Statistics Netherlands

Paper VG ’13

Turnover and output for Warehousing and Support Activities

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1. Introduction

For centuries now the Netherlands is well known for its longstanding tradition of international trade, which has led to an extensive logistic sector. Because of its central location in the heart of Europe the Netherlands is considered to be the logistic gateway to Europe.

Numerous international companies serve their customers throughout Europe and beyond via a central distribution centre in the Netherlands. It is home to Europe's largest port, the Port of Rotterdam and Europe's third largest cargo airport, Amsterdam Airport Schiphol. The country is also famous for its excellent multimodal hinterland connections. Logistic service providers offer a wide-range of logistic activities such as: ocean and air freight forwarding, transport throughout Europe, warehousing, value adding logistics activities (assembly, (re)labeling) and value adding services (order entry, tracking & tracing, fiscal representation).

Strong features of the Netherlands are

- Four international airports.
- Main ports Rotterdam and Amsterdam.
- 138,199 km of roads, of which 3,051 km highways.
- 3,013 km of railway.
- 4,688 km of waterways for inland shipping.
- About 18,000 km of pipelines (for gas, oil and refined products).

The sector transportation and storage is very important for the Netherlands in terms of employment and added value. This paper describes the importance of the division warehousing and support activities for transportation based on data which are collected and published by Statistics Netherlands.

2. Definition of service being collected

2.1 Classifications

The Dutch Standard Enterprise Classification (SBI 2008) also called the Standard Industrial Classification (SIC) is based on the activity classification of the European Union (Nomenclature statistique des activités économiques dans la Communauté Européenne, NACE) and on the classification of the United Nations (International Standard Industrial Classification of All Economic Activities, ISIC).

The first four digits of the SBI are the four digits of NACE and the first two digits of the SBI and NACE are the same as the first two digits of ISIC. The fifth digit is a Dutch differentiation.

2.2 Warehousing and support activities for transportation

The SIC 52 division includes warehousing and support activities for transportation, such as operating of transport infrastructure (e.g. airports, harbours, tunnels, bridges, etc.), as well as cargo handling services and forwarding agencies.

Table 1 Warehousing and support activities according to the different classifications

ISIC rev. 4	NACE rev.2	SBI 2008	Description
52	52	52	Warehousing and support activities for transportation
521	521	521	Warehousing and storage
522	522	522	Support activities for transport
5221	5221	5221	Support activities for land transport
5222	5222	5222	Support activities for water transport
5223	5223	5223	Support activities for air transport
5224	5224	5224	Cargo handling services
5229	5229	5229	Forwarding agencies, ship brokers and charterers; weighing and measuring

The sector transportation and storage employs more than 500 thousand people in 30 thousand enterprises and has an annual turnover of almost 72 billion euro. The division warehousing and support activities employs more than 100 thousand people in 5 thousand enterprises. In 2011 the generated turnover was almost 24 billion euro.

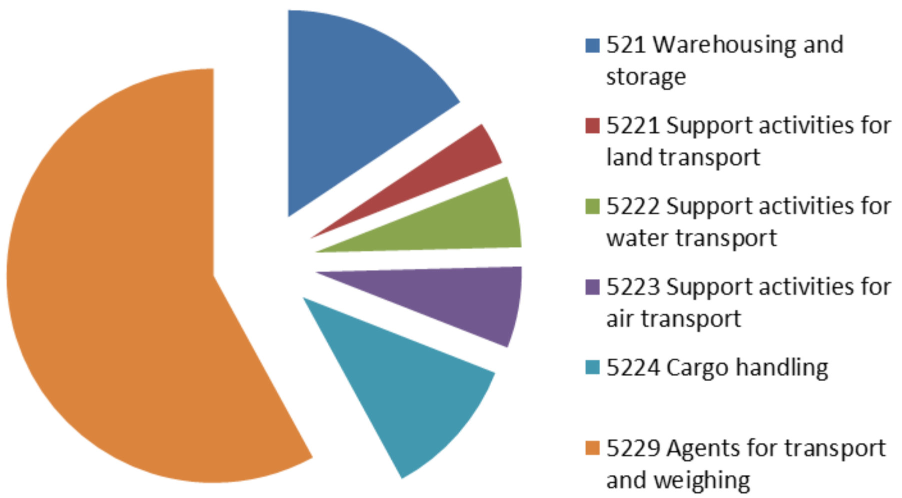
Table 2 Overview of the transportation and storage activities in the Netherlands

