Trends in international trade in goods

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After the economic and financial crisis, in which the Dutch GDP volume contracted by 3.7 percent in 2009, the international trade flows started to pick up again in 2010. This recovery came faster for the Netherlands than for other EU countries. However, growth also stagnated faster. The bulk of Dutch trade still takes place with other EU countries. Through time, high-tech products have become more important in Dutch exports. In conjunction with this, re-exports have become more important, although this activity adds less to the Dutch GDP.

1.1 Introduction

The Netherlands has been renowned as a trading country for centuries. It was the fifth largest exporter in the world in 2011 (WTO), and is home to the largest seaport in Europe. The economic crisis, which started in 2008, had a major impact on Dutch economic growth and on its international trade in 2009. Still the Netherlands was able to recover quickly, and realise positive economic growth in 2010 mainly because of the upswing in its international trade. However, in 2011 the growth in international trade slowed down again in 2011.

Statistics on international trade in commodities describe the value and volume of goods crossing the Dutch border. In 2010, 9,452 commodities and 245 trading partners were distinguished. Figures are published on a regular and timely basis on the website of Statistics Netherlands. This chapter looks at the main developments in international trade in goods and places them into context by taking into account other statistics, data from partner countries, or by applying new ways of presenting the data. This chapter builds on trends and tables presented in the Internationalisation Monitor 2011 (CBS, 2011). In 2011, there was fear of a double dip, as there were signals for a slowdown of the economic growth. In 2012 there are still some worrisome developments, like the debt crises in southern Europe countries that result in major uncertainties for the financial and economical world.

Section 1.2 starts by providing a broad overview of the trends in international trade in goods. The focus is on the long-term consequences of the economic crisis for the Netherlands, in terms of trade and economic growth and also in comparison with other countries. Section 1.3 continues with a synopsis of the geographical composition of Dutch trade in goods over time. Section 1.4 analyses the most important products traded. The focus is on the degree of technology in the products and on the countries involved, and how this pattern evolved over time. In section 1.5 the focus will be on re-exports, which comprises a significant part of Dutch trade. The main conclusions and findings are summarized in section 1.6.

1.2 Trends in trade and the economic crisis

The economic and financial crisis of 2009 resulted in the largest decline in world trade in over 70 years (WTO, 2010). After growth in the value of world imports and exports in 2008, it contracted rapidly in 2009, as is shown in table 1.2.1. In 2010, world trade recovered quickly with strong growth rates, which became even stronger in 2011. In terms of value, world exports and imports surpassed the level of 2008 in 2011, but for the important trading partners, the growth seems to have stagnated in the first quarter of 2012.

1.2.1 Trade growth in percentages

	The Netherlands	US	EU-27	Germany	China	World
	%					
Imports						
2008	9.3	7.4	12.4	12.3	18.5	15.5
2009	–18.4	–26.0	–24.8	–21.9	–11.2	–23.0
2010	21.1	22.7	13.6	13.9	38.8	17.6
2011*	9.9	15.1	16.5	19.0	24.9	18.9
2012Q1*	6.6	8.3	–0.8	0.5	6.8	n.a.
Exports						
2008	6.6	12.1	10.9	9.6	17.4	15.1
2009	–16.5	–18.0	–22.6	–22.7	–16.0	–22.3
2010	20.1	21.0	12.3	12.3	31.3	17.9
2011*	10.2	15.8	17.4	17.0	20.3	19.4
2012Q1*	5.1	8.5	–0.1	1.3	7.6	n.a.

Source: Data on the Netherlands: CBS, Statline, International trade statistics, core figures (extracted: 2-9-2012), Data on other countries: WTO, http://www.wto.org/english/res_e/statis_e/daily_update_e/monthly_trade_e.xls.

Between the end of 2009 and 2012 the Netherlands has seen a period of growth in the international trade in goods. Both imports and exports fell sharply earlier on in 2009, imports by 18.4 and exports by 16.5 percent. Yet, Dutch trade already reached its pre-crisis level in 2010, showing a faster recovery than other European countries. But while the international trade in goods of other countries continued to grow, the growth rate did not increase for the Netherlands.

The development of the international trade in services shows a somewhat different pattern. Dutch *imports* of services did not decline at all in 2009, although the annual growth rates of 2009 and 2010 were more modest than in previous years, with 2.0 and 2.9 percent respectively. In 2011, the growth rate rose again to 6.2 percent for imports.

In contrast, Dutch *exports* of services fell by 4.7 percent in 2009. However, services exports bounced back strongly, with an 8.8 percent growth rate in 2010 and a 9.8 percent growth rate in 2011. As such, the economic crisis had a far more negative impact on the trade in commodities than on the trade in services (see Chapter 3 for trends in international trade in services).

The geographic location of the Netherlands makes it a logical gateway to the rest of Europe for goods arriving from all over the world. As such, re-exporting is an important activity for the Netherlands, amounting to over 44 percent of total Dutch exports in 2011.

The Netherlands still was the fifth largest exporter in the world in 2011

Table 1.2.2 shows that the developments for re-exports are very different than for domestically produced exports. Re-exports already almost stopped growing in 2008. This indicates that the European economy, receiving the bulk of these re-exports, was already slowing down either in terms of import demand, or because customers were supplied from stock. While the decline in re-exports in 2009 was less severe than that of domestically produced exports, and the increase in 2010 was higher. In 2011, the growth of re-exports slowed down, while the export value of domestic products kept growing.

