923.8	60.0	+ 1.4	+ 2.4
Ghent	3,091.2	3,371.5	3,361.9	3,203.7	3,407.1	3,575.4	21.6	+ 4.9	+ 3.0
Ostend	450.7	494.6	470.5	485.7	485.4	492.4	3.0	+ 1.4	+ 1.8
Zeebrugge	925.8	960.3	976.2	944.7	979.4	935.8	5.7	- 4.5	+ 0.2
Liège	1,271.1	1,311.0	1,413.9	1,186.1	1,202.2	1,130.9	6.8	- 5.9	- 2.3
Brussels	527.8	537.0	526.0	541.4	484.4	473.8	2.9	- 2.2	- 2.1
Outside the ports (p.m) ²¹ ...	80.8	115.8	136.7	132.2	128.0	135.0	-	+ 5.5	+ 10.8
2. INDIRECT EFFECTS	12,860.8	15,167.2	14,301.2	14,346.0	13,788.6	14,089.9	-	+ 2.2	+ 1.8
TOTAL VALUE ADDED	27,921.9	31,848.1	30,760.4	30,728.5	30,129.1	30,622.0	-	+ 1.6	+ 1.9

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

CHART 2 CHANGE IN DIRECT VALUE ADDED

(in € million, current prices)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

1.4 Direct and indirect employment in the Belgian ports

In contrast to value added, direct employment in the Belgian ports declined by -1.5 %, thus continuing the downward trend of recent years. Only the ports of Ghent and Ostend have managed to improve or stabilise their level of employment since 2009.

Zeebrugge and Liège recorded the steepest falls. In Zeebrugge – as already mentioned – that was due to the departure of an industrial firm in the electronics branch. In the maritime cluster, employment

²¹ The firms in certain maritime branches may be selected from anywhere in the country, since their definition is sufficient in itself to link them to the port activity. These are branches directly connected with the activity of the sea ports. Their results are therefore allocated among the Flemish ports, using the formula for the allocation of value added per branch. For each year and for each branch, this formula is calculated on the basis of the ratio between the direct value added generated in a given Flemish port and the direct value added generated in all the Flemish maritime ports. The line "Outside the ports (p.m.)" included in the tables 4, 5 and 6 collates these data, which are also allocated respectively in the tables showing value added, employment and investment in chapters 2 to 5 on the line entitled "Allocation (p.m.)".

actually increased. In Liège, just as in the case of value added, both clusters saw a predominantly downward trend, owing to the metalworking industry.

Indirect employment has been declining since 2011. Although that fall can be attributed to developments within various branches, the decline in indirect employment caused by the metalworking industry merits a mention.

The share of port jobs in total Belgium employment came to 2.9 % for direct employment and 6.3 % for total employment in 2014 (3.1 and 6.7 % respectively in 2009).

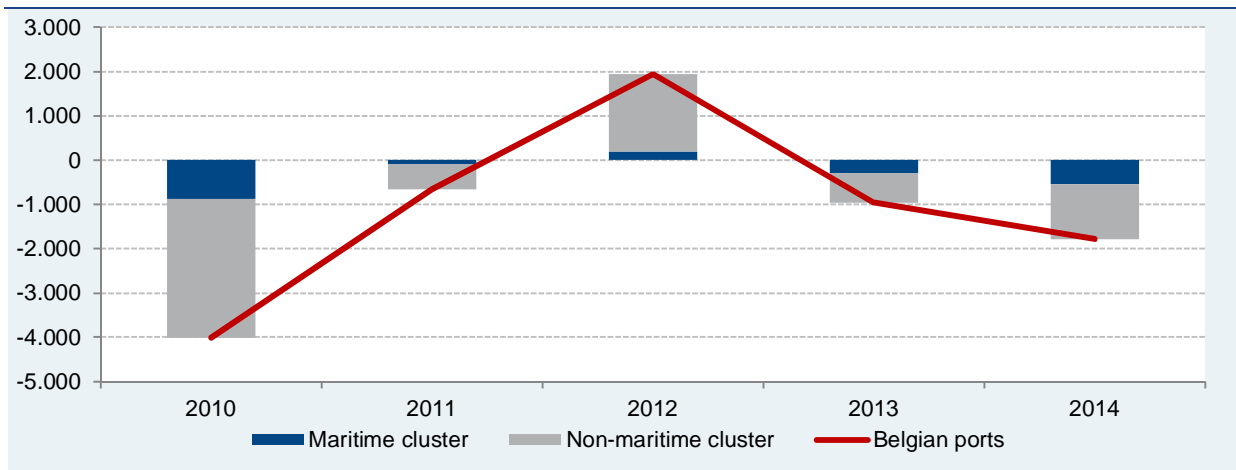
TABLE 5 EMPLOYMENT IN THE BELGIAN PORTS
(FTE)

	2009	2010	2011	2012	2013	2014	Relative share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
1. DIRECT EFFECTS	120,175	116,165	115,507	117,446	116,486	114,706	100.0	- 1.5	- 0.9
Antwerp	63,180	61,341	60,120	61,181	61,325	60,586	52.8	- 1.2	- 0.8
Ghent	26,642	25,813	26,550	27,148	27,445	27,602	24.1	+ 0.6	+ 0.7
Ostend	4,902	4,860	4,718	5,098	5,041	4,957	4.3	- 1.7	+ 0.2
Zeebrugge	10,752	10,250	10,072	9,962	9,726	9,365	8.2	- 3.7	- 2.7
Liège	10,366	9,673	9,750	9,555	8,862	8,165	7.1	- 7.9	- 4.7
Brussels	4,334	4,227	4,297	4,502	4,087	4,032	3.5	- 1.3	- 1.4
Outside the ports (p.m.) ²² ..	2,331	2,240	2,187	2,140	2,091	2,002	-	- 4.2	- 3.0
2. INDIRECT EFFECTS	142,187	138,460	140,763	140,440	137,310	135,736	-	- 1.1	- 0.9
TOTAL EMPLOYMENT	262,362	254,625	256,270	257,886	253,797	250,442	-	- 1.3	- 0.9

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

CHART 3 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

1.5 Investment in the Belgian ports

Investments recorded strong growth of 25.7 % overall. There were wide variations between ports. The pattern of investment is closely linked to projects and consequently highly volatile, so that the figures require a nuanced interpretation.

²² These figures stand for the activity of the maritime enterprises located outside the port limits and are divided among the Flemish ports according to the breakdown of value added.

TABLE 6 INVESTMENT IN THE BELGIAN PORTS²³

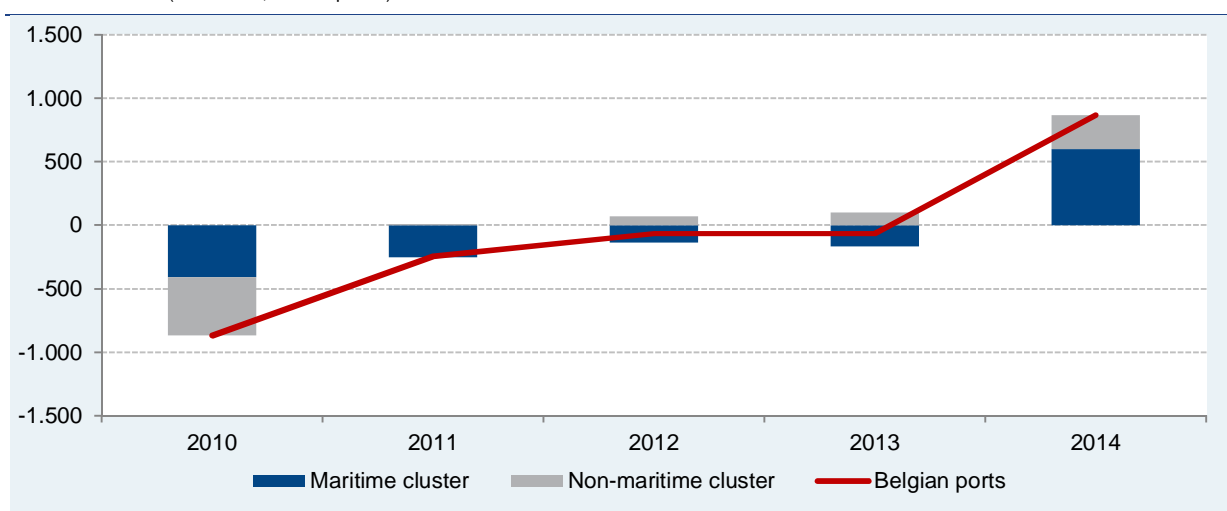
(in € million - current prices)

	2009	2010	2011	2012	2013	2014	Relative share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
Antwerp	3,080.0	2,521.8	2,402.6	2,321.4	2,356.5	3,229.0	76.5	+ 37.0	+ 0.9
Ghent	601.3	501.7	445.8	460.2	421.6	403.6	9.6	- 4.3	- 7.7
Ostend	125.7	105.9	90.3	95.5	76.2	118.9	2.8	+ 56.1	- 1.1
Zeebrugge	194.7	349.6	293.9	254.6	219.7	220.1	5.2	+ 0.2	+ 2.5
Liège	534.6	186.5	203.2	238.1	213.7	195.7	4.6	- 8.4	- 18.2
Brussels	66.8	66.7	52.3	51.9	68.4	53.0	1.3	- 22.6	- 4.6
<i>Outside the ports (p.m.)²⁴ ...</i>	247.9	454.5	306.7	213.5	208.4	285.0	-	+ 36.8	+ 2.8
DIRECT INVESTMENT	4,603.1	3,732.3	3,488.2	3,421.6	3,356.1	4,220.3	-	+ 25.7	- 1.7

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

CHART 4 CHANGE IN DIRECT INVESTMENT

(in € million, current prices)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

1.6 Demography of the Belgian ports

The table entitled 'Demography of the Belgian Ports' gives an overview of changes in the sample population used for the study for the period 2009-2014. The public sector is not taken into consideration in this table. As a reminder, besides Belgian commercial enterprises, the study also covers a limited number of legal entities such as non-profit organizations or branches of foreign firms. The two columns, entitled '2009' and '2014', with the heading "Population" indicate the number of legal persons (regardless of the legal form of the entity) included in the study for the years 2009 and 2014 respectively. The 'Migrate-out' column lists firms that left the population during the period 2010 - 2014. Obviously, it is the other way round for the 'Migrate-in' column. There are several explanations justifying the exclusion from the survey population from one year to the next: the company has moved, changed activity, merged with another firm already established in the port (in which case, only the surviving company continues to feature in the study). The three last columns of the table give the number of firms affected by corporate restructuring (absorption, merger, takeover or split), by a stoppage or failure. The firms included in the 'Migrate-in' column can either be newly established firms (after 2009) coming into the population studied or existing companies that have, for instance, started activities or taken over another enterprise in the

²³ Investment by the public authority Flemish Region is limited to the projects linked to a specific port.

²⁴ These figures stand for the activity of the maritime enterprises located outside the port limits and are divided among the Flemish ports according to the breakdown of value added.

port. The 'Missing account' column adds the number of firms that have not filed their annual accounts for the year 2014 and which, as far as we know, should not be excluded from the study²⁵.

TABLE 7 DEMOGRAPHY OF THE BELGIAN PORTS FOR THE PERIOD 2009 - 2014
(Number of firms)

Sectors	Population ²⁶					Death		
	2009	Migrate-In	Migrate-Out	Missing account	2014	Restructuring	Stoppage	Failure
MARITIME CLUSTER	1,799	458	523	41	1,693	48	203	140
Shipping agents and forwarders	708	190	205	18	675	22	66	51
Cargo handling	375	77	89	5	358	19	37	12
Shipping companies	362	133	119	10	366	3	60	39
Shipbuilding and repair	160	36	56	7	133	1	18	25
Port construction and dredging	13	2	1	0	14	0	1	0
Fishing and fish industry	134	14	37	0	111	3	18	12
Port trade	40	5	16	1	28	0	3	1
Port authority	7	1	0	0	8	0	0	0
Public sector	n.	n.	n.	n.	n.	n.	n.	n.
NON-MARITIME CLUSTER	2,012	1,042	890	36	2,128	116	217	197
TRADE	578	233	243	10	558	25	61	63
INDUSTRY	591	240	203	8	620	28	51	50
Energy	15	14	7	0	22	1	2	1
Fuel production	8	2	1	0	9	0	0	1
Chemicals	91	24	17	0	98	1	9	3
Car manufacturing	25	2	7	0	20	1	2	0
Electronics	15	5	5	0	15	0	1	2
Metalworking industry	122	35	30	1	126	5	8	9
Construction	178	111	88	7	194	9	16	26
Food industry	29	4	4	0	29	0	3	0
Other industries	108	43	44	0	107	11	10	8
LAND TRANSPORT	201	85	79	4	203	8	18	24
Road transport	199	80	78	4	197	8	18	24
Other land transport	2	5	1	0	6	0	0	0
OTHER LOGISTIC SERVICES..	642	484	365	14	747	55	87	60
TOTAL	3,811	1,500	1,413	77	3,821	164	420	337

Migrate-In = New in population after 2009.

Migrate-Out = Left the population in the period 2010-2014. This category includes the category 'Death', the enterprises which moved their activities outside the port area or whose NACE-BEL branch changed.

Death = legal situation at the closing date of this report

Restructuring = Absorption + Takeover + Merger + Split

Source: NBB (calculations based on the Crossroads Bank for Enterprises CBE).

Over the period considered, net additions to the total survey population amounted to only a small number of firms. In relative terms, it was mainly the maritime cluster that saw significant changes. In particular, two branches - shipping agents and forwarders and shipping companies - experienced both restructuring and a rise in bankruptcies. In the non-maritime cluster, firms generally come and go more frequently than in the case of maritime firms. That need not be a bad sign, because newcomers may create a more efficient and competitive market situation. Branches with a noticeably high rate of change are other logistic services and construction. On balance, over the period considered those branches did gain additional firms, but they are also the branches with the biggest percentage of failures.

1.7 Breakdown of the variables by company size

Note that the distribution of the firms according to size depends on the format of the annual accounts filed by the firms. Thus, companies submitting their annual accounts to the Central Balance Sheet Office

²⁵ See Coppens F., Verduyn F. (2009), *Analysis of business demography using markov chains: an application to Belgian data*, NBB, Working Paper No. 170 (Research series), Brussels.

²⁶ The results of the public sector are not included in this table.

in the full format are considered to be large firms. The SME category covers companies submitting their annual accounts in an abbreviated format.

In 2014 there was a 2 % fall in the number of SMEs, thus maintaining the downward trend of recent years. In contrast to last year, the number of large firms was also down slightly (-0.8 %). However, that fall had no impact on the creation of value added, which increased by roughly 0.5 % in large firms and by over 1.8 % in SMEs. Nevertheless, employment declined in both groups, but mainly in large firms where it contracted by -1.8 %.

TABLE 8 BREAKDOWN OF FINDINGS IN THE BELGIAN PORTS IN 2014

Ports	Number of firms ²⁷		Direct value added (in € million)		Direct employment (FTE)		Direct investment (in € million)	
	Large firms	SMEs	Large firms	SMEs	Large firms	SMEs	Large firms	SMEs
Antwerp	836	1,001	9,311.5	365.5	53,788	3,524	2,926.7	54.9
Ghent	279	321	3,354.0	190.0	25,051	2,235	356.1	33.2
Ostend	58	135	390.6	40.1	3,628	493	85.4	16.8
Zeebrugge	158	229	716.4	91.5	6,401	1,031	146.2	11.9
Liège	91	87	1,097.6	33.3	7,656	509	190.8	4.9
Brussels	116	238	409.6	64.0	3,176	853	38.3	14.7
Outside the ports	26	360	73.7	61.3	1,571	432	256.2	28.8
TOTAL	1,564	2,371	15,353.5	845.8	101,271	9,076	3,999.7	165.2

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

1.8 Social balance sheet in the Belgian ports²⁸

The social balance sheet presents a coherent set of data on various aspects of employment in firms: composition of the workforce, staff rotation, type of employment contracts, level of education, working time, labour costs and training efforts. The results presented below concerning direct employment in the six Belgian ports are not exhaustive. The figures are based on a constant sample²⁹ relating to the period 2012 - 2014. The national data is calculated from a constant sample of filed annual accounts with the Central Balance Sheet Office. The findings per individual port are also based on a constant sample.

1.8.1 Working time and labour costs

For a detailed analysis of the social balance sheet data, see the article by P. Heuse in the June 2016 Economic Review of the National Bank of Belgium.

In 2013 the reduction in employment in the constant sample of firms active in the Belgian ports was still relatively modest (-0.2 %). In contrast, in 2014 the decline was considerably bigger (-3.9 %) and exceeded the findings based on the general results in table 5. The number of hours worked fell faster than the number of FTEs in 2014, so that the average number of hours worked per FTE declined further.

²⁷ For each port, this is the number of firms located in the port zone. A firm may in fact be recorded in more than one port. The sample for the year 2014 comprises 1.457 large firms and 2.364 small and medium-sized firms, totalling 3.821 firms. The results of the public sector are not included in this table.

²⁸ The national data mentioned were taken from Heuse P., *2014 social balance sheet*, NBB, Economic Review, June 2016. The comparisons are merely an indication, since only firms filing their social balance sheet for a period of 12 months ending on 31 December were taken into account in that study. Moreover, NACE-BEL 78 branches (employment-related activities), 84 (public administration and defence; compulsory social security) and 85 (education) are excluded in that study.

²⁹ The constant sample was determined on the basis of the firms which filed full-format accounts throughout the period 2012 - 2014, and the financial year must comprise a period of twelve months. The employer's organisations (e.g. Cepa), with NACE-BEL 78200, are included in the constant sample. The constant sample comprises 981 firms and 93,873 FTEs, or 25.6 % of the firms considered for this study in 2014 and 81.8 % of the direct employment calculated in this study.

TABLE 9 HOURS WORKED AND ASSOCIATED COSTS OF INTERNAL HUMAN RESOURCES
(reduced population: constant population)
(percentage change compared with the previous year, unless otherwise stated)

	2012	2013	2014
Change in the average number of employees on the staff register (p.c.)		-0.2	-3.9
Change in the number of hours actually worked (p.c.)		-0.5	-4.2
Change in staff costs (p.c.)		+2.0	-1.0
Average number of hours worked per annum per full-time equivalent (<i>hours</i>)	1,513	1,508	1,504
Average annual staff costs per full-time equivalent (<i>euros</i>)	76,545	78,251	80,621
Average staff costs per hour worked (<i>euros</i>)	51	52	54

Source: NBB (full presentation accounts only).

1.8.2 Composition of the workforce

The changes recorded for 2014 in table 10 are relatively minor. The proportion of blue collar workers has remained virtually unchanged for a number of years, as has the proportion of employees with higher education qualifications.

In contrast to previous years, female employment increased by 1 percentage point in 2014. The article by P. Heuse mentioned above discusses female employment in more detail.

TABLE 10 INTERNAL WORKFORCE AT THE END OF THE FINANCIAL YEAR
(reduced population: constant population)
(share as a percentage of the total)

	2012	2013	2014
By professional category			
<i>White-collar</i>	44	44	44
<i>Blue-collar</i>	52	52	52
<i>Other staff</i>	4	4	4
By sex			
<i>Males</i>	84	84	83
<i>Females</i>	16	16	17
By working time			
<i>Full-time</i>	90.1	90.1	89.1
<i>Part-time</i>	9.9	9.9	10.9
By educational level			
<i>Males</i>			
<i>Primary education (p.c.)</i>	19.9	19.1	18.6
<i>Secondary education (p.c.)</i>	54.8	55.3	55.4
<i>Higher non-university education (p.c.)</i>	16.4	16.7	16.9
<i>University education (p.c.)</i>	8.9	8.9	9.0
<i>Females</i>			
<i>Primary education (p.c.)</i>	7.1	7.0	7.1
<i>Secondary education (p.c.)</i>	45.2	44.6	44.0
<i>Higher non-university education (p.c.)</i>	31.9	32.5	32.7
<i>University education (p.c.)</i>	15.7	15.9	16.2

Source: NBB (full presentation accounts only).

1.8.3 External staff

The general tendency to employ more temporary workers is also apparent in firms in the ports. Some years ago this form of work occurred mainly in a number of specific sectors, but has now become more widespread. Demand for more flexible labour to cater for cyclical fluctuations is part of the reason. Since the increase in the number of hours worked exceeded the change in labour costs, there was a reduction in the average hourly cost of external staff.

TABLE 11 HIRED TEMPORARY STAFF AND STAFF PLACED AT THE ENTERPRISE'S DISPOSAL(reduced population: constant population)
(percentage change compared with the previous year, unless otherwise stated)

	2012	2013	2014
Share of external staff in total employment (on the basis of the number of hours actually worked) (share as a percentage of the total)	13.9	14.0	15.8
Change in the number of hours actually worked		- 0.1	+ 9.4
Change in costs		+ 1.8	+ 8.2

Source: NBB (full presentation accounts only).

1.8.4 Staff turnover

In the constant sample, staff turnover was again decidedly negative. It is noteworthy that the number of workers in the 'unemployment with company allowance' category more than doubled. It could be that both employers and employees still want to make use of the bridging pension system which will be subject to severe government restrictions from now on.