Period	2011			
Subject	Enterprises	Employees	FTE	Turnover
Sector/division (SIC 2008)		x 1 000	x 1 000	x mln euro
H Transportation and storage	30235	505,5	388,4	71874
52 Warehousing and support activities	5140	103,3	90,1	23542
521 Warehousing and storage	680	23,3	18,6	3677
522 Support activities for transport	4465	80,1	71,5	19865
5221 Support activities for land transport	870	9,4	7,8	799
5222 Support activities for water transport	450	4,7	4,3	1312
5223 Support activities for air transport	125	6,3	5,5	1500
5224 Cargo handling services	370	13,8	12	2609
5229 Agents for transport and weighing	2650	45,9	41,8	13645

Source: Structural Business Statistics, NACE rev. 2, 2011

Forwarding agents took care of almost 60 percent of the divisions turnover, followed by warehousing and storage with a share of almost 16 percent.

Figure 1 Turnover warehousing and support activities



Source: Structural Business Statistics, NACE rev. 2, 2011

3. Unit of measure to be collected

Turnover is measured as net turnover, proceeds from sales, excluding value-added tax (VAT), deducting discounts, premiums, deposits and freight charges. The enterprise, employing at least one person for 15 hours work or more, is used as the statistical unit. For the warehousing and support activities direct data collection is used, by means of electronic questionnaires.
The use of VAT data instead of survey data is already enforced in 9 of the 18 market segments Statistics Netherlands distinguishes within the sector transportation and storage. At this moment the use of VAT-data is still under investigation with regard to the division warehousing and support activities. Implementation of the methodology and publication of the figures on Statline, the online database of Statistics Netherlands, is expected for the year 2014.

4. Market conditions and constraints

4.1 Market conditions and constraints

Because of the longstanding tradition of international trade an important logistic support sector developed over the years in the Netherlands. The two main Dutch gateways, the Port of Rotterdam and Amsterdam Airport, combined with the excellent multimodal hinterland connections are ideal to access the European market. With a turnover of almost 24 billion euro the division warehousing and support activities is a very important economic activity in the Netherlands. In 2011 more than 5 thousand companies employed 103 thousand people of whom about 46 thousand in the forwarding agency business.

Economic crisis
Since the economic crisis, which started at the end of 2008, the golden years ended. Turnover growth rates declined steadily, however, not as strong as compared to other branches like for example road transportation in building materials. Two main reasons are responsible for this. First, many enterprises in the warehousing and support activities area focus on different markets, both foreign and domestic. Second, most of the companies in warehousing and support activities are service providers with a wide range of services. Therefore these companies are less sensitive to economic fluctuations.

Maasvlakte 2
Already in the 1970s, economists predicted that the Port of Rotterdam would one day be too small[1]. At that time however, the newly completed Maasvlakte could still keep the port going for some time to come. Concrete plans to expand the port even further have existed since 1993. This finally resulted in a plan to expand the current Maasvlakte to the west.

The construction of Maasvlakte 2 started in 2008 and aimed at 2014 for the processing of[2]. Maasvlakte 2 will be a direct extension of the existing Maasvlakte and will have access to all connections with the European hinterland. Maasvlakte 2 will be a new top location in the heart of the European market, with 1,000 hectares of space for deep-sea related container trans-shipment, distribution and chemical industry. These activities are of great interest for the industrial sites located near the deep waterways of Maasvlakte 2. Nowhere else in Europe will the largest ships in the world be able to moor 24 hours a day.

The expansion of the port is considered to be a huge stimulus for the warehousing and support activities. However, on the short term, it can also result in an overcapacity which causes low price levels.

[1] Source: www.Maasvlakte2.com
[2] Source: www.PortofRotterdam.com

Monitor Logistics and Supply Chain Management
To increase the added value of the logistic sector in the Netherlands, the Ministry of Infrastructure and the Environment commissioned Statistics Netherlands to collect en publish specific figures about the logistic sector.

The policy goal is to increase the added value of the sector without raising extra burden like road congestion. In other words the Netherlands want to earn more money by innovating the sector. The report 'Monitor Logistiek & Supply Chain Management can be found on the website of Statistics Netherlands (only available in Dutch).

The main idea is to create a relative shift from traditional transportation (low-tech) to support services (high-tech) as an addition, not as a substitute. The target is to increase the shares of the so called high-tech services like Value Added Logistics and Services (VAL/VAS) and supply chain management services[3].

