Dutch Trade in Facts and Figures

Exports, imports & investment

2021

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Explanation of symbols

Empty cell	figure not applicable
.	figure is unknown, insufficiently reliable or confidential
*	provisional figure
**	revised provisional figure
–	(between two numbers) inclusive
0 (0.0)	less than half of unit concerned
2016–2017	2016 to 2017 inclusive
2016/2017	average for the years 2016 up to and including 2017
2016/'17	crop year, financial year, school year etc., beginning in 2016 and ending in 2017
2004/'05–2016/'17	crop year etc. 2004/'05 up to and including 2016/'17

Due to rounding, some totals may not correspond to the sum of the separate figures.

Colophon

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Foreword

As a small, open trading nation, the Netherlands has strong links with the rest of the world. Being closely interconnected in international trade and production chains can also have a downside in times of crisis or in a pandemic. This became immediately apparent with a sharp drop in imports and exports of goods and services in 2020. Travel – spending by foreign tourists and travellers in the Netherlands, and by Dutch travellers abroad – halved and specific goods flows such as mineral fuels and transport equipment were also reduced in 2020. The total import and export value of goods declined by 8% (imports) and 6% (exports) in 2020, while for services, the import value shrank by 12% and the export value was down by 7%.

Global trade in goods recovered relatively quickly during 2020. Dutch exports of goods actually grew in volume in September, but this was not the case for the trade in services. Other international developments, such as increased prices, shortages of raw materials and components, as well as higher transport costs, may have a longer-lasting effect on international production chains. If indispensable parts suddenly cannot be supplied, production may have to be halted. This makes international production chains, in which the Netherlands is a major participant, vulnerable at times.

The year 2020 ended with a brief closure of the borders between the United Kingdom (UK) and the European Union (EU), the prospect of a 'hard Brexit' as a future scenario, and the final push to achieve a trade deal. Despite this agreement, relationships between the UK and the EU – and the Netherlands – have changed. As a trading partner, the UK's export share declined further in 2020 and in the first quarter of 2021, despite the fact that the UK is a major supplier of goods, and especially services, that the Netherlands needs in its export production. In 2019, Dutch companies made relatively frequent use in their export production of British business services (such as management consulting, legal or technical services) and intellectual property owned (or managed) by British companies.

Before the coronavirus crisis, about a third of Dutch GDP and employment was due to exports of goods and services. Preliminary figures show that in 2020, this share had shrunk, mainly due to the contraction in travel. The prosperity that exports of goods and services bring to Dutch society has a downside, specifically the pressure that these trade flows put on the environment. CO_2 emissions from international trade and transit flows to and from foreign countries rose by more than 3% between 2007 and 2019. Cross-border road transport in particular made a relatively large contribution to these emissions. In contrast to this increase in CO_2 emissions, there has been a decline in emissions of nitrogen oxides and particulate matter. These, too, are aspects of the Netherlands as a trading nation that Statistics Netherlands (CBS) will continue to focus on in the future.

More news and reports in the field of globalisation, as well as the Internationalisation Monitor, can be found in our dossier.

Director General
A. Berg
The Hague, Heerlen, Bonaire, November 2021

Contents

Executive Summary

Dutch Trade in Facts and Figures: Exports, imports and investment provides an overview of key figures on the internationalisation of the Netherlands. Many figures were already available from various CBS publications and data tables, but had not been bundled into a single publication. At the request of the Dutch Ministry of Foreign Affairs, the CBS Expertise Centre for Globalisation therefore developed *Dutch Trade in Facts and Figures*, which appeared for the first time in 2019 and is published annually as part of the Globalisation research agenda at CBS. This publication aims to provide a broad target group with objective information on the internationalisation of the Dutch business economy and the national economy in a broad sense. Furthermore, it offers independent data for trade policy decisions at the Ministry of Foreign Affairs. Apart from the data tables with key figures, this publication contains an outline of the major trends behind these figures.

Some of the figures and trends in this publication relate to 2019, a year in which the world looked very different. Policy and international agendas then featured issues such as the climate and nitrogen crises, tensions between the United States, China and the EU, and the potentially 'Hard Brexit' that was thought might take place by the end of January 2020.[1)] It could not have been foreseen at the time that the world, including the Netherlands, would be in the grip of a pandemic in 2020. However, the SARS-CoV-2 outbreak dealt the world a huge and very sudden blow, first of all due to the unprecedented health crisis that took hold in many countries. The measures taken by countries to contain the outbreak had a major impact on social life, society and the economy. Lockdowns caused disruptions in production and trade chains, as well as international tourism and travel, and the closure of sectors such as accommodation and food services, culture and events had a huge impact on companies and entrepreneurs in the affected industries. As the summer of 2020 progressed, world trade recovered, recouping some of the losses of Q2, but with the resurgence of the virus in the autumn and the arrival of new virus variants, 2020 ended in a new lockdown for the Netherlands. The COVID-19 crisis, Brexit and the historically low oil price in 2020 undeniably affected the international activities of the Netherlands. The effects are most readily visible in the figures for the international trade in goods and services, and in the investment figures for the Netherlands, and these are therefore prominently featured in this publication wherever possible. In other statistics, such as those relating to multinational companies or value chains, these effects will only become clear when the 2020 reporting year becomes available, and possibly even later, when support measures are brought to an end.

Listed below are some of the main findings presented in this edition[2)]:

1) On 31 January 2020, the United Kingdom formally left the EU. A transitional period then came into effect, during which the EU and the UK negotiated the terms on which the two parties would continue their economic relationship in the future.
2) Chapter 1 comprises a dashboard with the key findings from chapters 2–8 and is not included here.

Chapter 2: Dutch earnings from international trade

- In 2019, the value added due to exports of goods and services amounted to €272bn, accounting for 33.5% of GDP.
- Most export earnings were generated by exports of domestically produced goods (€125bn), followed by exports of services (€112bn) and re-exports (€35bn).
- The Netherlands earned the most from exports of goods and services to Germany (€51bn), followed by the United Kingdom (€28bn) and Belgium (€24bn).
- Imported goods and services are utilised to enable exports of goods and services. The greater the amount of imports that is required to produce a certain good or provide a certain service, the lower the value added will be. Earnings per euro of exports vary from one export category to another. In 2019, the Netherlands earned the most for each euro – around 62 cents – from exports of services. For domestically produced exports, the figure was 54 cents per euro and for re-exports it was 13 cents.
- In 2019, the volume growth of Dutch GDP was 1.7%. Exports of goods and services contributed 0.7 percentage point, of which 0.6 percentage point came from exports of services and 0.1 percentage point from re-exports of goods.
- In 2019, 2.5 million full-time jobs were induced by exports of goods and services, of which 1.5 million were due to direct employment by exporting companies and 1 million to employment by companies that supply exporting companies. The 2.5 million full-time jobs induced by exports of goods and services represented 32% of the total number of full-time jobs in the Netherlands in 2019.
- Most export-induced employment comes from exporting goods and services to Germany (472 thousand full-time jobs), followed by the United Kingdom (264 thousand full-time jobs) and Belgium (216 thousand full-time jobs).

Chapter 3: Characteristics of the internationally active business economy

- In 2019, around one-third of the Dutch business economy (or approximately 442 thousand companies) was an active trader. This group of active traders comprised 67% one-way importers, 10% one-way exporters and 23% two-way traders.
- The number of companies that trade internationally differs significantly between industries: 52% of companies in the wholesale and retail sector traded outside the Netherlands in 2019, while the share of international traders in the construction industry is limited to 18%. Of the independent SMEs, 33% was engaged in international trade; for the large enterprises this share was 89%. Almost 5% of all companies that trade internationally are multinationals.
- In 2019, there were more than 445 thousand companies in the Dutch business economy that were internationally active. These are the active traders (442 thousand) as well as a small number of multinational companies that did not have any international trade in 2019 (3.1 thousand). Most companies are only active as importers, while nearly 33% of the internationally active companies also export goods and/or services.

- More than half of the companies in the internationally active business economy are active in the wholesale and retail sector or in specialised business services. Nearly 44% of the companies that operate internationally have been in existence for 10 years or longer.
- The group of companies that export goods or services abroad is extremely diverse and subject to strong dynamic forces. Every year there are new arrivals and there are companies which, voluntarily or out of necessity, close their doors, to international trade or completely. In 2019, nearly 18 thousand companies withdrew from the international market as exporters. Conversely, more than 32 thousand companies started exporting in 2019.
- A quarter of new exporters in 2019 (7.9 thousand companies) can be characterised as born global. This is a special type of new exporter: companies that start exporting goods and/or services within a year of being founded. Of the born globals, 36% are active in business services.
- There is hardly any difference between male and female entrepreneurs in terms of international trade activity. However, the median import and export value of companies headed by female entrepreneurs is lower than that of businesses led by male entrepreneurs.
- The vast majority (80%) of full-time equivalents (FTEs) in the internationally active business economy are employed by companies with a share of imports in relation to turnover of up to 25%.
- Employees at companies with a relatively high ratio of goods imports or exports to turnover (high import/export intensity) earn higher wages on average. This might be because companies that are more dependent on direct imports or exports employ older workers on average. Differences between sectors and levels of education and training, for example, could also play a role in explaining the wage gap.

Chapter 4: Composition of Dutch international trade

- The Netherlands exported goods worth close to €483bn in 2020 – a decrease of around 6.3% compared to 2019. This contraction took place mainly in Q2.
- The economy and international trade were severely affected by the COVID-19 pandemic. Lockdown measures interrupted production processes and international value chains, and hit consumer and business demand for goods and services. In addition, there were lower trade prices in 2020 due to a sharply lower oil price.
- Exports of mineral fuels saw the sharpest fall in 2020, down more than 34.4% from the previous year. Both lower demand for these products and lower oil prices played a role in this decline. If the exports of mineral fuels are excluded, the decline in goods export was 2.1% in 2020.
- Exports of chemical products increased by 1.6% in 2020. Exports of medical and pharmaceutical products in particular grew strongly.
- The value of domestic exports was more than €263bn in 2020, down 8.0% from 2019. Re-exports, with an export value of around €219bn, contracted by 4.3% compared to 2019.
- The larger contraction in domestic exports was due to the relatively large share of mineral fuels in this type of exports. Dutch-made transport equipment also experienced a major decline.
- In contrast, re-exports of chemical products grew by almost 10%. The COVID-19 pandemic, in particular, stimulated growth in medicines and other pharmaceutical products.

- Independent small and medium-sized enterprises (SMEs) accounted for nearly 20% of total goods exports and large companies for almost 52%. However, exports by independent SMEs did still increase in 2020, by 0.8%, while goods exports by large companies fell by around 5.7%.
- The Netherlands imported goods worth over €424bn in 2020, which was 7.8% less than in 2019. In the case of imports, too, the decline was mainly in mineral fuels, as well as in transport equipment (–15.8%); in 2020, considerably fewer lorries, passenger cars and parts were imported.
- However, imports of chemical products, food and beverages, as well as raw materials and natural products, increased in 2020. Machinery was still the most important import category in 2020.
- There was also a striking difference between the types of companies with regard to goods imports. The import value of independent SMEs increased slightly by about 0.6%, while that of large companies fell by 11.2% compared to 2019.
- The trade in services also had to contend with the COVID-19 pandemic and the accompanying economic downturn. Exports of services fell by 6.6% to almost €230bn in 2020. Travel was hit especially hard by the lockdowns and travel restrictions. There were noticeable consequences for travel intermediaries and transporters, too, with business services and transport services seeing their exports fall sharply compared to 2019.
- Exports of financial services and the use of intellectual property did increase in 2020. The growth in financial services was due to an increase in online payments. The rise in exports of intellectual property can be traced to streaming services of music, films and series.
- Imports of services totalled €209bn in 2020: a drop of 11.7% from the previous year. Once again, it was travel that depressed imports of services in 2020, while imports of financial services increased in relation to 2019.

Chapter 5: Geographical dimension of Dutch goods trade

- In 2020, the Dutch share of worldwide exports of goods was 3.1%. The Dutch share of global exports to the EU (including the United Kingdom) was 6.6%. For countries outside the EU, the Netherlands is considerably less important and its share of global exports to non-EU countries was 1.4% in 2020.
- In 2020, the Dutch share of worldwide imports was about 2.7% and its share of global imports from the EU was 4.5%. The Netherlands accounted for 2.2% of global imports from all non-EU countries.
- In 2020, the value of Dutch goods exports was around €483bn, which was 6% less than in 2019. The EU was by far the most important market, taking a 70% share of exports. Due to increasing globalisation, this share has been declining steadily for years. Exports within the EU in 2020 were 6% lower than in 2019, while exports to countries outside the EU decreased by 7%.
- Eight of the 10 most important export destinations belong to the EU and in 2020, most goods went to Germany (22% share) and Belgium (10% share). Exports to China and Poland grew, while exports to the other eight countries fell.

- Dutch imports of goods totalled €424bn in 2020 – a drop of 8% from 2019. More than half (53%) were imported from an EU country. The EU share of imports has remained virtually unchanged since 2015. The value of imports from EU member states decreased by 7% in 2020 compared to 2019. Imports from non-EU countries contracted by 9% in 2020.
- Among the top 10 importing countries are three from outside the EU: China, the United States and Russia. However, most goods come from the neighbouring countries Germany (18% share) and Belgium (10% share). Imports from China grew, while imports from the remaining nine countries decreased in 2020 compared to 2019.

Chapter 6: The Netherlands as part of global value chains

- In 2019, imports totalled €591bn, of which €426bn were goods and €165bn were services.
- Nearly half of the goods imported (€209bn) were intended for re-export. These imports for re-export were dominated by ICT products, such as machinery, computers and electronics.
- Intermediate imports totalled €278bn, the bulk of which (€100bn of goods and €83bn of services) were processed in the Netherlands in the production of goods and services that were subsequently exported.
- Petroleum and petroleum products (€25bn) and chemicals (€22bn) were the main imported goods used in export-oriented production processes. Germany (€18bn), Belgium (€12bn) and the United Kingdom (€7bn) were the principal countries of origin of goods that were incorporated into Dutch exports.
- Business services (€31bn) and fees (royalties) for the use of intellectual property (€18bn) made up the largest inputs of foreign services in exports. The United States (€13bn), the United Kingdom (€11bn) and Germany (€10bn) were the main countries of origin of services incorporated into Dutch exports.
- The Netherlands plays an important role in intraregional trade in the European Single Market. A large share of the imports that were incorporated into exports (€57.1bn, accounting for 34% of total imports for intermediate use) came from the EU-28 and went to another (or the same) EU-28 country.
- The high degree of relative dependence on imports from Europe incorporated in exports was especially true for industrial products (73%) and chemical products (71%). The EU-28 share in the Dutch import share of petroleum and petroleum products was limited and this can be explained by the large imports from other countries (such as Russia, Norway, Iraq and Nigeria).
- Imports from the United Kingdom were important (with 9% of total imports incorporated into Dutch exports). The Netherlands depended to an even higher degree on imports of services from the United Kingdom as a share of total services imports required to produce exports (12%), largely due to imports of business services.
- Outside Europe, the United States and China are shown to be important players for imports to the Netherlands processed by Dutch companies. However, despite the growing influence of China in Dutch trade figures in recent years, the Netherlands still required

imports from the United States worth more than three times the value (€16.5bn) of imports from China (€5.2bn) in order to produce its exports.
- In general, exports of services relied more on foreign services inputs than was the case for goods exports. More than three-quarters (77%) of the imports used involved services. An identical pattern can be seen in goods exports, as 76% of total imports required for the exports of goods involved goods.

Chapter 7: Foreign direct investment and multinationals

- In addition to international trade flows, direct investments are an important sign of the interdependence of the Dutch economy with other countries. By investing in foreign subsidiaries, companies can for instance benefit from an increase in scale or local production factors, but tax or legal motives may also be a motive. The Netherlands plays an important role worldwide in this respect, as shown by the establishment of a large number of Special Purpose Entities (SPEs) and holding companies.
- Globally, there was a decline in foreign direct investment (FDI) in 2020 due to the COVID-19 crisis. In the Netherlands, too, there was a clear dip in both inward and outward foreign direct investment. Inward FDI fell by 2% (excluding SPEs and holding companies). Outward FDI fell by 5% to €1,851bn (excluding SPEs and holding companies).
- Nevertheless, the Netherlands remained the third largest player worldwide in terms of outward FDI in 2020, after the United States and China. Inward FDI, excluding SPEs and holding companies, was around €1,391bn in 2020. This made the Netherlands the fourth largest recipient in 2020, after the United States, China and the United Kingdom.
- In 2018, 26.5 thousand multinational enterprises were active in the Dutch business economy, representing 2.2% of the Dutch business economy.
- Altogether, multinationals employed more than 2.4 million people in the Netherlands in 2018, accounting for 41% of total employment in the Dutch business economy. With this they offered 92 thousand more jobs than in the previous year. In 2018, Dutch multinationals employed around 324 thousand more people than foreign-owned multinationals.
- Multinationals in the Netherlands were mainly represented in the wholesale and retail sector in 2018: 39% of foreign-owned multinationals and 29% of multinationals that were under Dutch control. These multinationals in the wholesale and retail sector employed 694 thousand people in 2018.
- One in five foreign-owned multinationals in the Netherlands were US-owned (more than 3 thousand companies), followed at a considerable distance by Germany, with 2.3 thousand companies. The United States was therefore the largest foreign employer in the Dutch business economy in 2018, with around 218 thousand employees. Germany and France complete the top three largest foreign employers in the Dutch business economy.
- The number of multinational companies controlled by Turkey doubled between 2014 and 2018, reaching 150 companies. This enabled Turkey to climb from 22nd to 17th place. Many Turkish companies choose to establish a branch in the Netherlands in order to expand in the European Union.
- Germany had the most companies under Dutch control in 2018, at almost 2.6 thousand, followed by the United States, with 1,865 subsidiaries of Dutch multinationals. Compared to 2017, the number of Dutch subsidiaries grew the strongest in the United States

(+35 subsidiaries). The number of Dutch subsidiaries operating in China also grew slightly (+10).

- The number of subsidiaries of Dutch multinationals in the ASEAN-5 region rose again in 2018 (by 20%), to 805. The Gulf region also saw a slight increase (+10) in the number of Dutch subsidiaries in 2018, to 275 companies. In North Africa, there was no rise in the number of Dutch subsidiaries in 2018.
- Many Dutch subsidiaries in the ASEAN-5 region are registered in Singapore, and between 2010 and 2018 this number increased by 110 to 385 companies. A notable decline was in Thailand, where the number of companies under Dutch control fell by about 30 compared to 2010.
- In 2018, most Dutch companies in the Gulf region were located in the UAE (205). The number of Dutch subsidiaries in North Africa was stable at 95.

Chapter 8: International trade and transit flows; emissions to air on Dutch territory

- Between 2007 and 2019, the actual CO_2 emissions associated with cross-border trade and transit flows increased by 3.4%. This increases the share within total mobile sources emissions to 23.1%. The increase is mainly due to a rise in CO_2 emissions in the flow of imports for re-export plus re-exports. The flow of goods imported for domestic use plus exports of domestically produced goods and the flow of goods for transit trade made a relatively smaller contribution to the additional CO_2 emissions over this 13-year period.
- For the road transport mode, CO_2 emissions associated with cross-border trade and transit flows increased by 6.4% between 2007 and 2019. This brings the share of road transport in total mobile sources emissions to 7.0%: an increase of 0.6 percentage point.
- Maritime transport, with a share of more than 45.2% in mobile source emissions, is responsible for the largest contribution of nitrogen oxides related to the transport of cross-border trade and transit flows to, via and from the Netherlands. However, between 2007 and 2019, actual NOx emissions from maritime transport related to cross-border trade and transit flows fell by 12.5%.
- Between 2007 and 2019, inland shipping was the only mode of transport that had an increase in the actual particulate matter emissions (PM10) related to cross-border trade and transit. This PM10 emission increased by 15.5%. With a share of 2.8% in mobile source emissions, inland shipping makes a limited contribution of PM10 emissions in the transport of cross-border trade and transit flows to, via and from the Netherlands.
- Given the state of the technology used in the various means of transport deployed, the emission factor for cross-border transport and emissions to air on Dutch territory has improved for all three types of emissions. Most in the case of PM10 emissions. Compared to 2007, 157.3% more international goods could be transported internationally for each kilogram of PM10 emissions in 2019. For NOx emissions, 31.7% more international goods could be transported for each kilogram of nitrogen oxide emissions compared to the year 2007. In the case of CO_2, the increase was limited to 4.7%. In 2019, it was possible to

transport 112 kilogram of cross-border goods flows for each kilogram of carbon dioxide emissions compared to 107 kilogram in 2007.