TABLE 12 STAFF TURNOVER(reduced population: constant population)
(share as a percentage of the total, unless otherwise stated)

	2012	2013	2014
Net number of staff hired during the year (FTE)	+ 1,502	+ 314	- 1,479
Staff leaving, by reason for termination of contract			
Retirement	6.9	8.6	7.4
Unemployment with company allowance	4.3	4.3	9.0
Dismissal	18.0	18.5	16.5
Other reason ³⁰	70.6	68.6	67.0

Source: NBB (full presentation accounts only).

1.8.5 Training³¹

Almost two-thirds of the constant sample reported training initiatives in the social balance sheet (63.0 %); however, in 2014 that figure was down slightly against the previous year. The participation rate increased for both men and women, but the number of hours' training attended was down, so that the firms' training costs were nevertheless lower than in the previous year.

³⁰ Spontaneous departures, death in service, expiry of the period of fixed-term contracts, provided that they are not immediately followed by a new contract, and the completion of the work for which the contract was concluded.

³¹ Here, training is meant in the formal sense, i.e. courses in premises reserved for that purpose, within the firm or outside. For example, on-the-job training, mentoring and self-training study are outside the scope of this study.

TABLE 13 EFFORTS DEVOTED TO FORMAL TRAINING
(reduced population: constant population)
(share as a percentage of the total, unless otherwise stated)

	2012	2013	2014
P.c. of firms reporting training on the social balance sheet	62.6	63.4	62.3
Participation rate	56.8	57.2	58.4
<i>Males</i>	57.4	58.3	59.2
<i>Females</i>	54.2	52.2	54.6
Number of hours' training per person (<i>hours</i>)	32.5	33.2	29.0
<i>Males (hours)</i>	33.5	34.0	29.7
<i>Females (hours)</i>	27.3	29.1	25.6
Training costs per hour (euros)	73.2	70.7	71.9
<i>Males (euros)</i>	72.6	69.6	71.8
<i>Females (euros)</i>	76.8	77.4	72.2
P.c. of the number of hours worked devoted to training	1.3	1.3	1.1
Training costs as a percentage of total staff costs	1.8	1.8	1.5

Source: NBB (full presentation accounts only).

1.9 Financial ratios in the Belgian ports

The ratios presented below show the net return on equity after tax, liquidity in the broad sense (the current ratio), and solvency (see Annex 2 for the definition of the ratios). The first ratio concerns the firms' ability to generate profits, and to give shareholders an idea of the firm's return after tax. The second ratio shows the firm's ability to mobilise in due time the cash resources that it needs in order to meet its short-term liabilities. Finally, the third ratio gives an idea of the firm's ability to honour all its financial commitments in the short and long term. This section gives information on the movement in the ratios for the six Belgian ports together³².

The study of the financial ratios is based on a constant sample³³ composed for the years 2012 to 2014. Consequently, the firms studied in the financial section of this report are not the same as those in the constant sample of the previous report, which may explain some discrepancies between the figures in the two publications. To permit comparison with the national data, i.e. all Belgian non-financial firms companies, the same calculation method – namely globalisation – was used.

In 2014, firms included in the constant sample saw a further rise in their profitability, which reached a level exceeding the average for all non-financial corporations. However, that favourable trend did not occur in every port and was in fact due to the substantial improvement in Antwerp and Liège. Liquidity and solvency deteriorated slightly and were below the national averages, although they remain at an acceptable level.

³² Note that readers wishing to compare the financial ratios of a firm with those in the sector where it operates can find that information in the company file published by the Central Balance Sheet Office.

³³ The constant sample composed for the study of the ratios includes all firms which filed their annual accounts in 2012, 2013 and 2014 and whose annual accounts items meet the conditions for the calculation of these ratios. For example, for the purpose of calculating profitability, the financial year must comprise 12 months and the equity must be strictly positive. NACE-BEL branch 70100 (head office activities) is excluded as these companies may distort the results because of their often very high shareholders' equity figures. This constant sample covers 2,426 firms, € 14,829.2 million of value added and 97,376 FTEs, or 63.3 % of the firms considered for the Belgian ports in 2014, 89.7 % of the direct value added and 84.9 % of the direct employment examined here.

TABLE 14 FINANCIAL RATIOS IN THE BELGIAN PORTS FROM 2012 TO 2014
(reduced population: constant population)

Ports	Return on equity after tax (in p.c.)			Liquidity in the broad sense			Solvency (in p.c.)		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
Antwerp	10.1	3.6	7.5	1.19	1.19	0.97	44.1	44.4	42.6
Ghent	4.1	5.1	5.8	1.24	1.34	1.27	39.2	42.5	40.3
Ostend	15.8	8.8	1.7	0.91	1.00	0.95	48.0	51.2	46.0
Zeebrugge	4.9	6.7	5.2	1.15	1.06	1.08	51.5	50.8	52.4
Liège	-1.5	-2.6	5.1	0.90	0.82	0.70	40.7	42.0	42.6
Brussels	6.3	2.9	3.0	1.41	1.41	1.40	39.6	39.2	38.1
Belgian ports	8.1	3.2	6.8	1.16	1.17	1.00	43.4	44.1	42.7
Non-financial corporations ³⁴	6.8	5.3	5.5	1.26	1.25	1.24	43.1	43.1	43.4

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

1.10 Financial health in the Belgian ports

The financial health indicator is designed as a weighted combination of variables, created by means of a model constructed in the same way as a failure prediction model. The model takes the form of a logistic regression discriminating between failing and non-failing companies. The definition of failure is based on a legal criterion, namely that a company is considered to have failed if it has faced bankruptcy or judicial administration in the past.

The indicator summarises each company's situation in a single value which takes account simultaneously of the solvency, liquidity and profitability dimensions. Those dimensions are complementary in the establishment of a financial diagnosis, as a high debt level, for example, may be offset by a plentiful cash flow, and vice versa. The indicator also takes account of the companies' age and size, particularly through interaction variables.

The indicator constitutes a strictly financial assessment of the companies at a given moment. That assessment is based on data from the annual accounts, and therefore disregards any other fundamental elements, such as development prospects, competition, management calibre or shareholders' willingness to provide financial support. In that respect, it must be regarded as one of the factors enabling an overall appraisal of a firm's situation.

Classes 1, 2, 3 and 4 are associated with below-average failure rates, and therefore correspond to a favourable financial situation. However, the rates are not zero, which means that these classes are not totally risk free. Conversely, classes 6, 7, 8, 9 and 10 are associated with above-average failure rates, and therefore correspond to a situation of vulnerability. That is why belonging to one of these classes can be interpreted as a warning sign, which becomes stronger as we move from class 6 to class 10. Finally, class 5 corresponds to an average failure rate and is therefore neutral in terms of interpretation.

The financial health classes are used in the enterprise files compiled by the Central Balance Sheet Office³⁵. The sample of firms for which the financial health index was calculated is naturally much smaller than in the national study. Consequently, the results are more volatile. The result for a particular firm can therefore be obtained from the company file³⁶ and compared to the distribution of firms by financial health class in the ports, or in Belgium as a whole.

Tables 15 and 16 show that, in 2014, a substantial majority of firms in the Belgian ports (66.5 % of the number of firms and 81.3 % in terms of jobs) were in classes 1 to 4, i.e. with a below-average failure

³⁴ For additional information see Rubbrecht I., Vivet D., *Results and financial situation of firms in 2014*, NBB, Economic review, December 2015, Brussels.

³⁵ See Vivet D. (2011), *Development of a financial health indicator based on companies' annual accounts*, NBB, Working Paper No. 213 (Document series), Brussels.

³⁶ The company file compares the financial position of an enterprise with the financial position of the activity sector the enterprise belongs to. For more information, see introduction.

risk. It is notable that the distribution according to the number of firms has changed very little since 2008. That is not the case for the distribution according to firm size (number of employees): in the crisis year 2009, the overall share of classes 1 to 3 declined significantly, but in the ensuing years the situation was largely restored.

TABLE 15 FINANCIAL HEALTH IN THE BELGIAN PORTS - IN % OF THE NUMBER OF COMPANIES
(reduced population)

	2009	2010	2011	2012	2013	2014
Class 1	8.3	8.2	7.9	8.4	8.4	8.6
Class 2	18.1	18.4	19.3	18.6	19.1	19.3
Class 3	17.7	18.5	18.7	18.5	19.2	18.4
Class 4	18.7	19.1	20.2	19.2	19.4	20.2
Class 5	17.9	18.1	17.5	18.3	17.6	17.6
Class 6	13.1	11.8	11.4	12.0	10.7	11.1
Class 7	3.6	3.3	2.6	2.8	3.4	2.8
Class 8	1.5	1.9	1.7	1.6	1.5	1.5
Class 9	0.7	0.4	0.5	0.4	0.5	0.4
Class 10	0.4	0.2	0.3	0.2	0.3	0.1
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 16 FINANCIAL HEALTH IN THE BELGIAN PORTS - IN % OF WORKERS ENTERED IN THE STAFF REGISTER³⁷
(reduced population)

	2009	2010	2011	2012	2013	2014
Class 1	6.7	10.0	8.7	7.7	8.0	7.8
Class 2	23.5	23.0	18.7	15.2	22.4	20.9
Class 3	29.4	33.3	35.2	39.2	33.0	35.1
Class 4	24.9	20.9	18.6	16.6	16.7	17.5
Class 5	11.0	8.7	15.5	16.9	16.5	15.8
Class 6	3.4	3.3	2.6	3.7	2.6	2.0
Class 7	0.6	0.5	0.4	0.4	0.5	0.5
Class 8	0.3	0.3	0.2	0.3	0.3	0.2
Class 9	0.0	0.0	0.1	0.0	0.1	0.1
Class 10	0.1	0.0	0.0	0.0	0.0	0.0
TOTAL.....	100.0	100.0	100.0	100.0	100.0	100.0

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

³⁷ Full-time equivalents (item 9087)

2 PORT OF ANTWERP

2.1 Port developments³⁸

In 2014, traffic handled by the port of Antwerp totalled over 199 million tonnes, setting a new record. Growth since 2013 came to 4.2 %. As the average growth figure for the Hamburg-Le Havre range³⁹ was 2.2 %, the port of Antwerp increased its market share (from 16.7 to 17.1 %). The port's overall expansion in 2014 is due to the strong rise in traffic in liquid bulk (+5.5 %) and containers (+5.9 %). In liquid bulk, the volume handled was up for both crude oil and petroleum derivatives, which account for most of the liquid bulk. Chemicals recorded slightly lower growth. Dry bulk declined sharply (-6.5 %). That downward trend has been apparent ever since 2009. Roll-on/roll-off traffic and conventional general cargo were also down in 2014.

In 2015 the port of Antwerp established another traffic record: 208.4 million tonnes. In the figures for 2015, the emphasis is again on liquid bulk and containers. Liquid bulk was up by 6.1 % against 2014. Within this group, traffic in chemicals recorded very strong growth (+8.3 %), but there was a decline in the case of oil. Petroleum derivatives were up by 4.0 %. Work proceeded on the implementation or launch of investments announced previously, such as at Total (Optara), ExxonMobil (Delayed Coker Unit) and Evonik (enlargement of butadiene and MTBE installations). Container traffic increased by 4.6 % to a total of 113.3 million tonnes (9.65 million TEU, a new record). Other forms of traffic also recorded growth: dry bulk (+2.1 %), ro/ro (+4.1 %) and conventional general cargo (+1.2 %).

In the past 10 years there have been substantial shifts in the composition of traffic at the port of Antwerp. In 2005 containers accounted for almost 47 % of the total volume. In 2015 that share increased to over 54 %. In the past 10 years, containerisation has reduced the share of conventional general cargo from 11 % to 5 %. The share of dry bulk has fallen from 17 % to 7 %. Conversely, liquid bulk has increased sharply, from 23 % to 32 % of total traffic in 2015.

The number of ocean-going vessels calling the port increased from 14,009 in 2014 to 14,417 in 2015. In recent years the number of vessels had constantly declined as a result of the increases in scale in the container business. The largest container ship to call the port of Antwerp in 2015 was the MSC Zoë, with a capacity of 19,224 TEU.

Every year there are many investment projects, both small and large, in the port of Antwerp, aimed at maintenance, modernisation or expansion of the existing infrastructure. The most noticeable investment is the new lock which will offer a second route into the Waasland port on the left bank of the Scheldt. This lock, which was named the "Kieldrecht lock" at the beginning of 2016, will be 500 metres long and 68 metres wide. The lock will be inaugurated in mid-2016.

2.2 Value added

The 1.4 % increase in direct value added recorded in the port of Antwerp was generated by both the maritime and the non-maritime cluster. However, in the case of the maritime cluster that positive development was very largely due to the shipping companies branch. Here too, there is a need to exercise caution in interpreting the decline in the port construction and dredging sector, where a sharp fall was recorded, because shifts between various subsidiaries and to new created subsidiaries which did not file yet their annual account. In the non-maritime cluster, there were notable developments in key sectors (chemicals, refineries and trade). The energy branch was an exception here, possibly owing to the protracted technical problems at some power stations.

The strong rise in indirect value added is largely attributable to the chemical industry and shipping companies.

³⁸ Source: Jean-Pierre Merckx, *Flemish Port Commission*

³⁹ For the purposes of this study, the range comprises the ports of Hamburg, Bremen, Amsterdam, Rotterdam, the Zeeland Seaports complex (ports of Flessingue and Terneuzen), Antwerp, Ghent, Zeebrugge, Ostend, Dunkirk and Le Havre.

Direct value added represented 4.3 % of the GDP of the Flemish region and 2.5 % of the Belgian GDP. Total value added accounted for 4.7 % of the Belgian GDP.

2.3 Employment

In contrast to value added, the growth of direct employment in the port of Antwerp was negative. In recent years, most sectors have displayed a predominantly downward trend, or at best stabilisation. Fortunately, that stable situation applies in the sectors which generate the most jobs, such as cargo handlers, chemicals, trade and fuel production.

In contrast to the sharp rise in indirect value added, indirect employment barely increased, reflecting the downward trend in direct employment. The virtual stabilisation of indirect employment cannot be attributed to any particular sector but is due to developments in the principal branches.

Direct employment represented 2.6 % of the employment in the Flemish region and 1.5 % of Belgian employment. Total employment accounted for 3.6 % of Belgian employment.

2.4 Investment

In 2014, investment in the port of Antwerp expanded by 37 %. As stated above, that figure must always be interpreted with some caution. The strong growth in the maritime cluster was due mainly to the substantial increase in the shipping companies branch. In the non-maritime cluster the rise came to 27.1 %, driven mainly by the significant investments in chemicals and oil refining.

CHART 5 CHANGE IN DIRECT VALUE ADDED
(in € million, current prices)

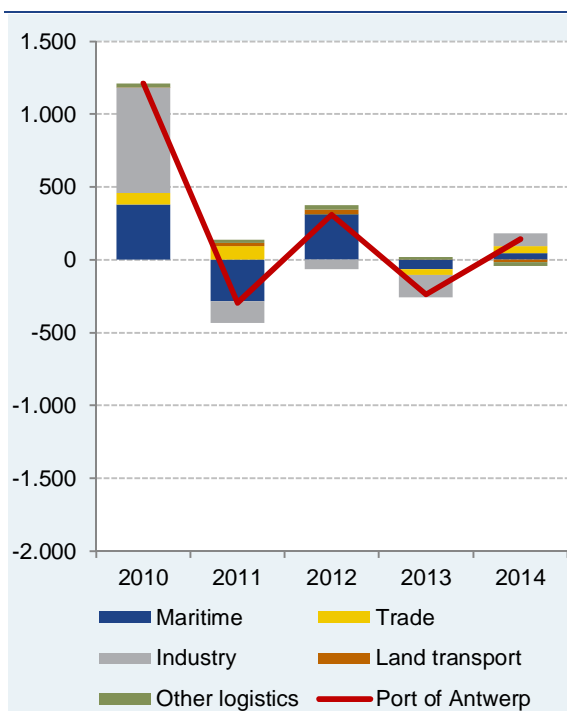
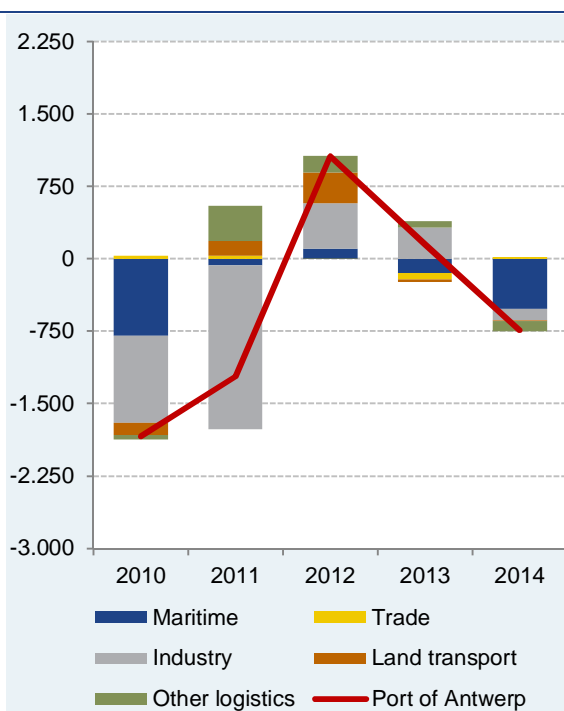


CHART 6 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 17 VALUE ADDED AT THE PORT OF ANTWERP FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	8,794.5	10,006.4	9,710.8	10,020.9	9,782.0	9,923.8	100.0	+ 1.4	+ 2.4
MARITIME CLUSTER	2,933.8	3,314.1	3,031.0	3,343.7	3,280.2	3,325.5	33.5	+ 1.4	+ 2.5
Shipping agents and forwarders	558.8	572.9	602.2	599.0	628.9	598.2	6.0	- 4.9	+ 1.4
Cargo handling	1,223.6	1,288.3	1,374.8	1,485.9	1,566.6	1,602.6	16.1	+ 2.3	+ 5.5
Shipping companies	588.5	850.3	479.6	547.2	363.2	429.9	4.3	+ 18.4	- 6.1
Shipbuilding and repair	58.4	49.7	45.4	37.5	33.0	37.1	0.4	+ 12.4	- 8.7
Port construction and dredging	122.8	161.9	131.4	247.1	272.9	236.2	2.4	- 13.5	+ 14.0
Fishing and fish industry	2.0	1.7	1.1	1.1	1.2	1.9	0.0	+ 52.1	- 0.7
Port trade	15.9	19.6	21.1	21.3	19.8	14.5	0.1	- 27.0	- 1.9
Port authority	222.8	229.2	233.9	255.9	243.6	251.8	2.5	+ 3.4	+ 2.5
Public sector	140.9	140.6	141.6	148.7	150.9	153.4	1.5	+ 1.6	+ 1.7
Allocation (p.m.)	54.7	84.3	102.9	95.9	91.6	93.4	-	+ 2.0	+ 11.3
NON-MARITIME CLUSTER	5,860.8	6,692.2	6,679.8	6,677.1	6,501.8	6,598.3	66.5	+ 1.5	+ 2.4
TRADE	703.5	781.6	877.5	879.8	839.3	887.5	8.9	+ 5.8	+ 4.8
INDUSTRY.....	4,501.9	5,227.9	5,077.8	5,013.0	4,859.3	4,948.6	49.9	+ 1.8	+ 1.9
Energy	462.9	453.8	530.1	418.9	415.0	309.2	3.1	- 25.5	- 7.8
Fuel production	748.4	984.1	898.5	970.8	806.2	824.9	8.3	+ 2.3	+ 2.0
Chemicals	2,543.3	2,658.7	3,009.6	2,946.1	2,944.2	3,112.0	31.4	+ 5.7	+ 4.1
Car manufacturing	259.3	607.2	86.1	107.0	94.0	93.4	0.9	- 0.6	- 18.5
Electronics	10.1	9.5	8.6	10.6	8.3	10.1	0.1	+ 22.0	- 0.1
Metalworking industry	205.3	212.6	225.0	248.5	242.6	243.3	2.5	+ 0.3	+ 3.5
Construction	102.3	115.8	129.3	136.2	153.2	159.5	1.6	+ 4.2	+ 9.3
Food industry	49.0	59.3	63.6	46.4	61.8	57.4	0.6	- 7.1	+ 3.2
Other industries	121.3	126.9	127.0	128.5	134.0	138.9	1.4	+ 3.6	+ 2.7
LAND TRANSPORT	257.5	258.0	275.8	305.3	306.6	290.1	2.9	- 5.4	+ 2.4
Road transport	131.7	130.7	140.5	150.0	139.7	135.1	1.4	- 3.3	+ 0.5
Other land transport	125.8	127.3	135.2	155.3	166.9	155.0	1.6	- 7.1	+ 4.3
OTHER LOGISTIC SERVICES	397.9	424.7	448.6	479.0	496.6	472.1	4.8	- 4.9	+ 3.5
INDIRECT EFFECTS	8,222.6	10,223.1	9,241.1	9,696.6	8,798.2	9,035.7	-	+ 2.7	+ 1.9
MARITIME CLUSTER	3,155.0	4,125.6	2,974.4	3,331.8	2,886.8	2,996.0	-	+ 3.8	- 1.0
NON-MARITIME CLUSTER.....	5,067.6	6,097.5	6,266.7	6,364.8	5,911.5	6,039.7	-	+ 2.2	+ 3.6
TOTAL VALUE ADDED	17,017.1	20,229.5	18,951.8	19,717.4	18,580.2	18,959.5	-	+ 2.0	+ 2.2