Top sector Logistics
The transport sector is showing a worldwide growth. Customer demand for quality is high. The Dutch logistic sector aims to use this development to obtain a leading global position. This ambition requires innovation. The government has earmarked the logistics sector as a top sector in view of its current strong position and scope for growth. The government, industry and science will target investment in this sector[4]. Strategic partnerships and cooperation in the supply chain, as well as vertically as horizontally, in the logistic sector is considered to be the road to success for innovation and growth.

[3] Source: Monitor Logistiek en Supply Chain Management: www.cbs.nl
[4] Source: www.government.nl

4.2 Available statistics

In Table 3 the statistical information regarding to the division warehousing and support activities for transportation is shown.

Table 3 Available statistical information SIC 52

Statistic	Turnover STS	Operating returns/costs SBS	PPI/SPPI	Aviation figures	Length of waterways, roads etc.	Logistic variables like VAL/VAS	Sentiment surveys
Sector/branches (SIC 2008)							
H Transportation and storage	Y	Y					Y
52 Warehousing and support activities	Y	Y	Y				Y
521 Warehousing and storage	Y	Y	Y			Y	
521011 Refrigerated storage services			Y				
521012 Bulk liquid or gas storage services			Y				
52101A Other warehousing and storage services			Y				
522 Support activities for transportation	Y	Y	Y				
5221 Support activities for land transportation	Y	Y					
5222 Support activities for water transportation	Y	Y					
5223 Support activities for air transportation	Y	Y		Y			
5224 Cargo handling services	Y	Y	Y			Y	
5229 Agents for transport and weighing	Y	Y				Y	

Structural Business Statistics (SBS)

These are annual statistics on employment, operating returns and costs. The most recent year is 2011.

Short Term Statistics (STS)

These are quarterly statistics on turnover and prices , both available as NACE rev. 2 (index 2010 = 100). The aviation figures for the Dutch airport are available on a monthly bases.

Business Sentiment Survey

A survey in which entrepreneurs are asked to give their opinions on the economic climate, orders and indications of recent developments and expectations regarding to orders, turnover, prices and personnel.

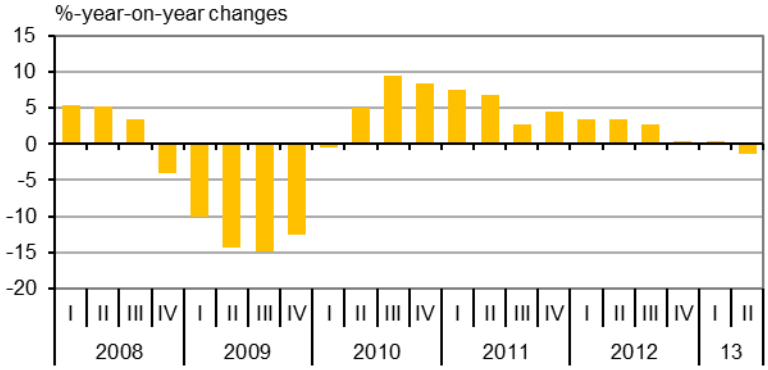
National Accounts

The National Accounts provide information on production, intermediate consumption and value added for the NACE 52 warehousing and support activities for transportation.

4.3 Warehousing and support activities: current market situation

In the second quarter of 2013 turnover of warehousing and support activities of transportation slightly decreased (figure 2). The on-going recession in the Dutch construction sector, falling domestic spending and a declining manufacturing output have had a negative impact on the results of a lot of Dutch companies[5]. Still a lot of companies within the branch are internationally orientated and are therefore less dependent on the Dutch domestic economy.