– For the individual modes of transport, the CO_2 emission factor for cross-border transport and emissions to air on Dutch territory declined the most for road transport. In 2019, it was possible to transport 72 kilograms of goods across borders for each kilogram of carbon dioxide emissions compared to 79 kilogram in 2007. This represents a decline of 8.8%. The CO_2 emission factor for cross-border goods freight transport by air did not improve either, at 20 kilogram of goods per kilogram of CO_2 emissions. An improvement can be seen in the CO_2 emission factor for goods transported across borders by sea vessels. The factor increased by 14.6% in 13 years.

Dutch Trade in Facts and Figures 2021: Exports, imports and investment – An introduction

Dutch Trade in Facts and Figures 2021: Exports, imports and investment is a publication that has been developed by the Expertise Centre for Globalisation at Statistics Netherlands (CBS) and was commissioned by the Dutch Ministry of Foreign Affairs. It is a publication with annually recurring key economic figures and indicators in the area of the internationalisation of the Dutch economy and business economy. The publication and the accompanying data tables contain many time series, primarily at the upper macro or meso level, with a number of topics specifically geared towards the priorities that have been set in the trade agenda of the Dutch government.

Contents of 2021 edition

For the Netherlands, with its open economy, international trade is of crucial importance. Many Dutch companies, both large and small, do business in other countries. Other companies primarily supply exporting companies or multinationals, without being internationally active themselves. In addition, some Dutch companies have offices in multiple countries, or they are controlled by a foreign company, and they are therefore directly or indirectly part of global value chains. All these aspects of international trade and investment are addressed in the publication Dutch Trade in Facts and Figures 2021: Exports, imports and investment.

This publication consists of seven descriptive chapters, illustrated with many figures, infographics and tables. These chapters present the key trends, figures and developments. The complete datasets that form the basis of these chapters are so extensive that they have not been included in full here; they can be accessed and downloaded from the home page of this publication. The publication begins with a dashboard (Chapter 1) that provides an overview of the key findings from the other chapters and forms a common thread running throughout the publication. This common thread has the following structure:

- How much is earned through Dutch exports (Chapter 2)?
- Who is involved in international trade (Chapter 3)?
- What and how much is traded (Chapter 4)?
- With whom are goods traded (Chapter 5)?
- How do goods and services from the rest of the world work their way through the Netherlands (Chapter 6)?

– How much does the Netherlands invest internationally and how much do other countries invest in the Netherlands (Chapter 7)?
– What is the level of emissions to air associated with the international trade and transit flows (Chapter 8)?

What has changed in relation to the 2020 edition?

A number of adjustments have been made in relation to the 2020 edition. Among other things, there is a stronger focus on Dutch imports. Chapter 3 devotes more attention to the number of jobs at companies with imports (or exports) and focuses on the professional characteristics of the people who hold those positions. A distinction is also made according to the extent to which a company is dependent on imports. Chapter 6 further explores the role and use of Dutch imports. Among other things, we examine what happens to the goods and services that enter the Netherlands. These imports can have four destinations: (1) imports for direct consumption in the Netherlands; (2) imports for production and services in the Netherlands, for consumption in the Netherlands; (3) imports for production and services in the Netherlands, for export; and (4) imports directly destined for export abroad. A substantial share of these imported goods and services turns out to be essential for companies to be able to export competitively.

Compared to the 2020 edition, Chapter 2 now also specifies the earnings from exports of goods and services by destination. This makes it clear which exports, and to which country, earn the most for the Netherlands, and whether these earnings come from domestic exports, re-exports or export of services. Also new in Chapter 2 is a more detailed specification of the contribution of exports to GDP growth in the Netherlands. This shows that, with the exception of 2017, exports of goods and services between 2016 and 2019 contributed less to the volume growth of GDP than did domestic expenditure.

In Chapter 4, the section on carry-along trade is omitted. In its place, there is a greater focus on the concentration of the international trade in goods and services.

Finally, a seventh and completely new chapter has been added to this publication. In this chapter, we illustrate how emissions to air of CO_2, nitrogen oxides and particulate matter are linked with international goods flows into, through or out of the Netherlands. The growth of international trade and transit flows, and their impact on the environment, are a matter of growing concern. It is obvious that growth in the trade in goods goes hand-in-hand with strong growth in transport by ship, plane, train and lorry of semi-finished goods and end products, which is accompanied by emissions of all kinds of harmful substances. The focus in this additional chapter is on actual emissions to air from mobile sources in connection with cross-border trade and transit flows on Dutch territory. Various statistics are linked for this purpose: (1) import, export and transit trade statistics; (2) statistics on the international trade in goods; and (3) statistics on actual emissions to air.

Actual figures, including trade: corona box

Due to the emergency measures imposed to contain the spread of the coronavirus, many economies contracted at an unprecedented rate in 2020. According to IMF estimates, the global economy shrank by 3.3% in 2020 and Europe recorded an economic contraction of 5.8% (IMF, 2021). When a shock occurs, as in the case of a pandemic, it not only affects the traders who are directly involved but also everyone who is connected through production chains. This also applies to Dutch companies; they too have increasingly become part of global production processes and more dependent on foreign suppliers and buyers. CBS calculations show that in 2020, Dutch GDP contracted by 3.8% compared to a year earlier (CBS, 2021a; CBS, 2021b).

Many of the trends in this publication concern the years up to and including 2019. However, due to the coronavirus pandemic, 2020 and – to a certain extent – also 2021 were atypical years. To take account of this, some indicators for 2020 and, if possible, the first half of 2021 are included in the corona box below. These include economic growth figures; the development of the international trade value for each month; the import value of face masks up to and including Q2 2021; figures on developments with regard to air traffic; the importance of the contribution of exports to GDP and employment; and the extent to which Dutch companies, and specifically international goods traders, made use of the Dutch government's coronavirus support and recovery package. Chapters 4, 5 and 7 also cover Dutch trade and investments at the time of the coronavirus crisis.

Current trade and investment figures: Brexit

The coronavirus crisis is hitting both our economy and the entire global economy hard. In addition, the Netherlands is facing other challenges (Van Der Heijden et al., 2021): new trade barriers due to the departure of the UK from the European Union (Brexit); the climate crisis; the sanctions imposed by the European Union on China and Russia, among others; and the pressure on the balance of power between the EU, the economic giant China, and the world's largest economy, the United States.

At the time of writing, the most recent developments in Dutch-British relations – as a consequence of Brexit – are still largely limited to trade figures up to and including Q1 2021. In Chapter 5, there is greater emphasis on Dutch trade with the United Kingdom (UK), as a result of Brexit. Chapter 7 also briefly discusses the impact of Brexit on the direct investment relationship with the UK. At the time of writing, the investment figures were available up to the end of 2020.

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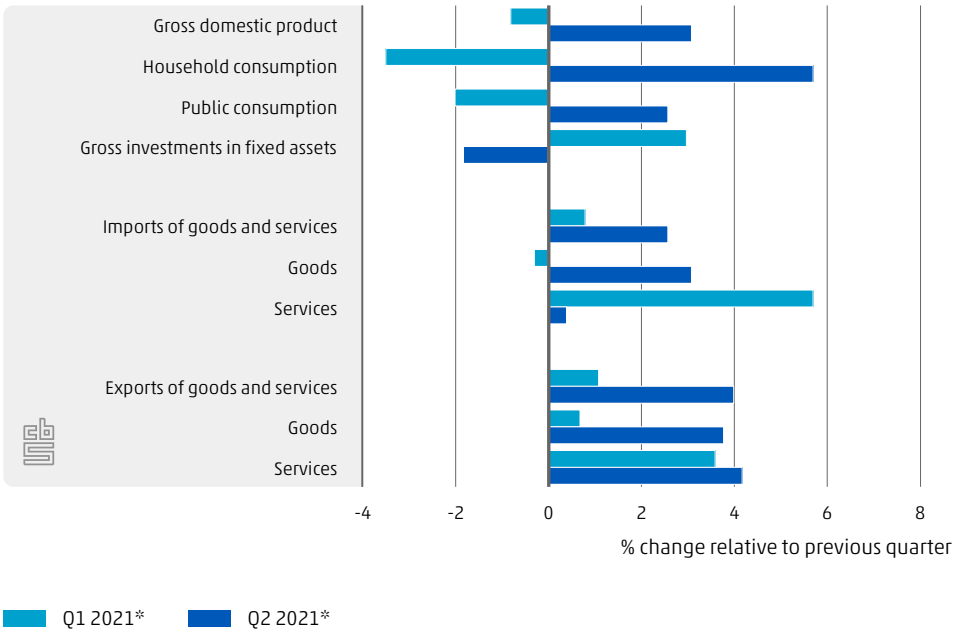
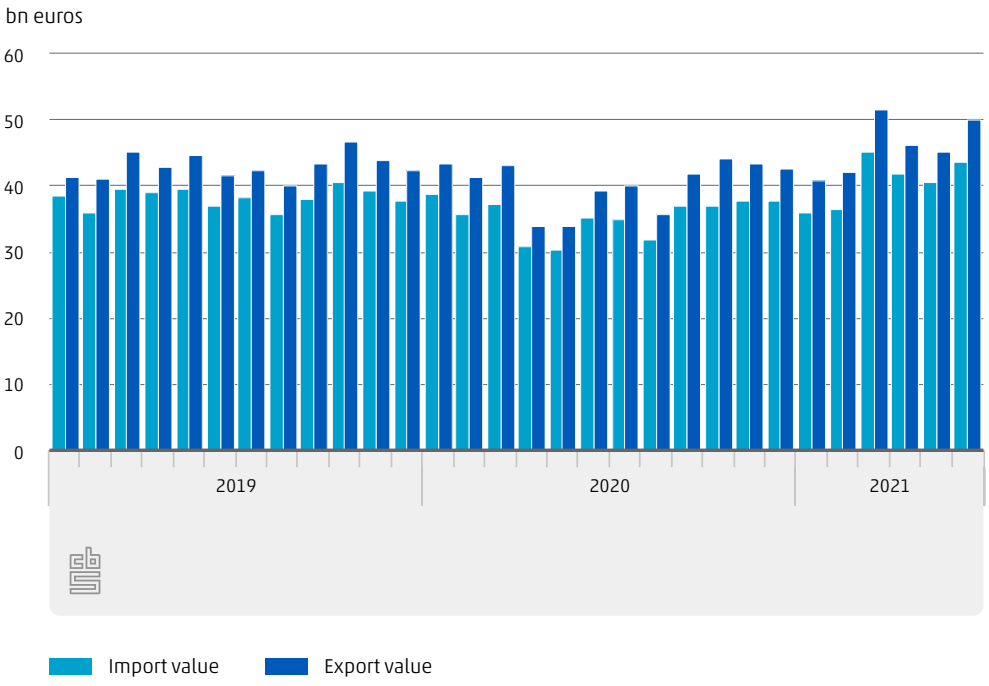
Corona box

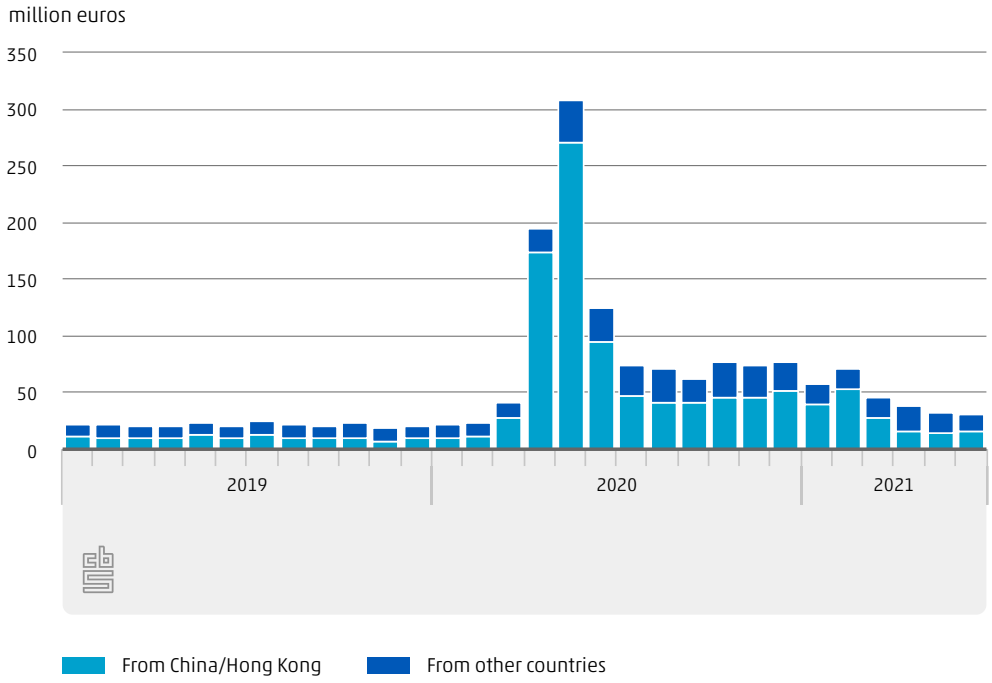
Development of GDP and expenditure by category (volume)



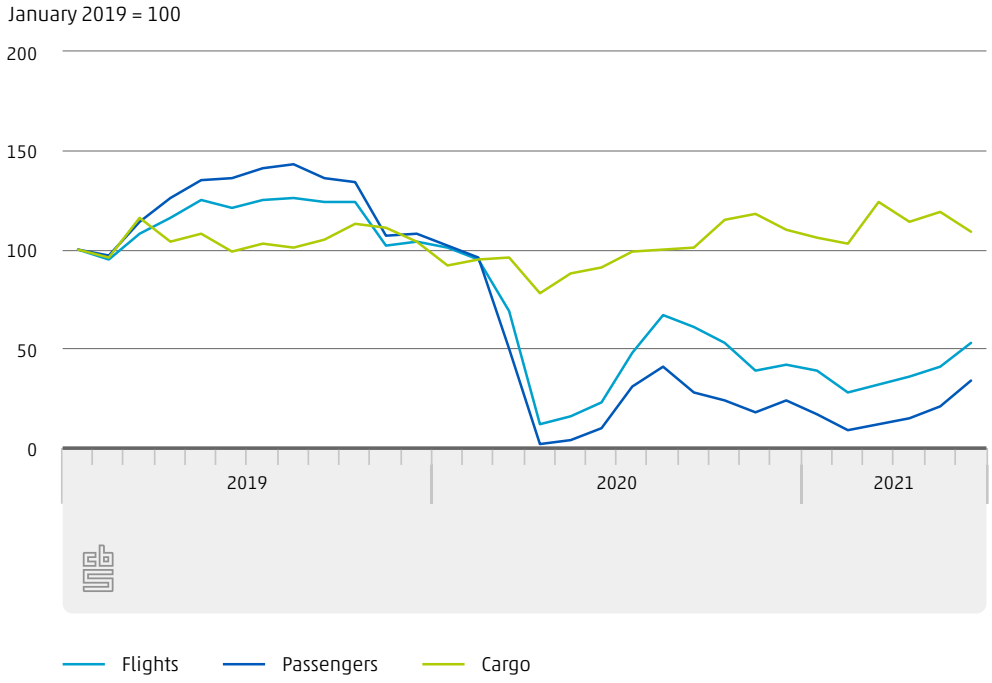
Import and export value of goods



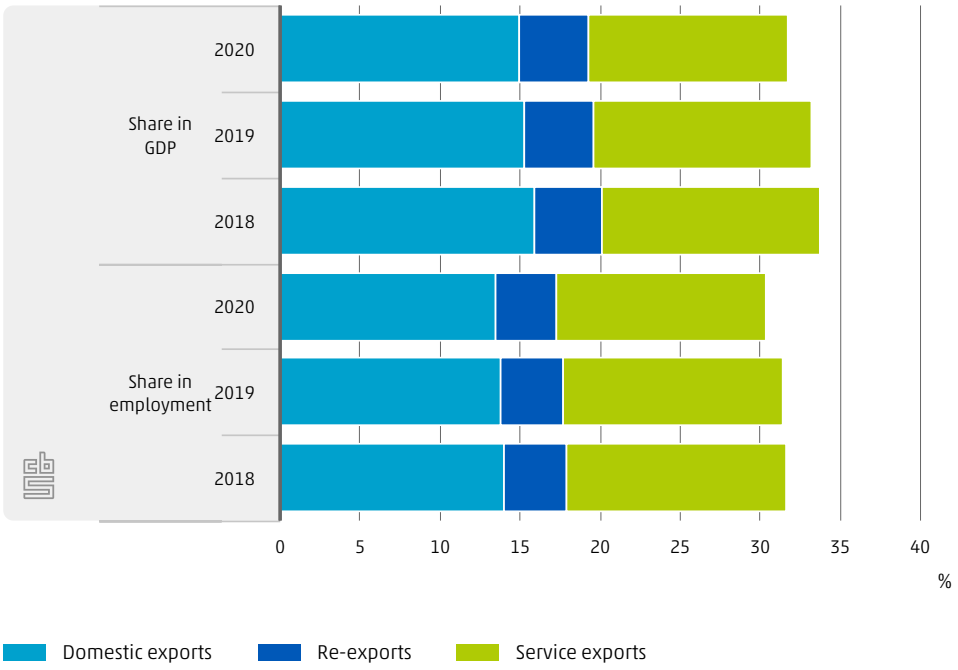
Import value of face masks



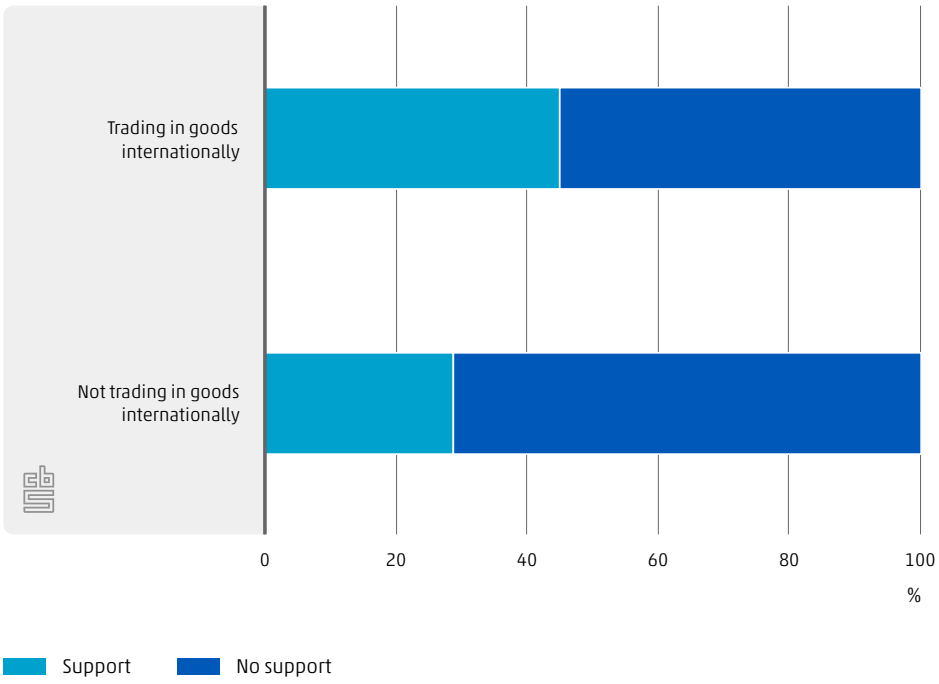
Air traffic to and from the five Dutch airports



Share of exports in GDP and employment



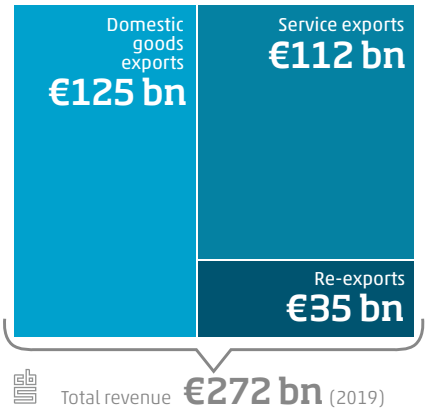
Use of COVID-19 support measures in the Dutch business economy, 2020

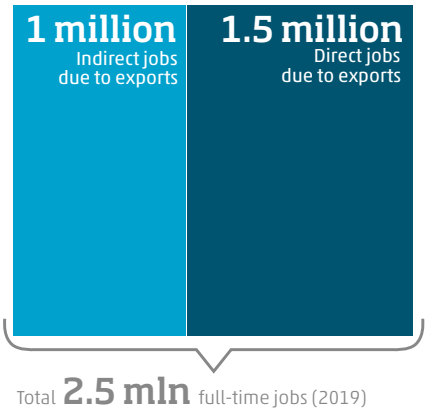


Supported enterprises are those that used at least one government support measure in connection with COVID-19. This chart includes the use of the following support measures: allowance for wage costs (NOW), allowance for fixed costs (TOGS and TVL), temporary bridging measure for self-employed persons (Tozo) and tax deferral.