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 18 VALUE ADDED TOP 10 AT THE PORT OF ANTWERP IN 2014

Ranking	Company name	Sector
1	B.A.S.F. ANTWERPEN	Chemicals
2	KUWAIT PETROLEUM (BELGIUM)	Trade
3	EXXONMOBIL PETROLEUM & CHEMICAL	Fuel production
4	TOTAL RAFFINADERIJ ANTWERPEN	Fuel production
5	ANTWERP PORT AUTHORITY	Port authority
6	ELECTRABEL	Energy
7	MSC PSA EUROPEAN TERMINAL	Cargo handling
8	BAYER ANTWERPEN	Chemicals
9	DREDGING INTERNATIONAL	Port construction and dredging
10	EVONIK DEGUSSA ANTWERPEN	Chemicals

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 19 EMPLOYMENT AT THE PORT OF ANTWERP FROM 2009 TO 2014
(FTE)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	63,180	61,341	60,120	61,181	61,325	60,586	100.0	- 1.2	- 0.8
MARITIME CLUSTER	28,999	28,204	28,138	28,242	28,096	27,574	45.5	- 1.9	- 1.0
Shipping agents and forwarders	6,885	6,697	6,876	7,017	6,823	6,740	11.1	- 1.2	- 0.4
Cargo handling	15,449	14,881	14,760	14,608	14,701	14,683	24.2	- 0.1	- 1.0
Shipping companies	1,040	1,081	1,108	908	888	890	1.5	+ 0.2	- 3.1
Shipbuilding and repair	880	761	631	546	438	401	0.7	- 8.6	- 14.6
Port construction and dredging	935	1,030	1,094	1,475	1,513	1,260	2.1	- 16.7	+ 6.1
Fishing and fish industry	25	22	18	16	16	19	0.0	+ 14.8	- 6.0
Port trade	191	197	152	153	148	138	0.2	- 7.0	- 6.3
Port authority	1,699	1,711	1,692	1,697	1,703	1,607	2.7	- 5.6	- 1.1
Public sector	1,894	1,824	1,808	1,822	1,866	1,838	3.0	- 1.5	- 0.6
Allocation (p.m.)	1,855	1,649	1,623	1,527	1,502	1,437	-	- 4.4	- 5.0
NON-MARITIME CLUSTER	34,181	33,137	31,982	32,939	33,229	33,012	54.5	- 0.7	- 0.7
TRADE	2,292	2,323	2,352	2,350	2,282	2,298	3.8	+ 0.7	+ 0.1
INDUSTRY	24,364	23,456	21,754	22,224	22,544	22,426	37.0	- 0.5	- 1.6
Energy	1,101	1,075	1,042	1,030	993	995	1.6	+ 0.2	- 2.0
Fuel production	2,585	2,652	2,687	2,678	2,607	2,626	4.3	+ 0.7	+ 0.3
Chemicals	10,651	10,671	10,792	10,889	10,982	10,931	18.0	- 0.5	+ 0.5
Car manufacturing	3,773	3,022	1,000	1,075	1,013	1,012	1.7	- 0.1	- 23.1
Electronics	149	158	157	133	127	133	0.2	+ 4.3	- 2.3
Metalworking industry	3,400	3,252	3,362	3,591	3,596	3,466	5.7	- 3.6	+ 0.4
Construction	1,124	1,170	1,205	1,328	1,688	1,706	2.8	+ 1.0	+ 8.7
Food industry	478	381	392	404	391	394	0.7	+ 0.8	- 3.8
Other industries	1,103	1,076	1,118	1,096	1,146	1,163	1.9	+ 1.5	+ 1.1
LAND TRANSPORT	4,169	4,048	4,200	4,523	4,495	4,489	7.4	- 0.1	+ 1.5
Road transport	2,119	1,945	2,026	2,088	1,989	2,050	3.4	+ 3.1	- 0.7
Other land transport.....	2,050	2,103	2,174	2,435	2,506	2,439	4.0	- 2.7	+ 3.5
OTHER LOGISTIC SERVICES	3,356	3,310	3,676	3,842	3,908	3,798	6.3	- 2.8	+ 2.5
INDIRECT EFFECTS	85,587	83,171	85,755	84,464	82,615	82,068	-	- 0.7	- 0.8
MARITIME CLUSTER	33,957	33,428	32,908	32,155	31,570	31,122	-	- 1.4	- 1.7
NON-MARITIME CLUSTER	51,630	49,744	52,847	52,308	51,046	50,946	-	- 0.2	- 0.3
TOTAL EMPLOYMENT	148,767	144,513	145,875	145,644	143,941	142,654	-	- 0.9	- 0.8

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 20 EMPLOYMENT TOP 10 AT THE PORT OF ANTWERP IN 2014

Ranking	Company name	Sector
1	B.A.S.F. ANTWERPEN	Chemicals
2	BNRC GROUP	Other land transport
3	PUBLIC SECTOR	Public sector
4	ANTWERP PORT AUTHORITY	Port authority
5	EXXONMOBIL PETROLEUM & CHEMICAL	Fuel production
6	MSC PSA EUROPEAN TERMINAL	Cargo handling
7	TOTAL RAFFINADERIJ ANTWERPEN	Fuel production
8	PSA ANTWERP	Cargo handling
9	EVONIK DEGUSSA ANTWERPEN	Chemicals
10	NEW HOLLAND TRACTOR LIMITED	Car manufacturing

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 21 INVESTMENT AT THE PORT OF ANTWERP FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
MARITIME CLUSTER	2,065.5	1,628.5	1,493.9	1,375.0	1,220.3	1,785.1	55.3	+ 46.3	- 2.9
Shipping agents and forwarders	34.2	50.5	61.4	48.3	29.7	31.4	1.0	+ 5.9	- 1.7
Cargo handling	688.5	594.7	675.4	606.6	488.6	540.0	16.7	+ 10.5	- 4.7
Shipping companies	1,045.7	630.0	325.3	382.1	425.7	1,000.8	31.0	+ 135.1	- 0.9
Shipbuilding and repair	14.6	12.5	6.6	4.7	5.9	2.1	0.1	- 64.1	- 32.1
Port construction and dredging	194.8	268.4	342.7	93.2	14.8	27.4	0.8	+ 84.6	- 32.5
Fishing and fish industry	0.3	1.1	0.2	0.2	0.2	0.2	0.0	+ 19.7	- 9.9
Port trade	1.3	1.8	0.9	0.6	0.5	2.5	0.1	+ 354.0	+ 14.1
Port authority	44.7	33.9	45.0	194.8	196.3	154.2	4.8	- 21.5	+ 28.1
Public sector	41.4	35.7	36.6	44.5	58.5	26.5	0.8	- 54.7	- 8.5
Allocation (p.m.)	208.0	393.4	245.0	164.3	162.8	220.9	-	+ 35.7	+ 1.2
NON-MARITIME CLUSTER	1,014.6	893.3	908.7	946.4	1,136.3	1,443.9	44.7	+ 27.1	+ 7.3
TRADE	38.9	48.5	55.2	54.3	54.8	52.5	1.6	- 4.3	+ 6.2
INDUSTRY.....	805.0	744.3	748.7	768.7	965.3	1,279.0	39.6	+ 32.5	+ 9.7
Energy	158.0	93.6	74.6	76.0	71.8	71.6	2.2	- 0.3	- 14.6
Fuel production	185.0	161.8	90.3	127.3	239.0	417.8	12.9	+ 74.8	+ 17.7
Chemicals	359.4	374.0	471.8	489.9	576.9	737.0	22.8	+ 27.8	+ 15.4
Car manufacturing	9.7	5.7	8.7	7.9	8.5	2.2	0.1	- 74.2	- 25.7
Electronics	0.2	3.7	2.0	0.9	1.0	0.0	0.0	- 98.8	- 44.1
Metalworking industry	11.6	12.8	10.7	13.6	15.3	11.3	0.3	- 26.2	- 0.6
Construction	11.0	8.0	11.7	11.5	11.2	8.7	0.3	- 22.3	- 4.6
Food industry	34.6	20.1	17.4	15.1	15.6	12.7	0.4	- 18.3	- 18.1
Other industries	35.5	64.6	61.5	26.5	26.1	17.7	0.5	- 32.1	- 13.0
LAND TRANSPORT	45.1	39.6	29.9	43.6	38.5	44.9	1.4	+ 16.7	- 0.1
Road transport	24.8	24.2	19.9	28.9	22.8	32.8	1.0	+ 43.9	+ 5.7
Other land transport	20.3	15.4	10.0	14.6	15.7	12.2	0.4	- 22.7	- 9.8
OTHER LOGISTIC SERVICES ...	125.6	61.0	74.8	79.9	77.7	67.5	2.1	- 13.1	- 11.7
DIRECT INVESTMENT	3,080.0	2,521.8	2,402.6	2,321.4	2,356.5	3,229.0	100.0	+ 37.0	+ 0.9

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

TABLE 22 INVESTMENT TOP 10 AT THE PORT OF ANTWERP IN 2014

Ranking	Company name	Sector
1	EURONAV TANKERS	Shipping companies
2	EURONAV SHIPPING	Shipping companies
3	TOTAL RAFFINADERIJ ANTWERPEN	Fuel production
4	B.A.S.F. ANTWERPEN	Chemicals
5	TOTAL OLEFINS ANTWERP	Chemicals
6	EXMAR SHIPPING	Shipping companies
7	EXXONMOBIL PETROLEUM & CHEMICAL	Fuel production
8	DEURGANCKDOKSLUIS	Port authority
9	BAYER ANTWERPEN	Chemicals
10	EVONIK OXENO ANTWERPEN	Chemicals

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

3 PORT OF GHENT

3.1 Port developments⁴⁰

In 2014, total maritime traffic in the port of Ghent matched its 2013 level at 25.9 million tonnes. With 16.7 million tonnes of dry bulk, the port of Ghent is the leading dry bulk port in Flanders. This mainly concerns deliveries of iron ore, coal, cereals, construction materials and crude minerals. In 2014 the cargo traffic of dry bulk was slightly higher than in 2013 (+2.3 %). Cargo traffic of liquid bulk and containers declined, and the volume of conventional general cargo remained stable. Roll-on/roll-off traffic was up by 9.0 %. This comprises cars being shipped between Ghent and Göteborg.

In 2015 total traffic in the port of Ghent came to 26.4 million tonnes (+1.8 % against 2014). Dry bulk, which accounts for almost 64 % of that total, was stable at 16.7 million tonnes. Liquid bulk and conventional general cargo increased (+9.1 and +12.3 %). Container traffic declined again, but the volume concerned is very small. Roll-on/roll-off was down in 2015 (-3.3 %), following a steep rise in 2014.

In 2015, 2,847 ocean-going vessels called the port of Ghent, slightly fewer than in 2014. The average vessel size was 10,792 BT.

The principal infrastructure project for the port of Ghent is still the new lock in Terneuzen (Netherlands), which will enable the port of Ghent to receive larger vessels. In February 2015, Flanders and the Netherlands signed the contract for installation of the new lock, agreeing the political, legal and financial arrangements. The contract was approved by both parliaments and took effect on 1 March 2016. In the second quarter of 2016 the market will be approached with a view to appointing the firms to carry out the work. The work is to start in the third quarter of 2017, and completion of the project is scheduled for 2021.

3.2 Value added

The 4.9 % increase in direct value added in the port of Ghent was the strongest rise among Belgian ports in the range in 2014. In the past 6 years this port has also achieved a steady increase in value added, primarily in the non-maritime cluster, although the maritime cluster is also holding up well, despite the fact that 2014 was not exactly the best year for cargo handlers who form an important maritime branch (-3.3 %). In the non-maritime cluster the major branches (metalworking, chemicals, food and other industries) recorded good growth figures in 2014, with the exception of car manufacturing.

The marked rise in indirect value added, up by 6.8 %, is due largely to developments in the metalworking industry, chemicals and food industry. The indirect value added generated by car manufacturing was down slightly.

Direct value added represented 1.5 % of the GDP of the Flemish region and 0.9 % of the Belgian GDP. Total value added accounted for 1.9 % of the Belgian GDP.

3.3 Employment

Overall, direct employment remained stable in the port of Ghent. However, that figure masks wide variations. In the maritime cluster there was a notable 2 % fall in the case of cargo handlers, while in the non-maritime cluster significant increases were recorded in major industrial branches such as metalworking, other industries and other logistic services.

Indirect employment in the port of Ghent stabilized (+0,4 %). Indirect employment has been expanding since 2009 at this port. The metalworking industry and car manufacturing are the main branches generating jobs in the supplier sectors.

⁴⁰ Source: Jean-Pierre Merckx, *Flemish Port Commission*.

Direct employment represented 1.2 % of the employment in the Flemish region and 0.7 % of Belgian employment. Total employment accounted for 1.6 % of Belgian employment.

3.4 Investment

Owing to the completion of a number of major expansion projects here, investment in the port of Ghent was down sharply in the maritime cluster. This is particularly noticeable in the case of the cargo handlers. However, the port authority is continuing with investment projects. In the non-maritime sectors, investment in the main branches is still rising strongly, certainly in car manufacturing. The other industries branch is an exception to that trend in 2014.

CHART 7 CHANGE IN DIRECT VALUE ADDED
(in € million, current prices)

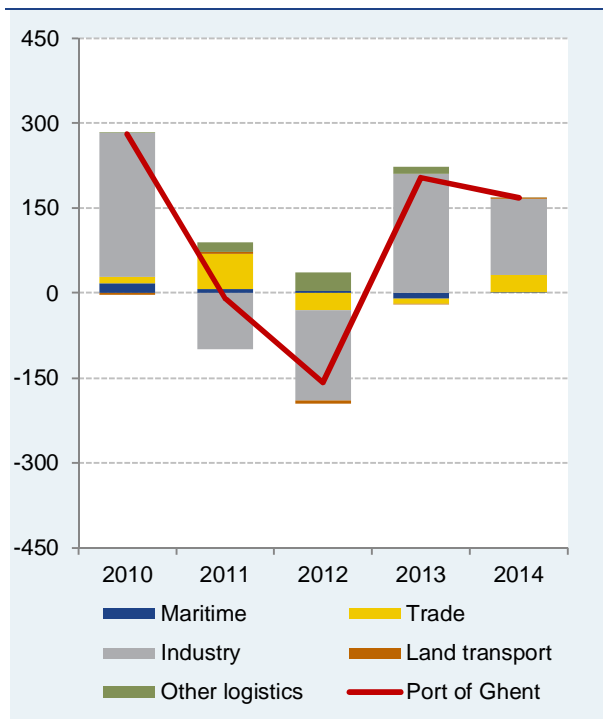
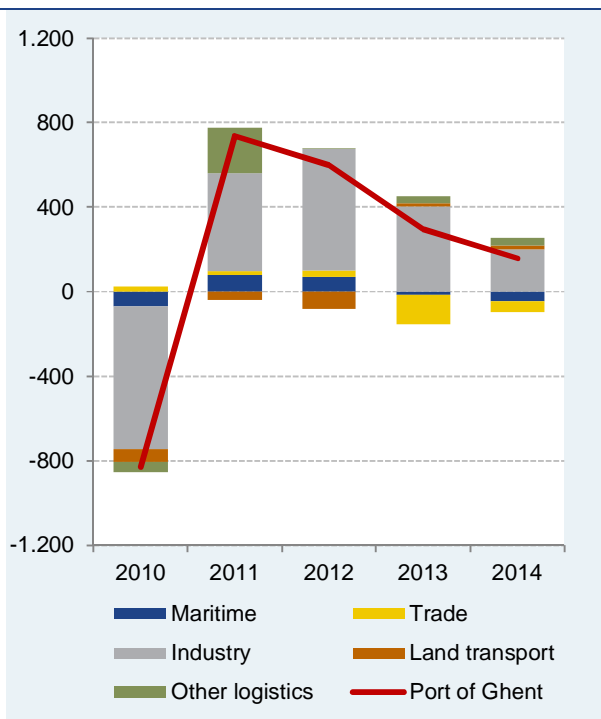


CHART 8 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 23 VALUE ADDED AT THE PORT OF GHENT FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	3,091.2	3,371.5	3,361.9	3,203.7	3,407.1	3,575.4	100.0	+ 4.9	+ 3.0
MARITIME CLUSTER	318.7	335.7	342.8	346.4	335.8	337.1	9.4	+ 0.4	+ 1.1
Shipping agents and forwarders	33.3	36.3	31.4	32.3	34.0	35.6	1.0	+ 4.9	+ 1.3
Cargo handling	226.4	240.9	255.3	253.4	244.5	236.4	6.6	- 3.3	+ 0.9
Shipping companies	10.6	9.1	7.8	9.9	7.9	13.3	0.4	+ 67.7	+ 4.6
Shipbuilding and repair	4.1	4.3	4.0	5.8	4.8	5.4	0.1	+ 10.7	+ 5.6
Port construction and dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Fishing and fish industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port trade	0.1	0.1	0.1	0.2	0.2	0.2	0.0	+ 15.6	+ 8.1
Port authority	23.6	25.5	24.7	23.6	23.4	24.8	0.7	+ 5.9	+ 1.0
Public sector	20.5	19.4	19.4	21.3	20.9	21.5	0.6	+ 2.7	+ 0.9
Allocation (p.m.)	6.9	6.2	5.3	8.7	6.9	9.8	-	+ 42.5	+ 7.4
NON-MARITIME CLUSTER	2,772.5	3,035.8	3,019.1	2,857.3	3,071.3	3,238.3	90.6	+ 5.4	+ 3.2
TRADE	737.9	749.8	811.7	780.9	772.2	802.7	22.5	+ 4.0	+ 1.7
INDUSTRY	1,877.8	2,131.5	2,031.8	1,872.9	2,083.6	2,218.2	62.0	+ 6.5	+ 3.4
Energy	59.7	68.3	75.0	66.6	53.9	23.0	0.6	- 57.2	- 17.3
Fuel production	24.5	43.3	30.5	50.5	54.7	41.4	1.2	- 24.3	+ 11.1
Chemicals	278.2	368.2	401.6	321.8	326.0	388.4	10.9	+ 19.1	+ 6.9
Car manufacturing	573.0	678.9	653.7	649.6	734.9	713.6	20.0	- 2.9	+ 4.5
Electronics	27.3	31.6	31.2	27.4	28.5	34.1	1.0	+ 19.6	+ 4.5
Metalworking industry	609.9	636.3	499.8	402.4	525.0	629.0	17.6	+ 19.8	+ 0.6
Construction	89.6	101.9	98.2	109.3	106.5	106.9	3.0	+ 0.4	+ 3.6
Food industry	63.9	88.5	82.6	74.3	91.9	104.4	2.9	+ 13.5	+ 10.3
Other industries	151.7	114.5	159.1	171.0	162.1	177.4	5.0	+ 9.4	+ 3.2
LAND TRANSPORT	80.6	77.4	81.0	75.7	75.4	76.9	2.1	+ 2.0	- 0.9
Road transport	62.3	59.6	66.6	63.0	63.8	66.8	1.9	+ 4.7	+ 1.4
Other land transport.....	18.3	17.9	14.4	12.7	11.6	10.1	0.3	- 12.8	- 11.2
OTHER LOGISTIC SERVICES	76.3	77.2	94.6	127.8	140.2	140.5	3.9	+ 0.2	+ 13.0
INDIRECT EFFECTS	3,266.6	3,656.9	3,554.0	3,355.8	3,649.5	3,898.2	-	+ 6.8	+ 3.6
MARITIME CLUSTER	238.3	246.7	258.1	257.2	250.8	248.7	-	- 0.8	+ 0.9
NON-MARITIME CLUSTER	3,028.2	3,410.1	3,295.9	3,098.6	3,398.7	3,649.5	-	+ 7.4	+ 3.8
TOTAL VALUE ADDED	6,357.8	7,028.4	6,915.8	6,559.4	7,056.6	7,473.6	-	+ 5.9	+ 3.3

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).
The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 24 VALUE ADDED TOP 10 AT THE PORT OF GHENT IN 2014

Ranking	Company name	Sector
1	ARCELORMITTAL BELGIUM	Metalworking industry
2	TOTAL BELGIUM	Trade
3	VOLVO CAR BELGIUM NV	Car manufacturing
4	VOLVO GROUP BELGIUM	Car manufacturing
5	BELGIAN SHELL	Trade
6	STORA ENSO LANGERBRUGGE	Other industries
7	TAMINCO	Chemicals
8	DSV SOLUTIONS	Cargo handling
9	CRI CATALYST COMPANY BELGIUM	Chemicals
10	OLEON	Chemicals