1.2.2 Dutch International trade in goods

	Imports		Exports		Of which			
					domestic exports		re-exports	
	billion euro	*%*	*billion euro*	*%*	*billion euro*	*%*	*billion euro*	*%*
2004	228.2	10	255.7	9	145.3	6	110.4	13
2005	249.8	9	281.3	10	159.4	10	121.9	10
2006	285.4	14	319.0	13	179.0	12	139.9	15
2007	307.3	8	347.5	9	192.3	7	155.2	11
2008	335.9	9	370.5	7	212.5	11	157.9	2
2009	274.0	–18	309.4	–16	169.4	–20	139.9	–11
2010	331.9	21	371.5	20	199.9	18	171.6	23
2011	364.9	10	409.4	9	231.1	16	178.3	4
2012Q1*	96.8	7	107.6	5	60.3	5	47.3	5

Source: CBS, Statline, International trade in goods statistics (extracted: 2-9-2012).

The international trade in goods is an important source of economic growth for the Netherlands. In graph 1.2.3 the importance of trade is illustrated by depicting trade flows against GDP over the past two decades. Between 2001 and the first quarter of 2012, the share of GDP for the exports of goods was on average 57 percent compared to 46 percent in the nineties. In fact, in the first quarter of 2012, this share had even increased to 70.6 percent. This is far more than for most other countries (Ramaekers and Daems, 2009). The net contribution of trade in goods to GDP, the trade in goods balance, has also risen from almost 3.6 percent of GDP during in 1990 to 9.9 percent in the first quarter of 2012.

1.2.3 Trade in goods as a share of Dutch GDP

Source: CBS, Statline, National Accounts (extracted: 16-7-2012).

The decline in trade also had a significant impact on Dutch economic growth. During the crisis the Dutch GDP volume contracted by 3.7 percent in 2009. In the first quarter of 2010, both Dutch GDP and trade started growing again. Growing exports have been the main driving force behind the economic growth of 1.6 percent in 2010 and 1 percent in 2011 (see table 1.2.4). However, in the fourth quarter of 2011 GDP contracted again by 0.8 percent. Household consumption started to show a decline in 2011, which continued in the first quarter of 2012. Government consumption was also slower in 2011, but grew somewhat in the first quarter of 2012. Investments grew in 2011. The strong recovery of China and other developing Asian countries, and their renewed demand for investments, resources and materials was a major cause of this upswing in 2011. However, the first quarter of 2012 shows a decrease in investments again.

1.2.4 Breakdown of Dutch economic growth (year-on-year % changes in volume)

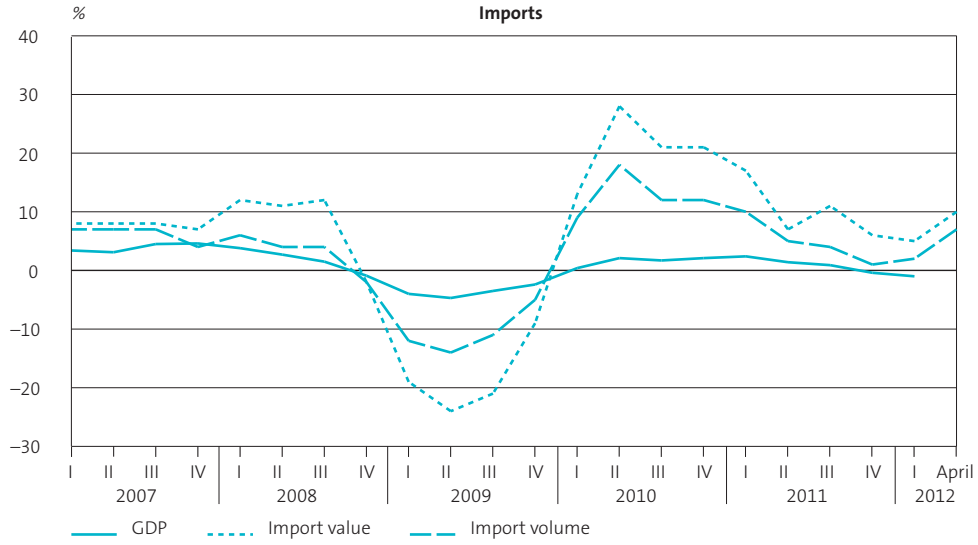
	2009	2010**	2011*	2012Q1*
	%			
Economic growth	–3.7	1.6	1.0	–0.8
Consumption households	–2.1	0.3	–1.0	–0.7
Consumption government	5.0	0.7	0.1	0.9
Investment	–12.0	–7.2	5.7	–5.2
Export	–7.7	11.2	3.9	2.6
Import	–7.1	10.2	3.6	1.6

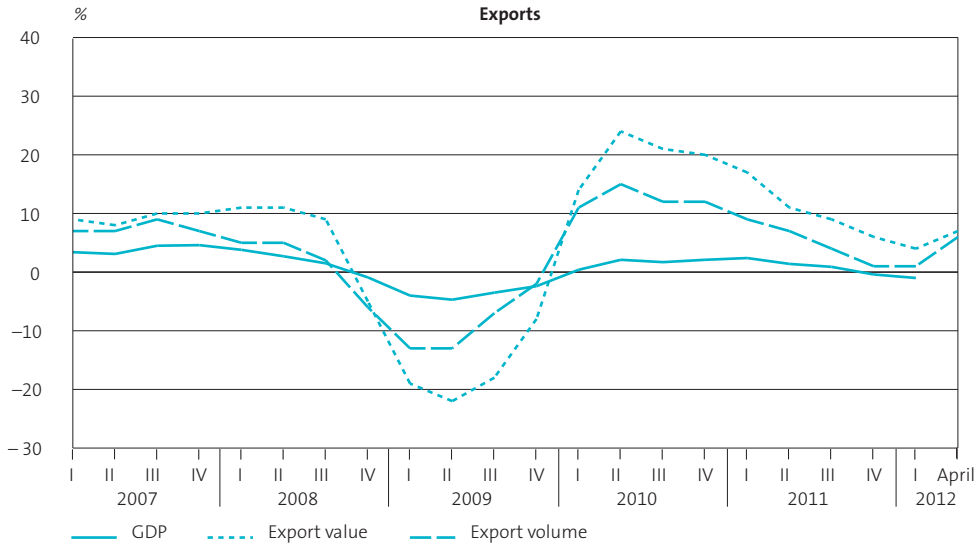
Source: CBS, Statline, National Accounts (extracted: 16-7-2012).