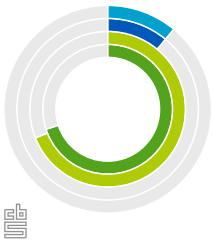
1 Dashboard

Chapter 2
Dutch export earnings





Chapter 3
Dutch international traders

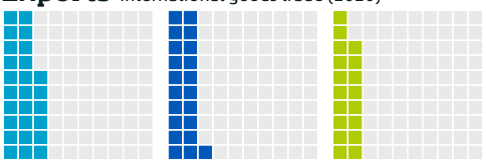


Exporters:
- 11% of all enterprises
- 11% of SMEs
- 69% of large enterprises
- 70% of multinationals

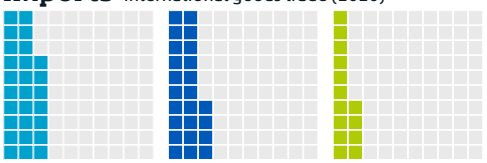
Importers:
- 31% of all enterprises
- 30% of SMEs
- 85% of large enterprises
- 84% of multinationals

Chapter 4
Internationally traded goods and services

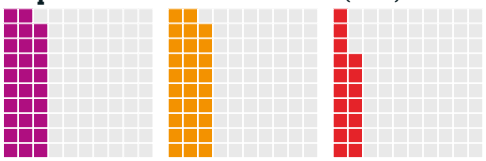
Exports International goods trade (2020)



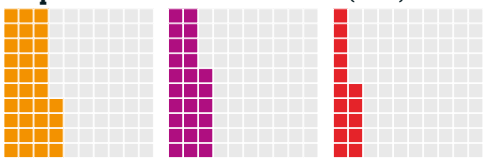
Imports International goods trade (2020)



Exports International service trade (2020)

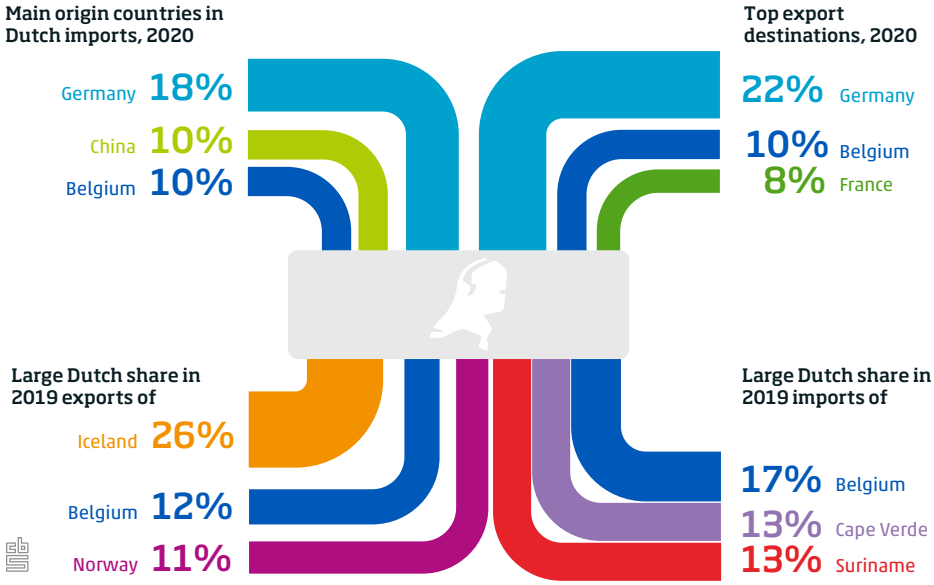


Imports International service trade (2020)



Chapter 5

Top trading partners in goods trade



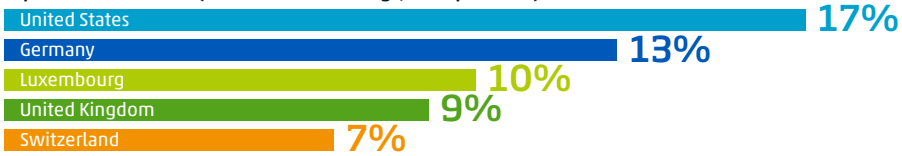
Chapter 6

Origin of imports needed for Dutch export production (2019)

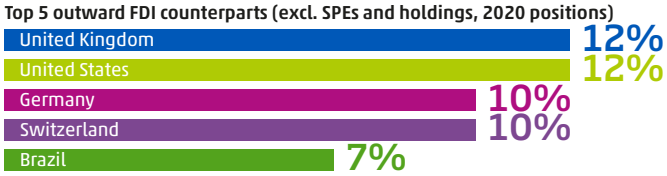
Chapter 7

International investments

Top 5 inward investors (excl. SPEs and holdings, 2020 positions)



Top 5 outward FDI counterparts (excl. SPEs and holdings, 2020 positions)

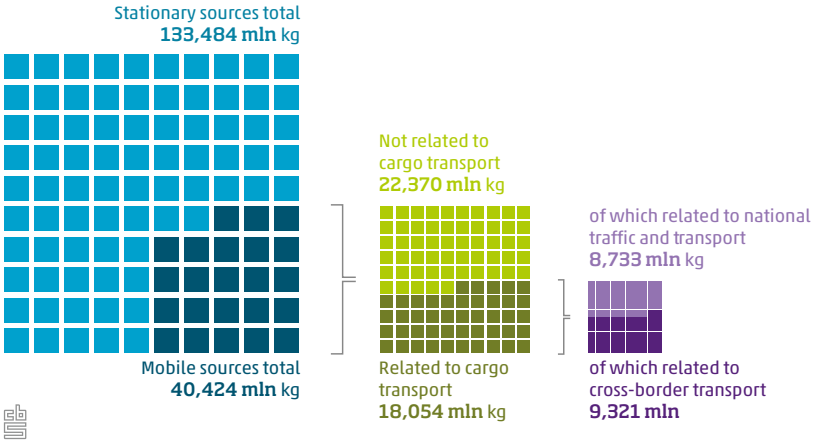


Source: DNB.

Chapter 8

Carbon emissions related to international transport on Dutch territory (2019)

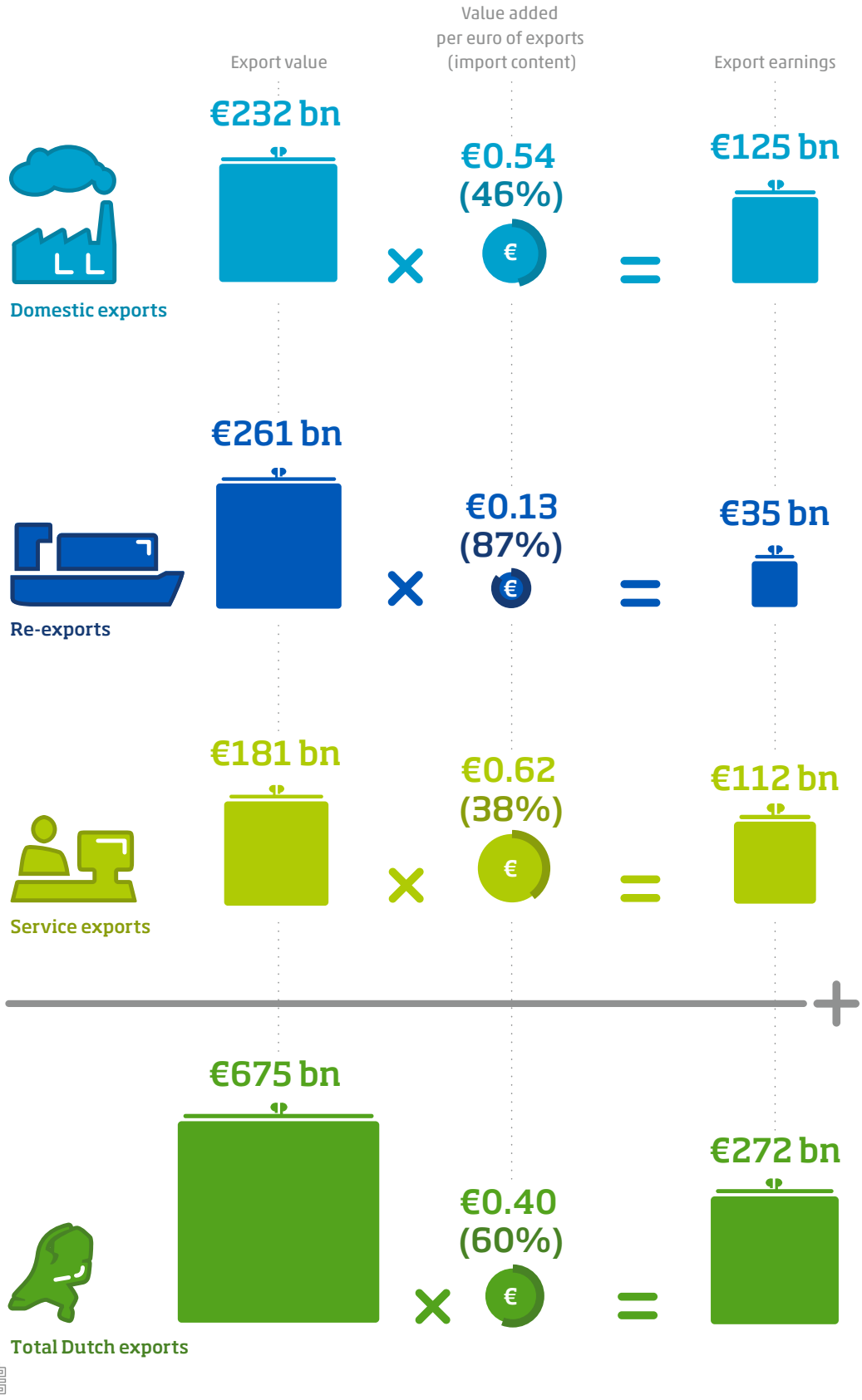
Carbon emissions on Dutch territory, 2019 (173,908 mln kg)



2 Dutch earnings from international trade

Authors: Tom Notten, Leen Prenen, Khee Fung Wong

Dutch export earnings (2019)



International trade in goods and services is crucial to a small, open economy such as that of the Netherlands. No less than one-third of Dutch GDP is earned from exports of goods and services. Exporting goods and services also generates 2.5 million full-time jobs for the Dutch population, both directly through employment with exporting companies and indirectly at suppliers to those exporters. How much are domestic exports, re-exports and service exports worth, and what is the value of the goods and services that Dutch companies have imported to produce these exports? How much value added and employment does the Netherlands gain from exports and what is the trend shown by these figures? How do value added and employment vary between the different sectors? Which destination countries provide the Netherlands with the highest export earnings and which export destination is associated with the largest number of full-time equivalent jobs?

2.1 Key findings

Previous editions of Dutch Trade in Facts and Figures have shown that exports of goods and services are an important source of income for the Dutch economy. In 2019[1)], Dutch exports of goods and services totalled €675.2 billion.[2)] This is nearly €20 billion more than in 2018 – a rise of 3%. Nevertheless, growth continued to slow in 2019 after gross export value rose by 9.3% in 2017 and 6.5% in 2018. Geopolitical uncertainties in 2019, such as those resulting from Brexit and the trade conflict between the United States and China, were responsible for a continuing slowdown in the growth of economic activities in the global economy (OECD, 2019). Dutch companies, which are relatively highly dependent on international trade (see for example Lammertsma & Notten, 2019; Aerts et al., 2020), also feel the effects of such global shocks, both in their trade with those countries and through the national and global value chains with which they are connected. However, re-exports and exports of services did enjoy strong growth of 6.5% and 6.3% respectively. In contrast, domestic goods exports saw a 2.3% decline, which can be mainly attributed to a sharp fall in exports of electrotechnical machinery and equipment (Mares, 2020).

In 2019, the Dutch economy earned more than €271.7 billion in value added[3)] from exports of goods and services, which was a 4% rise from 2018. Export earnings in 2019 accounted for 33.5% of gross domestic product (GDP) that year. The contribution made by export earnings was therefore approximately one-third of GDP, just as in recent years.

Manufacturing generated the highest value added due to exports (mainly from domestic exports). Specifically, this concerned the food, beverages and tobacco industry, the machinery industry and the chemical industry. After manufacturing, it is the (wholesale) trade sector that earns the most from exports, followed by the business services sector (primarily through exports of services). The composition of value added by sector is therefore virtually

1) The figures for 2015, 2016, 2017 and 2018 are final, while those for 2019 are provisional. The 2019 figures in the corona box for value added and employment resulting from exports are final and therefore deviate from the 2019 figures that are presented in this chapter.
2) The figures presented in this chapter are based on figures of the National Accounts. In Chapters 4 and 5, figures from the International Trade in Goods source statistics are used. The source statistics use different concepts from those of the National Accounts. For example, source statistics are based on cross-border trade in goods, while economic ownership is leading for the National Accounts. Integration into the National Accounts results in additional differences. In consequence, the figures in this chapter cannot be compared directly with those in Chapters 4 and 5. For more information on these differences, see 'De in- en uitvoercijfers van het CBS' (CBS, 2015).
3) When we refer in this chapter to value added related to exports, we mean the sum of value added and the balance of product-related taxes and subsidies linked to exports. This is slightly broader than the usual value added created by Dutch industries, and it has the advantage of enabling comparison with GDP.

identical to that of 2018, with a few key exceptions. Compared to 2018, mining and quarrying earned substantially less in 2019 from exports of goods and services. The strong growth of service exports and re-exports ensured a substantial increase in export earnings from business services and the wholesale trade sector. Manufacturing also earned more from exports in 2019 than a year earlier. The machinery industry and the pharmaceutical industry benefited from a sharp rise in domestic exports, but the electrotechnical industry, the motor vehicle and trailer industry, the chemical industry and the basic metal industry earned considerably less from exports in 2019 than in 2018.

The bulk of the above-mentioned value added came from exports to Germany, followed a long way behind by earnings from exports to the United Kingdom, Belgium, France and the United States. For most export destinations, the Netherlands earned more from exports of goods than from exports of services. Important exceptions to this pattern are exports to the United States, the United Kingdom, Switzerland and Ireland, where exports of services contributed a major share of Dutch earnings.

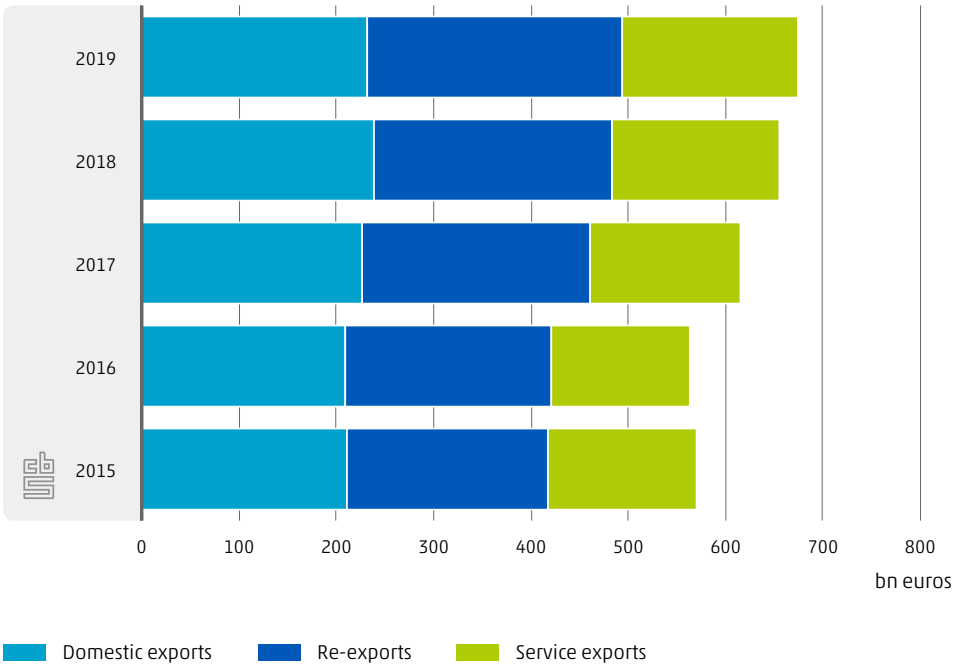
In 2019, the Netherlands imported goods and services worth some €590.7 billion (a rise of 3% relative to the previous year). The bulk of these imports, some 68%, concerned imports used to produce Dutch exports. This can refer to imports for re-export or imports that are processed further to produce goods and services for other countries. In 2019, less than a third of imported goods and services were destined for domestic final demand (mainly domestic consumption and investments).

In 2019, nearly 2.5 million full-time equivalent jobs in the Netherlands were directly or indirectly connected to exports of goods and services, which represents nearly 32% of total Dutch labour volume. As in 2018, exports by the business services sector provided the most employment, followed by manufacturing, trade and transport, and information services. Of the total of 2.5 million FTEs, 1.5 million were in sectors that export goods and services, and 1.0 million with suppliers to the exporting companies. Driven by the strong increase in exports of services, direct employment as a result of exports grew by 4.5% – or 65,000 FTEs – compared to 2018. Indirect employment due to exports remained virtually unchanged relative to 2018.

2.2 Contribution of exports to GDP

In 2019, the Netherlands exported €675.2 billion worth of goods and services. Figure 2.2.1 shows that this gross export value is the sum of exports of goods produced in the Netherlands, re-exports and exports of services. Re-exports consist of goods imported by the Netherlands and then re-exported virtually without processing, with the goods having been under Dutch ownership. Compared to 2018, gross export value grew by €19.7 billion, which was a rise of 3%. This means that growth slowed further in 2019, as gross export value increased by 9.3% in 2017 and 6.5% in 2018.

2.2.1 Gross export value per export category, 2015-2019



Re-exports have highest gross export value

The bulk of gross export value came from exports of goods, €232.5 billion of which consisted of domestic exports and €261.5 billion of re-exports.[4] Exports of services represented a smaller share, with a value of €181.2 billion.[5] The value of re-exports grew by 6.5% and that of service exports rose by 6.3%, while the gross export value of domestic exports shrank by 2.3%. According to Mares (2020), this was mainly because exports of electrotechnical machinery and equipment (for example consumer electronics) were lower than in 2018. However, there was an increase in Dutch exports of machinery and equipment, and chemical and petroleum products in 2019. Re-exports also experienced the strongest medium-term growth. Between 2015 and 2019, re-exports increased by an average of 6.1% annually, exports of services by an average of 4.5% per year and domestic goods exports by 2.3% on average.

Service exports are most lucrative

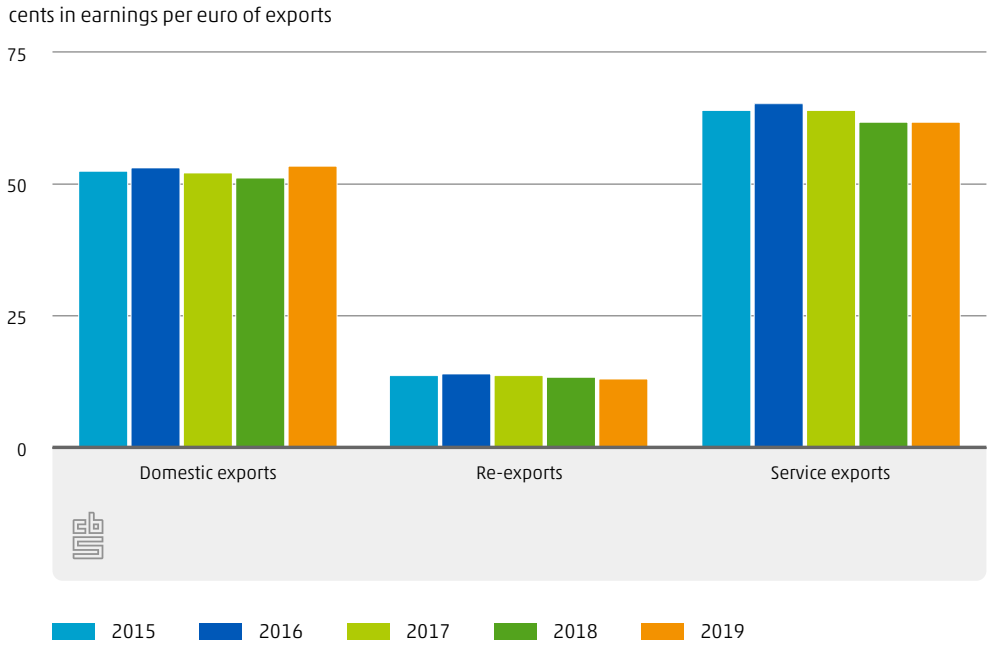
The Netherlands plays an active part in global value chains, which is reflected in a high degree of dependence on inputs from abroad in order to produce its own goods and services for export (see for example Lammertsma & Notten, 2019; Aerts et al., 2020). Examples are

4) Elsewhere in this publication, for example in Chapters 4 and 5, it is indicated that re-exports account for slightly less than half of goods exports. The figures presented in this chapter are based on figures of the National Accounts. The ownership criterion is central to the National Accounts, meaning that certain transactions abroad can be counted as Dutch imports and exports even if the traded goods have not physically been in the Netherlands. Partly because of this, the volume of re-exports in this chapter and in Chapter 6 is larger than the volume of domestic exports.