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 25 EMPLOYMENT AT THE PORT OF GHENT FROM 2009 TO 2014
(FTE)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	26,642	25,813	26,550	27,148	27,445	27,602	100.0	+ 0.6	+ 0.7
MARITIME CLUSTER	3,033	2,963	3,042	3,113	3,096	3,050	11.1	- 1.5	+ 0.1
Shipping agents and forwarders	344	349	346	359	373	389	1.4	+ 4.2	+ 2.5
Cargo handling	2,162	2,094	2,202	2,221	2,213	2,169	7.9	- 2.0	+ 0.1
Shipping companies	46	49	33	42	34	40	0.1	+ 15.7	- 2.8
Shipbuilding and repair	69	66	57	90	75	67	0.2	- 11.3	- 0.8
Port construction and dredging	0	0	0	0	0	0	0.0	n.	n.
Fishing and fish industry	0	0	0	0	0	0	0.0	n.	n.
Port trade	1	1	1	1	1	1	0.0	+ 0.0	+ 0.0
Port authority	155	160	156	156	156	148	0.5	- 5.1	- 0.9
Public sector	255	246	247	243	244	237	0.9	- 2.8	- 1.5
Allocation (p.m.)	88	82	68	108	83	78	-	- 6.0	- 2.3
NON-MARITIME CLUSTER	23,609	22,849	23,508	24,035	24,348	24,552	88.9	+ 0.8	+ 0.8
TRADE	2,171	2,196	2,214	2,246	2,107	2,055	7.4	- 2.5	- 1.1
INDUSTRY	19,423	18,748	19,213	19,789	20,190	20,390	73.9	+ 1.0	+ 1.0
Energy	175	167	160	166	170	130	0.5	- 23.2	- 5.7
Fuel production	31	33	35	36	39	42	0.2	+ 7.8	+ 6.3
Chemicals	2,073	2,091	2,132	2,132	2,110	2,104	7.6	- 0.3	+ 0.3
Car manufacturing	8,150	7,786	8,324	8,762	9,026	9,088	32.9	+ 0.7	+ 2.2
Electronics	242	240	240	245	235	253	0.9	+ 7.9	+ 0.9
Metalworking industry	5,894	5,601	5,581	5,613	5,767	5,924	21.5	+ 2.7	+ 0.1
Construction	1,294	1,311	1,234	1,290	1,283	1,206	4.4	- 6.0	- 1.4
Food industry	608	605	587	590	601	632	2.3	+ 5.1	+ 0.8
Other industries	957	913	922	955	961	1,011	3.7	+ 5.2	+ 1.1
LAND TRANSPORT	1,099	1,039	1,000	917	932	952	3.4	+ 2.1	- 2.8
Road transport	802	744	767	717	758	792	2.9	+ 4.5	- 0.2
Other land transport	298	295	232	200	174	160	0.6	- 8.2	- 11.7
OTHER LOGISTIC SERVICES ...	916	867	1,081	1,084	1,118	1,155	4.2	+ 3.2	+ 4.7
INDIRECT EFFECTS	33,398	32,942	33,631	34,233	34,302	34,443	-	+ 0.4	+ 0.6
MARITIME CLUSTER	3,278	3,118	3,177	3,280	3,256	3,207	-	- 1.5	- 0.4
NON-MARITIME CLUSTER	30,120	29,824	30,455	30,954	31,046	31,236	-	+ 0.6	+ 0.7
TOTAL EMPLOYMENT	60,040	58,754	60,182	61,381	61,747	62,044	-	+ 0.5	+ 0.7

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).
The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 26 EMPLOYMENT TOP 10 AT THE PORT OF GHENT IN 2014

Ranking	Company name	Sector
1	ARCELORMITTAL BELGIUM	Metalworking industry
2	VOLVO CAR BELGIUM	Car manufacturing
3	VOLVO GROUP BELGIUM	Car manufacturing
4	DSV SOLUTIONS	Cargo handling
5	DENYS	Construction
6	HONDA MOTOR EUROPE LOGISTICS	Trade
7	STORA ENSO LANGERBRUGGE	Other industries
8	TAMINCO	Chemicals
9	PLASTAL	Car manufacturing
10	TOWER AUTOMOTIVE BELGIUM	Car manufacturing

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 27 INVESTMENT AT THE PORT OF GHENT FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
MARITIME CLUSTER	147.1	93.7	67.9	77.3	87.4	54.6	13.5	- 37.5	- 18.0
Shipping agents and forwarders	2.6	9.5	4.7	2.4	2.0	2.0	0.5	+ 0.2	- 5.2
Cargo handling	99.0	48.9	39.2	57.9	62.5	35.0	8.7	- 44.0	- 18.8
Shipping companies	14.7	5.3	3.7	1.9	5.2	7.6	1.9	+ 45.6	- 12.3
Shipbuilding and repair	1.6	3.5	0.8	0.6	0.4	0.5	0.1	+ 27.7	- 22.3
Port construction and dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Fishing and fish industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port trade	0.0	0.0	0.0	0.0	0.0	0.1	0.0	n.	n.
Port authority	21.6	15.2	9.9	6.7	6.4	6.6	1.6	+ 3.3	- 21.1
Public sector	7.7	11.2	9.6	7.8	11.0	3.0	0.7	- 73.2	- 17.5
Allocation (p.m.)	11.4	10.4	9.8	6.5	8.2	11.4	-	+ 38.0	+ 0.0
NON-MARITIME CLUSTER	454.2	408.0	377.9	382.9	334.2	349.1	86.5	+ 4.4	- 5.1
TRADE	26.5	27.2	24.7	31.2	36.1	43.5	10.8	+ 20.6	+ 10.4
INDUSTRY	394.7	349.1	307.6	303.0	243.1	248.0	61.4	+ 2.0	- 8.9
Energy	136.6	110.5	35.4	35.6	27.2	5.9	1.5	- 78.4	- 46.7
Fuel production	10.8	1.3	2.8	3.0	3.0	2.2	0.5	- 26.6	- 27.5
Chemicals	39.6	45.3	69.0	69.1	56.0	68.8	17.0	+ 22.9	+ 11.7
Car manufacturing	54.7	53.9	87.5	71.3	34.1	50.6	12.5	+ 48.4	- 1.5
Electronics	1.3	1.8	1.2	1.1	0.9	1.8	0.4	+ 94.5	+ 6.4
Metalworking industry	54.9	54.3	53.1	67.9	67.8	74.4	18.4	+ 9.7	+ 6.2
Construction	13.5	15.2	28.3	18.6	12.4	10.1	2.5	- 18.7	- 5.7
Food industry	21.1	12.1	15.2	16.2	17.3	15.1	3.7	- 12.8	- 6.5
Other industries	62.0	54.7	15.2	20.1	24.5	19.2	4.7	- 21.6	- 20.9
LAND TRANSPORT	15.9	14.3	23.4	33.4	34.8	31.1	7.7	- 10.4	+ 14.4
Road transport	14.7	8.5	12.0	9.5	17.5	14.6	3.6	- 16.3	- 0.1
Other land transport.....	1.2	5.7	11.4	23.9	17.3	16.5	4.1	- 4.4	+ 70.4
OTHER LOGISTIC SERVICES	17.2	17.4	22.2	15.3	20.3	26.4	6.6	+ 30.3	+ 9.0
DIRECT INVESTMENT	601.3	501.7	445.8	460.2	421.6	403.6	100.0	- 4.3	- 7.7

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

TABLE 28 INVESTMENT TOP 10 AT THE PORT OF GHENT IN 2014

Ranking	Company name	Sector
1	ARCELORMITTAL BELGIUM	Metalworking industry
2	VOLVO CAR BELGIUM	Car manufacturing
3	TAMINCO	Chemicals
4	VOLVO GROUP BELGIUM	Car manufacturing
5	HONDA MOTOR EUROPE LOGISTICS	Trade
6	BNRC GROUP	Other land transport
7	RÜTGERS BELGIUM	Chemicals
8	STORA ENSO LANGERBRUGGE	Other industries
9	TOTAL BELGIUM	Trade
10	OILTANKING GHENT	Cargo handling

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

4 PORT OF OSTEND

4.1 Port developments⁴¹

In 2014, for the first time in many years the port of Ostend recorded no further roll-on/roll-off traffic. This traffic has been entirely absent since April 2013, following the failure of Transeuropa Ferries, which operated the roll-on/roll-off service between Ostend and Ramsgate. The total loss of roll-on/roll-off traffic is the main reason for the 21.3 % decline in total traffic, down to 1.4 million tonnes. The principal remaining traffic comprises deliveries of sand and gravel, which at 1.2 million tonnes account for 85 % of the traffic. In 2014 that traffic increased by 5 %.

In 2015 total traffic in the port of Ostend declined further to 1.3 million tonnes (-9.5 %). The main reason is the fall in deliveries of sand and gravel (-8.9 %). The loss of the roll-on/roll-off business has meant a decline in the number of passengers since 2013.

In 2015, cruise ship traffic comprised 11,277 passengers. The port's focus is shifting from the simple transshipment of cargo and tonnages to added value projects requiring a port and water.

In recent years the port of Ostend has positioned itself as an "Energy Port". The port handles the maintenance of the 3 offshore wind farms in the North Sea which are already operational (C-Power, Belwind & Northwind). It also aims to win projects for the installation of wind farms. These activities are generating additional shipping movements to and from the port.

4.2 Value added

In recent years, in view of the changed circumstances, the smallest Flemish port – Ostend – has been trying to refocus and position itself, and has been relatively successful in doing so. Over the past six years both the maritime and the non-maritime cluster have achieved growth in most branches. 2014 was another fairly good year, with the possible exception of dredging, chemicals and construction. However, the main branches – metalworking and fishing industry – again recorded positive growth of direct value added.

The change of indirect value added was very modest (-0.4 %) and is attributable primarily to the metalworking industry, construction and dredging.

Direct value added represented 0.2 % of the GDP of the Flemish region and 0.1 % of the Belgian GDP. Total value added accounted for 0.2 % of the Belgian GDP.

4.3 Employment

As in most ports, direct employment in the port of Ostend is under some pressure. Nevertheless, it should be noted that employment in the fishing industry and in cargo handling increased considerably in 2014. In the non-maritime cluster, employment in the key branch – the metalworking industry – was virtually stable (+0.4 %). There was a particularly sharp fall in the other logistic services branch (-26.2 %).

In 2014 there was little change in employment generated in the supplier sector.

Direct employment represented 0.2 % of the employment in the Flemish region and 0.1 % of Belgian employment. Total employment accounted for 0.2 % of Belgian employment.

4.4 Investment

In regard to investment, the notable growth recorded by the maritime cluster is due mainly to the port construction and dredging branch. The fishing industry posted its lowest growth figure in six years. In the non-maritime cluster, investment in the metalworking industry was down sharply (-28.4 %).

⁴¹ Source: *Jean-Pierre Merckx, Flemish Port Commission.*

CHART 9 CHANGE IN DIRECT VALUE ADDED
(in € million, current prices)

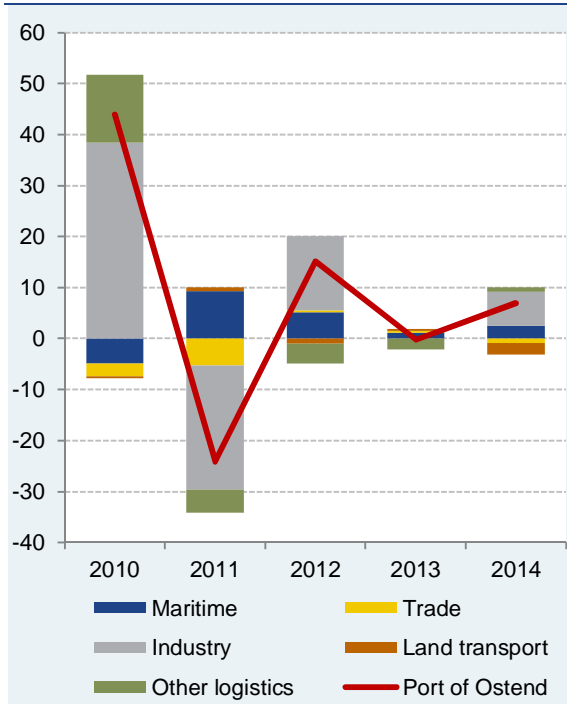
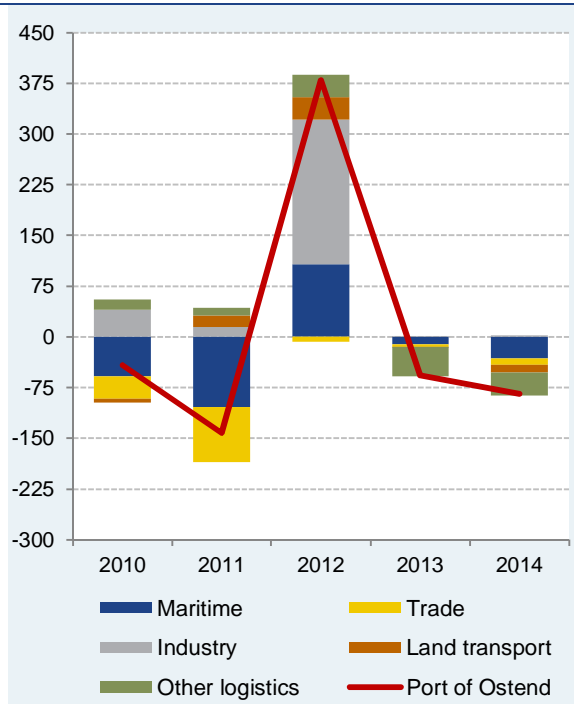


CHART 10 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 29 VALUE ADDED AT THE PORT OF OSTEND FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	450.7	494.6	470.5	485.7	485.4	492.4	100.0	+ 1.4	+ 1.8
MARITIME CLUSTER	158.6	153.6	163.0	168.2	169.3	171.8	34.9	+ 1.5	+ 1.6
Shipping agents and forwarders	4.5	4.5	4.6	7.0	4.5	2.2	0.4	- 52.3	- 13.8
Cargo handling	2.5	2.2	2.2	3.3	2.2	3.1	0.6	+ 39.3	+ 4.9
Shipping companies	0.3	0.5	0.6	0.2	0.8	1.1	0.2	+ 41.4	+ 32.0
Shipbuilding and repair	12.1	12.5	12.2	12.4	13.1	12.2	2.5	- 6.7	+ 0.1
Port construction and dredging	50.0	42.5	55.4	57.0	59.4	57.6	11.7	- 3.1	+ 2.9
Fishing and fish industry	38.2	39.7	35.8	34.3	38.7	43.3	8.8	+ 11.9	+ 2.5
Port trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port authority	3.0	3.2	2.0	3.6	2.3	2.4	0.5	+ 5.8	- 4.2
Public sector	47.9	48.4	50.1	50.3	48.2	49.9	10.1	+ 3.4	+ 0.8
Allocation (p.m.)	9.9	10.8	9.6	8.6	9.9	11.7	-	+ 18.5	+ 3.5
NON-MARITIME CLUSTER	292.1	341.0	307.5	317.5	316.2	320.6	65.1	+ 1.4	+ 1.9
TRADE	21.0	18.5	13.3	13.7	14.0	13.1	2.7	- 6.8	- 9.1
INDUSTRY.....	236.7	275.0	250.7	265.1	265.1	271.7	55.2	+ 2.5	+ 2.8
Energy	13.5	27.8	22.0	19.0	13.4	18.8	3.8	+ 40.3	+ 6.8
Fuel production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Chemicals	34.5	36.5	34.3	36.0	38.3	36.7	7.5	- 4.1	+ 1.2
Car manufacturing	0.0	2.2	2.4	2.1	2.2	0.8	0.2	- 62.2	n.
Electronics	0.0	0.5	-0.1	0.0	0.0	0.0	0.0	n.	n.
Metalworking industry	156.1	176.2	152.9	153.7	161.5	167.4	34.0	+ 3.7	+ 1.4
Construction	16.8	17.7	21.2	37.3	33.1	31.7	6.4	- 4.2	+ 13.5
Food industry	9.1	8.7	11.2	12.2	12.3	11.6	2.4	- 5.7	+ 4.9
Other industries	6.5	5.5	6.6	4.7	4.3	4.7	1.0	+ 7.9	- 6.3
LAND TRANSPORT	24.8	24.4	25.1	24.2	24.6	22.4	4.6	- 8.8	- 2.0
Road transport	24.8	24.4	25.1	23.6	24.6	22.4	4.6	- 8.8	- 2.0
Other land transport	0.0	0.0	0.0	0.6	0.0	0.0	0.0	n.	n.
OTHER LOGISTIC SERVICES ...	9.6	23.0	18.5	14.6	12.5	13.3	2.7	+ 7.1	+ 6.8
INDIRECT EFFECTS	314.9	330.4	327.7	358.5	356.5	355.2	-	- 0.4	+ 2.4
MARITIME CLUSTER	111.8	103.9	116.7	121.4	124.6	122.9	-	- 1.4	+ 1.9
NON-MARITIME CLUSTER.....	203.1	226.5	211.1	237.0	231.9	232.3	-	+ 0.1	+ 2.7
TOTAL VALUE ADDED	765.5	825.0	798.2	844.2	842.0	847.6	-	+ 0.7	+ 2.1

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 30 VALUE ADDED TOP 10 AT THE PORT OF OSTEND IN 2014

Ranking	Company name	Sector
1	DAIKIN EUROPE	Metalworking industry
2	BAGGERWERKEN DECLOEDT EN ZOON	Port construction and dredging
3	PUBLIC SECTOR	Public sector
4	PROVIRON FUNCTIONAL CHEMICALS	Chemicals
5	BIOSTOOM OOSTENDE	Energy
6	VERHELST AANNEMINGEN	Construction
7	MORUBEL	Fishing and fish industry
8	ALGEMENE ONDERNEMINGEN SOETAERT	Construction
9	BELGIAN NAVY	Public sector
10	CLEMACO CONTRACTING	Shipbuilding and repair

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 31 EMPLOYMENT AT THE PORT OF OSTEND FROM 2009 TO 2014
(FTE)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	4,902	4,860	4,718	5,098	5,041	4,957	100.0	- 1.7	+ 0.2
MARITIME CLUSTER	1,983	1,925	1,821	1,928	1,917	1,885	38.0	- 1.7	- 1.0
Shipping agents and forwarders	64	60	59	53	12	12	0.2	- 0.9	- 28.5
Cargo handling	118	89	55	58	55	66	1.3	+ 19.6	- 11.0
Shipping companies	2	1	2	1	2	3	0.1	+ 45.3	+ 10.4
Shipbuilding and repair	235	230	211	194	201	192	3.9	- 4.6	- 4.0
Port construction and dredging	259	270	276	428	426	381	7.7	- 10.4	+ 8.0
Fishing and fish industry	501	491	421	423	453	477	9.6	+ 5.3	- 1.0
Port trade	0	0	0	0	0	0	0.0	n.	n.
Port authority	44	40	43	44	42	38	0.8	- 7.9	- 2.8
Public sector	760	744	756	726	727	716	14.4	- 1.5	- 1.2
Allocation (p.m.)	140	136	116	110	128	120	-	- 6.0	- 3.1
NON-MARITIME CLUSTER	2,918	2,935	2,897	3,170	3,124	3,072	62.0	- 1.7	+ 1.0
TRADE	295	262	180	173	169	160	3.2	- 5.4	- 11.5
INDUSTRY	2,142	2,182	2,197	2,411	2,412	2,415	48.7	+ 0.1	+ 2.4
Energy	46	53	63	62	55	56	1.1	+ 2.6	+ 3.9
Fuel production	0	0	0	0	0	0	0.0	n.	n.
Chemicals	342	320	318	321	311	312	6.3	+ 0.4	- 1.8
Car manufacturing	0	27	29	29	31	33	0.7	+ 6.6	n.
Electronics	0	11	1	0	0	0	0.0	n.	n.
Metalworking industry	1,342	1,336	1,337	1,338	1,391	1,396	28.2	+ 0.4	+ 0.8
Construction	231	248	259	476	439	413	8.3	- 5.9	+ 12.3
Food industry	118	124	133	135	130	142	2.9	+ 9.3	+ 3.8
Other industries	62	63	57	50	56	63	1.3	+ 11.0	+ 0.2
LAND TRANSPORT	369	363	380	413	413	401	8.1	- 2.8	+ 1.7
Road transport	369	363	380	404	413	401	8.1	- 2.8	+ 1.7
Other land transport.....	0	0	0	9	0	0	0.0	n.	n.
OTHER LOGISTIC SERVICES	113	128	140	173	130	96	1.9	- 26.2	- 3.1
INDIRECT EFFECTS	4,061	4,061	3,851	4,406	4,292	4,275	-	- 0.4	+ 1.0
MARITIME CLUSTER	1,259	1,239	1,096	1,293	1,268	1,222	-	- 3.6	- 0.6
NON-MARITIME CLUSTER	2,802	2,822	2,754	3,112	3,024	3,053	-	+ 1.0	+ 1.7
TOTAL EMPLOYMENT	8,963	8,921	8,569	9,504	9,333	9,232	-	- 1.1	+ 0.6

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 32 EMPLOYMENT TOP 10 AT THE PORT OF OSTEND IN 2014