The rapid growth of imports and exports of 2010, was followed by a slowdown in 2011. Although many economies were growing and international trade has returned to pre-crisis levels, Dutch economic growth seemed to be coming to a halt. Not only has the growth in trade value slowed down, trade volumes showed no further growth either (see graph 1.2.5). Much of the growth in value was due to higher import and export price levels. But in April 2012, the Dutch export volume had increased by 6 percent and imports by 7 percent compared to April 2011. However, the factors that influence Dutch exports were worsening in July 2012.[1)] Producer confidence in Germany and the Netherlands has dropped, and European manufacturers were more pessimistic about their foreign order positions. Also, the debt crises in several European countries are still causing uncertainty on the financial markets.

[1)] Statistics Netherlands, Exportradar of July 2011, http://www.cbs.nl/nl-NL/menu/themas/dossiers/conjunctuur/cijfers/kerncijfers/exportradar.htm

1.2.5 Development of Dutch GDP; imports and exports (year-on-year % changes, adjusted for calendar effects)





Source: CBS, StatLine, National Accounts (extracted: 21-08-2012).

1.3 Geographical composition of Dutch international trade in commodities

Table 1.3.1 shows the Dutch trade pattern with its main trading partners for 2008–2011. The bulk of Dutch trade takes place with the other countries of the European Union. In 2011, more than half of the Dutch imports originated from EU countries, and almost 75 percent of Dutch exports were destined for an EU country. Germany is still the most important trading partner. Compared with 15 years ago, the role of the EU in Dutch exports has changed relatively little, but in terms of imports the picture has changed somewhat. In 1996, almost 65 percent of Dutch imports came from an EU country (and at that time the EU counted only 14 other Member States, compared with the 26 other member states in 2011). The main reason for the declining importance of the EU is still the rise of China and the other emerging markets such as Brazil and Russia. The share of imports coming from BRIC countries, most importantly China, has quadrupled since 1996, coming from 4 percent to almost 16 percent or 57.0 billion euros in 2011. Dutch exports to BRIC countries also increased, but at a much slower pace.

EU-members are still the most important trading partners for the Netherlands

A study on international trade data for the year 2010 showed that the value of trade between the Netherlands and its different trading partners can be predicted quite well by the GDP of the trading partner and the geographical distance from the trading partner (Ramaekers & De Wit, 2012). That is, a higher GDP correlates with a higher trade value, whereas distance is negatively correlated with trade value. For the Netherlands, these two factors account for 85 percent of the variability of the trade value between trading partners. The study also shows that, taking these factors into account, trade with Germany is not exceptionally high. Trade with the Netherlands is larger than expected for countries like Belgium, China and Taiwan. Factors like openness of an economy, re-exports and specific export products play a key role in this. However, trade value is lower than expected for most large economies, e.g. Canada. Here, the fact that large economies are more self-providing plays an important role. There is also less trade with politically instable countries.

1.3.1 International trade in goods by partner country

	Import value				Export value			
	2008	2009	2010	2011	2008	2009	2010	2011
	million euro							
Total	**335,927**	**274,025**	**331,914**	**364,922**	**370,489**	**309,369**	**371,549**	**409,358**
EU	**185,128**	**151,826**	**176,670**	**193,565**	**282,735**	**231,344**	**275,666**	**302,883**
Belgium	33,896	27,452	31,864	36,420	42,967	34,620	41,265	48,678
Czech Republic	3,701	3,761	4,544	5,154	4,481	3,818	5,317	5,947
France	16,885	13,591	14,438	16,785	32,376	27,484	32,489	36,245
Germany	64,622	52,538	58,914	60,943	90,618	75,225	90,269	99,189
Italy	7,962	6,322	7,163	7,786	19,609	16,007	18,596	19,528
Poland	3,939	3,595	4,624	5,094	7,261	5,948	7,378	8,411
Spain	5,989	4,799	7,037	6,564	12,731	10,512	12,604	12,234
Sweden	5,737	3,993	5,282	6,238	6,463	5,185	6,650	7,194
United Kingdom	21,224	17,648	22,130	24,505	33,586	25,879	29,651	32,326
Other EU	21,169	18,126	20,675	24,076	32,640	26,659	31,447	33,131
BRIC	**45,208**	**37,877**	**52,714**	**57,036**	**13,208**	**11,784**	**14,546**	**17,247**
Brazil	4,854	3,893	4,397	5,612	1,231	1,109	1,797	2,282
China	25,000	21,967	31,001	30,874	3,852	4,589	5,391	6,696
India	2,318	2,390	3,293	3,591	1,565	1,668	1,717	1,864
Russia	13,036	9,628	14,023	16,959	6,559	4,419	5,641	6,405
Non-EU (excl. BRIC)	**105,594**	**84,324**	**102,529**	**114,321**	**74,551**	**66,249**	**81,337**	**89,228**
Japan	9,492	7,251	9,275	10,100	2,945	2,381	3,190	3,414
United States	27,043	22,995	25,055	23,541	16,472	13,928	16,875	19,632
Rest of world	69,059	54,078	68,200	80,680	55,134	49,939	61,273	66,182

Source: CBS, Statline, International trade in goods (extracted: 2-9-2012).