5) The figures referred to in this chapter on exports of services are based on the National Accounts. Chapter 4 of this publication also provides information on service exports, from the perspective of the source statistics. These two figures differ. On the one hand there are inconsistencies due to the way in which the National Accounts and the source statistics have to deal with Special Purpose Entities. On the other hand the National Accounts compare service trade data with other source statistics, and any inconsistencies between the sources can lead to adjustments to the source data in order to provide a consistent picture of the economy as a whole. The focus on continuity in the National Accounts also leads to divergences in level between the source statistics and the National Accounts. This will be reviewed in a revision year.

raw materials and semi-finished goods that are incorporated into Dutch export products, the imports needed for re-exports, and foreign service providers that facilitate Dutch exports. To determine what the Netherlands earns from exports, consumption of imported goods and services required must be deducted from gross export value. On average, the Netherlands earned 40 cents for every euro of exports of goods and services in 2019. However, earnings per euro of exports vary significantly from one export category to another (Figure 2.2.2). In 2019, the Netherlands earned the most for each euro – around 62 cents – from exports of services. For domestic exports, the figure was 54 cents per euro and for re-exports it was 13 cents. For re-exports, in addition to the imported goods (which leave the country virtually unchanged), the imported goods and services that were used to facilitate re-exports also have to be deducted from the re-export value in order to calculate earnings per euro of exports. Earnings per euro of exports remained relatively stable over the years for all types of exports.

2.2.2 Earnings per euro of exports by export category, 2015- 2019



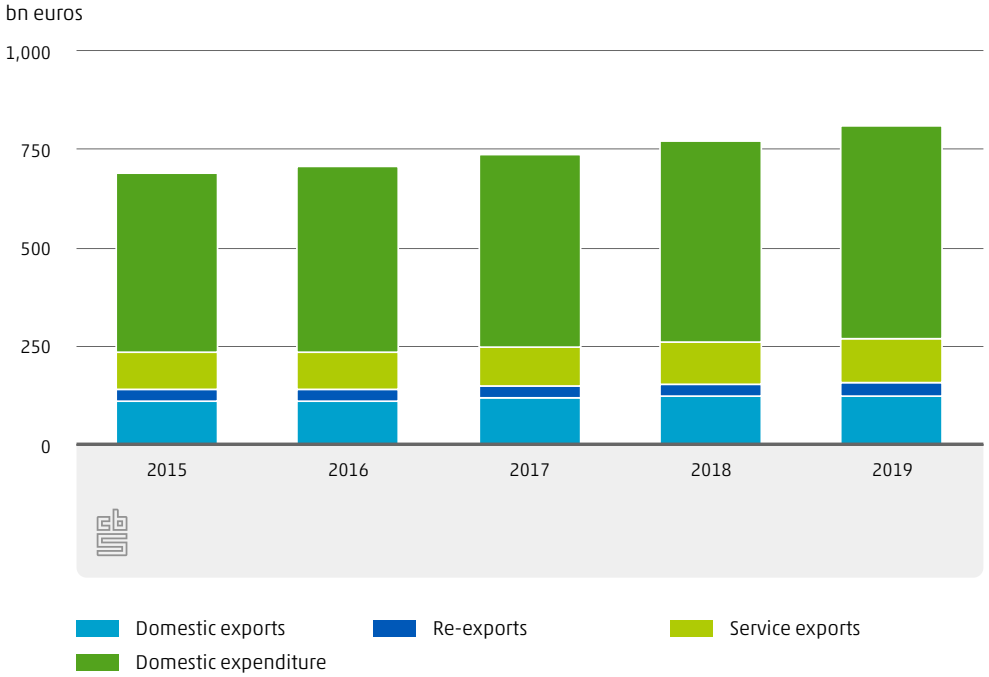
€271.7 billion earned in the Netherlands from exports of goods and services in 2019

Earnings from exports stable over recent years at around one-third of GDP

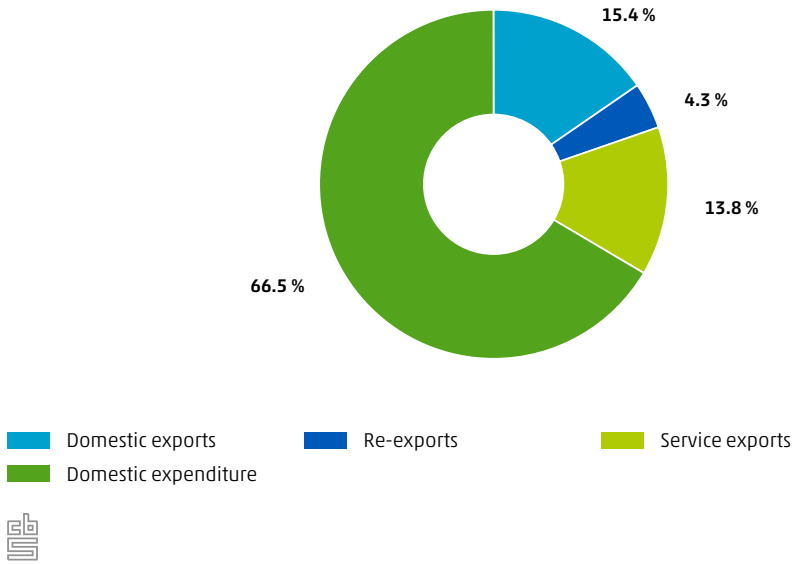
After deduction of processed imported goods and services, Dutch exports of goods and services amounted to €271.7 billion in 2019, up 4% from 2018 (Figure 2.2.3). Exports of goods and services therefore accounted for 33.5% of GDP (Figure 2.2.4). In recent years, the share of goods and service exports as a proportion of GDP has remained fairly constant at around one-third (Lammertsma & Notten, 2019; Aerts et al., 2020). According to Figure 2.2.3, domestic goods exports brought in the most revenue at €124.7 billion, followed by exports of services at €112.1 billion and re-exports at €34.8 billion.

€124.7 billion earned in the Netherlands from domestic exports in 2019

2.2.3 Earnings per expenditure category, 2015-2019



2.2.4 Share of expenditure categories (including exports) in GDP, 2019



Manufacturing earns the most from exports

Earnings from exports vary from one sector to another. Figure 2.2.5 shows that manufacturing generated the highest value added, at €65.3 billion, as a result of exports. The major part of this value added came from domestic goods exports. By exporting self-produced goods or by supplying industries that subsequently export domestically produced goods, manufacturing created €56.4 billion of value added. Manufacturing earned an additional €7.1 billion from exporting or contributing to exports of services, including support services. Most of the value added resulting from manufacturing exports is created by the food, beverages and tobacco industry (€12.6 billion), followed by the chemical industry (€11.0 billion) and the machinery industry (€10.5 billion) (Figure 2.2.6). Manufacturing industries that generate more value added through domestic expenditure (for example purchases by Dutch consumers) than through exports are the building materials industry, the furniture industry and the timber, paper and printing industry.

Manufacturing earned around €2.3 billion more from exports in 2019 than in 2018, mainly through domestic goods exports. This was primarily due to higher earnings in the machinery industry (€0.9 billion more than in 2018) and the pharmaceutical industry (€0.4 billion more than in 2018). In contrast, the electrotechnical industry, the motor vehicle and trailer industry, the chemical industry and the basic metal industry earned less from exports in 2019 than in 2018. This may be related to the sharp contraction in German manufacturing in 2019. German manufacturing declined because it is strongly integrated into international production chains which, according to OECD figures, are also supplied by the above-mentioned manufacturing industries that experienced declining export earnings in 2019 (CBS, 2019a; Cremers et al., 2020).

Nearly three-quarters of value added from manufacturing is due to exports

No less than 74% of total value added from manufacturing came from exports of goods and services. Only mining and quarrying (85%), and agriculture, forestry and fishing (78%) create relatively more value added as a result of exports. Exports by companies active in mining and quarrying earned €3.8 billion in 2019 and companies in agriculture, forestry and fishing earned €12.5 billion. The export earnings of these two sectors are also dominated by domestic exports.

Half of value added in trade is from exports

After manufacturing, the trade sector (mainly the wholesale trade) generates the most value added from exports, at €50.6 billion. The wholesale trade sector is active not only as an exporter, but also as an important supplier for exporting companies in the supply chains of other industries. It is also the only sector in which re-exports play a major role in its total earnings. Exports of services play a key role in the export earnings of business services, transportation and storage (transport and logistics), and information and communication.

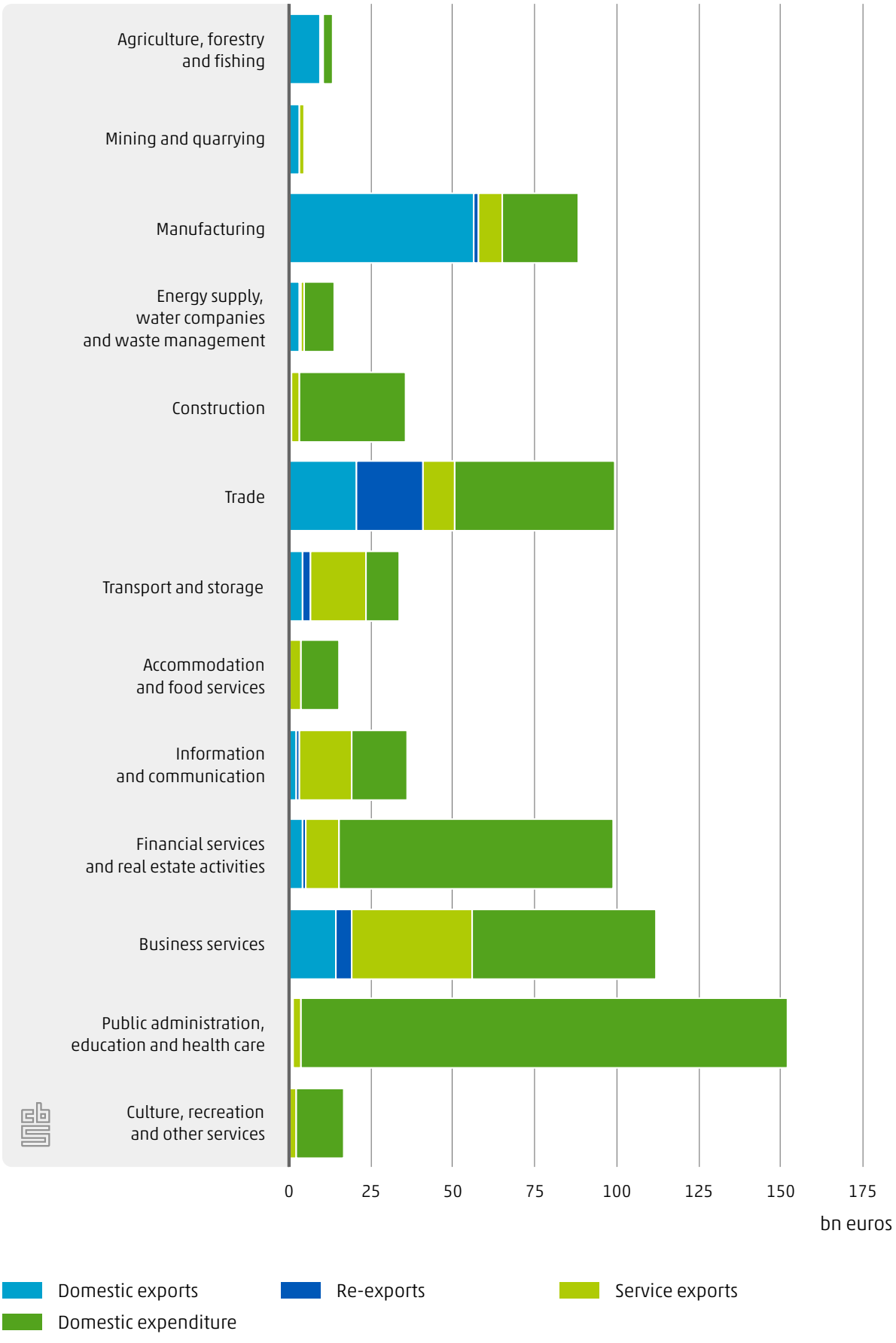
Business services and wholesale trade are drivers of growth

The composition of value added by sector in 2019 (Figure 2.2.5) appears to be largely in line with the picture from 2018 (Aerts et al., 2020), with a few exceptions. For example, mining and quarrying earned over €1.7 billion less (–27%) from exports of goods and services than in 2018 due to the scaling back of natural gas extraction (CBS, 2019b; CBS, 2020). This involved a sharp fall in the value added associated with domestic goods exports. Driven by the strong increase in exports of services, the business services sector earned over €3.1 billion more in 2019 than it did a year earlier. Furthermore, service exports and re-exports proved to be the drivers of the growth in earnings from exports for wholesale trade. This sector earned over €2.6 billion more from exports in 2019 than in 2018.

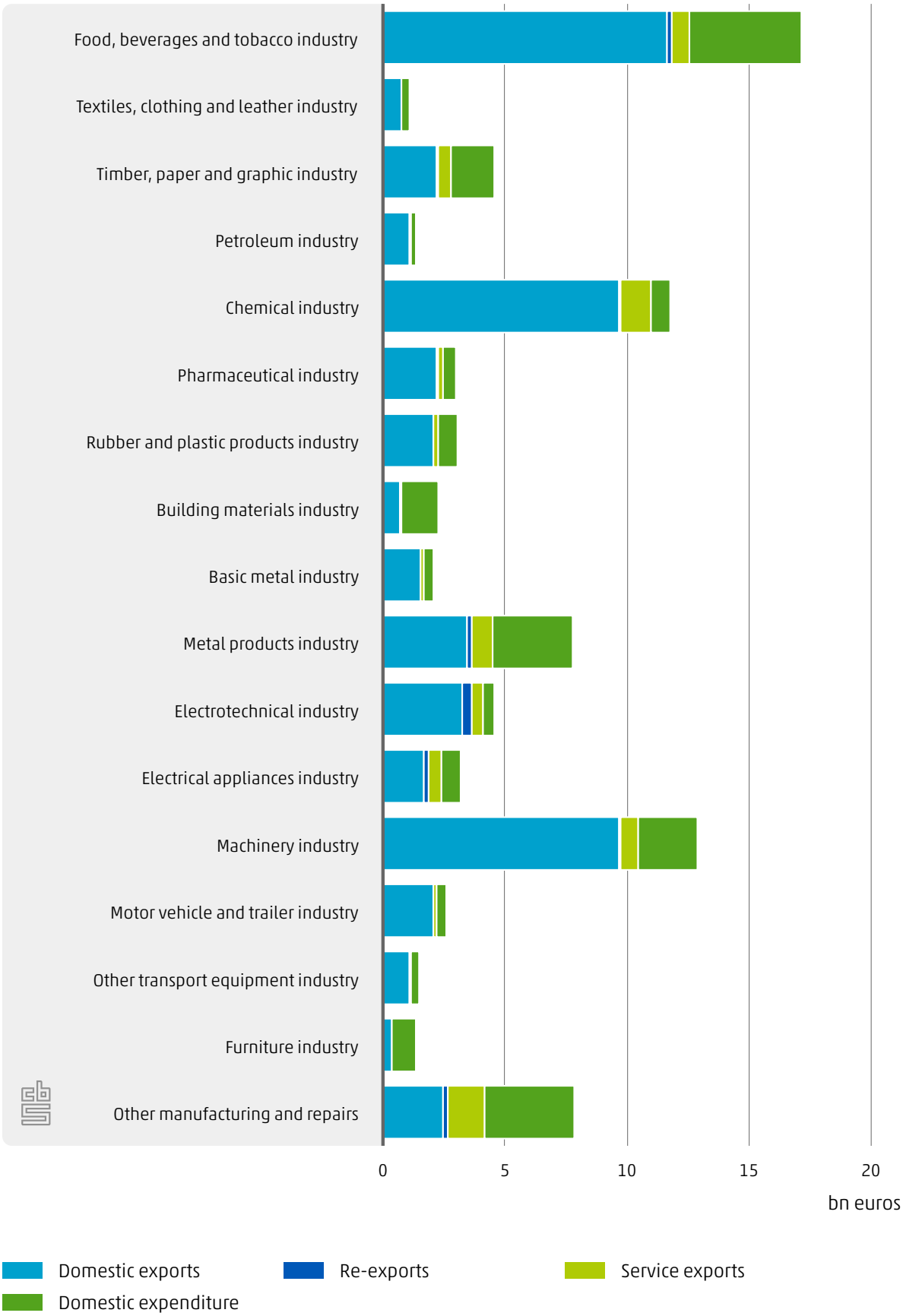
Accommodation and food services, government, construction and financial services earn more from domestic market

Sectors such as accommodation and food services, construction, financial services and real estate focus mainly on the domestic market. In consequence, the share of exports in the total value added of these industries is lower. Public administration, education, healthcare and culture and recreation are also primarily national matters, so there is little dependence on foreign demand.

2.2.5 Composition of value added by sector, 2019



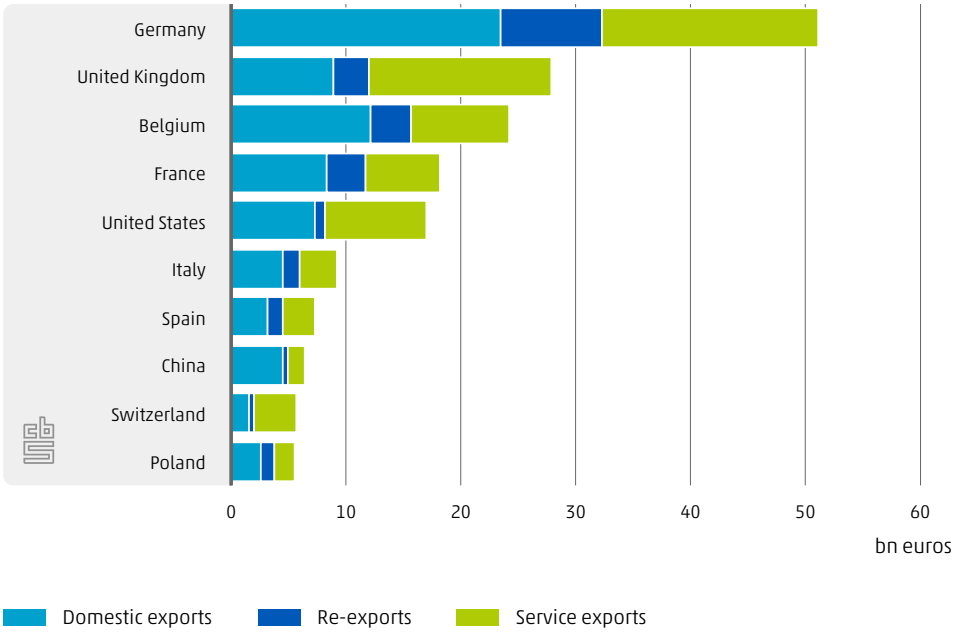
2.2.6 Composition of value added by manufacturing industry, 2019



Exports to Germany provide the highest export earnings

Exports of goods and services to Germany earned the Netherlands more than €51.2 billion in 2019 (Figure 2.2.7), which accounted for 6.3% of GDP. Germany is the most important export partner, not only in terms of export value, but also as regards export earnings. The other countries in the top five are the United Kingdom (€28.0 billion, or 3.5% of GDP), Belgium (€24.3 billion, or 3.0%), France (€18.3 billion, or 2.3%) and the United States (€17.0 billion, or 2.1%). At 17%, the share of re-exports in earnings from exports to Germany is relatively large. Examples are consumer electronics, toys and clothing that a Dutch company imports from China and subsequently sells on to Germany. The Netherlands is an important pivot point for goods imported from Asia and America that reach the European hinterland as re-exports (Franssen et al., 2020). This can be seen in the share of re-exports in Dutch exports to France, Spain, Italy and Poland, which fluctuates around 18–19% of total Dutch export earnings for those countries. For more distant destinations, such as the United States and China, the share of re-exports in Dutch export earnings is much smaller.