Figure 2 Turnover changes Warehousing and storage



Source: Statistics Netherlands

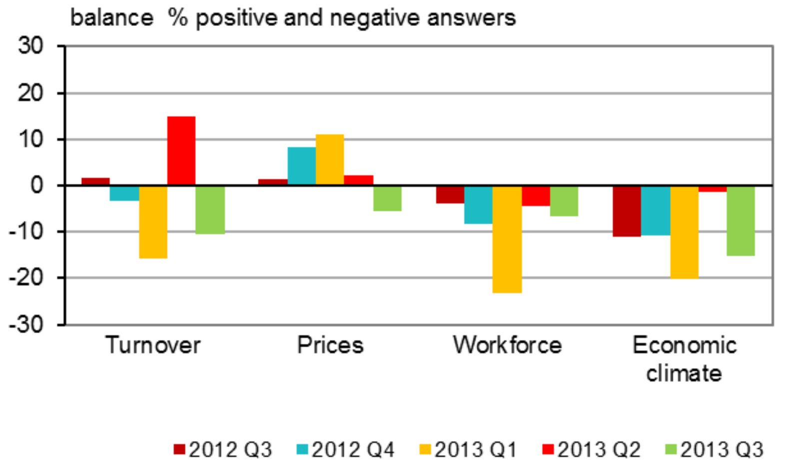
The only price information available is data about the SIC 521 (storage) and SIC 5224 (cargo handling services). Therefore it's not possible to use this information for deflation of the SIC 52. Also because there's no price information available of the most important and influential branch, the agents for transport and weighing (SIC 5229).

Business Sentiment Survey

This statistic is set-up to provide current information on the opinions of Dutch producers about performance and expectations concerning their enterprises. The Business sentiment survey makes it possible to identify turning points in sentiment at an early stage. In this way a change in the trend of economic activity of Dutch companies is available at an early stage. The questions that are asked to the companies relate to production, sales, prices, orders, stocks, investment, competitiveness, economic climate, workforce and the factors limiting production.

[5] Source: Statistics Netherlands

Figure 3 Expectations third quarter 2013



Source: Statistics Netherlands

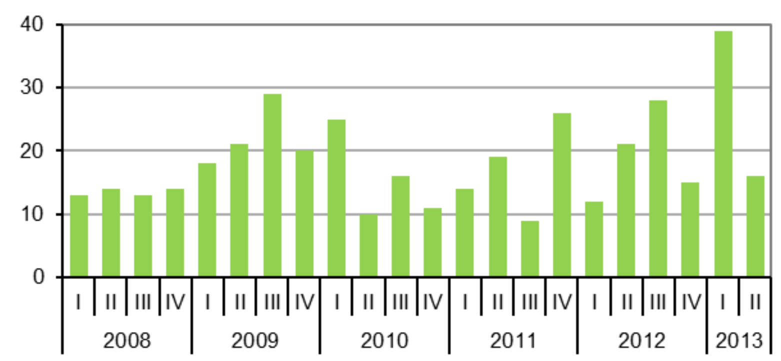
The expectations of the Dutch producers didn't change much in de last five quarters, besides some outliers like the unexpected high score in turnover in the second quarter. Almost 80 percent expects that the turnover will remain unchanged in next quarter. Ten percent expects an increase of turnover in the next period versus 20 percent who expects a decrease. The balance score therefore is minus 10 percent as shown in figure 3.

For the third quarter a lower percentage of the producers think the workforce will decrease compared to the previous quarters. This indicatesthat the Dutch producers become slightly less pessimistic. Almost 80 percent expects that the economic climate will remain unchanged. Nevertheless 20 percent still think that the economic climate will decline.

Bankruptcies

In the second quarter 16 companies went into liquidation as shown in figure 4. A quarter earlier 39 companies were on the bankruptcy-list. Mostly small transport agent companies.
Market entry is easy as a transport agent. The investments are low and the Dutch market isn't regulated, i.e. no permits etc. are needed to enter the market. As there are no substantial barriers, the population of transport agent companies is dynamic.

Figure 4 Number of bankruptcies warehousing and support activities



Source: Statistics Netherlands

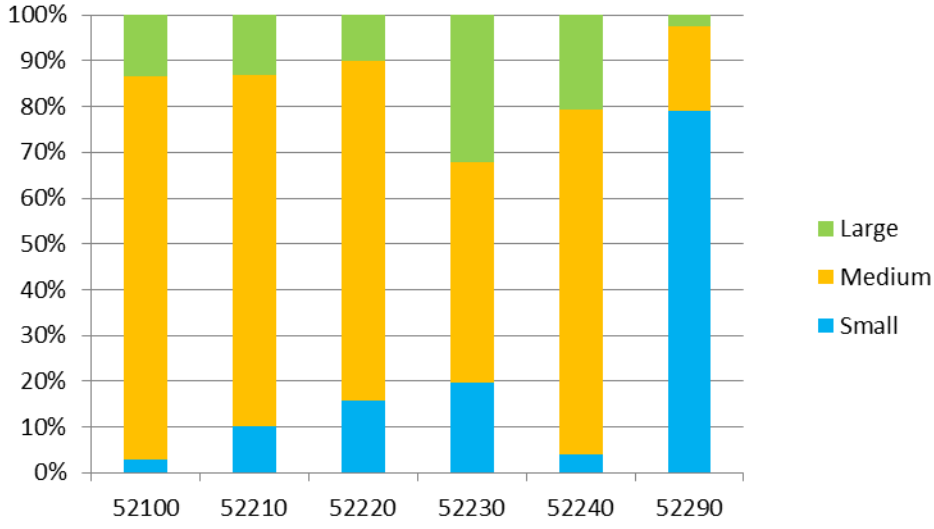
5. Standard classification structure and product detail/levels