1.4 Products traded

Table 1.4.1 specifies which goods were imported, exported and re-exported between 2008 and the first quarter of 2012. With 103.0 billion euro, imports of machinery and transport equipment formed the bulk of Dutch imports in 2011, followed by mineral fuels (80.0 billion) and chemicals (47.0 billion euro). Combined, these three categories accounted for 63 percent of Dutch imports in 2011. Dutch export products quite resemble the imports, with machinery and transport equipment, chemicals and mineral fuels as the largest categories.

1.4.1 Imports and exports of commodities, by SITC classification

	Import value					Export value				
	2008	2009	2010	2011	2012Q1*	2008	2009	2010	2011	2012Q1*
	billion euro									
Total	335.9	274.0	331.9	364.9	96.8	370.5	309.4	371.5	409.4	107.6
Food and live animals	27.0	25.7	28.3	32.1	8.5	42.1	40.2	45.2	48.0	12.0
Beverages and tobacco	3.1	3.2	3.3	3.7	1.0	6.1	5.9	6.2	7.0	1.6
Crude materials, inedible ex. fuels	13.9	9.8	13.3	15.9	3.8	18.1	15.4	19.1	20.8	5.9
Mineral fuels, lubricants, related materials	61.1	43.0	60.0	80.0	24.0	56.8	38.3	51.0	67.8	21.0
Animal and vegetable oils, fats and waxes	3.3	2.2	2.7	3.9	1.1	4.0	3.0	3.0	4.0	1.0
Chemicals and related products	48.5	44.0	51.0	47.0	12.4	66.0	59.3	70.6	73.5	19.0
Manufactured goods classified by materials	38.7	28.3	33.6	38.3	9.4	35.3	26.7	33.2	36.7	9.3
Machinery and transport equipment	102.0	83.0	100.1	103.0	26.1	107.4	88.3	106.5	111.8	27.3
Miscellaneous manufactured articles	37.3	33.8	37.8	38.4	10.1	32.7	30.5	34.6	36.9	9.7
Commodities not classified elsewhere	1.0	1.1	1.6	1.7	0.4	1.9	1.8	2.2	2.8	0.8

Source: CBS, Statline, International trade in goods (extracted: 2-9-2012).

1.4.2 Breakdown of Dutch trade in terms of technology

	Import value			Export value		
	1997	2010	2011	1997	2010	2011
	billion euro					
Total	157.4	331.9	364.9	171.4	371.5	409.4
	%					
High-tech products	27	31	26	25	31	28
Medium to high-tech products	23	18	18	25	19	20
Medium to low-tech products	25	33	36	21	27	30
Low-tech products	24	19	19	29	23	22
Unclassified	0	0	0	0	0	0

Source: CBS.

The Netherlands seeks to expand knowledge and innovation in its export product range (Innovatieplatform, 2004). To see if this shift is present in the trading range of the Netherlands, an insightful way of classifying goods traded is by the level of technology embodied in a product. This classification system was developed by Martins and Opromolla (2009) and is based on Loschky (2008). Table 1.4.2 shows the composition of Dutch trade in terms of technology level, and the developments over time. Table 1.1.1a in the annex shows which types of goods belong to which category.

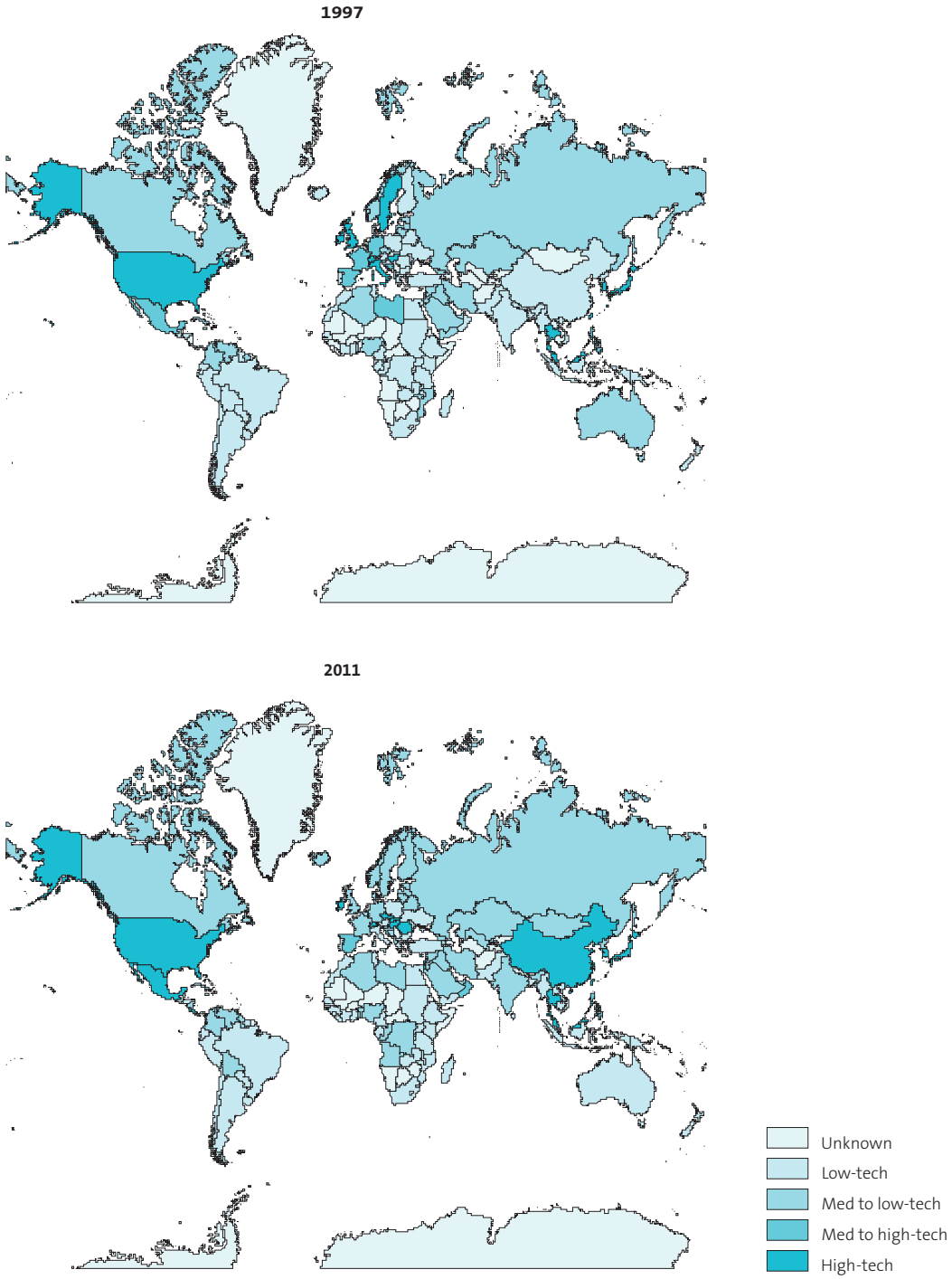
In 1997, the composition of Dutch imports was quite equally divided across the four categories, with high-tech products making up the highest share. By 2011, this balance had shifted mostly in favour of medium to low-tech products. Over a third of Dutch imports consisted of medium to low-tech products in 2011, even more than in 2010. This development can be related to the kinds of products involved. The Netherlands is an active trader in, and re-exporter of fossil fuels such as natural gas, crude oil and derivates. The Netherlands is also specialised in storing and refining these products. Fossil fuels form a key component of medium to low-tech products. A quarter of the imports were high-tech.