2.2.7 Top 10 export destinations based on export earnings, 2019



Also in the top 10 of most important destinations measured by export earnings are Italy, Spain, China, Switzerland and Poland. While total export earnings increased by 2.5% on average between 2015 and 2019, earnings from exports to China grew by 6.7% annually on average, growth in relation to Poland was 6.4% and for Spain it was 6.2%. In contrast, earnings from exports to Switzerland decreased by 6.2% annually on average. This was caused by a decline in service exports, which in turn was driven by a steep drop in the fees received for the use of intellectual property rights.

Services crucial in export earnings from the UK, the US, Ireland and Switzerland

Dutch exports of goods are worth more than its exports of services to most countries. This pattern is also visible in export earnings: for most countries, these are higher for goods exports than for service exports. Important exceptions to this pattern are earnings from exports to the United Kingdom, the United States, Switzerland and Ireland. For the United Kingdom, 57% of export earnings came from exports of services, such as business services or transport services. The corresponding figure for the United States was 51% and for Switzerland it was 64%. Ireland, which is just outside the top 10, is the leader, as 72% of the €4.7 billion in Dutch export earnings from that country is from exports of services. These earnings are mainly related to payments received for the use of intellectual property rights (royalties).

A detailed look at the contribution of exports to GDP growth

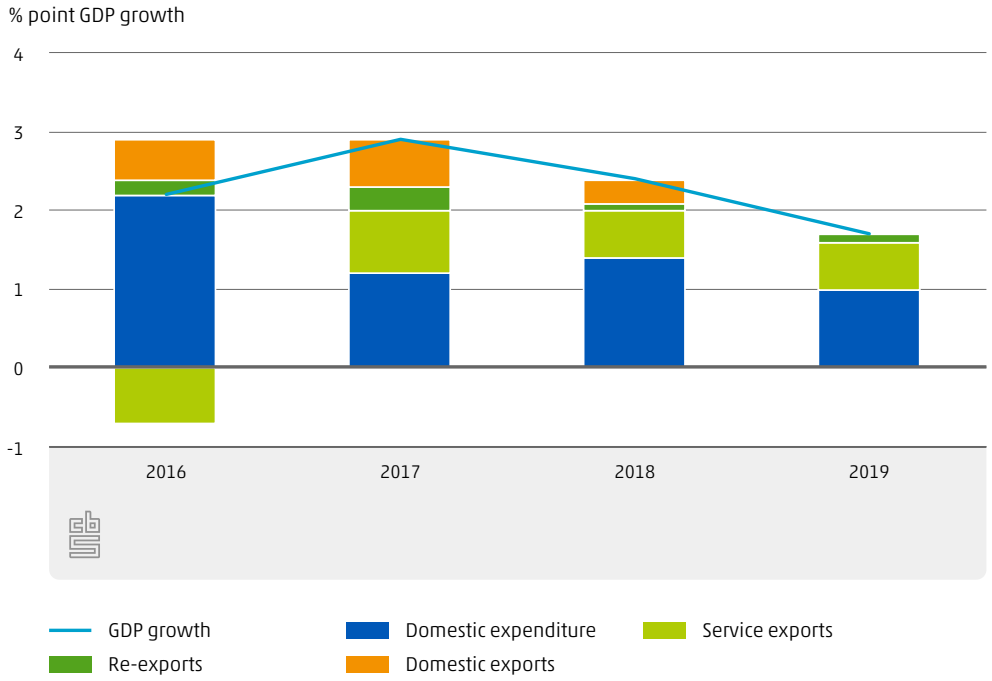
As approximately one-third of gross domestic product comes from exports of goods and services, exports are frequently referred to as the engine of growth of the Dutch economy. Figure 2.2.8 shows the contributions to growth made by the various export categories to GDP volume changes. In 2019, the Dutch economy grew by 1.7%. Exports of goods and services contributed 0.7 percentage point, while the remaining 1 percentage point resulted from domestic expenditure, such as household consumption, government spending and investments. The contribution of exports to GDP growth came mainly from exports of services (0.6 percentage point). Re-exports accounted for 0.1 percentage point of GDP volume growth in 2019. Domestic exports did not contribute either positively or negatively to GDP volume growth.

Contribution of exports to GDP volume growth: the international method versus the import-adjusted method

GDP according to final expenditures equals the sum of final consumption, investments and exports of goods and services minus imports of goods and services (trade balance). To determine the contribution of the trade balance to GDP volume growth, the contribution of imports is subtracted from that of exports (this is the internationally agreed method for compiling National Accounts). CBS intends to publish a StatLine table showing the contribution of final expenditure categories to GDP volume growth according to this international method. In 2019, the trade balance made a negative contribution to economic growth (Mares, 2020). However, the internationally agreed method underestimates the contribution of exports to GDP and overestimates the contribution of domestic consumption. This is because the internationally agreed method does not take into account the fact that goods and services are imported for the purpose of domestic consumption. To gain a more accurate picture of the contribution to growth by type of export, this chapter presents figures on the contribution to GDP volume growth in which imports are allocated to all final expenditure categories. This is done using input-output analysis according to the method developed by Kranendonk and Verbruggen (2008).

With the exception of 2017, it appears that exports of goods and services between 2016 and 2019 contributed less to the volume growth of GDP than did domestic expenditures. Of the three types of exports, service exports made the greatest contribution to export growth, except in 2016, when exports of services contracted strongly and consequently had a negative impact on economic growth. The contribution of service exports was driven by exports of business services and computer services. It is striking that the contribution made by domestic goods exports has declined over recent years. This can be attributed mainly to decreasing natural gas exports due to the scaling back of natural gas extraction. The positive contribution of re-exports has also slowed over the last few years.

2.2.8 Contribution of exports to economic growth, 2016-2019



2.3 The importance of imports of goods and services

Increasing imports ultimately destined for export

Imports of goods and services amounted to €590.7 billion in 2019 (Figure 2.3.1). Imports of goods and services experienced similar growth to exports at 3%. Around 68% of imports of goods and services in 2019, worth €403.5 billion, were intended for exports of goods and services, either as imports for re-export or as imported raw materials, semi-finished goods and support services incorporated into goods and service exports. In 2015, this share was 64%. Of the imports used for exports, €213.7 billion were imports for re-export.[6)]

6) In total, €226.6 billion of imports were used to produce re-exports. The amount of €213.7 billion was the value of the imported goods (which leave the country virtually unchanged) and the remaining €12.9 billion of imports consisted of goods and services used to facilitate re-exports.

68% of total imports are used for exports of goods and services

Nearly €190 billion of imports of goods and services were intended for domestic expenditure in 2019: €95.6 billion for household consumption, €72.0 billion for investments and €19.6 billion for government consumption.

2.3.1 Destination of imported goods and services, 2015- 2019

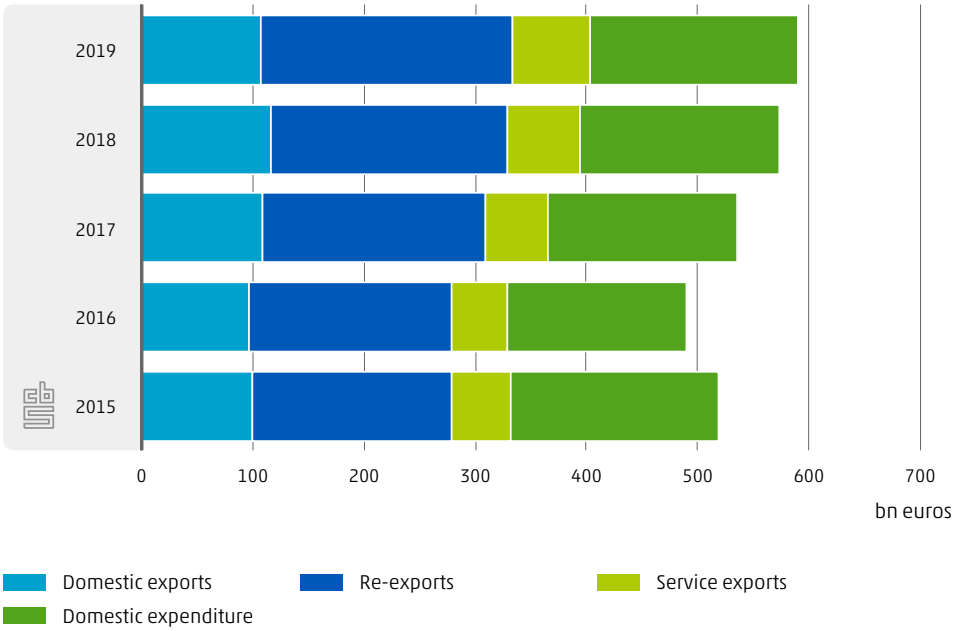
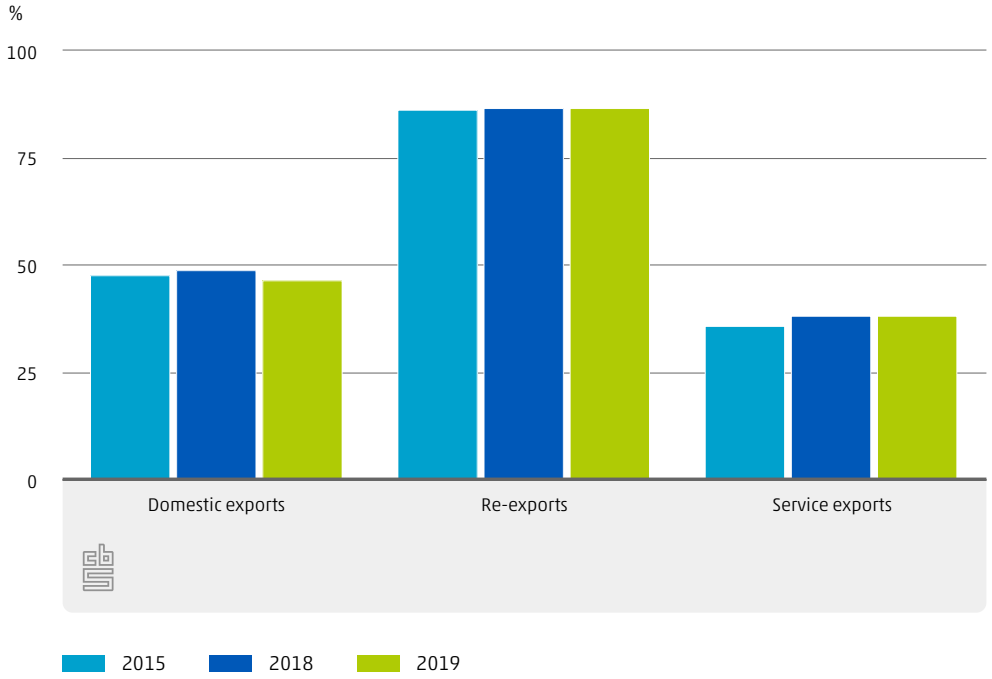


Figure 2.3.2 shows the import content per export category, which is the share of imported goods and services in the export value. This indicator is also known as a vertical specialisation measurement. The higher the import content, the higher the degree of integration in global value chains (Hummels et al., 2001). For total exports of goods and services in 2019, the import content was 59.8%; in 2015, it was 1.4 percentage points lower. Exports of services require the smallest amount of imports – 38.1% of export value – but this share is increasing, as it was 35.9% in 2015. In 2019, 46.4% of domestic exports consisted of processed imported goods and services – a drop of 2.3 percentage points from 2018. For re-exports, which make up a large share of total export value, the import content was 86.7%. The import content of domestic spending was 25.8% in 2019, with the import content of household spending at 27.0%, government spending at 9.9% and investments at 41.8%. Chapter 6 of this publication discusses the use of imports in more detail.

2.3.2 Import content per export category, 2015-2019



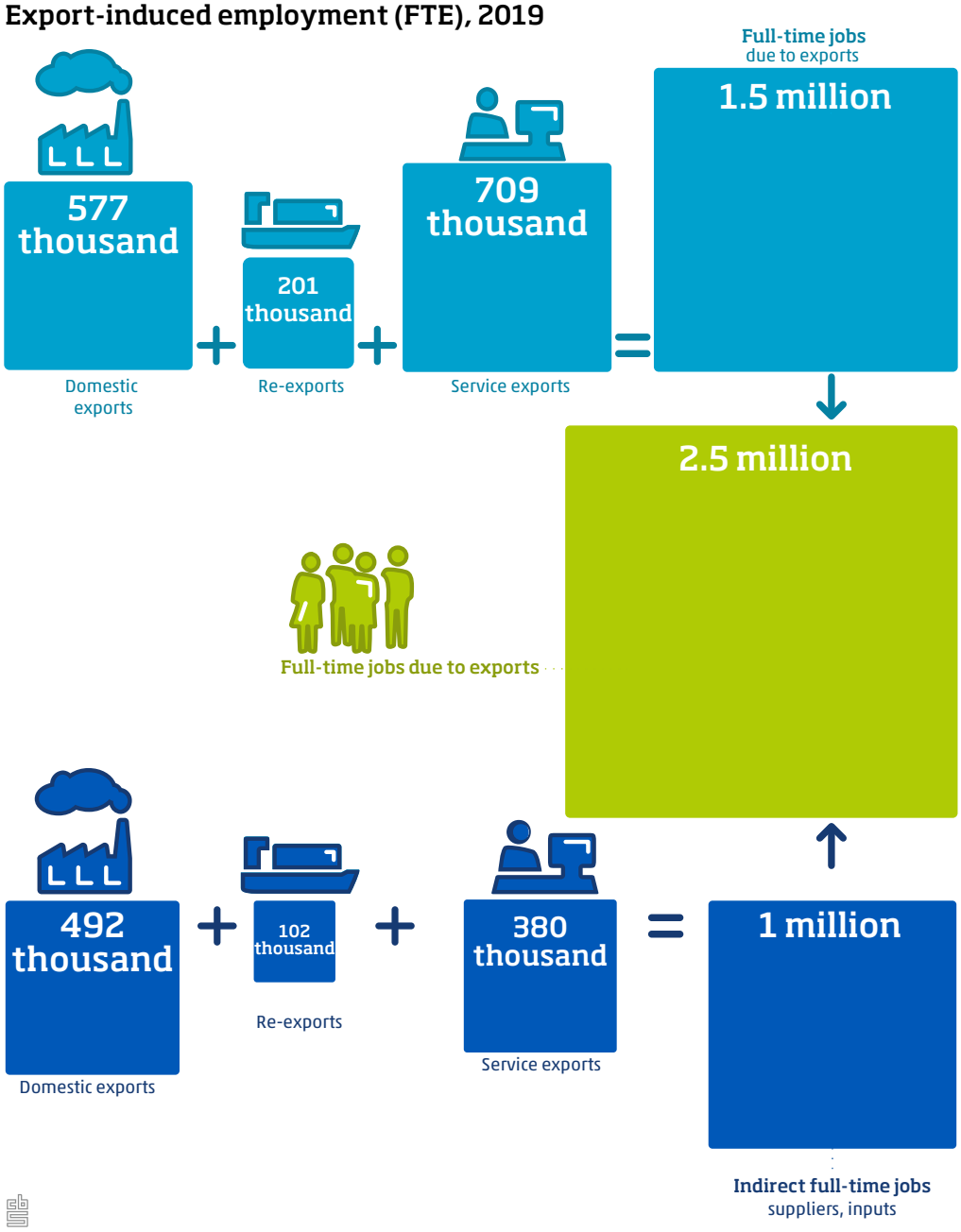
2.4 Export-induced employment

A third of employment in the Netherlands is linked to exports

Exports of goods and services create jobs for inhabitants of the Netherlands. These jobs can be subdivided into those that are directly linked to exports, for example in the exporting sector itself, and indirect jobs with suppliers to exporters. Examples are the cleaning crew that works at an exporting company (indirect employment) and the lab technician who works for the exporting company itself (direct employment). The infographic below shows that exports of goods and services provide some 2.5 million direct and indirect full-time equivalent jobs (FTE) in the Netherlands.[7] Around 32% of total employment in the Netherlands can therefore be attributed to exports. Domestic goods exports accounted for 14% of total employment in the Netherlands in 2019, exports of services provided the same percentage of jobs, while re-exports were responsible for just over 4%. Figure 2.4.1 shows for 2019 how the 2.5 million full-time equivalent jobs are provided by the various types of exports and the extent to which direct or indirect jobs are involved. If we compare 2019 with 2015, we can see a rise in all types of jobs, except for indirect employment associated with domestic exports and indirect employment due to re-exports, which both show a slight decline. The largest rise is in direct employment associated with exports of services, which reflects the continuing shift towards services in the Dutch economy.

7) When determining labour volume in full-time equivalents (FTEs) over a period, the start and end date of a job as well as the weekly working hours are taken into account. Because many people work part-time, some work only part of the year and some have several jobs, the number of individual jobs is higher than the number in FTEs.

Export-induced employment (FTE), 2019



32% of total employment due to exports of goods and services

Most direct employment provided by exports of services

In 2019, exports of goods and services generated 1.5 million FTEs of direct employment. Of this total, exports of services provided the largest number of jobs – around 709,000. Domestic exports accounted for around 577,000 FTEs and re-exports accounted for some 201,000 jobs. Exports of services not only provided the largest number of direct jobs in 2019, but this area of employment also grew most quickly, increasing by more than 6% compared to 2018. Direct employment as a result of domestic exports and re-exports increased somewhat less quickly in 2019, with a rise of 3%.

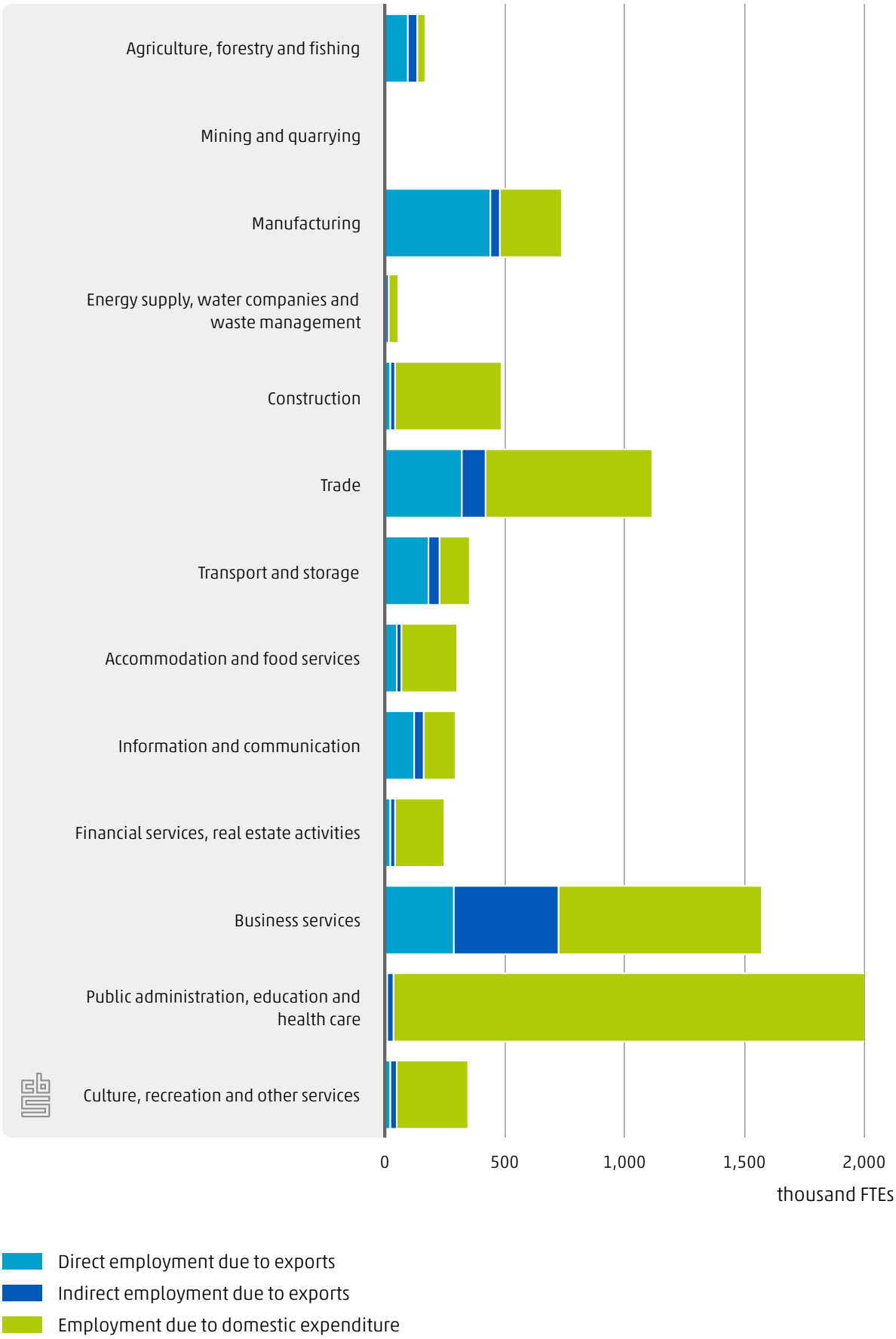
Most indirect employment generated by domestic goods exports

In addition to direct jobs, 974,000 FTEs are indirectly involved in the process of producing goods and providing services for exports. Examples are employment at suppliers, such as agriculture; with companies that produce packaging materials; or at firms that provide services such as cleaning, job placement or internet services. Domestic goods exports generated the most indirect jobs – 492,000 FTEs in 2019 – representing more than half of total indirect employment. Exports of services accounted for 380,000 indirect jobs and re-exports for about 102,000 full-time equivalent jobs. With 780,000 FTEs, service industries accounted for the bulk of indirect employment, due to exports. Most indirect employment was to be found with temporary employment agencies and job placement services, legal and management consulting, and companies active in wholesale trade.