Ranking	Company name	Sector
1	DAIKIN EUROPE	Metalworking industry
2	PUBLIC SECTOR	Public sector
3	BAGGERWERKEN DECLOEDT EN ZOON	Port construction and dredging
4	VERHELST AANNEMINGEN	Construction
5	PROVIRON FUNCTIONAL CHEMICALS	Chemicals
6	BELGIAN NAVY	Public sector
7	WIM BOSMAN LOGISTIC SERVICES	Road transport
8	ALGEMENE ONDERNEMINGEN SOETAERT	Construction
9	CLEMACO CONTRACTING	Shipbuilding and repair
10	MORUBEL	Fishing and fish industry

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 33 INVESTMENT AT THE PORT OF OSTEND FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
MARITIME CLUSTER	79.0	48.4	21.7	26.3	25.6	71.1	59.8	+ 177.9	- 2.1
Shipping agents and forwarders	1.2	0.2	0.2	0.4	1.9	0.2	0.2	- 87.1	- 27.5
Cargo handling	0.8	0.1	4.5	1.7	1.8	1.8	1.5	+ 2.5	+ 18.3
Shipping companies	0.0	0.2	0.5	0.0	0.3	0.5	0.4	+ 96.8	n.
Shipbuilding and repair	3.0	1.5	2.4	1.2	1.9	1.2	1.0	- 36.3	- 16.7
Port construction and dredging	28.6	24.6	2.0	3.2	0.2	46.4	39.0	+ 21217.0	+ 10.1
Fishing and fish industry	6.8	8.9	6.0	7.9	6.3	5.5	4.6	- 12.8	- 4.1
Port trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port authority	1.6	0.9	2.0	2.0	1.5	2.9	2.4	+ 85.5	+ 12.9
Public sector	37.0	12.1	4.2	9.9	11.7	12.6	10.6	+ 8.2	- 19.3
Allocation (p.m.)	5.3	5.1	3.4	4.6	3.6	4.1	-	+ 12.4	- 5.2
NON-MARITIME CLUSTER	46.6	57.5	68.6	69.2	50.6	47.8	40.2	- 5.5	+ 0.5
TRADE	3.2	2.6	4.6	5.2	4.0	7.0	5.9	+ 74.5	+ 16.8
INDUSTRY	32.3	45.0	45.9	40.8	34.6	35.3	29.6	+ 1.9	+ 1.8
Energy	8.9	21.4	13.2	2.1	0.2	0.2	0.2	+ 46.1	- 51.6
Fuel production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Chemicals	1.3	3.5	5.6	9.2	6.6	5.7	4.8	- 13.2	+ 33.7
Car manufacturing	0.0	0.3	0.3	0.2	0.2	0.1	0.1	- 70.1	n.
Electronics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Metalworking industry	15.7	6.0	14.4	16.4	15.6	11.2	9.4	- 28.4	- 6.5
Construction	5.0	7.5	6.7	11.3	9.4	13.6	11.4	+ 43.6	+ 22.2
Food industry	0.7	6.2	1.2	0.9	1.4	3.7	3.1	+ 163.1	+ 39.9
Other industries	0.7	0.1	4.6	0.6	1.2	0.8	0.6	- 34.3	+ 1.2
LAND TRANSPORT	2.5	4.1	7.0	6.5	5.6	1.7	1.5	- 68.5	- 6.9
Road transport	2.5	2.9	6.6	6.5	5.4	1.7	1.5	- 68.1	- 7.1
Other land transport	0.0	1.2	0.4	0.0	0.1	0.0	0.0	- 86.2	n.
OTHER LOGISTIC SERVICES ...	8.6	5.8	11.1	16.8	6.4	3.8	3.2	- 40.5	- 15.1
DIRECT INVESTMENT	125.7	105.9	90.3	95.5	76.2	118.9	100.0	+ 56.1	- 1.1

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

TABLE 34 INVESTMENT TOP 10 AT THE PORT OF OSTEND IN 2014

Ranking	Company name	Sector
1	BAGGERWERKEN DECLOEDT EN ZOON	Port construction and dredging
2	PUBLIC SECTOR	Public sector
3	DAIKIN EUROPE	Metalworking industry
4	TOPASFALT	Construction
5	GREEN POINT SUPPLIES	Trade
6	PROVIRON FUNCTIONAL CHEMICALS	Chemicals
7	FIDES PETFOOD	Food industry
8	VERHELST AANNEMINGEN	Construction
9	VERHELST MACHINES	Metalworking industry
10	OSTEND PORT AUTHORITY	Port authority

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

5 PORT OF ZEEBRUGGE

5.1 Port developments⁴²

In 2014, the traffic handled by the port of Zeebrugge totalled 42.5 million tonnes (-0.7 % against 2013). Containers, the main type of traffic in the port of Zeebrugge, recorded a further small rise in 2014 to reach 20.5 million tonnes. Roll-on/roll-off traffic, the second most important type, was up by 4.0 % in 2014. Containers and roll-on/roll-off together account for 79 % of the total traffic. The third important category in Zeebrugge is liquid bulk, with a large proportion of liquid natural gas (the LNG terminal in the outer port).

There was a steep decline in container traffic in 2015: down from 20.5 to 15.6 million tonnes (-23.8 %). That is due entirely to changes in container alliances. Following the formation of the O3 alliance (CMA CGM – CSCL - UASC), the main alliance services were transferred to Zeebrugge. However, the formation of the M2 alliance led to the departure of Maersk and MSC. CMA CGM took away the feeder network, and in mid-2015 the FAL 3 service was terminated in order to tackle the excess capacity. In 2015, roll-on/roll-off traffic increased from 13.0 to 13.5 million tonnes (+3.1 %). The main traffic growth concerned the United Kingdom (+6.2 %) and Scandinavia (+11 %). Within the roll-on/roll-off sector, the handling of new cars is generating good results: 2,427,950 cars were handled in Zeebrugge in 2015 (+10.3 % against 2014), making Zeebrugge the world's largest car shipping port. Liquid bulk transshipment increased by 2.9 % in 2015 to 6.8 million tonnes. LNG was up by 9 %. Fluxys LNG ordered the construction of a fifth storage tank at the LNG terminal in Zeebrugge. The new storage tank will have a capacity of 180,000 m³ of liquid natural gas, much bigger than the existing tanks (3 with a capacity of 80,000 m³ and 1 of 140.000 m³). Dry bulk accounts for a relatively small share of traffic in Zeebrugge: 1.3 million tonnes in 2015 (+6.3 %). Conventional general cargo was down by 1.6 % to 1.2 million tonnes.

Altogether, 7,888 ships called the port of Zeebrugge (+2.2 %). The average ship size was 24,553 BT (compared to 26,073 BT in 2014).

In 2015, 111 cruise ships called the port of Zeebrugge, with a total of 471,084 cruise passengers on board. In 2014 the number of cruise ships was 107.

Another notable feature of 2015 was the call of the very largest container vessels, such as the CSCL Globe (19,100 TEU) owned by China Shipping Container Lines, the CMA CGM Kerguelen and CMA CGM Georg Forster (17,772 TEU) and the UASC Barzan and UASC Al Muraykh (18,800 TEU) owned by United Arab Shipping Container Lines.

Consolidation of the container traffic at the APM Terminal in Zeebrugge was announced in 2015 and is scheduled to take place in 2016. Two CMA CGM services (FAL1 and FAL8) previously handled by the CHZ terminal in Zeebrugge are transferring to the Albert II dock. In addition to the existing services of APM Terminal Zeebrugge, all container services will be retained and thus concentrated on a single terminal.

5.2 Value added

In 2014, the overall growth of direct value added in Zeebrugge was remarkably weak at -4.5 %, but that figure masks numerous opposing trends in the various branches. The marked decline is due almost entirely to the relocation of one industrial company in the electronics branch, whereas the other important industrial branches in the non-maritime cluster did well in 2014. A number of branches in the maritime cluster also recorded strong growth figures: examples include the cargo handlers (+6.4 %), fishing industry (+2.9 %), shipping companies (+2.7 %) and the port authority (+12.9 %). Conversely, the port construction and dredging branch did less well in 2014 (-24.4 %).

Due to the departure of a company from the electronics branch, indirect value added decreased overall.

⁴² Source: Jean-Pierre Merckx, *Flemish Port Commission*.

Direct value added represented 0.4 % of the GDP of the Flemish region and 0.2 % of the Belgian GDP. Total value added accounted for 0.4 % of the Belgian GDP.

5.3 Employment

In regard to direct employment, viewed overall, Zeebrugge has also experienced the general downward trend of the past six years. Nevertheless, both clusters featured some exceptions, such as the cargo handlers, port construction and dredging, the energy sector and chemicals. The growth figures for 2014, the latest available year, vary widely.

The virtual stabilisation of indirect employment in the port of Zeebrugge is due almost exclusively to the aforesaid developments in the electronics branch and road transport. The indirect employment created by the shipping companies was predominantly positive.

Direct employment represented 0.4 % of the employment in the Flemish region and 0.2 % of Belgian employment. Total employment accounted for 0.5 % of Belgian employment.

5.4 Investment

Being project-linked, investment is highly volatile. However, over the past six years it is clear that the main branches in the port of Zeebrugge, such as cargo handling and the energy sector, have had a strong propensity to invest, although there was a sharp fall in investment spending in the latter sector in 2014 (-28 %).

CHART 11 CHANGE IN DIRECT VALUE ADDED
(in € million, current prices)

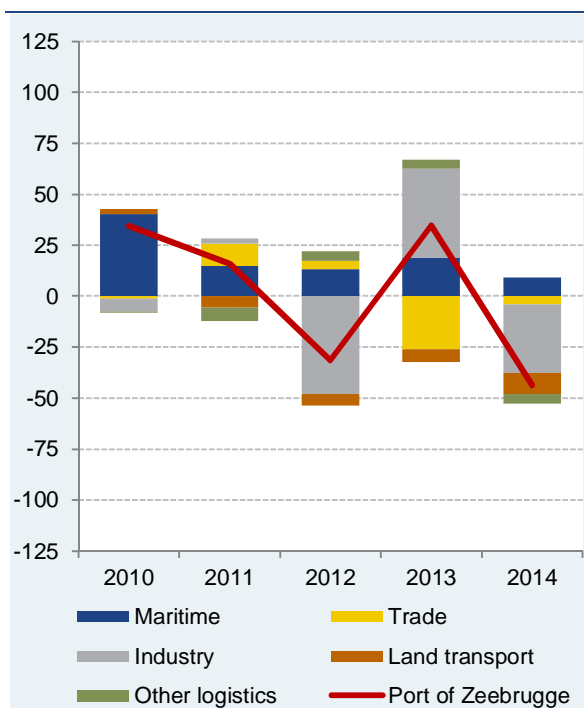
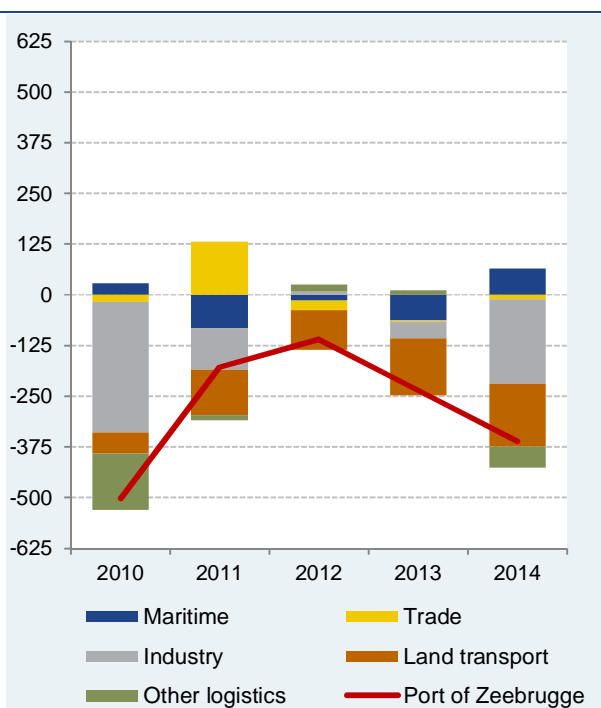


CHART 12 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 35 VALUE ADDED AT THE PORT OF ZEEBRUGGE FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	925.8	960.3	976.2	944.7	979.4	935.8	100.0	- 4.5	+ 0.2
MARITIME CLUSTER	450.6	490.8	505.6	518.8	537.8	546.9	58.4	+ 1.7	+ 3.9
Shipping agents and forwarders	62.8	48.0	49.8	58.6	69.8	68.4	7.3	- 2.0	+ 1.7
Cargo handling	174.3	191.8	191.9	193.9	194.7	207.2	22.1	+ 6.4	+ 3.5
Shipping companies	12.0	33.1	45.3	45.6	50.7	52.0	5.6	+ 2.7	+ 34.1
Shipbuilding and repair	8.0	8.8	9.3	10.3	9.8	9.0	1.0	- 9.1	+ 2.3
Port construction and dredging	13.3	17.6	15.3	20.0	24.6	18.6	2.0	- 24.4	+ 6.9
Fishing and fish industry	43.1	48.5	49.3	47.8	45.0	46.3	4.9	+ 2.9	+ 1.5
Port trade	0.7	0.6	0.6	0.6	0.7	0.8	0.1	+ 17.8	+ 3.7
Port authority	31.8	33.5	35.2	34.1	32.5	36.7	3.9	+ 12.9	+ 2.9
Public sector	104.7	108.7	108.9	107.8	109.9	107.8	11.5	- 1.9	+ 0.6
Allocation (p.m.)	9.3	14.6	18.9	19.0	19.6	20.0	-	+ 2.2	+ 16.5
NON-MARITIME CLUSTER	475.2	469.5	470.6	425.8	441.7	388.9	41.6	- 12.0	- 3.9
TRADE	86.5	85.3	96.1	100.3	74.2	70.2	7.5	- 5.5	- 4.1
INDUSTRY	286.9	280.5	283.1	235.0	278.6	245.1	26.2	- 12.0	- 3.1
Energy	92.0	97.6	107.3	95.0	92.5	98.3	10.5	+ 6.2	+ 1.3
Fuel production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Chemicals	25.9	27.8	28.0	25.4	30.7	36.1	3.9	+ 17.5	+ 6.9
Car manufacturing	0.5	0.6	0.6	0.9	1.1	1.3	0.1	+ 24.6	+ 20.0
Electronics	70.2	52.6	55.1	23.8	54.7	3.2	0.3	- 94.1	- 45.9
Metalworking industry	7.0	9.0	9.1	8.8	7.4	8.2	0.9	+ 10.9	+ 3.3
Construction	35.3	34.6	26.1	22.1	24.1	23.3	2.5	- 3.2	- 7.9
Food industry	20.2	24.5	24.3	27.7	32.4	35.5	3.8	+ 9.5	+ 11.9
Other industries	35.8	33.8	32.4	31.4	35.8	39.2	4.2	+ 9.6	+ 1.8
LAND TRANSPORT	79.3	81.7	76.2	70.7	64.4	53.9	5.8	- 16.3	- 7.4
Road transport	65.0	68.1	65.2	61.2	57.3	47.2	5.0	- 17.6	- 6.2
Other land transport.....	14.2	13.6	11.0	9.5	7.2	6.7	0.7	- 5.8	- 13.9
OTHER LOGISTIC SERVICES	22.6	22.1	15.3	19.8	24.4	19.7	2.1	- 19.3	- 2.7
INDIRECT EFFECTS	689.3	787.0	777.6	764.0	788.3	767.4	-	- 2.6	+ 2.2
MARITIME CLUSTER	315.7	397.4	423.4	430.1	444.0	453.8	-	+ 2.2	+ 7.5
NON-MARITIME CLUSTER	373.6	389.7	354.1	333.9	344.3	313.6	-	- 8.9	- 3.4
TOTAL VALUE ADDED	1,615.1	1,747.4	1,753.8	1,708.6	1,767.7	1,703.2	-	- 3.7	+ 1.1

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 36 VALUE ADDED TOP 10 AT THE PORT OF ZEEBRUGGE IN 2014

Ranking	Company name	Sector
1	BELGIAN NAVY	Public sector
2	FLUXYS LNG	Energy
3	ZEEBRUGGE PORT AUTHORITY	Port authority
4	COBELFRET FERRIES	Shipping companies
5	C.RO PORTS ZEEBRUGGE	Cargo handling
6	INTERNATIONAL CAR OPERATORS	Cargo handling
7	FLUXYS BELGIUM	Energy
8	WALLENUS WILHELMSSEN LOGISTICS ZEEBRUGGE	Cargo handling
9	PUBLIC SECTOR	Public sector
10	P.B.I. FRUIT JUICE COMPANY	Food industry

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 37 EMPLOYMENT AT THE PORT OF ZEEBRUGGE FROM 2009 TO 2014
(FTE)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	10,752	10,250	10,072	9,962	9,726	9,365	100.0	- 3.7	- 2.7
MARITIME CLUSTER	6,222	6,251	6,169	6,155	6,092	6,156	65.7	+ 1.1	- 0.2
Shipping agents and forwarders	621	612	605	633	652	652	7.0	+ 0.0	+ 1.0
Cargo handling	2,571	2,633	2,593	2,663	2,640	2,699	28.8	+ 2.2	+ 1.0
Shipping companies	329	283	244	203	189	207	2.2	+ 10.0	- 8.8
Shipbuilding and repair	138	140	139	143	138	123	1.3	- 10.4	- 2.3
Port construction and dredging	171	173	177	176	168	213	2.3	+ 26.7	+ 4.4
Fishing and fish industry	575	581	604	601	563	551	5.9	- 2.1	- 0.8
Port trade	9	9	9	10	9	11	0.1	+ 17.4	+ 3.3
Port authority	138	133	134	132	134	135	1.4	+ 0.4	- 0.4
Public sector	1,670	1,688	1,664	1,595	1,600	1,566	16.7	- 2.1	- 1.3
Allocation (p.m.)	248	374	380	396	377	367	-	- 2.7	+ 8.1
NON-MARITIME CLUSTER	4,529	3,999	3,903	3,807	3,635	3,209	34.3	- 11.7	- 6.7
TRADE	568	550	681	656	653	642	6.9	- 1.7	+ 2.5
INDUSTRY	2,318	1,996	1,893	1,902	1,862	1,654	17.7	- 11.2	- 6.5
Energy	114	127	127	129	125	135	1.4	+ 7.7	+ 3.4
Fuel production	0	0	0	0	0	0	0.0	n.	n.
Chemicals	245	224	231	237	246	263	2.8	+ 6.9	+ 1.5
Car manufacturing	13	11	11	12	11	13	0.1	+ 11.5	- 0.3
Electronics	524	324	358	354	309	45	0.5	- 85.3	- 38.7
Metalworking industry	137	145	146	147	137	142	1.5	+ 3.6	+ 0.6
Construction	463	445	367	341	351	328	3.5	- 6.3	- 6.6
Food industry	305	285	260	273	293	298	3.2	+ 1.5	- 0.5
Other industries	517	435	393	410	391	431	4.6	+ 10.3	- 3.6
LAND TRANSPORT	1,315	1,264	1,152	1,055	913	758	8.1	- 17.0	- 10.4
Road transport	1,082	1,038	974	906	806	652	7.0	- 19.1	- 9.6
Other land transport	232	225	177	149	108	107	1.1	- 0.8	- 14.4
OTHER LOGISTIC SERVICES ...	329	190	177	193	206	154	1.6	- 25.0	- 14.1
INDIRECT EFFECTS	11,897	11,803	10,707	10,499	10,274	10,192	-	- 0.8	- 3.0
MARITIME CLUSTER	7,161	7,030	6,503	6,158	5,989	6,210	-	+ 3.7	- 2.8
NON-MARITIME CLUSTER	4,736	4,772	4,204	4,341	4,285	3,981	-	- 7.1	- 3.4
TOTAL EMPLOYMENT	22,649	22,053	20,779	20,461	20,000	19,557	-	- 2.2	- 2.9

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 38 EMPLOYMENT TOP 10 AT THE PORT OF ZEEBRUGGE IN 2014

Ranking	Company name	Sector
1	BELGIAN NAVY	Public sector
2	WALLENUS WILHELMSSEN LOGISTICS ZEEBRUGGE	Cargo handling
3	C.RO PORTS ZEEBRUGGE	Cargo handling
4	INTERNATIONAL CAR OPERATORS	Cargo handling
5	PUBLIC SECTOR	Public sector
6	MARINE HARVEST PIETERS	Fishing and fish industry
7	P.B.I. FRUIT JUICE COMPANY	Food industry
8	ARTES DEPRET	Port construction and dredging
9	I.V.B.O.	Other industries
10	CONTAINER HANDLING ZEEBRUGGE	Cargo handling