In relative terms, the imports of medium to high-tech products and low-tech products have declined significantly since 1997. The key commodities involved in the decline of the first category are cars, motors and other transportation vehicles as well as electric machinery and (household) appliances. Low-tech imports that decreased in importance since 1997 were clothes and apparel, (recycled) paper, pulp, cardboard and cellulose. Low-tech products tend to be cheap products subject to heavy international competitive pressure. Therefore this decline might seem more dramatic while in terms of import volume, the decline is actually less pronounced.

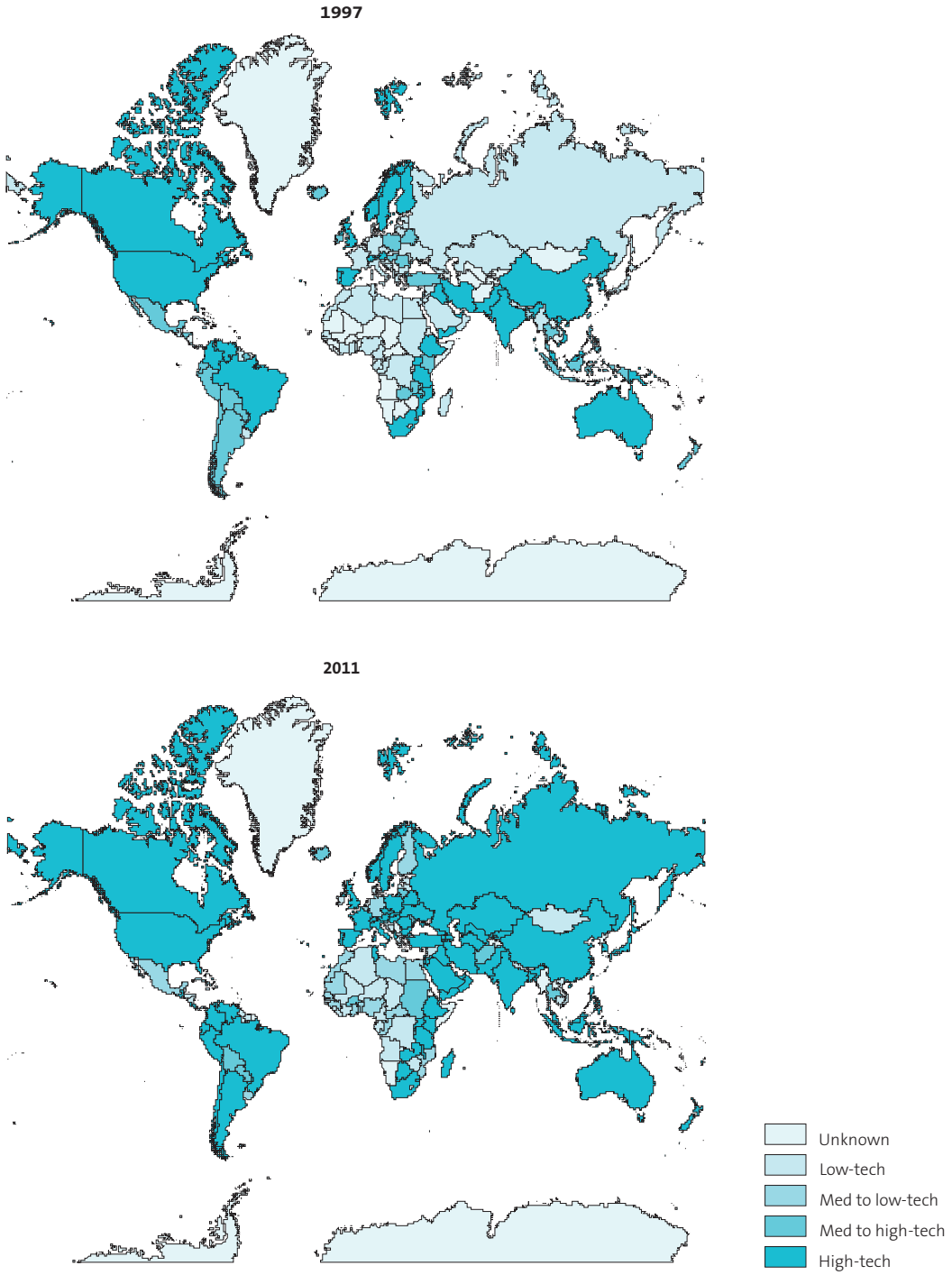
Low-tech products were the largest exports category in 1997. However, by 2011 exports consisted mostly of medium to low-tech products and high-tech products. The shares of medium to high-tech and of low-tech products were decreasing. High-tech exports that have become more important since 1997 are pharmaceuticals and 'new technology' items such as cell phones, video cameras, memory storage devices, (parts of) computers etc.