Exports create most employment in business services

In particular sectors, a large share of employment is associated with exports, while other sectors depend very little on exports for employment. Exports generated most employment in business services. The manufacturing, trade, transportation and storage, and information and communication sectors also benefit from exports of goods and services. Agriculture and manufacturing are most dependent on exports for employment in relative terms. That is mainly because these industries are themselves active in exports. Business services depend on exports for slightly less than half of their employment, but the export-induced employment is mostly indirect, meaning that these jobs exist to support other exporting sectors. In contrast, public administration, education, healthcare and the cultural and recreational sectors have a low dependence on exports for employment.

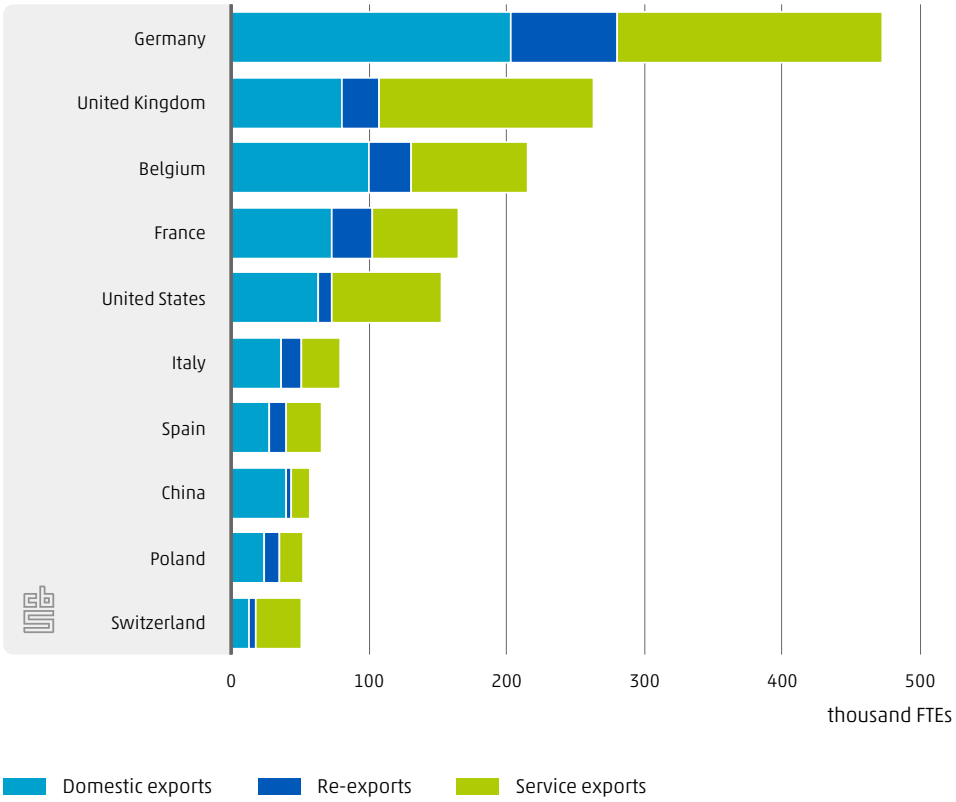
2.4.1 Export-induced employment per sector, 2019



Most export-induced employment due to Germany

The number of full-time equivalent jobs in the Netherlands that are linked to exports follow the same pattern as export earnings. Here too, the top three countries are Germany (472,000 FTEs), followed by the United Kingdom (264,000 FTEs) and Belgium (216,000 FTEs). The same countries also make up the top 10, except that Switzerland is number 9 for value added and Poland is number 10, while for employment, Poland is number 9 and Switzerland number 10. Germany, France, Spain, Italy and Poland have a significant role in employment due to re-exports. In the case of destinations where domestic exports play a relatively large part in export earnings, a relatively high level of employment is generated due to this type of exports, as with exports to Belgium, Italy and Poland, but primarily due to exports to China. Employment due to service exports is relatively high in the case of export destinations such as the United Kingdom, the United States and, especially, Switzerland.

2.4.2 Export-induced employment by country, top 10, 2019



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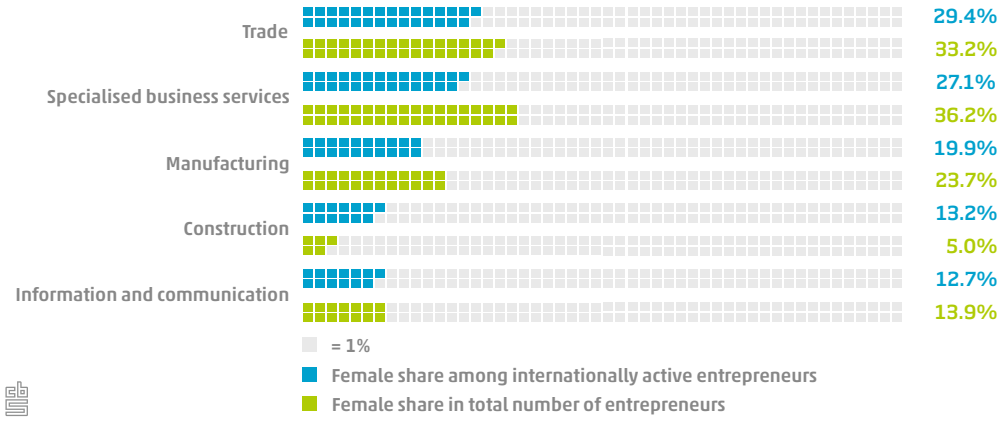
3 Characteristics of the internationally active business economy

Authors: Sarah Creemers, Bart Loog, Tim Peeters, Janneke Rooyakkers

Share of female entrepreneurs, 2019



This chapter examines the characteristics of companies and entrepreneurs that are internationally active. First, it discusses the Dutch business economy from the perspective of trade: to what extent do companies export, import or engage in both activities? What proportion of internationally active companies are independent SMEs or large enterprises? Which sector has the largest number of international traders? The chapter then highlights internationally active entrepreneurs: what proportion are women and how does this figure vary by age category and sector? Finally, we compare the characteristics of employees of companies with production processes that depend to a greater or lesser extent on imports or exports of goods.

3.1 Key findings

As the 17th largest economy in the world, as well as being in 4th place as an exporter of goods and of services and the 3rd largest investor, the Netherlands holds a strong position internationally (UNCTAD, 2021a, b, c, d). To consolidate this position, the Netherlands specifically supports small and medium-sized enterprises, start-ups and female entrepreneurs through its trade policy, because that is where there is probably the greatest untapped potential for international entrepreneurship (Kaag, 2018).

If we consider the group of almost 1.3 million companies in the Dutch business economy of 2019 from the perspective of trade, we see that two out of three did not trade any goods or services outside the Netherlands. Therefore, in 2019, 34% of companies were active

international traders. For independent SMEs, the share was 33%, while for large enterprises it was 89%.

International traders form a highly diverse group of companies that differ in many respects. This group can be broken down first of all according to type of trade. For example, 67% of international traders from the Dutch business economy only import goods and/or services, while 10% of them are exclusively exporters. This means that the remaining 23% are active as two-way traders. Of all the companies that trade internationally, nearly 3 in 10 are active in the wholesale and retail trade. For specialised business services, this figure is 26% and for information and communication it is 10%. In 2019, 5% of internationally operating companies were multinationals. Compared to the whole of the Dutch business economy, the share of multinationals in the total number of international traders is above average.

In 2019, there were more than 445,000 companies in the Dutch business economy that were active internationally. These were both the companies that trade internationally and the multinationals that were not involved in international trade. As a multinational is part of an international corporation, it is by definition internationally active. The Dutch internationally active business economy increased its productivity in 2019. Productivity per employed person was around €76,000 in 2019, up from €70,000 in 2018.

Some 44% of internationally active companies have been in existence for 10 years or more, nearly 22% for between 5 and 10 years, and 34% for under 5 years. In relative terms, the manufacturing, construction, and transportation and storage sectors include the most companies that have been operating for 10 years or more.

In 2019, around 7,900 companies achieved a proportion of their sales abroad soon after being set up. This means that a quarter of new exporters in 2019 can be characterised as born globals. Just under two-thirds of born globals start in specialised business services or the wholesale and retail trade.

In all the various sectors under consideration, at least twice as many male as female entrepreneurs were internationally active in 2019. However, of the total number of female entrepreneurs, the percentage (17%) of those who were internationally active was comparable to that of male entrepreneurs (18%). However, the median trade value of both the goods and service exports of female entrepreneurs is around €10,000 lower than the corresponding trade value for male entrepreneurs. The difference is 19% for exports of goods and 25% for exports of services.

Of the full-time equivalents employed by companies that import goods, 80% work for companies of which the ratio of imports to turnover is no more than 25%. Employees at companies with a relatively high ratio of goods imports or exports to turnover earn higher wages on average. Companies with an import intensity of more than 75% pay their employees on average €7 gross per hour more.

3.2 Dutch business economy from the perspective of trade

In 2019, the Dutch business economy (see box for more information) comprised nearly 1.3 million companies. This group can be divided into one-way importers, one-way exporters, two-way traders (companies that import and export), and companies that do not trade in goods or services and therefore do not trade internationally at all.[1] Companies belong to the category 'not an international trader' if they do not report any international trade in goods or services and focus exclusively on the domestic market.

What is the Dutch business economy?

Companies considered part of the Dutch business economy are those listed in the General Business Register (ABR), sections B to N plus division S95, with the exception of those in section K. This delineation is referred to internationally as 'non-financial business economy'. This category is composed of the following sectors[2]:

- **B Mining and quarrying;**
- **C Manufacturing;**
- **D Energy;**
- **E Water and waste management;**
- **F Construction;**
- **G Wholesale and retail trade;**
- **H Transportation and storage;**
- **I Accommodation and food services;**
- **J Information and communication;**
- **L Renting, buying and selling of real estate;**
- **M Specialised business services;**
- **N Renting/leasing and other business services;**
- **S95 Repair of personal and household goods.**

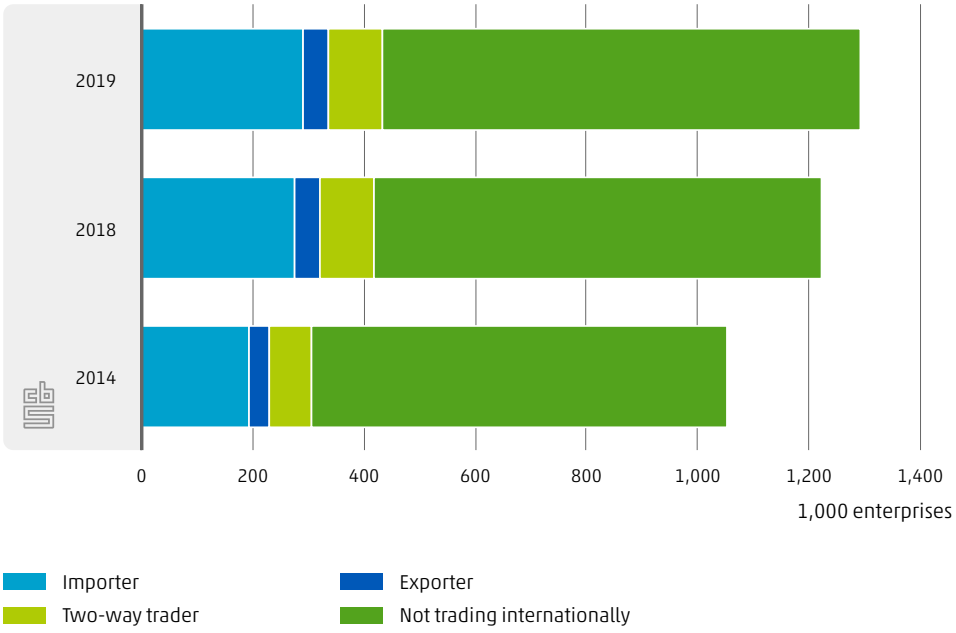
One in three companies in Dutch business economy engage in international trade

In 2019, nearly 34% of the Dutch business economy (or some 442,000 companies) was made up of international traders in goods and/or services – nearly 24,000 more than a year earlier. Of those international traders, 67% were exclusively involved in imports, 10% only in exports and 23% were both importers and exporters (two-way traders) (Figure 3.2.1). However, by far the largest group in the Dutch business economy is made up of non-traders, with around 853,000 companies in 2019. This means that two out of three companies in the Dutch business economy do not trade any goods or services outside the Netherlands.

1) In defining the types of international traders, no minimum threshold was used to filter out small traders. Importers (exporters) trade in goods and/or services; a two-way trader is active in both importing and exporting goods and/or services.
2) Agriculture, forestry and fishing (A), financial institutions (K), public administration (O), education (P), health care (Q), culture, sports and recreation (R), ideological and political organisations (division 94), wellness and funeral services (division 96), households (T) and extraterritorial organisations and bodies (U) are therefore outside the Dutch business economy.

In 2019, the Dutch business economy expanded by more than 71,000 companies from the previous year (Figure 3.2.1), which was an increase of 5.8%. The composition of the business economy by type of trader (whether or not companies trade internationally) was virtually unchanged compared to 2018.

3.2.1 Enterprises in the Dutch business economy by type of trader



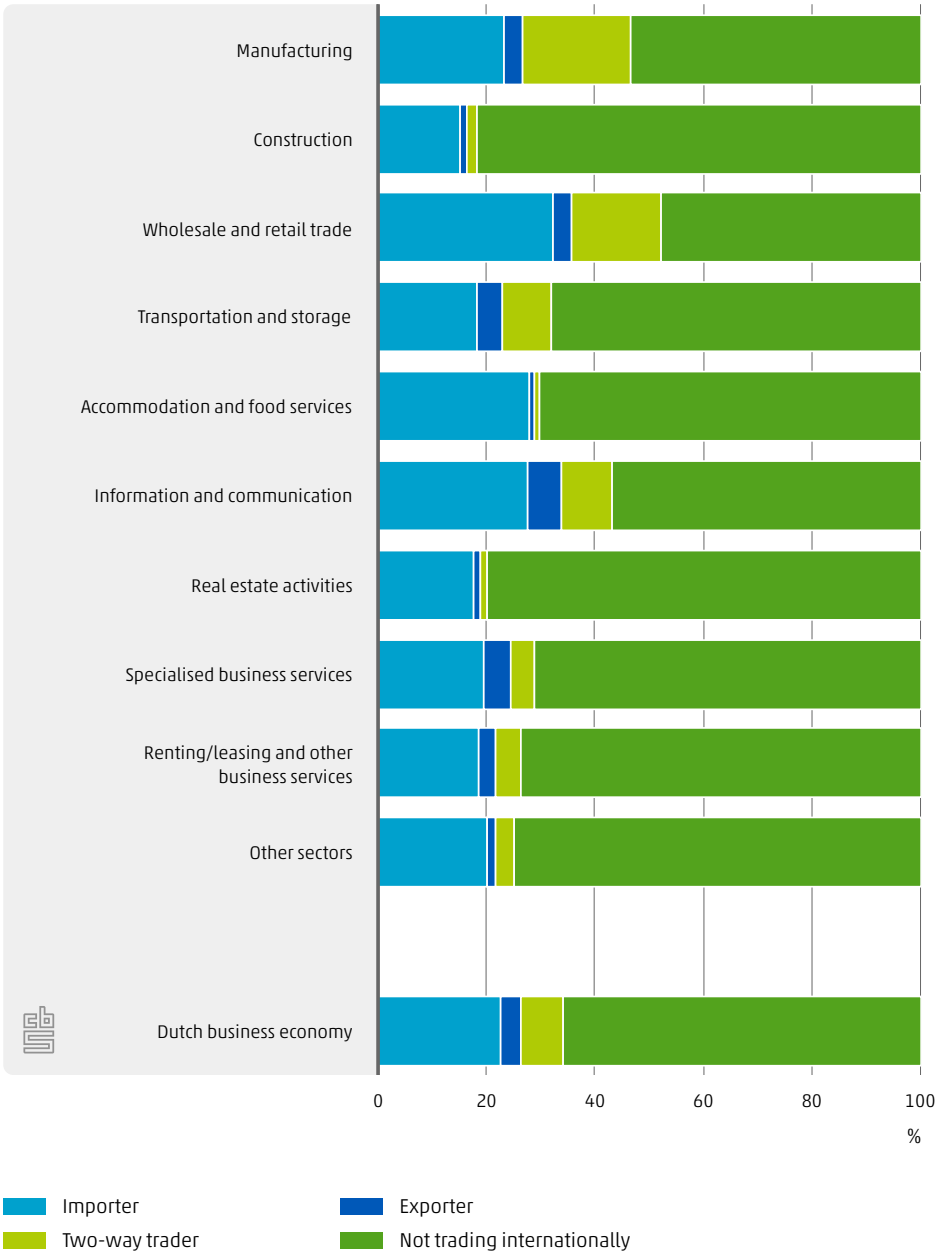
Compared to 2014, the total number of companies in the Dutch business economy had increased by 23% in 2019. Because the total number of international traders grew faster during this period (+43%) than the number of non-traders (+14%), the proportion of non-traders declined slightly. Within the group of traders, there was mainly strong growth in the number of companies that are exclusively active in imports. Compared to 2014, there were nearly 100,000 more such companies, which is an increase of 51%. The rise in the number of traders that do business abroad is connected among other things with the growing total number of companies in the Dutch business economy. The growth in global trade also plays a role. Increasing digitisation has undeniably altered international trade. It lowers the costs of participating in international trade, connects businesses and consumers worldwide, facilitates the spread of ideas and technologies, and eases the coordination of global value chains (OECD, 2019). Digitisation has made it easier for companies to sell their products across country borders, for example through online platforms, where this was previously too costly or too complicated (Polder & Rooyakkers, 2021).

Companies in wholesale and retail trade or manufacturing relatively often trade internationally

The number of companies that do or do not trade internationally varies considerably from one sector to another (Figure 3.2.2). For instance, the share of international traders is above average in the wholesale and retail trade, manufacturing, and information and communication sectors. We know that one-third of companies in the Dutch business economy do business with foreign countries, and in the wholesale and retail trade the share is as high as 52%. This is not surprising in itself, as companies in the wholesale trade form an

indispensable link between suppliers and customers. This sector provides support services, and in doing so it connects many sectors at home and abroad (CBS, 2019b). Of all the companies that trade internationally, nearly 3 in 10 are active in the wholesale and retail trade.

3.2.2 Type of trader by sector, 2019



Dutch manufacturing is also strongly interconnected with foreign countries: 47% of manufacturing companies traded beyond the borders of the Netherlands in 2019. For example, Dutch manufacturing is highly dependent on exports because most of its customers are located in other European countries (De Boeck, 2017). The food and beverage industries are examples of industries that have become increasingly dependent on foreign countries (CBS, 2017). In addition to exports, the sector is also heavily dependent on imports of foreign products (De Boeck, 2017). Of total goods imports of nearly €460 billion, more than €105 billion were imported by the manufacturing sector in 2019. A proportion of the

imports are directly consumed in the Netherlands while another proportion consists of intermediate goods and services that are (further) processed here in the production process and subsequently consumed or re-exported.

Conversely, the share of international traders in construction, at 18%, is significantly lower than in the Dutch business economy as a whole. Nevertheless, the number of international traders in this sector has risen by 70% from 2014. The number of international traders in the accommodation and food services sector increased by about 93% in 2019 compared to 2014, to just under 20,000 companies. However, the share of international traders in this sector is about 30%. Within this sector, there is also particularly strong growth in the number of traders that are exclusively importers. In absolute terms, the number of international traders for all sectors has grown compared to 2014.