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 39 INVESTMENT AT THE PORT OF ZEEBRUGGE FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
MARITIME CLUSTER	115.5	227.7	166.7	135.7	103.3	140.4	63.8	+ 36.0	+ 4.0
Shipping agents and forwarders	9.2	19.6	11.9	7.3	4.6	15.0	6.8	+ 228.3	+ 10.2
Cargo handling	41.0	114.5	62.9	54.8	40.2	74.7	33.9	+ 86.0	+ 12.7
Shipping companies	2.4	10.5	2.7	2.2	3.4	4.1	1.9	+ 20.3	+ 11.4
Shipbuilding and repair	3.9	1.1	1.9	1.4	1.0	1.6	0.7	+ 58.5	- 15.8
Port construction and dredging	1.3	1.7	1.1	1.1	1.6	1.3	0.6	- 22.3	- 0.0
Fishing and fish industry	9.2	13.1	10.4	14.8	7.6	8.3	3.8	+ 9.2	- 2.2
Port trade	0.1	0.1	0.2	0.0	0.2	0.0	0.0	- 76.6	- 11.8
Port authority	27.3	34.2	33.6	34.0	28.3	22.0	10.0	- 22.4	- 4.3
Public sector	21.0	32.9	42.0	20.0	16.4	13.4	6.1	- 18.1	- 8.6
Allocation (p.m.)	23.3	45.5	48.5	38.0	33.7	48.6	-	+ 44.3	+ 15.9
NON-MARITIME CLUSTER	79.2	121.9	127.2	118.9	116.4	79.6	36.2	- 31.6	+ 0.1
TRADE	7.9	8.8	11.1	12.1	10.0	7.0	3.2	- 29.7	- 2.2
INDUSTRY	51.3	72.5	68.2	71.0	69.0	49.6	22.5	- 28.1	- 0.7
Energy	14.8	38.1	27.1	24.4	44.0	31.7	14.4	- 28.0	+ 16.5
Fuel production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Chemicals	2.0	2.7	4.5	3.3	3.1	4.3	2.0	+ 40.3	+ 16.6
Car manufacturing	0.0	0.0	0.0	0.1	0.3	0.0	0.0	- 94.9	n.
Electronics	5.8	7.3	5.9	4.7	5.5	0.5	0.2	- 90.8	- 38.5
Metalworking industry	1.1	0.9	0.5	0.6	0.3	0.6	0.3	+ 69.2	- 11.9
Construction	6.9	6.9	6.4	5.3	3.3	2.5	1.1	- 23.7	- 18.4
Food industry	14.9	6.1	6.4	15.2	4.7	5.9	2.7	+ 26.2	- 16.8
Other industries	5.8	10.6	17.5	17.5	7.8	4.0	1.8	- 48.4	- 7.1
LAND TRANSPORT	13.0	27.5	41.2	32.4	28.8	17.8	8.1	- 38.1	+ 6.5
Road transport	11.8	17.1	16.2	7.3	12.3	7.4	3.4	- 39.8	- 8.8
Other land transport.....	1.2	10.4	25.0	25.2	16.5	10.4	4.7	- 36.8	+ 53.5
OTHER LOGISTIC SERVICES	7.0	13.2	6.7	3.3	8.6	5.2	2.4	- 39.7	- 5.7
DIRECT INVESTMENT	194.7	349.6	293.9	254.6	219.7	220.1	100.0	+ 0.2	+ 2.5

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

TABLE 40 INVESTMENT TOP 10 AT THE PORT OF ZEEBRUGGE IN 2014

Ranking	Company name	Sector
1	FLUXYS LNG	Energy
2	ZEEBRUGGE PORT AUTHORITY	Port authority
3	PUBLIC SECTOR	Public sector
4	VERBRUGGE TERMINALS ZEEBRUGGE	Cargo handling
5	BNRC GROUP	Other land transport
6	2XL	Shipping agents and forwarders
7	C.RO PORTS ZEEBRUGGE	Cargo handling
8	FLUXYS BELGIUM	Energy
9	CONTAINER HANDLING ZEEBRUGGE	Cargo handling
10	P.B.I. FRUIT JUICE COMPANY	Food industry

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

6 LIÈGE PORT COMPLEX

6.1 Port developments⁴³

The Liège port complex comprises private and public quays. The traffic figures in table 3 of this study present the picture for both. In 2014 there was an increase of around 0.5 %, representing over 15 million tonnes. The traffic figures for the public quays, operated by the Autonomous Port of Liège, indicate an increase of 2 % in 2014 to 13.5 million tonnes. However, the growth figures need to be interpreted with caution because the private quays are gradually managed by the Autonomous Port of Liège.

Substantial increases were recorded in the goods categories coal, recycling materials and containers. Timber, chemicals, coke and petroleum products were down sharply. Factors include the closure of the coke oven in Seraing, the mild winter and and closure of the Les Awirs pellet-fired power stations.

6.2 Value added

The favourable trend in traffic was not reflected in value added growth. In both the maritime and the non-maritime cluster, value added fell by around 5.8 %. The port of Liège is heavily dependent on industry for the creation of value added. Various industrial restructurings and problems in some electricity generating stations therefore had a significant negative impact on growth.

The restructurings in the steel industry also had a major adverse effect on indirect value added, which declined sharply in 2014 (-7.8 %). However, that fall was due solely to the metal industry; with the exception of chemicals and construction, most branches generated less indirect value added.

Direct value added represented 1.2 % of the GDP of the Walloon region and 0.3 % of the Belgian GDP. Total value added accounted for 0.6 % of the Belgian GDP.

6.3 Employment

The port of Liège has for some years experienced quite a sharp downward trend in direct employment, mainly as a result of major restructuring in the steel industry. In the other branches, the picture is variable. In energy – the most important branch – employment is expanding strongly, and the trend over a longer period has been very favourable. The same applies to the fuel production and chemicals branches, where employment is also increasing or at least remaining stable.

The said restructuring in the steel industry was the main reason for the steep 8.2 % decline in indirect employment in 2014.

Direct employment represented 0.8 % of the employment in the Walloon region and 0.2 % of Belgian employment. Total employment accounted for 0.5 % of Belgian employment.

6.4 Investment

The port authority is embarking on ambitious projects in an effort to maintain and stimulate business activity in the port. Projects such as Trilogiport encourage investment in a number of branches, but have not yet succeeded in reversing the downward trend in total investment, seen over a longer period.

⁴³ Source: www.portdeliege.be, *Press release 4 March 2015* from the Liège Port Authority.

CHART 13 CHANGE IN DIRECT VALUE ADDED
(in € million, current prices)

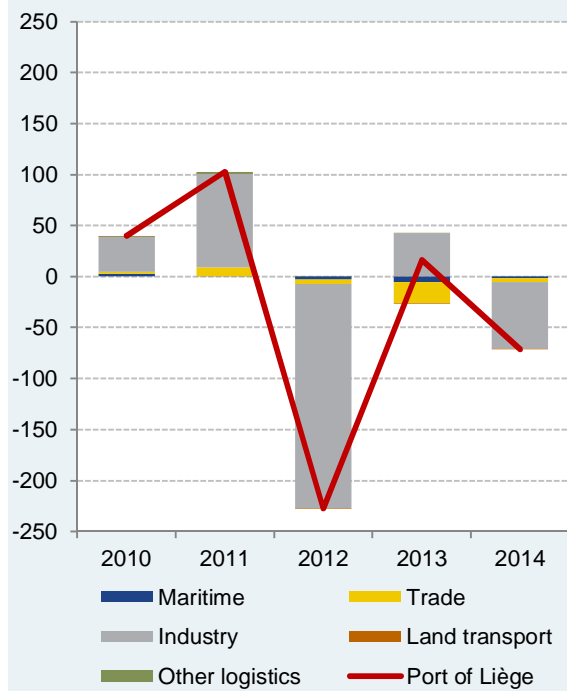
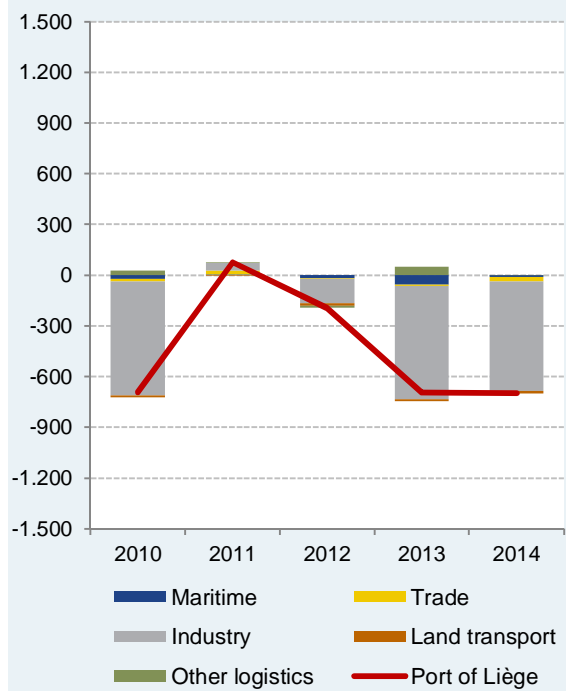


CHART 14 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 41 VALUE ADDED IN THE LIÈGE PORT COMPLEX FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	1,271.1	1,311.0	1,413.9	1,186.1	1,202.2	1,130.9	100.0	- 5.9	- 2.3
MARITIME CLUSTER	30.5	33.2	33.2	30.2	25.0	23.5	2.1	- 5.8	- 5.1
Shipping agents and forwarders	8.8	11.4	11.5	8.7	4.0	3.6	0.3	- 8.0	- 16.3
Cargo handling	15.4	15.1	14.9	14.4	14.5	13.1	1.2	- 9.4	- 3.2
Shipping companies	3.4	3.9	3.7	4.0	3.2	3.6	0.3	+ 10.3	+ 0.8
Shipbuilding and repair	0.4	0.4	0.5	0.5	0.6	0.6	0.0	- 3.1	+ 9.0
Port construction and dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Fishing and fish industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port authority	2.5	2.4	2.5	2.6	2.7	2.6	0.2	- 2.9	+ 1.3
Public sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
<i>Allocation (p.m.)</i>									
NON-MARITIME CLUSTER	1,240.6	1,277.8	1,380.7	1,155.9	1,177.2	1,107.4	97.9	- 5.9	- 2.2
TRADE	82.8	84.9	93.6	89.2	68.6	65.1	5.8	- 5.2	- 4.7
INDUSTRY	1,140.5	1,175.0	1,267.1	1,047.4	1,089.5	1,023.7	90.5	- 6.0	- 2.1
Energy	409.8	409.3	496.7	388.0	382.6	324.7	28.7	- 15.1	- 4.5
Fuel production	-10.7	-5.3	42.4	34.6	59.7	39.2	3.5	- 34.3	n.
Chemicals	62.1	126.4	119.6	97.7	116.9	139.8	12.4	+ 19.6	+ 17.6
Car manufacturing	0.4	0.5	0.4	0.4	0.4	0.4	0.0	+ 0.8	- 0.9
Electronics	2.7	3.4	5.5	4.6	3.3	4.2	0.4	+ 26.6	+ 9.0
Metalworking industry	444.8	412.3	383.8	338.5	333.5	285.6	25.3	- 14.4	- 8.5
Construction	143.4	133.2	128.8	103.0	104.2	141.6	12.5	+ 35.9	- 0.3
Food industry	25.1	22.8	20.5	23.1	29.4	26.9	2.4	- 8.3	+ 1.5
Other industries	62.8	72.4	69.6	57.5	59.6	61.2	5.4	+ 2.8	- 0.5
LAND TRANSPORT	8.3	8.5	8.5	7.4	6.7	6.1	0.5	- 9.0	- 6.1
Road transport	7.2	7.5	7.5	6.5	5.7	5.0	0.4	- 11.4	- 7.0
Other land transport	1.1	1.0	1.0	0.9	1.0	1.1	0.1	+ 5.0	- 0.9
OTHER LOGISTIC SERVICES ...	9.0	9.5	11.6	11.9	12.4	12.5	1.1	+ 0.5	+ 6.9
INDIRECT EFFECTS	1,303.2	1,313.4	1,441.9	1,204.4	1,286.8	1,186.0	-	- 7.8	- 1.9
MARITIME CLUSTER	24.3	26.0	24.9	22.6	19.2	17.4	-	- 9.3	- 6.4
NON-MARITIME CLUSTER	1,278.9	1,287.4	1,416.9	1,181.8	1,267.6	1,168.6	-	- 7.8	- 1.8
TOTAL VALUE ADDED	2,574.3	2,624.4	2,855.8	2,390.5	2,489.0	2,316.9	-	- 6.9	- 2.1

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).
The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 42 VALUE ADDED TOP 10 AT THE LIÈGE PORT COMPLEX IN 2014

Ranking	Company name	Sector
1	ELECTRABEL	Energy
2	ARCELORMITTAL BELGIUM	Metalworking industry
3	PRAYON	Chemicals
4	CIMENTERIES CBR CEMENTBEDRIJVEN	Construction
5	COCKERILL MAINTENANCE & INGENIERIE	Metalworking industry
6	EDF LUMINUS	Energy
7	BIOWANZE	Fuel production
8	CARRIERES ET FOURS A CHAUX DUMONT-WAUTIER	Construction
9	RAFFINERIE TIRLEMONTAISE - TIENSE SUIKERRAFFINADERERIJ	Food industry
10	IMERYS MINERAUX BELGIQUE	Chemicals

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 43 EMPLOYMENT IN THE LIÈGE PORT COMPLEX FROM 2009 TO 2014
(FTE)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	10,366	9,673	9,750	9,555	8,862	8,165	100.0	- 7.9	- 4.7
MARITIME CLUSTER	396	374	379	361	306	297	3.6	- 3.2	- 5.6
Shipping agents and forwarders	105	103	94	94	56	47	0.6	- 17.0	- 14.9
Cargo handling	182	174	184	166	153	154	1.9	+ 0.2	- 3.3
Shipping companies	63	52	55	54	52	52	0.6	+ 1.4	- 3.7
Shipbuilding and repair	9	10	10	9	9	9	0.1	+ 3.2	- 0.3
Port construction and dredging	0	0	0	0	0	0	0.0	n.	n.
Fishing and fish industry	0	0	0	0	0	0	0.0	n.	n.
Port trade	0	0	0	0	0	0	0.0	n.	n.
Port authority	37	36	36	38	36	35	0.4	- 3.9	- 1.3
Public sector	0	0	0	0	0	0	0.0	n.	n.
<i>Allocation (p.m.)</i>									
NON-MARITIME CLUSTER	9,970	9,299	9,371	9,194	8,556	7,868	96.4	- 8.0	- 4.6
TRADE	397	382	404	402	396	370	4.5	- 6.5	- 1.4
INDUSTRY	9,297	8,623	8,672	8,525	7,855	7,206	88.3	- 8.3	- 5.0
Energy	1,185	1,174	1,192	1,215	1,246	1,353	16.6	+ 8.6	+ 2.7
Fuel production	92	128	124	122	122	125	1.5	+ 2.5	+ 6.4
Chemicals	1,072	1,078	1,085	1,075	1,004	1,035	12.7	+ 3.1	- 0.7
Car manufacturing	10	12	11	10	9	9	0.1	+ 1.1	- 2.0
Electronics	62	56	69	73	68	71	0.9	+ 4.0	+ 2.8
Metalworking industry	5,167	4,457	4,462	4,327	3,718	2,983	36.5	- 19.8	- 10.4
Construction	903	920	899	867	850	791	9.7	- 7.0	- 2.6
Food industry	90	83	94	98	99	111	1.4	+ 11.3	+ 4.2
Other industries	716	716	737	739	737	728	8.9	- 1.3	+ 0.3
LAND TRANSPORT	170	158	156	144	130	116	1.4	- 10.8	- 7.3
Road transport	152	141	140	130	115	100	1.2	- 13.6	- 8.1
Other land transport.....	18	17	16	14	15	17	0.2	+ 10.6	- 1.5
OTHER LOGISTIC SERVICES	107	136	138	123	175	176	2.2	+ 0.4	+ 10.5
INDIRECT EFFECTS	14,723	13,627	13,965	13,762	12,825	11,773	-	- 8.2	- 4.4
MARITIME CLUSTER	428	393	395	375	314	299	-	- 4.7	- 6.9
NON-MARITIME CLUSTER	14,295	13,235	13,570	13,386	12,512	11,474	-	- 8.3	- 4.3
TOTAL EMPLOYMENT	25,089	23,300	23,715	23,317	21,688	19,937	-	- 8.1	- 4.5

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 44 EMPLOYMENT TOP 10 AT THE LIÈGE PORT COMPLEX IN 2014

Ranking	Company name	Sector
1	ARCELORMITTAL BELGIUM	Metalworking industry
2	ELECTRABEL	Energy
3	PRAYON	Chemicals
4	COCKERILL MAINTENANCE & INGENIERIE	Metalworking industry
5	INTRADEL	Other industries
6	CIMENTERIES CBR CEMENTBEDRIJVEN	Construction
7	CARRIERES ET FOURS A CHAUX DUMONT-WAUTIER	Construction
8	EDF LUMINUS	Energy
9	SEGAL	Metalworking industry
10	SHANKS LIEGE - LUXEMBOURG	Other industries

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 45 INVESTMENT IN THE LIÈGE PORT COMPLEX FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
MARITIME CLUSTER	3.8	3.6	5.0	4.0	4.0	5.2	2.7	+ 29.8	+ 6.3
Shipping agents and forwarders	0.9	0.7	1.0	1.0	0.2	2.1	1.1	+ 896.7	+ 18.8
Cargo handling	2.6	2.2	3.0	2.4	3.4	2.6	1.3	- 21.9	- 0.2
Shipping companies	0.2	0.3	0.7	0.5	0.4	0.2	0.1	- 58.1	- 2.3
Shipbuilding and repair	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port construction and dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Fishing and fish industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port authority	0.1	0.3	0.2	0.0	0.0	0.3	0.1	n.	+ 26.4
Public sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
<i>Allocation (p.m.)</i>									
NON-MARITIME CLUSTER	530.8	183.0	198.2	234.1	209.7	190.5	97.3	- 9.2	- 18.5
TRADE	6.2	4.9	7.0	4.6	2.8	4.5	2.3	+ 57.6	- 6.4
INDUSTRY.....	522.1	174.4	186.4	220.8	202.8	182.5	93.2	- 10.0	- 19.0
Energy	99.4	58.8	82.0	82.3	88.9	79.8	40.8	- 10.2	- 4.3
Fuel production	51.8	16.8	10.5	7.6	5.9	7.2	3.7	+ 22.3	- 32.7
Chemicals	41.2	36.4	20.2	26.6	21.5	18.1	9.3	- 15.6	- 15.2
Car manufacturing	0.1	0.1	0.0	0.0	0.1	0.0	0.0	- 71.3	- 28.5
Electronics	0.3	0.4	0.7	2.4	0.5	0.6	0.3	+ 36.0	+ 14.8
Metalworking industry	35.7	26.6	40.6	68.3	40.1	32.1	16.4	- 20.0	- 2.1
Construction	13.9	23.8	20.4	17.1	29.6	28.3	14.4	- 4.6	+ 15.2
Food industry	1.6	1.1	1.6	1.7	1.9	1.9	0.9	- 1.2	+ 3.6
Other industries	278.1	10.3	10.5	14.8	14.5	14.5	7.4	- 0.1	- 44.6
LAND TRANSPORT	1.7	1.6	2.6	1.0	2.1	1.2	0.6	- 43.5	- 6.8
Road transport	0.9	1.0	1.8	0.5	1.2	0.5	0.3	- 58.6	- 11.4
Other land transport	0.8	0.6	0.8	0.5	0.9	0.7	0.4	- 24.3	- 2.6
OTHER LOGISTIC SERVICES ...	0.7	2.1	2.3	7.7	1.9	2.4	1.2	+ 25.2	+ 26.6
DIRECT INVESTMENT	534.6	186.5	203.2	238.1	213.7	195.7	100.0	- 8.4	- 18.2

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

TABLE 46 INVESTMENT TOP 10 AT THE LIÈGE PORT COMPLEX IN 2014

Ranking	Company name	Sector
1	ELECTRABEL	Energy
2	ARCELORMITTAL BELGIUM	Metalworking industry
3	PRAYON	Chemicals
4	CARRIERES ET FOURS A CHAUX DUMONT-WAUTIER	Construction
5	EDF LUMINUS	Energy
6	BIOWANZE	Fuel production
7	INTRADEL	Other industries
8	SEGAL	Metalworking industry
9	COCKERILL MAINTENANCE & INGENIERIE	Metalworking industry
10	CIMENTERIES CBR CEMENTBEDRIJVEN	Construction

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

7 PORT OF BRUSSELS

7.1 Port developments⁴⁴

After two successive years of decline, 2014 saw positive growth of 3 % in the port's own traffic; transshipment totalled around 4.4 million tonnes. Conversely, transit traffic – i.e. goods which pass through the port but are not loaded or unloaded – was down by 2 % and came to just under 2.3 million tonnes. Growth is attributable largely to the building materials category, and more particularly to the substantial rise in soil removal, which has quadrupled since 2013. The projects concerning the new shopping centre Docks Brussels and Tour&Taxis are the reason for that. The petroleum products category recorded a decline, but that was likely due to the very mild weather conditions in 2014. In preceding years, the successive changes in the container terminal operator resulted in a downward trend in the number of containers. While a further 4 % fall was recorded in the 2014 financial year, that is due to circumstances unconnected with the operator, more specifically the disruption to shipping between Antwerp and Brussels in 2014 caused by major maintenance work on the Zemst lock and a defect in the Vilvoorde bridge.