Visualisation 1.4.3 shows how Dutch imports from different countries has shifted in terms of dominant product technology between 1997 and 2011. Strikingly, most imports from EU countries seem to shift towards a lower degree of technology. Dutch imports from the United Kingdom and Sweden have shifted from a concentration of high-tech to medium to high-tech products. However, imports from non-EU countries show a shift in concentration of low-tech to higher technological products. In 1997, only non-EU imports from the US, Japan, South-Korea, Thailand, Malaysia, and Singapore were dominated by high-tech products. In 2011 more countries shifted towards high-tech products, for example imports from Mexico, Costa Rico and China were now dominated by them. Some non-EU countries, like Australia, show the opposite development.

1.4.3 Geographical composition of imports in terms of dominant technology



1.4.4 Geographical composition of exports in terms of dominant technology



Visualisation 1.4.4 shows how Dutch export products to different countries also shifted in terms of technology level between 1997 and 2011. Although exports to many countries were already dominated by high-tech products in 1997, more countries had shifted towards higher tech products in 2011, including important trading partners like Russia, France, Italy and Southern America. However, only countries like Finland and some African countries show an opposite development, receiving less technologically advanced products.

1.5 A closer look at re-exports

As mentioned earlier, the Netherlands has always been a gateway to the rest of Europe due to its location. Therefore, many goods enter the Netherlands to be distributed to other countries. Re-exporting goods is an important activity for the Netherlands, comprising almost 44 percent of total Dutch exports in 2011. However, it does not add as much to the Dutch economy as products produced in the Netherlands. A study by Kuypers, Lejour, Lemmers and Ramaekers (2012) showed that every euro re-export only adds 7.5 cents to the Dutch economy. This is 59 cents for every euro in the export of Dutch-manufactured products. Table 1.5.1 shows that the share of re-exports was highest for machinery and transport equipment and for miscellaneous manufactured articles. There has been a remarkable increase in the share of re-exports in mineral fuels, lubricants, related materials chemicals and related products, which rose from 19 percent in 2008 to 32 percent in the first quarter of 2012.

1.5.1 Re-exports of commodities, by SITC classification

	Re-export value					Re-exports as a share of exports				
	2008	2009	2010	2011	2012Q1*	2008	2009	2010	2011	2012Q1*
	billion euro					*%*				
Total	157.9	139.9	171.6	178.3	47.3	43	45	46	44	44
Food and live animals	10.5	10.1	11.5	12.4	3.2	25	25	25	26	26
Beverages and tobacco	0.8	0.7	0.7	1.1	0.3	14	12	11	15	16
Crude materials, inedible ex. fuels	5.7	4.1	6.6	6.7	1.9	32	27	34	32	32
Mineral fuels, lubricants, related materials	10.7	9.2	13.4	20.6	6.8	19	24	26	30	32
Animal and vegetable oils, fats and waxes	1.0	0.6	0.6	0.8	0.3	26	20	20	21	28
Chemicals and related products	26.7	26.3	29.7	26.6	6.9	41	44	42	36	36
Manufactured goods classified by materials	13.4	9.9	13.7	15.3	3.9	38	37	41	42	42
Machinery and transport equipment	66.5	57.4	69.7	67.7	16.9	62	65	66	61	62
Miscellaneous manufactured articles	22.4	21.1	24.5	25.6	6.8	68	69	71	69	70
Commodities not classified elsewhere	0.2	0.4	1.2	1.4	0.4	9	20	55	50	48

Source: CBS, Statline, International trade in goods (extracted: 2-9-2012).

Table 1.5.2 shows the five main trading partners of the Netherlands in terms of exports of Dutch-manufactured products and re-exports for 2011. Germany and Belgium are and have traditionally been our most important trading partners. In 2011, almost half of the products exported to Germany consisted of re-export products. The same was true for France, UK and Italy. For Belgium re-exports made up for almost 40 percent of the export.