52% **of wholesale and retail trade companies traded beyond the borders of the Netherlands in 2019**

There are also significant differences between sectors in the share of companies that exclusively import, exclusively export or both import and export, as shown in Figure 3.2.2. Of all sectors, the wholesale and retail trade had the highest share of companies in relative terms (32%) that were only active in imports in 2019, against 23% for the Dutch business economy as a whole. The sector with the highest percentage of companies that only export is information and communication (6%).[3)] For the total Dutch business economy, the share is 3.6%. In relative terms, two-way traders were most common in manufacturing, at nearly 20%.

89 out of 100 large enterprises trade internationally

The Dutch business economy can be broken down further by company size. The independent small and medium-sized enterprises include all Dutch-owned businesses employing fewer than 250 people across the whole organisation. Large enterprises comprise all Dutch businesses that are part of a group employing at least 250 people and/or part of a foreign-owned group.

Of nearly 1.3 million companies in the total Dutch business economy in 2019, 1.28 million were independent SMEs and 17,000 were large enterprises. Around 99% were therefore independent SMEs. Of all the companies engaged in international trade, around 97% are independent SMEs.

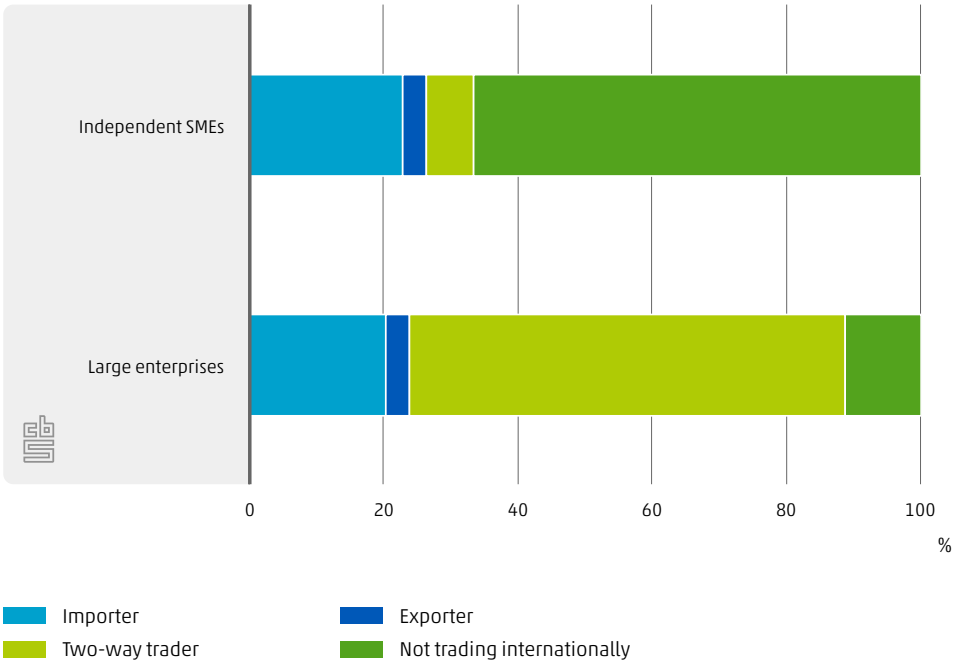
3) Of all sectors, mining and quarrying had the highest share of exclusive exporters, at 9%. However, it must be emphasised that this is a small sector with regard to the number of companies it includes. Mining and quarrying involved some 550 companies in 2019, which is only 0.04% of the total Dutch business economy.

Independent SMEs are far less active as international traders than large enterprises (Figure 3.2.3). While two-thirds of independent SMEs did no business with foreign countries in 2019, this was true of only 11% of large enterprises. It is generally known that small companies trade less in international markets than large enterprises (Bernard et al., 2007 and 2012). Independent SMEs encounter various obstacles to entering foreign markets. For example, it is usually more of an effort for them to find local partners; they often lack knowledge of local markets; legislation and regulations differ; it is more difficult for them to access funding; and exporting is usually associated with payment and currency risks. The larger the company, the more likely it is to export (Brakman et al., 2018). In comparison with large enterprises, independent SMEs do more themselves and are less active in global value chains. Independent SMEs therefore focus more on the local market, both for supplying and obtaining goods and services, and less on direct sales to foreign markets (Statistics Denmark & OECD, 2017; Chong et al., 2019). For both independent SMEs and large enterprises, growth in the share of international traders was similar in the period 2014–2019.

There is a major difference between the two groups mainly in the share of two-way traders. Just 7% of independent SMEs were two-way traders, against 65% of large enterprises. Two-way traders are by definition the companies that are most strongly and directly interconnected in global value chains (Statistics Denmark & OECD, 2017). Two-way trade generally increases with the size of the company (Van den Berg, 2013).

The percentage of companies that only export or import is comparable in independent SMEs and large enterprises. Around 23% of independent SMEs in the Dutch business economy only imported goods and/or services in 2019, compared to 20% of large enterprises. For both independent SMEs and large enterprises, around 4% were exclusively exporters.

3.2.3 Type of trader by enterprise size, 2019



For both independent SMEs and large enterprises, the information and communication sector had the most companies that were exclusively active in exports in relative terms in 2019, with 6% for independent SMEs and 7% for large enterprises. There are major differences in the

proportions of two-way traders between independent SMEs and large enterprises. In both groups, the manufacturing sector includes the most two-way traders in relative terms. For manufacturing companies in the large enterprise category, more than 80% are two-way traders, while the share is around 17% for independent SMEs. In the independent SME group, most exclusive importers are active in the wholesale and retail trade. The number and share of exclusive importers among large enterprises are highest in accommodation and food services.

5% of international traders are multinationals

In addition to the distinction between independent SMEs and large enterprises, the Dutch business economy can also be broken down according to multinational status. There are increasing numbers of multinationals in the Netherlands, with 26,000 active in the Dutch business economy in 2019, representing 2% of the total.

Of all the companies engaged in international trade, more than 5% are multinationals. Compared to the whole of the Dutch business economy, the share of multinationals in the total number of international traders is therefore above average. Figure 7.3.8 in Chapter 7 of this publication shows that the share of multinationals in the international trade in goods and services is also large. These two groups (multinational versus non-multinational) differ in the extent to which they do or do not trade internationally. Whereas 33% of non-multinationals did business abroad in 2019, this share was 88% for multinationals. Multinationals are usually very knowledgeable about foreign markets abroad through their parent companies or subsidiaries.

Statistics Netherlands distinguishes between Dutch and foreign-owned multinationals. A Dutch multinational is a company under Dutch control with subsidiaries (majority stakes) abroad. A foreign multinational is a subsidiary based in the Netherlands that is ultimately controlled from abroad. Of the multinationals, 53% were under foreign control and 47% were in Dutch hands. As regards type of trader (exclusive importer, exclusive exporter, two-way-trader, not an international trader), the proportions of the various status types are similar for both Dutch and foreign multinationals. Both types of multinational are most likely to be in the two-way trader category.

From 2014 to 2019, the number of Dutch multinationals rose by 4%, while the number of foreign multinationals went up by 11%. The number of international traders rose for both types of company in the same period. Dutch multinationals saw a rise of 10%, while multinationals under foreign control had around 15% more international traders in 2019 than in 2014.

3.3 The internationally active business economy

The previous section focused on the international traders in the Dutch business economy. This section examines internationally active companies in more detail. This concerns not only companies with imports and/or exports, but also includes the multinationals. These are companies with a parent and/or subsidiary abroad, so they are by definition internationally

active. Most multinationals also trade internationally, but a small share (12%) had no imports or exports in 2019. In 2019, there were more than 445,000 companies in the Dutch business economy that were active internationally. These are the international traders from section 3.2, as well as some multinationals that did not have any international trade in 2019.

Table 3.3.1 gives a number of key indicators for the internationally active business economy. This shows that the vast majority of companies in the internationally active business economy in the Netherlands belong to the wholesale and retail trade. Many companies engaged in business services are also internationally active. On average, nearly 6% of internationally active companies have a parent company or subsidiary abroad. This share is substantially higher in the mining and quarrying, energy, and water and waste management sectors. However, these are only small sectors as regards the number of companies involved.

3.3.1 Key indicators for internationally active enterprises, 2019

	Number of internationally active enterprises	Share of multinationals	Share of exporters	Productivity	Average wage
Sector		%	%	1,000 euros per employed person per year	euros per hour
Mining and quarrying	265	41.5	64.2	597	40
Manufacturing	34,615	11.3	49.6	105	26
Energy supply	480	28.1	29.2	298	33
Water supply	825	18.2	53.3	113	25
Construction	37,825	2.7	16.7	85	25
Wholesale and retail trade	137,895	6.5	37.9	69	21
Transportation and storage	16,980	9.8	42.1	86	23
Accommodation and food services	19,905	1.7	5.1	31	15
Information and communication	46,550	5.8	35.3	105	31
Real estate activities	6,595	12.2	12.5	219	28
Specialised business services	116,135	4.0	32.6	87	31
Renting/leasing and other business services	23,475	6.3	28.4	42	18
Repair of personal and household goods	3,670	0.8	17.4	43	18
Total internationally active business economy	**445,220**	**5.8**	**33.0**	**76**	**24**

Most companies are only active as importers, while on average 33% of internationally active companies are also involved in exports.[4)] Only in mining and quarrying (64%), and water and waste management (53%) are more than half of the internationally active companies engaged in exports (or imports and exports).[5)]

Various researchers have shown that there is a positive relationship between international trade and productivity, though the underlying mechanism is still under discussion. On the one hand, international trade can generate learning effects (spillovers), for example in the field of technology, which make companies more productive (Keller & Yeaple, 2003). On the other hand, there may also be preselection by the companies themselves: those that start trading

4) The column 'share of exporters' in Table 3.3.1 contains the companies that only export as well as the two-way traders. The remaining share refers to the internationally active companies that only import and the non-trading multinationals.
5) Both mining and quarrying, and water and waste management are very small sectors, with only a few hundred internationally active companies, which can easily bring about striking results.

are already more productive than comparable businesses that do not choose to do so or that fail to break into the international market (Bernard & Jensen, 1999; Melitz, 2003). Research for Dutch companies also shows that the internationally active business economy is more productive than the total business economy in the Netherlands, with the results indicating self-selection (Kox & Rojas-Romagosa, 2010).

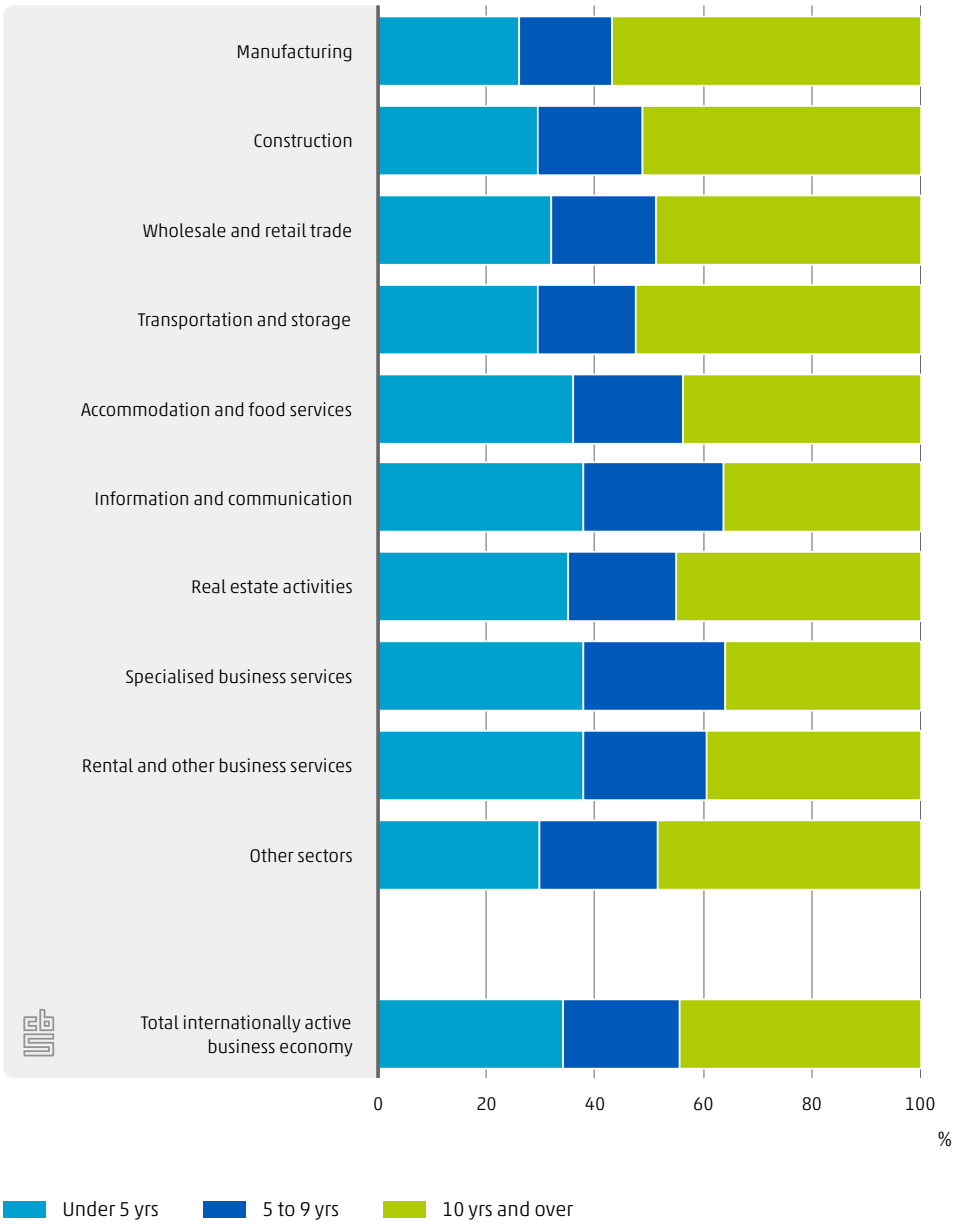
Table 3.3.1 shows productivity by sector: Table 3.5 in the set of tables (to be found on the home page of this publication) also sets out the productivity of the whole Dutch business economy. This shows that internationally active Dutch companies are more productive than the totality of companies in the Dutch business economy. In 2019, the productivity of the Dutch business economy as a whole was around €72,000 per employed person, while for the internationally active companies, the figure was €76,000. In addition, the productivity of companies that are active internationally grew somewhat faster in 2019. It rose by around 8.5% compared to 2018, while the productivity of the business economy as a whole grew by around 7.6%. Because no price developments are included here, it is not possible to compare the developments over time by sector. There are significant differences in productivity between sectors, as can be seen in Table 3.3.1. For all sectors individually, productivity is also similar or higher for internationally active companies than for the Dutch business economy as a whole.

The average gross hourly wage at internationally active companies was around €24 in 2019 – the same as in the previous year. Wages are highest in mining and quarrying, which is traditionally a sector with specialised staff and high salaries (CBS, 2021). Wages are lowest in accommodation and food services, and this is undoubtedly linked to the age structure of the people employed in this sector, who include many school pupils and students.

Most internationally active companies have been in existence for 10 years or longer

Internationally active companies can also be distinguished by age (Figure 3.3.2). Most companies that are internationally active have been in existence for 10 years or more. Some 44% have been in operation for 10 years or more, nearly 22% for between 5 and 10 years, and the other 34% have been in existence for less than 5 years. These proportions are comparable to those of previous years. Looking at the sectors, it is notable that in relative terms, manufacturing has the largest number of internationally active companies that are 10 years old or more (57%). The construction sector and the transportation and storage sector also include relatively large numbers of internationally active companies that have been in existence for 10 years or longer. The percentage of internationally active companies that are under 5 years old is never higher than 40% in any of the sectors.

3.3.2 Internationally active enterprises by sector and enterprise age, 2019



3.4 Dynamics of exporters: born globals

The group of companies that export goods or services abroad is extremely diverse and subject to strong dynamic forces. Every year there are new arrivals and there are also companies that, voluntarily or out of necessity, close their doors to international trade.

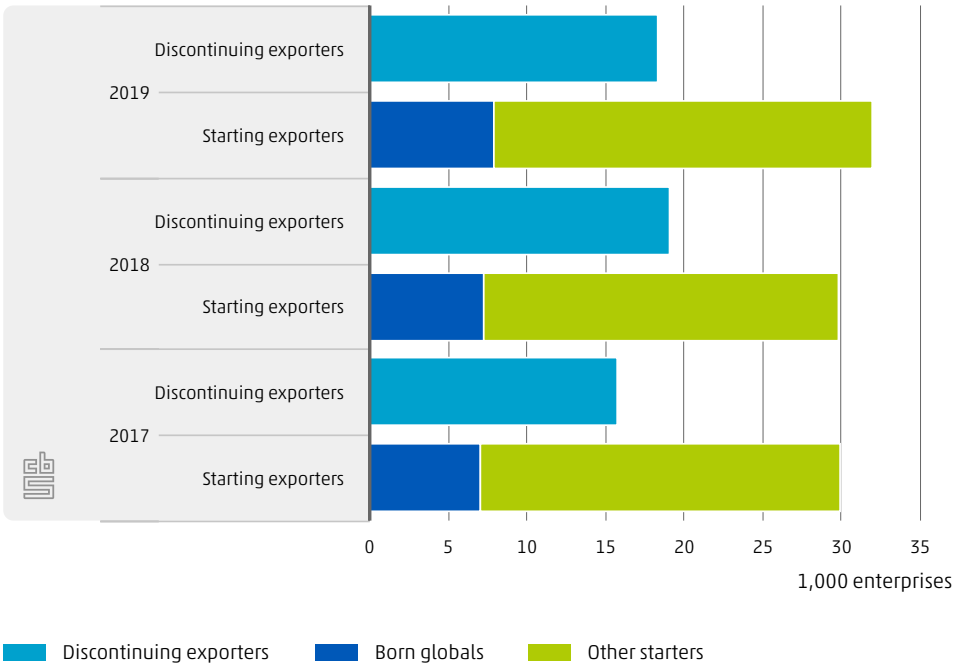
Dynamics of (all) exporters, 2019

One in four new exporters is a born global

In 2019, more than 18,400 companies[6] withdrew from the international market as exporters (Figure 3.4.1). There are various reasons why companies make this decision. Conversely, more than 32,000 companies[7] started exporting in 2019. These are companies that had not previously exported but that did begin to do so in 2019, for example because they received orders from abroad, the domestic market became too small or they were driven by the competition to start exporting (CBS, 2019a).

6) A discontinuing exporter is a company that did not export goods or services in 2019 or in 2018, but that did do so in 2017. The company must still have been in existence in 2019 in order to be listed as a discontinuing exporter.
7) A starting exporter is a company that exported goods or services in 2019 which it did not export (yet) in 2018 or in 2017, regardless of whether the company already existed in those years.

3.4.1 Dynamics of exporters



The internationalisation of companies is often seen as a gradual process (Lopez et al., 2009; Sui & Baum, 2014). Companies initially grow in the domestic market and then gradually expand the scope of their international activities. In this way, companies can build up their knowledge of foreign markets and will then be better at managing the risks associated with exporting (Cremers et al., 2019). However, there are other ways in which companies internationalise. A special kind of starting exporter is known as a born global. These are businesses that immediately start exporting goods and/or services within a year of being founded. A quarter of starting exporters in 2019 can be characterised as born globals. In that year, around 7,900 companies achieved a proportion of their sales abroad soon after being set up. Born globals are characterised by their ability to overcome the initial barriers associated with entering foreign markets without first establishing a strong presence in their home market (Ferguson et al., 2021).

The number of discontinuing and starting exporters rose in 2019 compared to 2017. This growth can also be seen in the number of born globals (Figure 3.4.1). There were 7,000 born globals in 2017 and 850 more in 2019. This means that the number of born globals has grown faster in percentage terms than the number of starting exporters. As a result, the share of born globals in the total number of starting exporters in 2019 was higher than in 2017.

In Cremers et al. (2019), the characteristics of born globals are explored in greater detail. For example, born globals have on average more export destinations, more trade relations and a higher turnover from exports than the average starting exporter. Born globals also grow faster than other starting exporters in the years following their entry into the export market. In addition, born globals have a better chance of survival than other starting exporters.

36% of born globals active in business services

Within the group of exporters of goods and/or services in 2019, most starting and discontinuing exporters were active in specialised business services, wholesale and retail trade, and information and communication. It is also in these sectors that the largest number of born globals are active (see Infographic at the beginning of this section). In specialised business services, there are 2,900 companies that were set up in 2019 and that immediately started to export goods or services. This represents 27% of the 10,700 starting exporters in this sector. The share of born globals in the total number of starting exporters is similar in the wholesale and retail trade (25.7%) and in information and communication (26.9%).