7.2 Value added

The direct value added of the port of Brussels was down by 2.2 % in 2014 against the previous year. That decline was due largely to the chemical industry and the port authority. In regard to the latter, that fall was due to an accounting operation in 2013 when an exceptional increase in value added was recorded via the provisions. Those provisions were used for dredging in 2014. The stated decline in the chemical industry is due primarily to the halving of turnover at Peptisyntha. That firm made a loss in 2014 owing to the excess capacity on the peptides market. The strong expansion in trade was due to a substantial increase in profit at Solvay Chemicals International⁴⁵ and to the arrival of two new firms.

The almost 3,4 % fall in indirect value added is attributable largely to developments in the other industries sector, in contrast to the previous year when the fall was due mainly to the construction industry.

Direct value added represented 0.6 % of the GDP of the Brussels Capital Region and 0.1 % of the Belgian GDP. Total value added accounted for 0.2 % of the Belgian GDP.

7.3 Employment

In 2014 direct employment in the port of Brussels recorded a further decline, though it was smaller than in the previous year (-2.2 %). In the maritime cluster, cargo handlers alone recorded expansion. In the non-maritime cluster, there were particularly marked falls in construction, the food industry and trade. In the last case, the decline may be due to one firm concentrating its activities on a branch outside the port area.

The 3.8 % decline in indirect employment is due mainly to developments in the other services branch.

Direct employment represented 0.7 % of the employment in the Brussels Capital Region and 0.1 % of Belgian employment. Total employment accounted for 0.2 % of Belgian employment.

7.4 Investment

As already repeatedly mentioned, year-on-year investment figures are highly volatile because they relate to specific, major projects. However, a longer term view indicates that, in the maritime cluster, only cargo handlers are exhibiting positive growth. In the non-maritime cluster, the pattern is more varied.

⁴⁴ Sources: www.portdebruxelles.be, *Annual Report 2014* of the Brussels Port Authority and press release 30 January 2015.

⁴⁵ Firms in the Solvay group come under various industrial branches (see previous port studies).

CHART 15 CHANGE IN DIRECT VALUE ADDED
(in € million, current prices)

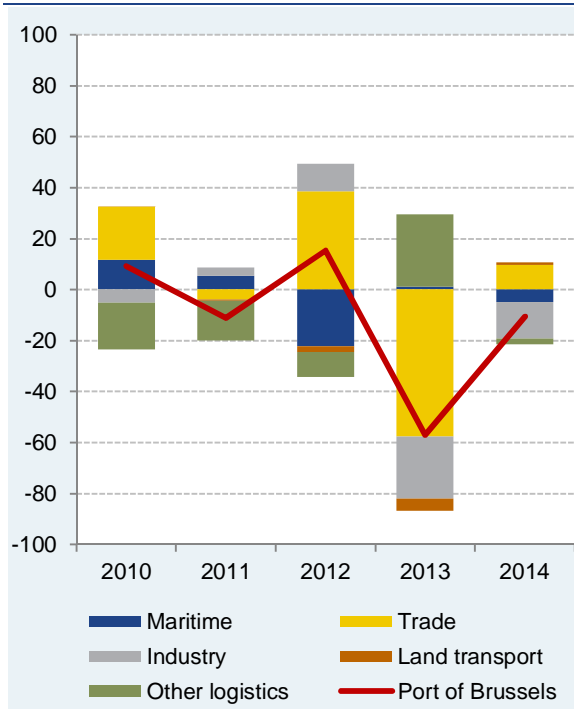
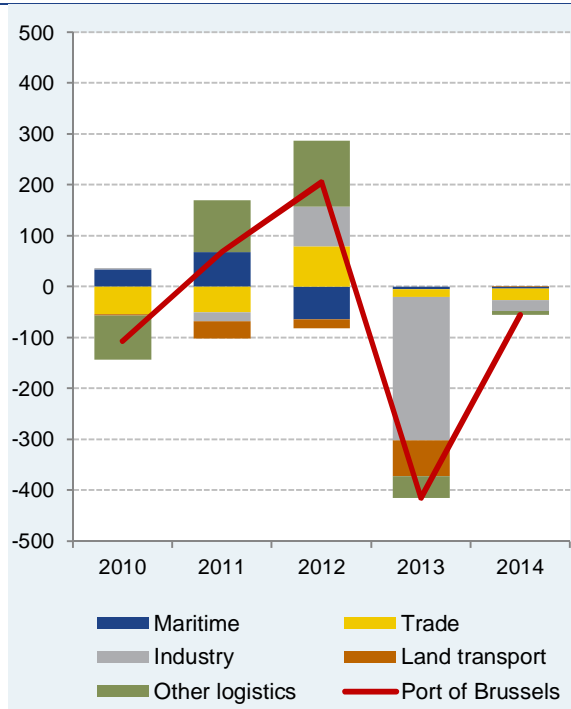


CHART 16 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

TABLE 47 VALUE ADDED AT THE PORT OF BRUSSELS FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	527.8	537.0	526.0	541.4	484.4	473.8	100.0	- 2.2	- 2.1
MARITIME CLUSTER	29.9	41.7	47.3	25.0	26.2	21.3	4.5	- 18.8	- 6.6
Shipping agents and forwarders	21.5	32.5	36.1	17.4	15.2	15.6	3.3	+ 2.4	- 6.2
Cargo handling	5.5	6.2	7.3	6.8	6.1	6.4	1.3	+ 4.1	+ 3.2
Shipping companies	0.4	1.0	1.3	1.5	1.5	1.0	0.2	- 33.2	+ 23.9
Shipbuilding and repair	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port construction and dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Fishing and fish industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port trade	0.7	0.6	0.5	0.0	0.0	0.0	0.0	n.	- 59.7
Port authority	1.8	1.4	1.9	-0.9	3.1	-1.9	-0.4	- 160.0	n.
Public sector	0.2	0.2	0.2	0.2	0.2	0.2	0.0	+ 0.2	+ 0.3
<i>Allocation (p.m.)</i>									
NON-MARITIME CLUSTER	497.9	495.3	478.7	516.4	458.2	452.5	95.5	- 1.2	- 1.9
TRADE	156.3	177.0	173.1	211.7	154.1	163.9	34.6	+ 6.4	+ 1.0
INDUSTRY	116.7	111.6	114.9	125.8	101.3	87.1	18.4	- 14.1	- 5.7
Energy	1.1	1.5	1.3	1.5	1.1	0.7	0.1	- 37.4	- 10.1
Fuel production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Chemicals	10.5	7.1	5.6	5.8	4.8	0.9	0.2	- 80.7	- 38.3
Car manufacturing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Electronics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- 19.7	n.
Metalworking industry	4.0	4.7	5.8	6.3	7.3	8.1	1.7	+ 10.5	+ 15.3
Construction	33.1	30.8	33.6	38.3	19.0	19.3	4.1	+ 1.6	- 10.2
Food industry	21.5	15.2	16.9	14.8	13.8	14.8	3.1	+ 7.0	- 7.2
Other industries	46.5	52.2	51.6	59.0	55.2	43.2	9.1	- 21.8	- 1.5
LAND TRANSPORT	24.3	24.4	23.9	21.8	17.2	18.1	3.8	+ 5.2	- 5.7
Road transport	24.2	24.4	23.7	21.6	17.1	18.0	3.8	+ 5.6	- 5.7
Other land transport.....	0.1	0.1	0.2	0.2	0.1	0.1	0.0	- 52.5	- 13.3
OTHER LOGISTIC SERVICES	200.6	182.3	166.9	157.2	185.6	183.4	38.7	- 1.2	- 1.8
INDIRECT EFFECTS	395.2	398.3	396.7	408.0	354.1	342.2	-	- 3.4	- 2.8
MARITIME CLUSTER	30.8	40.9	45.7	31.3	32.6	28.3	-	- 13.1	- 1.7
NON-MARITIME CLUSTER	364.4	357.4	351.1	376.7	321.6	313.9	-	- 2.4	- 2.9
TOTAL VALUE ADDED	923.0	935.3	922.7	949.4	838.5	816.0	-	- 2.7	- 2.4

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 48 VALUE ADDED TOP 10 AT THE PORT OF BRUSSELS IN 2014

Ranking	Company name	Sector
1	SOLVAY	Other logistic services
2	INEOS SERVICES BELGIUM	Other logistic services
3	SOLVAY CHEMICALS INTERNATIONAL	Trade
4	INOVYN BELGIUM	Trade
5	PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH	Other logistic services
6	BRUXELLES ENERGIE - BRUSSEL ENERGIE	Other industries
7	CERES	Food industry
8	AQUIRIS	Other industries
9	SCANIA BELGIUM	Trade
10	TOTAL BELGIUM	Trade

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies

TABLE 49 EMPLOYMENT AT THE PORT OF BRUSSELS FROM 2009 TO 2014
(FTE)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
DIRECT EFFECTS	4,334	4,227	4,297	4,502	4,087	4,032	100.0	- 1.3	- 1.4
MARITIME CLUSTER	395	429	498	434	428	425	10.6	- 0.7	+ 1.5
Shipping agents and forwarders	176	203	258	191	194	187	4.6	- 3.6	+ 1.2
Cargo handling	79	85	94	96	93	99	2.5	+ 6.2	+ 4.6
Shipping companies	1	4	5	16	15	14	0.4	- 4.0	+ 74.7
Shipbuilding and repair	0	0	0	0	0	0	0.0	n.	n.
Port construction and dredging	0	0	0	0	0	0	0.0	n.	n.
Fishing and fish industry	0	0	0	0	0	0	0.0	n.	n.
Port trade	5	5	6	0	0	0	0.0	n.	- 100.0
Port authority	130	130	132	127	123	122	3.0	- 1.1	- 1.3
Public sector	3	3	3	3	3	3	0.1	+ 0.0	+ 0.0
<i>Allocation (p.m.)</i>									
NON-MARITIME CLUSTER	3,939	3,798	3,799	4,068	3,658	3,606	89.4	- 1.4	- 1.7
TRADE	1,346	1,293	1,242	1,321	1,306	1,283	31.8	- 1.8	- 0.9
INDUSTRY	1,127	1,129	1,113	1,191	910	889	22.0	- 2.3	- 4.6
Energy	11	15	15	22	20	20	0.5	+ 0.0	+ 13.0
Fuel production	0	0	0	0	0	0	0.0	n.	n.
Chemicals	72	41	40	45	49	48	1.2	- 3.6	- 8.0
Car manufacturing	0	0	0	0	0	0	0.0	n.	n.
Electronics	0	0	0	0	0	0	0.0	n.	n.
Metalworking industry	63	60	71	87	86	89	2.2	+ 2.8	+ 7.1
Construction	551	515	525	568	281	264	6.5	- 6.0	- 13.7
Food industry	151	153	148	148	150	140	3.5	- 6.9	- 1.6
Other industries	279	346	313	322	323	328	8.1	+ 1.7	+ 3.3
LAND TRANSPORT	407	404	370	353	282	282	7.0	+ 0.0	- 7.1
Road transport	405	403	367	350	280	281	7.0	+ 0.4	- 7.1
Other land transport	2	1	3	3	2	1	0.0	- 50.0	- 13.8
OTHER LOGISTIC SERVICES ...	1,059	972	1,074	1,203	1,160	1,153	28.6	- 0.7	+ 1.7
INDIRECT EFFECTS	4,086	4,054	4,014	4,231	3,851	3,706	-	- 3.8	- 1.9
MARITIME CLUSTER	474	500	570	607	589	581	-	- 1.2	+ 4.2
NON-MARITIME CLUSTER	3,612	3,554	3,444	3,623	3,262	3,124	-	- 4.2	- 2.9
TOTAL EMPLOYMENT	8,420	8,281	8,310	8,732	7,938	7,738	-	- 2.5	- 1.7

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office, and the Belgian IOTs).

The data necessary to estimate the indirect effects are published by the NAI with a low frequency and after a certain time lag. The indirect effects for the period 2009-2014 are based on IOT 2010 and SUT 2010, 2011 and 2012. The calculated indirect effects are approximations and should be interpreted with caution.

TABLE 50 EMPLOYMENT TOP 10 AT THE PORT OF BRUSSELS IN 2014

Ranking	Company name	Sector
1	SOLVAY	Other logistic services
2	SCANIA BELGIUM	Trade
3	CERES	Food industry
4	BRUSSELS PORT AUTHORITY	Port authority
5	INOVYN BELGIUM	Trade
6	SITA WASTE SERVICES	Other industries
7	INEOS SERVICES BELGIUM	Other logistic services
8	PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH	Other logistic services
9	BRUXELLES ENERGIE	Other industries
10	ZIEGLER	Road transport

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics.

The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies.

TABLE 51 INVESTMENT AT THE PORT OF BRUSSELS FROM 2009 TO 2014
(in € million - current prices)

Sectors	2009	2010	2011	2012	2013	2014	Share in 2014 (in p.c.)	Change from 2013 to 2014 (in p.c.)	Annual average change from 2009 to 2014 (in p.c.)
MARITIME CLUSTER	17.8	19.1	13.9	13.4	24.4	7.6	14.4	- 68.6	- 15.5
Shipping agents and forwarders	4.4	9.7	7.7	7.0	13.1	0.6	1.2	- 95.3	- 32.5
Cargo handling	0.1	0.5	0.9	1.1	0.5	1.6	3.0	+ 200.0	+ 76.2
Shipping companies	0.0	0.0	0.0	0.8	0.0	0.0	0.0	n.	n.
Shipbuilding and repair	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port construction and dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Fishing and fish industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Port authority	13.2	8.9	5.3	4.6	10.7	5.4	10.2	- 49.6	- 16.4
Public sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
<i>Allocation (p.m.)</i>									
NON-MARITIME CLUSTER	49.1	47.6	38.4	38.4	44.1	45.3	85.6	+ 2.8	- 1.6
TRADE	22.3	16.4	9.6	9.7	14.3	12.6	23.8	- 11.9	- 10.7
INDUSTRY	10.5	19.9	8.5	9.6	7.0	11.6	22.0	+ 66.7	+ 2.1
Energy	0.1	0.1	0.0	0.1	0.0	0.1	0.2	n.	+ 13.0
Fuel production	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Chemicals	0.8	0.4	0.5	0.2	0.0	1.7	3.2	n.	+ 17.0
Car manufacturing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Electronics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.	n.
Metalworking industry	0.7	1.0	1.1	1.9	0.7	1.4	2.7	+ 95.1	+ 15.6
Construction	2.9	3.0	3.2	4.1	3.5	3.9	7.3	+ 11.5	+ 6.3
Food industry	4.2	10.8	2.4	1.2	1.8	1.3	2.5	- 27.1	- 20.8
Other industries	1.9	4.7	1.2	2.1	0.9	3.3	6.1	+ 245.5	+ 11.0
LAND TRANSPORT	3.2	1.6	4.6	2.2	2.4	3.5	6.7	+ 47.4	+ 1.7
Road transport	3.1	1.5	4.4	2.1	2.3	3.5	6.6	+ 53.6	+ 2.0
Other land transport.....	0.1	0.0	0.1	0.1	0.1	0.0	0.1	- 65.8	- 14.8
OTHER LOGISTIC SERVICES	13.0	9.7	15.8	16.9	20.4	17.5	33.1	- 14.0	+ 6.1
DIRECT INVESTMENT	66.8	66.7	52.3	51.9	68.4	53.0	100.0	- 22.6	- 4.6

Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office and on surveys).

TABLE 52 INVESTMENT TOP 10 AT THE PORT OF BRUSSELS IN 2014

Ranking	Company name	Sector
1	SOLVAY	Other logistic services
2	BRUSSELS PORT AUTHORITY	Port authority
3	HAVELANGE	Trade
4	DIMO	Other industries
5	GROND- EN AFBRAAKWERKEN G. EN A. DE MEUTER	Construction
6	RUSSEL	Other logistic services
7	SCANIA BELGIUM	Trade
8	INOYIN ELECTROLYSIS SERVICES	Chemicals
9	CLEANING COMPANY	Road transport
10	J.F. TRANS	Road transport

Source: NBB. The estimates for the multi-regional firms are based on surveys, annual reports and allocation formulas based on regional statistics. The top ten tables are based on information from annual accounts, surveys, annual reports and allocation formulas based on regional statistics. No individual figures are published as accurate data could not be obtained for all companies

8 BRIEF SUMMARY

The traffic growth recorded in 2013 continued strongly in 2014 (+2.7 %). Those increases are due solely to developments in the port of Antwerp. In all other ports, traffic declined, though in Ghent and Zeebrugge the decrease was modest overall.

Despite the declining traffic in the port of Ghent, that port together with the port of Antwerp represented the driving force behind the growth of value added (respectively +4.9 % and 1.4 %). In the port of Zeebrugge, the maritime cluster also saw an increase in value added, but in the overall figures that was negated by the departure of one industrial company from the electronics branch. In the port of Ostend, growth figures were generally positive except for trade. In recent years the ports of Liège and Brussels have suffered significant falls. Restructuring in certain industrial sectors (including the steel industry) is a factor here. In regard to indirect value added, the downward trend which had begun in 2010 was reversed (+2.2 %).

In contrast to value added, direct employment in the Belgian ports declined by 1.5 %, maintaining the downward trend of recent years. Only the ports of Ghent and Ostend have managed to stabilise or improve their employment level since 2009. The steepest falls were recorded in Zeebrugge and Liège. In Zeebrugge that was due mainly to the departure of an industrial company from the electronics branch. In the maritime cluster, employment actually expanded. In Liège, as in the case of value added, employment pursued a predominantly downward trend in both clusters owing to the metalworking industry. Total indirect employment has displayed a downward trend since 2011. Although that fall can be attributed to developments in various branches, it is the metalworking industry that has had a particularly adverse impact on indirect employment.

Taking all ports together, investment was up by more than 25 %, but that increase is particularly due to the evolution in the port of Antwerp. Owing to the highly volatile nature of investment expenditure, the figures need to be interpreted with caution.

CHART 17 CHANGE IN DIRECT VALUE ADDED
(in € million, by volume)

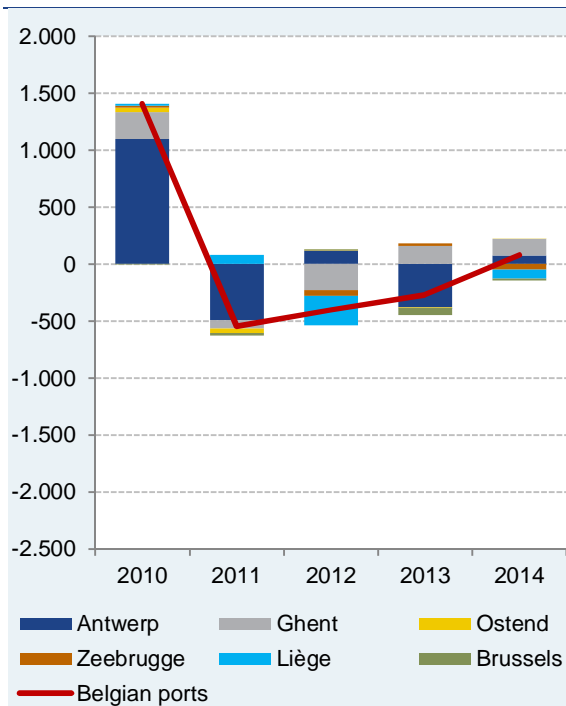
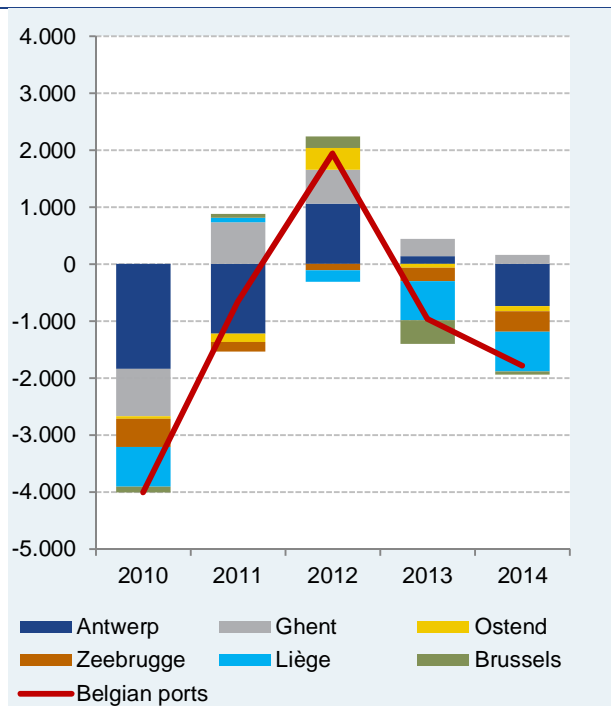


CHART 18 CHANGE IN DIRECT EMPLOYMENT
(FTE)



Source: NBB (calculations based on the Belgian accounts filed with the Central Balance Sheet Office).