1.5.2 Dutch exports and re-exports to top-trading partners for the Netherlands (2011)

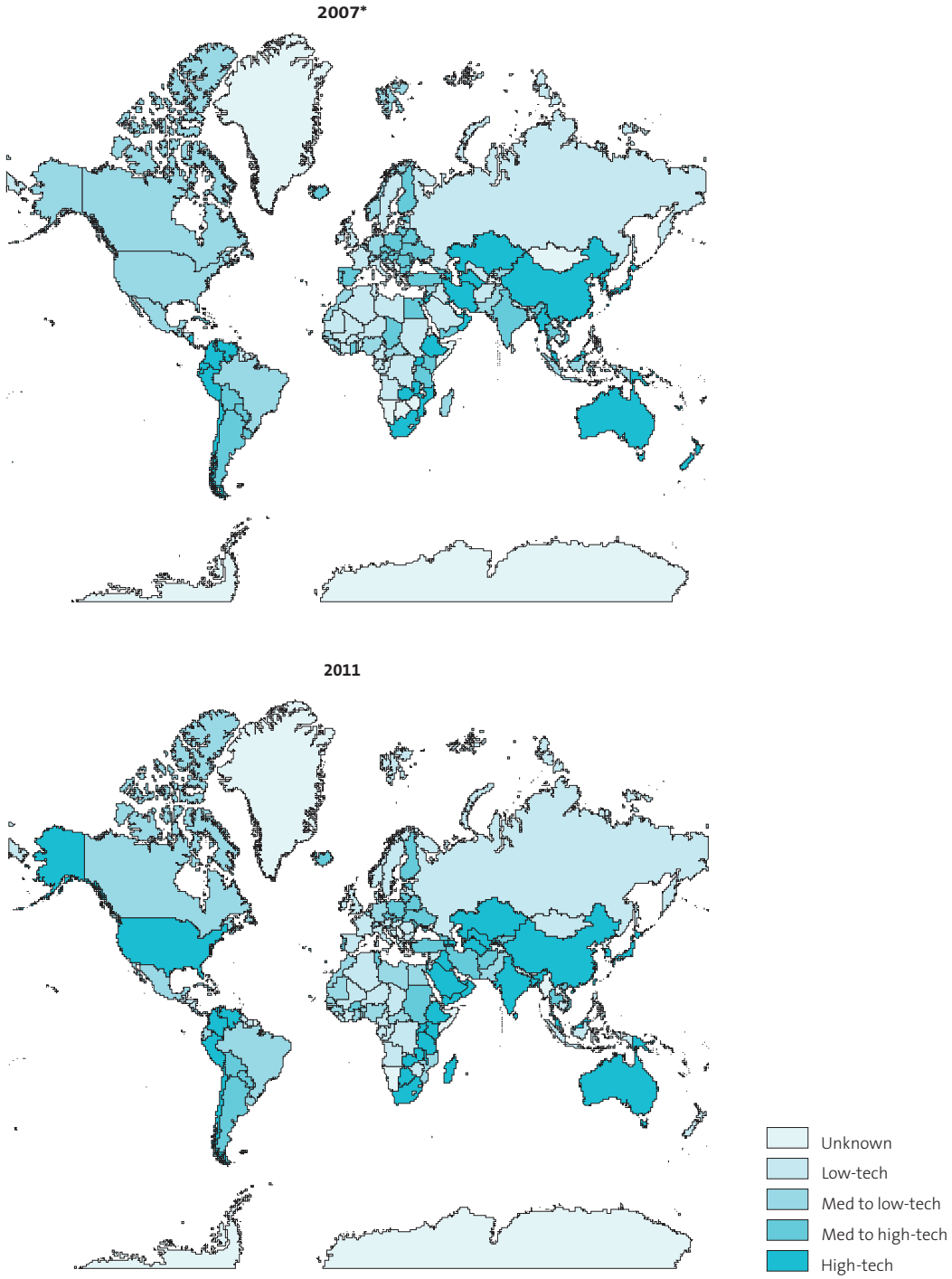
	Total exports	Share in Dutch exports	Export Dutch product	Re-exports	Share Dutch product in total exports	Share re-exports in total exports
	bln euro	*%*	*bln euro*		*%*	
Germany	99.2	24.2	53.2	46.0	53.6	46.4
Belgium	48.7	11.9	29.6	19.1	60.8	39.2
France	36.2	8.8	19.5	16.8	53.8	46.2
UK	32.3	7.9	17.2	15.1	53.3	46.7
Italy	19.5	4.8	9.9	9.7	50.5	49.5
Total EU	302.9	74.0	160.6	142.3	53.0	47.0
Total non-EU	106.5	26.0	70.4	36.0	66.2	33.8

Source: CBS.

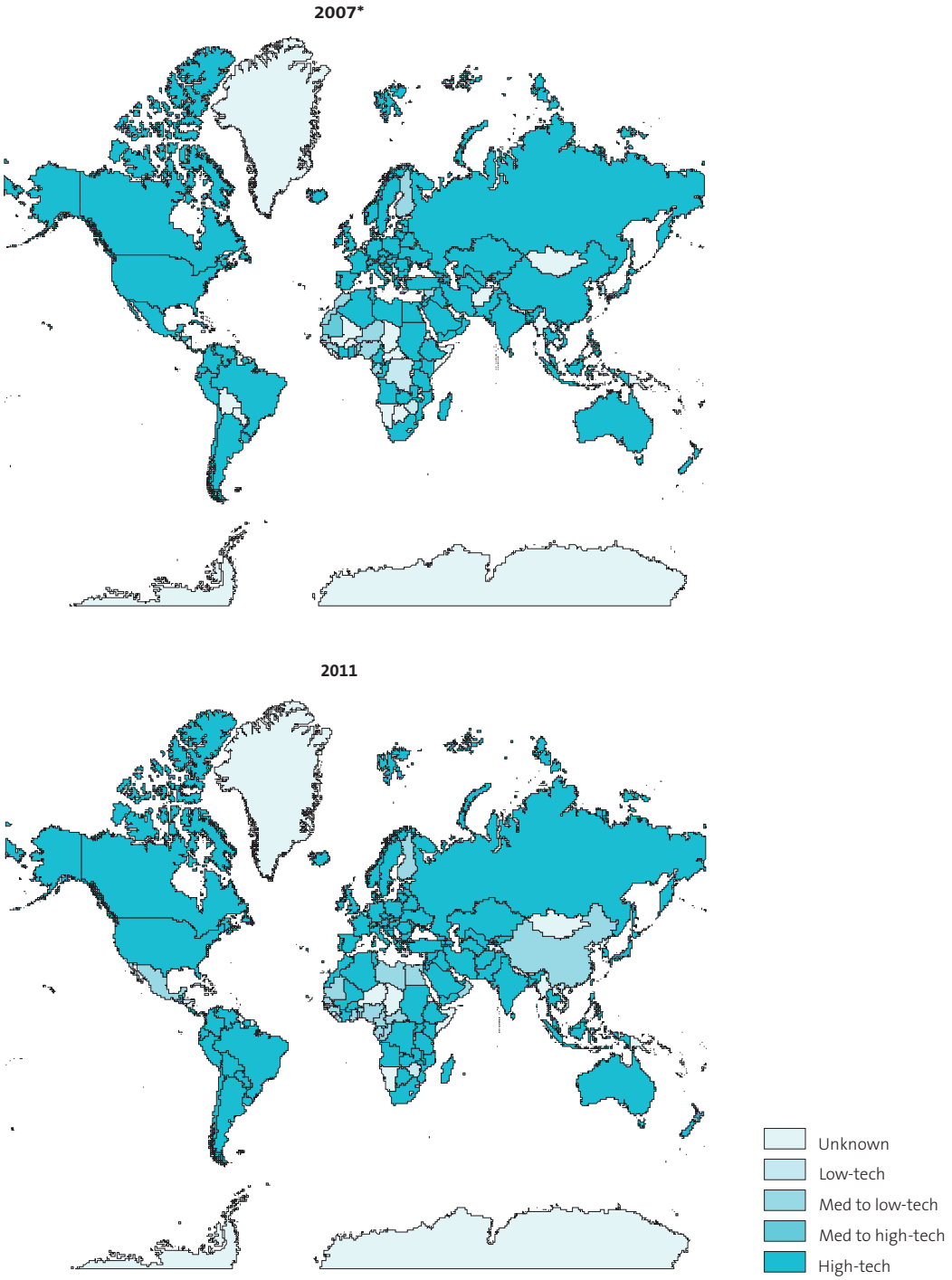
Visualisation 1.5.3 shows how exports of Dutch-manufactured products differ in terms of dominant product technology for 2007 and 2011. In 2011, for a limited number of countries like the United States, China, India, Australia and Japan the exports of Dutch manufactured products were dominated by high-tech products. This was not the case for export to countries within the European Union, for these countries there was no dominance of high-technology products. What is even more, for countries within the European Union there is a tendency towards a decrease in technology. Countries, such as Spain, show a dominance of low-tech products in 2011.