Regarding to the STS and SBS statistics there is no further breakdown into product categories, except for the SPPI of SIC 521 into 521011, 521012 and 5210aA as shown in table 3.

6. Evaluation of standard vs. definition and market conditions

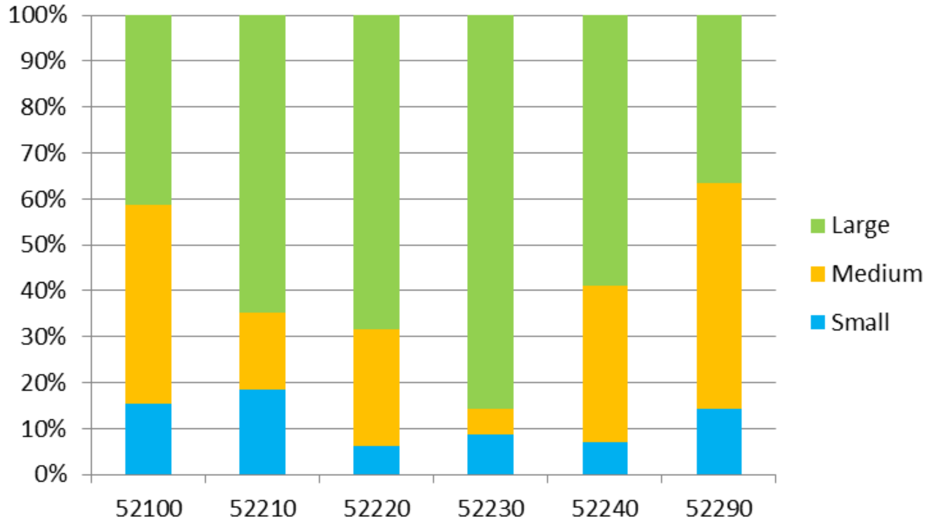
To find out which type of enterprises dominate the warehousing and support activities, the number of companies as well as the turnover are unravelled into size classes. As shown in figures 5 and 6 a few sub branches are dominated by a small number of enterprises like the support activities for water transport (SIC 5222). Combined the Ports of Rotterdam, Amsterdam and the Dutch Pilots' Corporation have a share of more than three-quarters in the total sales. The support activities for air transport (SIC 5223) are dominated by Schiphol Amsterdam Airport and the Dutch Air Traffic Control with a share of 80 percent.

Figure 5 Number of companies: share in order of size class



Source: Statistics Netherlands

Figure 6 Turnover: share in order of size class



Source: Statistics Netherlands

Table 4 shows, amongst others, the shares of turnover per size class at the level of SIC 52. As earlier said, the large enterprises have a dominant share of 60 to 75 percent in the figures of all variables. The share of almost 9 percent in personnel costs of the small enterprises and a share of 15 percent in turnover is remarkable. The personnel costs per person employed in FTE are the lowest for the small sized enterprises with 41 thousand euro per fte, 55 thousand for the medium size enterprises and more than 60 thousand euro for the large enterprises.

Table 4 SIC 52: shares in order of size class

Warehousing and support activities for transportation	Enterprises		
	Small	Medium	Large
2011	%		
Business turnover, net	15,0	26,3	58,8
Persons employed, annual average	13,4	17,1	69,6
Persons employed, annual average in FTE	12,4	17,3	70,3
Personnel costs	8,9	16,8	74,3
Operating costs	11,5	20,3	68,3

Table 5 shows the figures of the turnover per persons employed in FTE and the personnel costs per person in FTE. In this table for each market segment. The conclusion is that transport agents generate the highest turnover per person but at the same time personnel costs are the lowest for the warehousing and support activities with 51 thousand euro per person. The branch support activities for air transportations is characterized by the highest personnel costs, 75 thousand euro per person FTE.