LIST OF ABBREVIATIONS

BNRC	Belgian National Railway Company
EU	European Union
FTE	Full-time equivalent
GDP	Gross domestic product
IOT	Input-Output Table
NAI	National Accounts Institute
NBB	National Bank of Belgium
SMEs	Small and medium-sized enterprises
SUT	Supply and Use Table
TEU	Twenty-foot Equivalent Unit

CONVENTIONAL SIGNS

n.	the datum does not exist, is not available or is meaningless
p.c.	per cent
p.m.	pro memoria

ANNEX 1: LIST OF NACE-BEL BRANCHES ⁴⁷

TABLE 53 LIST OF NACE-BEL BRANCHES (NACE-BEL 2008)

SUT	NACE-BEL	Cluster	Sector	AN	GN	OO	ZB	LG	BR	Definition
03A	03110	MA	VI	*	*	*	*	*	*	Marine fishing
08A	08121	IN	AI	*		*	*			Quarrying of gravel
08A	08122	IN	AI	*	*					Quarrying of sand
08A	08910	IN	AI		*					Mining of chemical and fertiliser minerals
08A	08990	IN	AI						*	Other mining and quarrying n.e.c.
10A	10130	IN	VO		*					Production of meat and poultry meat products
10B	10200	MA	VI			*	*			Processing and preserving of fish, crustaceans and molluscs
10C	10320	IN	VO				*			Manufacture of fruit and vegetable juice
10D	10410	IN	VO	*	*					Manufacture of oils and fats
10E	10510	IN	VO	*	*	*	*	*	*	Operation of dairies and cheese making
10F	10610	IN	VO					*	*	Manufacture of grain mill products
10H	10810	IN	VO					*		Manufacture of sugar
10H	10820	IN	VO		*	*	*		*	Manufacture of cocoa, chocolate and sugar confectionery
10I	10890	IN	VO	*	*					Manufacture of other food products n.e.c.
10J	10910	IN	VO		*	*	*			Manufacture of prepared feeds for farm animals
11A	11010	IN	VO		*					Distilling, rectifying and blending of spirits
11A	11060	IN	VO	*						Manufacture of malt
13A	13100	IN	AI			*	*			Preparation and spinning of textile fibres
13B	13929	IN	AI	*		*				Manufacture of other textiles, except wearing apparel
16A	16100	IN	AI	*	*	*				Sawmilling and planing of wood
16A	16230	IN	AI	*	*			*	*	Manufacture of other builders' carpentry and joinery
16A	16240	IN	AI	*	*	*	*	*	*	Manufacture of wooden containers
17A	17120	IN	AI		*					Manufacture of paper and paperboard
17A	17210	IN	AI		*			*		Manufacture of corrugated paper and paperboard and of containers of paper and paperboard
17A	17290	IN	AI	*						Manufacture of other articles of paper and paperboard
18A	18120	IN	AI	*	*		*		*	Other printing
18A	18130	IN	AI	*						Pre-press and pre-media services
19A	19200	IN	PE	*	*	*	*	*	*	Manufacture of refined petroleum products
20A	20110	IN	CH	*	*				*	Manufacture of industrial gases
20A	20120	IN	CH	*	*					Manufacture of dyes and pigments
20B	20130	IN	CH	*	*	*		*	*	Manufacture of other inorganic basic chemicals
20A	20140	IN	CH	*	*	*	*	*	*	Manufacture of other organic basic chemicals
20A	20150	IN	CH	*	*		*	*		Manufacture of fertilisers and nitrogen compounds
20A	20160	IN	CH	*	*					Manufacture of plastics in primary forms
20A	20170	IN	CH	*						Manufacture of synthetic rubber in primary forms
20C	20200	IN	CH	*		*		*		Manufacture of pesticides and other agrochemical products
20D	20300	IN	CH	*	*		*	*		Manufacture of paints, varnishes and similar coatings, printing ink and mastics
20F	20520	IN	CH		*					Manufacture of glues
20F	20590	IN	CH	*	*			*		Manufacture of other chemical products n.e.c.
21A	21201	IN	CH			*				Manufacture of medicines
22A	22110	IN	CH	*						Manufacture of rubber tyres and tubes; retreating and rebuilding of rubber tyres
22A	22190	IN	CH		*		*			Manufacture of other rubber products
22B	22210	IN	CH	*	*			*	*	Manufacture of plastic plates, sheets, tubes and profiles
22B	22220	IN	CH	*	*			*		Manufacture of plastic packing goods
22B	22290	IN	CH	*	*	*		*		Manufacture of other plastic products
23A	23110	IN	CS				*			Manufacture of flat glass
23A	23120	IN	CS		*		*		*	Shaping and processing of flat glass
23B	23322	IN	CS					*		Manufacture of tiles and construction products, in baked clay
23C	23510	IN	CS	*	*	*	*	*	*	Manufacture of cement
23C	23520	IN	CS					*		Manufacture of lime and plaster
23D	23610	IN	CS		*		*	*		Manufacture of concrete products for construction purposes
23D	23620	IN	CS	*						Manufacture of plaster products for construction purposes
23D	23630	IN	CS	*	*	*	*	*	*	Manufacture of ready-mixed concrete

⁴⁷ The nomenclature in this list is in accordance with the NACE-BEL revision having taken place in 2008 (Rev.2).

TABLE 53 (continued) LIST OF NACE-BEL BRANCHES (NACE-BEL 2008)

SUT	NACE-BEL	Cluster	Sector	AN	GN	OO	ZB	LG	BR	Definition
23D	23640	IN	CS	*						Manufacture of mortars
23D	23700	IN	CS		*	*				Cutting, shaping and finishing of stone
23D	23990	IN	CS	*	*	*			*	Manufacture of other non-metallic mineral products n.e.c.
24A	24100	IN	ME	*	*	*	*	*	*	Manufacture of basic iron and steel and of ferro-alloys
24A	24200	IN	ME						*	Manufacture of tubes, pipes, hollow profiles and related fittings, of steel
24B	24310	IN	ME						*	Cold drawing of bars
24B	24510	IN	ME		*	*				Casting of iron
25A	25110	IN	ME	*	*		*	*		Manufacture of metal structures and parts of structure
25A	25120	IN	ME	*	*			*	*	Manufacture of doors and windows of metal
25A	25290	IN	ME	*	*	*		*	*	Manufacture of other tanks, reservoirs and containers of metal
25A	25300	IN	ME	*	*				*	Manufacture of steam generators, except central heating hot water boilers
25A	25501	IN	ME				*	*	*	Forging of metal
25B	25610	IN	ME	*	*		*	*	*	Treatment and coating of metals
25B	25620	IN	ME	*	*	*	*	*	*	Machining
25C	25930	IN	ME				*			Manufacture of wire products, chain and springs
25C	25940	IN	ME		*	*				Manufacture of fasteners and screw machine products
25C	25999	IN	ME		*		*	*	*	Manufacture of other fabricated metal articles
26A	26110	IN	MP	*				*		Manufacture of electronic valves and tubes and other electronic components
26B	26400	IN	MP	*	*		*			Manufacture of consumer electronics
26C	26510	IN	MP			*	*			Manufacture of instruments and appliances for measuring, testing and navigation
27A	27110	IN	MP	*	*	*	*	*	*	Manufacture of electric motors, generators and transformers
27A	27120	IN	MP		*		*			Manufacture of electricity distribution and control apparatus
27B	27900	IN	MP	*				*		Manufacture of other electrical equipment
28A	28110	IN	ME		*					Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
28A	28120	IN	ME	*					*	Manufacture of fluid power equipment
28A	28220	IN	ME	*						Manufacture of lifting and handling equipment
28A	28250	IN	ME			*	*	*	*	Manufacture of non-domestic cooling and ventilation equipment
28A	28295	IN	ME		*					Manufacture of filter equipment
28A	28299	IN	ME				*			Manufacture of other general-purpose machinery n.e.c.
29A	29100	IN	AU	*	*	*	*	*	*	Manufacture of motor vehicles
29B	29201	IN	AU	*	*					Manufacture of bodies (coachwork) for motor vehicles
29B	29202	IN	AU	*			*			Manufacture of trailers and semi-trailers and caravans
29B	29320	IN	AU	*	*			*		Manufacture of other parts and accessories for motor vehicles
30A	30110	MA	SB	*	*				*	Building of ships and floating structures
30B	30200	IN	AI						*	Manufacture of railway locomotives and rolling stock
32B	32990	IN	AI				*			Other manufacturing n.e.c.
33A	33110	IN	ME	*	*		*			Repair of fabricated metal products
33A	33120	IN	ME	*	*	*	*		*	Repair of machinery
33A	33150	MA	SB	*	*	*	*	*	*	Repair and maintenance of ships and boats
33A	33170	IN	ME	*			*			Repair and maintenance of other transport equipment
35A	35110	IN	EN	*	*	*	*	*	*	Production of electricity
35B	35220	IN	EN				*			Distribution of gaseous fuels through mains
37A	37000	IN	AI	*	*			*	*	Sewerage
38A	38110	IN	AI	*	*		*	*	*	Collection of non-hazardous waste
38A	38219	IN	AI	*	*	*	*	*	*	Other processing and disposal of non-hazardous waste
38B	38310	IN	AI			*	*	*	*	Dismantling of wrecks
38B	38321	IN	AI		*			*		Sorting of non-hazardous waste for recycling
38B	38322	IN	AI	*	*	*	*	*	*	Recovery of waste metal
38B	38323	IN	AI	*		*	*	*	*	Recovery of inert waste
39A	39000	IN	AI	*	*					Remediation activities and other waste management services
41A	41102	IN	CS	*	*	*	*	*	*	Non-residential development projects
41A	41203	IN	CS	*	*	*	*	*	*	Construction of other non-residential buildings
42A	42110	IN	CS	*	*	*	*	*	*	Construction of roads and motorways
42A	42130	IN	CS			*				Construction of bridges and tunnels
42A	42211	IN	CS		*					Construction of water and gas supply networks
42A	42219	IN	CS	*						Civil engineering works relating to fluids n.e.c.
42A	42220	IN	CS	*	*					Construction of utility projects for electricity and telecommunications

TABLE 53 (continued) LIST OF NACE-BEL BRANCHES (NACE-BEL 2008)

SUT	NACE-BEL	Cluster	Sector	AN	GN	OO	ZB	LG	BR	Definition
42A	42911	MA	DR	*		*	*			Dredging
42A	42919	MA	DR	*	*	*	*	*	*	Construction of water projects, except dredging
43A	43110	IN	CS	*	*	*	*	*	*	Demolition
43A	43120	IN	CS	*	*	*		*	*	Site preparation
43B	43211	IN	CS	*	*	*	*	*	*	Electrical engineering installations in buildings
43B	43221	IN	CS	*		*	*		*	Plumbing
43B	43222	IN	CS	*	*	*		*	*	Heat and air conditioning installation
43B	43291	IN	CS	*						Insulation work activities
43C	43320	IN	CS	*	*	*	*		*	Joinery installation
43C	43341	IN	CS	*	*	*	*	*	*	Painting of buildings
43D	43910	IN	CS	*	*	*	*	*	*	Roofing activities
43D	43999	IN	CS	*	*	*	*		*	Other specialised construction activities
45A	45111	CO	CO	*	*	*	*	*	*	Wholesale of cars and light motor vehicles
45A	45191	CO	CO	*	*		*		*	Wholesale of other motor vehicles (> 3,5 ton)
45A	45193	CO	CO			*				Retail sale of other motor vehicles (> 3,5 ton)
45A	45202	CO	CO	*			*	*	*	Maintenance and general repair of motor vehicles
45A	45205	CO	CO	*			*	*	*	Tyre specialists
45A	45310	CO	CO	*	*	*	*	*	*	Wholesale trade and intermediary of motor vehicle parts and accessories
46A	46120	CO	CO	*	*				*	Agents involved in the sale of fuels, ores, metals and industrial chemicals
46A	46140	CO	CO	*				*	*	Agents involved in the sale of machinery, industrial equipment, ships and aircraft
46A	46170	CO	CO	*	*			*		Agents involved in the sale of food, beverages and tobacco
46A	46180	CO	CO	*	*			*	*	Agents specialised in the sale of other particular products
46A	46190	CO	CO	*	*		*	*	*	Agents involved in the sale of a variety of goods
46A	46216	CO	CO	*	*		*	*	*	Wholesale of animal feeds and agricultural raw materials
46A	46319	CO	CO	*			*		*	Wholesale of fruit and vegetables, except potatoes
46A	46332	CO	CO	*	*					Wholesale of edible oils and fats
46A	46349	CO	CO	*	*	*	*		*	Wholesale of alcoholic and other beverages, general assortment
46A	46381	CO	CO	*	*	*	*		*	Wholesale of fish, crustaceans and molluscs
46A	46389	CO	CO	*	*	*	*		*	Wholesale of other food n.e.c.
46A	46391	CO	CO	*			*		*	Non-specialised wholesale of frozen food
46A	46392	CO	CO	*		*	*		*	Non-specialised wholesale of non-frozen food, beverages and tobacco
46A	46412	CO	CO	*	*		*		*	Wholesale trade in household textiles and bedding
46A	46423	CO	CO	*	*		*	*	*	Wholesale trade in clothing other than work clothes and underwear
46A	46431	CO	CO	*	*		*	*	*	Wholesale trade in domestic electrical appliances and audio and video equipment
46A	46442	CO	CO	*	*	*	*	*	*	Wholesale of cleaning materials
46A	46460	CO	CO	*			*	*	*	Wholesale of pharmaceutical goods
46A	46499	CO	CO	*	*	*	*	*	*	Wholesale of other household goods n.e.c.
46A	46510	CO	CO	*	*		*		*	Wholesale of computers, computer peripheral equipment and software
46A	46620	CO	CO	*		*	*	*	*	Wholesale of machine tools
46A	46630	CO	CO	*	*	*	*		*	Wholesale of mining, construction and civil engineering machinery
46A	46693	CO	CO	*	*	*	*	*	*	Wholesale trade in electrical equipment, including installation materials
46A	46694	CO	CO	*					*	Wholesale trade in lifting and transport equipment
46A	46695	CO	CO	*			*		*	Wholesale trade in pumps and compressors
46A	46699	CO	CO	*	*	*	*	*	*	Wholesale of other machinery and equipment n.e.c.
46B	46710	CO	CO	*	*	*	*	*	*	Wholesale of solid, liquid and gaseous fuels and related products
46A	46720	CO	CO	*	*		*	*	*	Wholesale of metals and metal ores
46A	46731	CO	CO	*	*		*	*	*	Wholesale of construction materials, general assortment
46A	46732	CO	CO	*	*	*	*	*	*	Wholesale of wood
46A	46733	CO	CO	*	*		*		*	Wholesale trade in wallpapers, paints and household textiles
46A	46741	CO	CO	*	*		*		*	Wholesale of hardware
46A	46751	CO	CO	*	*	*	*	*	*	Wholesale of industrial chemical products
46A	46769	CO	CO	*	*	*	*		*	Wholesale trade in other intermediate products n.e.c.
46A	46772	CO	CO		*		*	*	*	Wholesale trade in iron and steel scrap and non-ferrous scrap metals
46A	46900	MA	CP	*	*	*	*	*	*	Non-specialised wholesale trade
47A	47230	CO	CO			*	*		*	Retail sale of fish, crustaceans and molluscs in specialised stores

TABLE 53 (continued) LIST OF NACE-BEL BRANCHES (NACE-BEL 2008)

SUT	NACE-BEL	Cluster	Sector	AN	GN	OO	ZB	LG	BR	Definition
47B	47300	CO	CO	*	*	*	*	*	*	Retail sale of automotive fuel in specialised stores
47A	47410	CO	CO	*	*	*	*	*	*	Retail sale of computers, peripheral units and software in specialised stores
47A	47521	CO	CO		*		*	*	*	Specialist retail trade in building materials and DIY supplies, general range
47A	47781	CO	CO		*	*			*	Specialist retail trade in fuels other than road fuel
49A	49200	TR	TP	*	*	*	*	*	*	Freight rail transport
49C	49410	TR	WE	*	*	*	*	*	*	Freight transport by road, except removal
49C	49420	TR	WE	*	*				*	Removal services
49C	49500	TR	WE	*			*			Transport via pipelines
50A	50200	MA	RE	*	*	*	*	*	*	Sea and coastal freight water transport
50B	50400	MA	RE	*	*	*	*	*	*	Inland freight water transport
52A	52100	MA	GO	*	*	*	*	*	*	Warehousing and storage, including refrigerating
52A	52210	LO	AD	*					*	Service activities incidental to land transportation
52A	52220	MA	GO	*	*	*	*	*	*	Service activities incidental to water transportation
52A	52241	MA	GO	*	*	*	*	*	*	Cargo handling in sea ports
52A	52249	MA	GO	*	*	*	*	*	*	Cargo handling except sea ports
52A	52290	MA	SE	*	*	*	*	*	*	Other transportation support activities
53A	53200	TR	WE	*	*				*	Other postal and courier activities
62A	62010	LO	AD	*	*	*	*		*	Computer programming activities
66A	66210	LO	AD	*	*		*		*	Risk and damage evaluation
66A	66220	LO	AD	*	*	*	*	*	*	Activities of insurance agents and brokers
66A	66290	LO	AD		*				*	Other activities auxiliary to insurance and pension funding
68B	68203	LO	AD	*	*	*	*	*	*	Renting and operating of own or leased non residential real estate, except lands
68A	68321	LO	AD	*	*	*	*		*	Management of residential real estate on a fee or contract basis
68A	68322	LO	AD	*	*	*		*	*	Management of non-residential real estate on a fee or contract basis
69A	69201	LO	AD	*			*		*	Accountants and fiscal advisors
70A	70100	LO	AD	*	*	*	*	*	*	Activities of head offices
70A	70220	LO	AD	*	*	*	*	*	*	Business and other management consultancy activities
71A	71121	LO	AD	*	*	*	*	*	*	Engineering activities and related technical consultancy, except surveyor
71A	71209	LO	AD	*	*		*		*	Other technical testing and analysis
72A	72190	LO	AD	*	*	*			*	Other research and experimental development on natural sciences and engineering
73A	73110	LO	AD	*	*		*	*	*	Advertising agencies
77A	77120	LO	AD	*	*	*	*		*	Renting and leasing of trucks
77C	77320	LO	AD	*	*			*	*	Renting and leasing of construction and civil engineering machinery and equipment
77C	77340	LO	AD	*					*	Renting and leasing of water transport equipment
77C	77399	LO	AD	*	*			*	*	Renting and leasing of other machinery, equipment and tangible goods
80A	80100	LO	AD	*	*	*	*		*	Private security activities
81A	81100	LO	AD	*	*	*			*	Combined facilities support activities
81B	81220	LO	AD	*	*	*	*	*	*	Other building and industrial cleaning activities
81B	81290	LO	AD	*	*		*		*	Other cleaning activities
82A	82110	LO	AD	*	*			*	*	Combined office administrative service activities
82A	82920	LO	AD	*	*		*	*	*	Packaging activities
82A	82990	LO	AD	*	*	*	*	*	*	Other business support service activities n.e.c.
84B	84220	MA	PU			*	*		*	Defence activities

Source:NBB.

The asterisks denote the presence of the activity branches in the ports for at least one year over the period 2009 - 2014. For instance the branch 52241 (Cargo handling in sea ports) is or was present in the six ports, at the same time or at least one year in each of these ports between 2009 and 2014, while the branch 30110 (Building of ships and floating structures) was only present in Antwerp, Ghent and Liège.

Legend:

<u>Port code</u>	<u>Port</u>	<u>Port code</u>	<u>Port</u>
AN	Port of Antwerp	ZB	Port of Zeebrugge
GN	Port of Ghent	LG	Liège port complex
OO	Port of Ostend	BR	Port of Brussels

<u>Cluster code</u>	<u>Cluster definition</u>	<u>Sector code</u>	<u>Sector definition</u>
MA	Maritime	SE	Shipping agents and forwarders
		GO	Cargo handling
		RE	Shipping companies
		SB	Shipbuilding and repair
		DR	Port construction and dredging
		VI	Fishing and fish industry
		CP	Port trade
		HB	Port authority
		PU	Public sector
CO	Trade	CO	Trade
IN	Industrie	EN	Energy
		PE	Fuel production
		CH	Chemicals
		AU	Car manufacturing
		MP	Electronics
		ME	Metalworking industry
		CS	Construction
		VO	Food industry
		AI	Other industries
TP	Land transport	WE	Road transport
		TP	Other land transport
LO	Other logistic services	AD	Other services

ANNEX 2: DEFINITION OF THE FINANCIAL RATIOS

RATIO	ITEMS USED IN THE ANNUAL ACCOUNTS
RETURN ON EQUITY AFTER TAX	
Numerator (N)	9904
Denominator (D)	10/15
Ratio = $N / D * 100$	
Conditions for calculating the ratio :12-month financial year and item 10/15 > 0	
LIQUIDITY IN THE BROAD SENSE	
Numerator (N)	3+40/41+50/53+54/58+490/1
Denominator (D)	42/48+492/3
Ratio = N / D	
Conditions for calculating the ratio: none	
SOLVENCY	
Numerator (N)	10/15
Denominator (D)	10/49
Ratio = $N / D * 100$	
Conditions for calculating the ratio: none	

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