Visualisation 1.5.4 shows how Dutch re-exported products differ in terms of dominant product technology for 2007 and 2011. Strikingly, most re-exports consist of high-tech products. This is the case for countries within the European Union, for BRIC countries (except for China), as well for other countries. This dominance of high-tech products was however somewhat less strong in 2011, compared to 2007. For example, in 2011, re-exports to Mexico and China were dominated by medium to low-tech products. Nevertheless, Dutch re-exports are still much more high-tech intensive than Dutch-manufactured products.

1.5.3 Geographical composition of Dutch-manufactured exports in terms of dominant technology



1.5.4 Geographical composition of re-exports in terms of dominant technology



1.6 Conclusion

The Dutch international trade in goods recovered strongly in 2010 from the economic crisis, but slowed down in 2011. In 2011, both imports and export grew by 10 percent. The first quarter of 2012 shows even lower growth rates. Other European countries were growing faster than the Netherlands in 2011, but they actually showed a negative development in the first quarter of 2012. Additionally, import and export prices have risen significantly, indicating that the trade volume is not expanding as much. There are signs of a double dip, yet there are also signs of improvement.

The bulk of Dutch trade takes place with the other countries of the European Union with re-exports in particular as an important activity. In terms of imports, BRIC countries are making headway at the expense of European partners. China has become very important position in Dutch imports, and ranks third on the Dutch import top 5. Germany and Belgium, however, remain the top-trading partners as does the Netherlands for them.

Machinery and transport equipment, chemical products and mineral fuels form the bulk of Dutch trade. These three commodity categories combined accounted for 63 percent of Dutch imports and 62 percent of the exports in 2011. The share of re-exports is also quite high, especially for machinery and transport equipment, indicating that the majority of this trade is not produced in the Netherlands.

Classifying goods by their level of technology shows that imports and exports used to be quite balanced (i.e. almost as much trade in high-tech as in low-tech goods). In 2011, this balance had shifted in favour of high-tech products for all exports, and for imports from non-European countries. However, imports from the other EU countries seem to be shifting towards a lower degree of technology. Re-exports play a major role in Dutch trading activities, although this adds less to the national economy. Especially re-exports primarily consist of high-tech products.

Annex

1.1.1a Annex

Level	Description	HS 2002 code
High	Medical, precision and optical instruments	37, 90, 91
	Pharmaceuticals	30
	Radio, television and communication equipment	8517–8529
	Office, accounting and computing machinery	84
	Aircraft and spacecraft	88
Medium-high	Railroad equipment and transport equipment	86
	Motor vehicles, trailers and semi-trailers	87
	Electrical machinery and apparatus n.e.c.	8501–8508, 8511–8513, 8530–8548
	Machinery and equipment n.e.c.	8509–8510, 8514–8516
	Chemicals ex. pharmaceuticals	29, 31–36, 38, 3901–3914, 4001–4003, 54–55
Medium-low	Rubber and plastics products	3915–3926, 4004–4017
	Building and repairing of ships and boats	89
	Non-ferrous metals	28, 71, 74–76, 78–81
	Other non-metallic mineral products	25, 26, 68–70
	Manufacturing n.e.c.; recycling	83, 92–95, 97
	Fabricated metal products ex machinery and equipment	73, 82, 96
	Iron and steel	72
	Coke, refined petroleum products and nuclear fuel	27
Low	Pulp, paper, paper products, printing and publishing	47–49
	Textiles, textile products, leather and footwear	41–43, 50–53, 56–67
	Food products, beverages, tobacco	1–24
	Wood and products of wood and cork	44–46

Source: Martins and Opromolla (2009) and Loschky (2008).