Table 5 Financial indicators per branch

	Turnover per person employed in FTE	Personnel costs per person employed in FTE
	x 1000 euro	
52100	198	54
52210	102	61
52220	311	66
52230	272	75
52240	217	69
52290	326	51
52	262	57

7. NA concepts and measurement issues

The National Accounts provide statistical information on production, intermediate consumption and value added for warehousing and support activities as shown in table 6. The National Accounts use source statistics like the STS turnover figures to compile macro figures. The methodology used in source statistics may differ from the concepts used in the National Accounts. Some items which are not covered by source statistics are estimated and adjusted so everything will perfectly fit. That's why the figures of source statistics and the National Account may differ.

Table 6 Production, intermediate consumption and value added SIC 52

	Production basic prices mln euro	Intermediate consumption (-) mln euro	Gross value added basic prices mln euro
2010	12525	5068	7457
2011*	13195	5249	7946
2012*	13499	5305	8194

* provisional figures

In table 7 three different outcomes are shown on turnover changes. The STS figures and those of the National Accounts are nearly the same because the STS turnover growth rates are being used as inputs for the calculation of the production level. The National Accounts calculate the production level by multiplying the STS turnover growth rate with the production level of the previous year.
The growth rate of the SBS turnover differs with respect to the STS turnover growth rate as the methodologies are not similar. This is caused by the fact that the user purposes of these statistics differ. SBS provides structural information, STS provides estimations of the growth rates. Therefore the information of the SBS statistics are being used to fine-tuning the structures within the already determined new production level.

The STS turnover statistics main purpose is to cover the economic market trends on the short term. So, therefore non-real population shifts are excluded in the STS turnover statistic as well as in the National Accounts. In the SBS however these shifts are included and may cause a differences in growth rates.

Table 7 Turnover changes STS, SBS and NA SIC 52

Period	STS	SBS	National Accounts
2010	5,6	4,9	5,6
2011	5,4	9,9	5,3
2012	2,4		2,3

The goal for the near future is to use a similar methodology for the STS and SBS statistics regarding to Warehousing and support activities, so the output must be near the same. The solution for reducing different outcomes is the use of VAT to estimate a quarterly turnover level. Which can be used to calculate the growth rate per quarter and four quarters of a year added up means that the turnover level is already known. The result will be that the STS turnover changes are equal to the SBS turnover changes and the structural information will fit without major adjustments. This methodology is already implemented for certain statistics like the Wholesale trade and the commercial services.

8. Turnover/output data method(s) and criteria for choosing various output methods

Statistics Netherlands doesn’t have a survey to collect ‘volume changes’ for warehousing and support activities. Volume changes are estimated by using price information and turnover data. The turnover data is considered to be the primary variable, so only the price data can be adjusted.

The only available price data (SPPI) which can directly linked to SIC 52 turnover data is information about the SIC 521 (storage) and SIC 5224 (cargo handling services). Therefore it’s not possible to use this information for direct deflation purposes of SIC 52. Also because there’s no price information available of the most important and influential branch with a turnover share of 60 percent, the agents for transport and weighing (SIC 5229). The populations of both statistics match quite well.
The National Accounts approximates volumes by using the available price data combined with additional information of for instance wages as determined in collective labour agreements, CPI data, external price data, volume figures from airports, ports etc.
Volume figures are published at a 2/4-digit level (SIC 52, SIC 5222, SIC 5223 and SIC 52 other services) and on an annual bases.

9. Comparability of turnover/output data with price index practices

See chapter 8.

10. Summary

To collect STS turnover data primary data collection is used for the SIC 52. The use of VAT data regarding to warehousing and support activities is under investigation. Implementation of the methodology and publication of the figures on Statline, the online database of Statistics Netherlands, is expected for the year 2014.

The only price information currently available is information about the SIC 521 (storage) and SIC 5224 (cargo handling services). Therefore it's not possible to use this information for direct deflation of the SIC 52. Also because there's no price information available of the most important and influential branch, the agents for transport and weighing (SIC 5229).

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Volume figures are published at a 2/4-digit level (SIC 52, SIC 5222, SIC 5223 and SIC 52 other services) and on an annual bases.

To increase the usability and reliability of the volume figures of warehousing and support activities it's desirable to obtain more price information with respect to the sub branches of SIC 52.