Slightly under two-thirds of born globals start operations in specialised business services or the wholesale and retail trade. Information and communication is in 3rd place, with one in eight of born globals active in the sector in 2019.

3.5 Internationally active entrepreneurs highlighted

This section looks in more detail at the entrepreneurs behind internationally active companies. Entrepreneurs are people carrying out work on their own account or at their own risk in their own business or practice (independent entrepreneurs), or are owners of a company and employed by the company as director (owner-managers). In the Dutch business economy, there were approximately 187,000 entrepreneurs[8)] who were internationally active in 2019, or around 18% of all entrepreneurs in the Dutch business economy. Of those internationally active entrepreneurs, slightly more than a quarter were women (25.3%), which was a decline of 1 percentage point from 2018. The share of female entrepreneurs was therefore slightly lower than for the group of entrepreneurs who are not active internationally (26.8%).

1 in 6 female entrepreneurs are internationally oriented

Although significantly more men are internationally active, women are equally active in relative terms when the number of female entrepreneurs who are internationally active is compared to the total number of female entrepreneurs. There may be many more male entrepreneurs in total, but a similar proportion of men and women are active in the international market. Figure 3.5.1 shows that of all male entrepreneurs in 2019, about 18% were internationally active, while the share among women was 17%. It is also noteworthy that there has been a slight decline in recent years in the extent to which both men and

8) In defining the types of international entrepreneurs, a minimum threshold of €5,000 was used to filter out the very small internationally active entrepreneurs. In addition, companies may have multiple entrepreneurs and one entrepreneur may have multiple companies.

women are internationally active. This is mainly because the total number of entrepreneurs has been increasing more rapidly.

3.5.1 Internationally active entrepreneurs

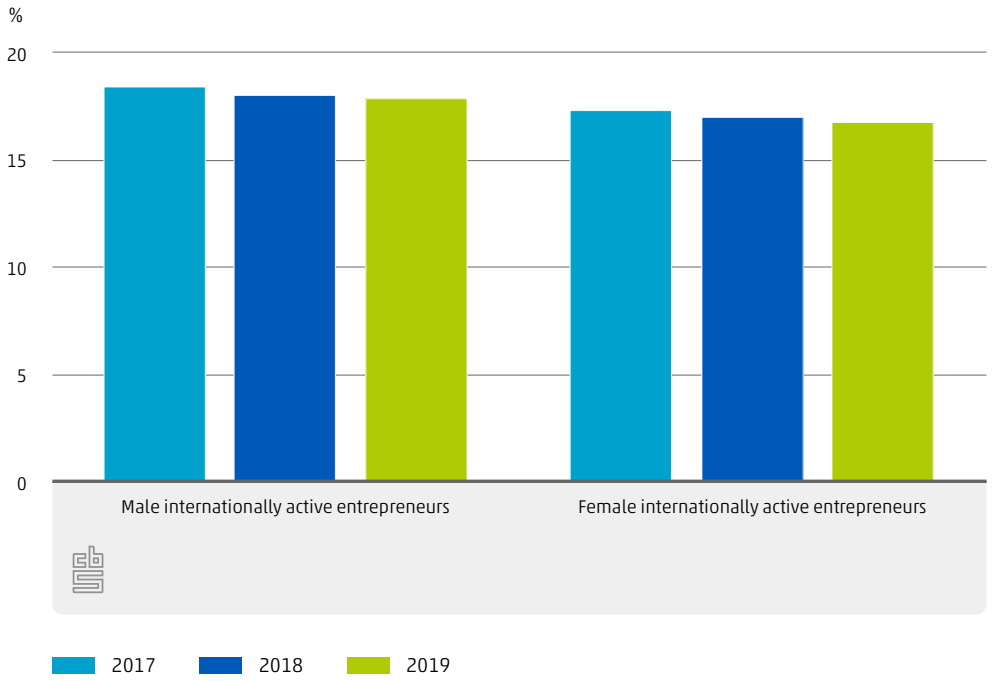


Figure 3.5.2 shows that there are differences in the sectors in which male and female entrepreneurs are internationally active. The largest share of both men and women are internationally active in the wholesale and retail trade. This sector frequently acts as an intermediate link in companies' national and international supply chains (CBS, 2019b). In 2019, more than half of internationally active female entrepreneurs traded in goods and/or services or headed a multinational in this sector, against 44% of male entrepreneurs. However, this share has declined for both men (down by 1 percentage point) and women (down by 2 percentage points) compared to 2017. The share of internationally active female entrepreneurs in specialised business services and accommodation and food services is also higher than that of men. The reverse is true in the construction sector (9%) and the information and communication sector (8%). In absolute terms, among internationally active entrepreneurs, there are at least twice as many men as women in all sectors of the Dutch business economy.

3.5.2 Internationally active entrepreneurs by sector and sex, 2019

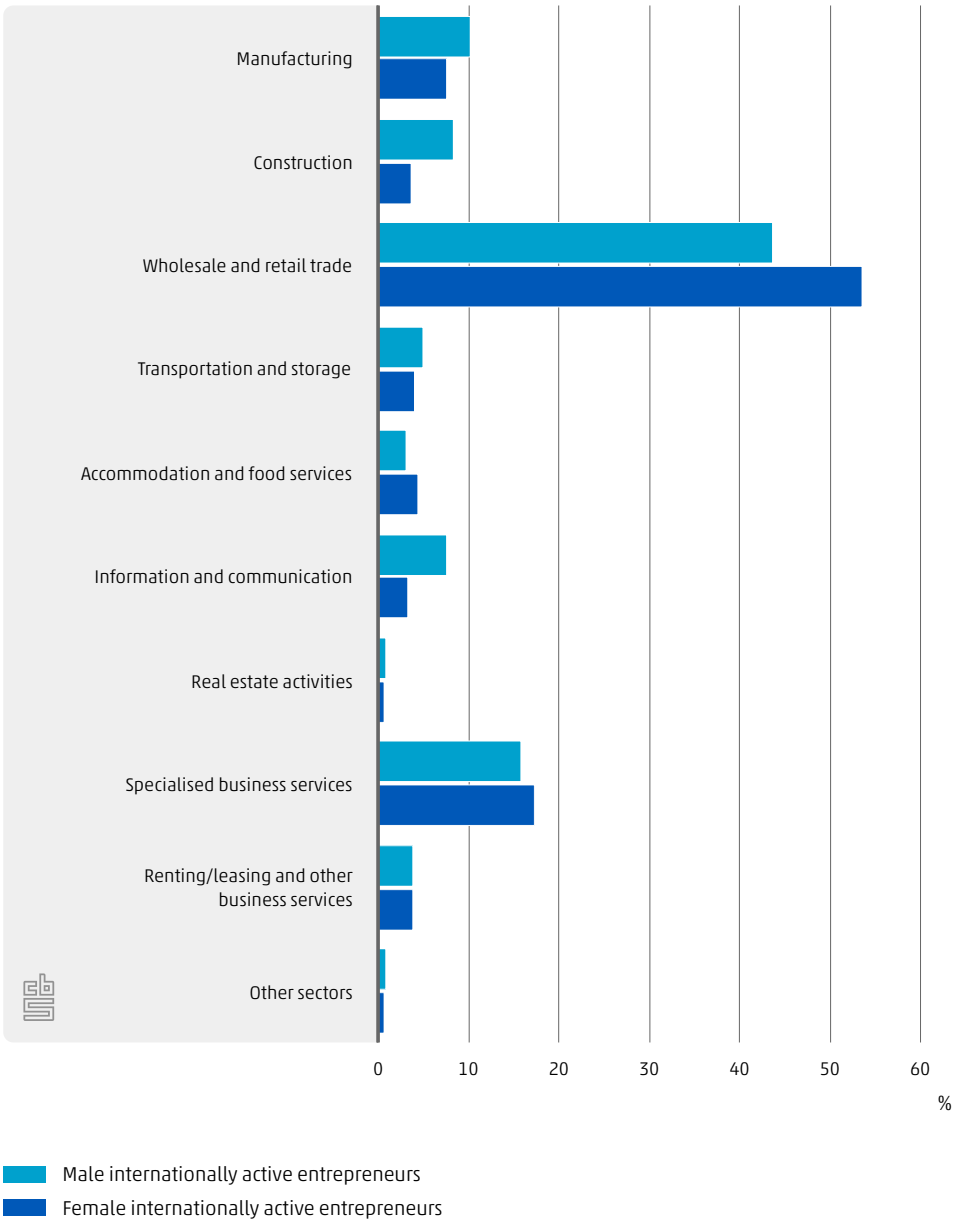


Figure 3.5.3 shows that the extent to which entrepreneurs are internationally active is age-related. The proportion of male entrepreneurs who are internationally active increases up to and including the 45–54 age category and then declines. Women only become less internationally active from the age of 65. Among entrepreneurs aged under 25 and over 65, women are more often internationally active than men. Childcare may possibly play a role in this, as it is mainly between these two age categories that people look after children.
In general, women more often take on the childcare responsibilities and it is more difficult for them than for men to achieve a work-life balance (Weerden & Martens, 2018).

3.5.3 Internationally active entrepreneurs by age, 2019

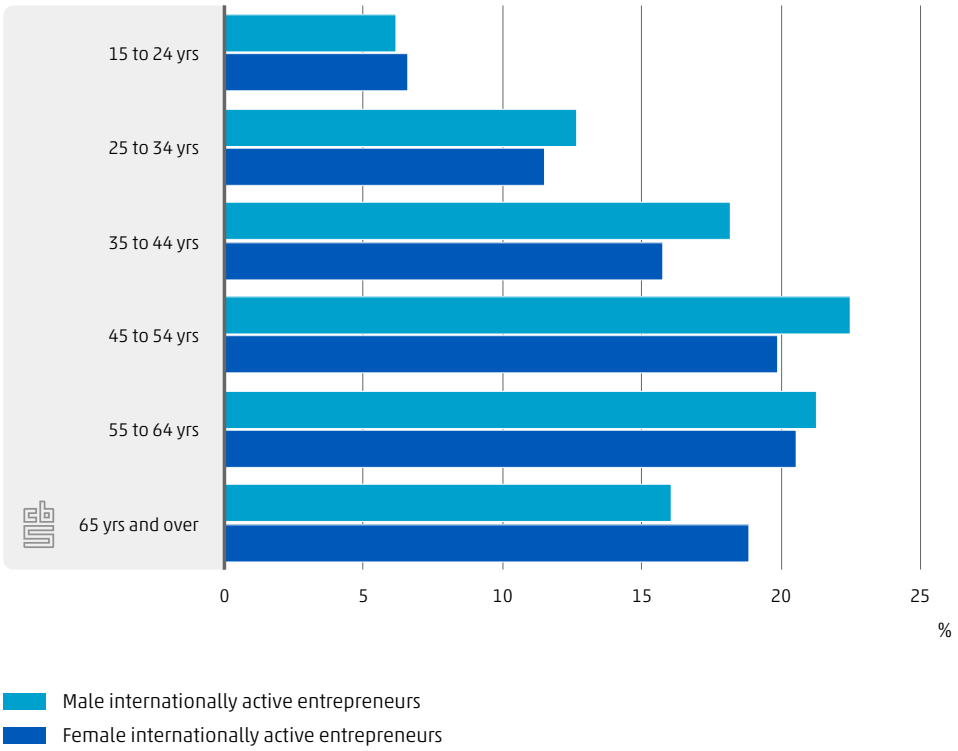
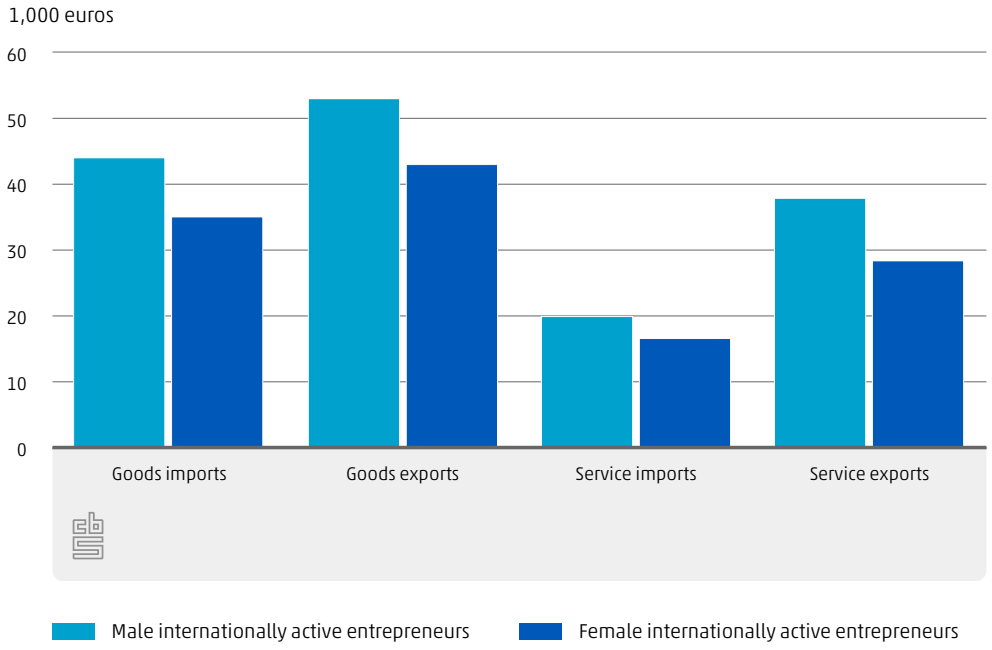


Figure 3.5.4 shows that there are also differences between men and women as regards trade value. The median import and export value of companies headed by a female entrepreneur is lower than for male entrepreneurs. This applies to both the trade in goods and in services. The median value of goods exported by female entrepreneurs in 2019 was about €10,000 lower (–19%) than that of male entrepreneurs. This gap of €10,000 can also be seen in the median trade value of service exports, where it represents a difference of about 25%. These value differences probably partly reflect differences in the sectors in which men and women are internationally active (Figure 3.5.2). Compared to 2017, median goods exports declined by about 4% for both men and women. Median service exports also decreased in this period for companies headed by female entrepreneurs (–3%), but they increased for enterprises with male entrepreneurs (+6%).

3.5.4 Median trade value of internationally active entrepreneurs, 2019



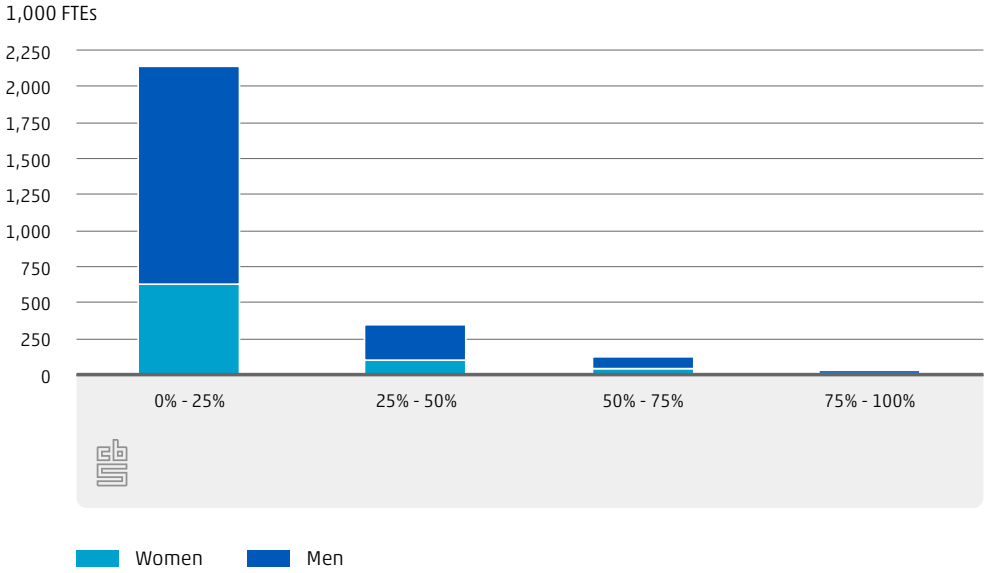
3.6 Characteristics of employees and dependence on imports

This section compares the characteristics of employees of companies that have production processes or turnover which depend to a greater or lesser extent on imports or exports of goods. A company's dependence on imports or exports is measured on the basis of import or export intensity. These are calculated by dividing the total import or export value of goods by the total turnover.[9] Companies without imports or exports are not included in these analyses.

In 2019, a total of 2.7 million full-time equivalents (FTEs) were employed by companies with imports and 1.9 million FTEs by companies with exports. Of these, relatively few worked for companies where the share of imports or exports in relation to turnover was higher than 25% (Figure 3.6.1). Of the businesses that import, the vast majority (80%) of FTEs are at companies with an import intensity of at most 25%. The picture is similar for export intensity, at 76% of FTEs. In other words, most of the working population is employed by the category of companies that is least directly dependent on importing or exporting goods. Figure 3.6.1 also shows that the share of men in the total number of FTEs is considerably higher than that of women. This is true for both imports and exports for all levels of intensity. Factors that play a role here are that men rather than women are more often employed by companies in the Dutch private sector and by companies that are internationally active, and that women are more often employed in the non-profit sector.

9) An important note is that this method looks exclusively at direct import and export dependency, and therefore does not consider indirect dependencies. An example of an indirect dependency is a Dutch company that sells intermediate goods to another Dutch company, which uses them to manufacture goods that it then exports. Another example is a Dutch company that buys goods from a Dutch wholesaler that had imported those goods from abroad.

3.6.1 Number of full-time equivalents by import intensity and sex, 2019

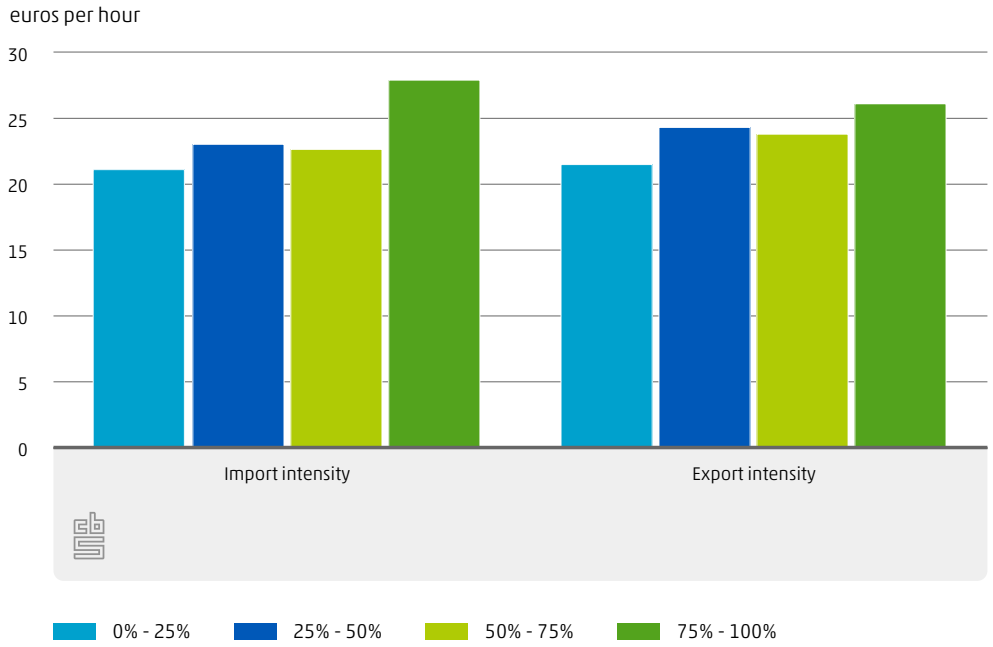


Only enterprises that import are included here. This means that enterprises in the 0%-25% category have an import intensity of more than 0% and less than 25%.

Employees at companies with a relatively high ratio of goods imports or exports to turnover earn higher wages on average (Figure 3.6.2). The average gross hourly wage at companies with an import intensity no higher than 25% was more than €21 in 2019.[10] In comparison, companies with an import intensity of more than 75% paid on average nearly €7 more per hour. The picture is similar for exports, though the difference between the two extremes of export intensity is slightly smaller, at €4.50 per hour. These wage gaps may be related to differences according to sector and education, which are generally associated with differences in productivity (see also Table 3.3.1).

10) The average gross hourly wage has been calculated here as a weighted average of the median gross hourly wages at the various companies. The weightings have been determined on the basis of business size in full-time equivalents. The calculation of gross hourly wages also takes into account holiday supplements, year-end payments, the number of overtime hours and the compensation for those hours.

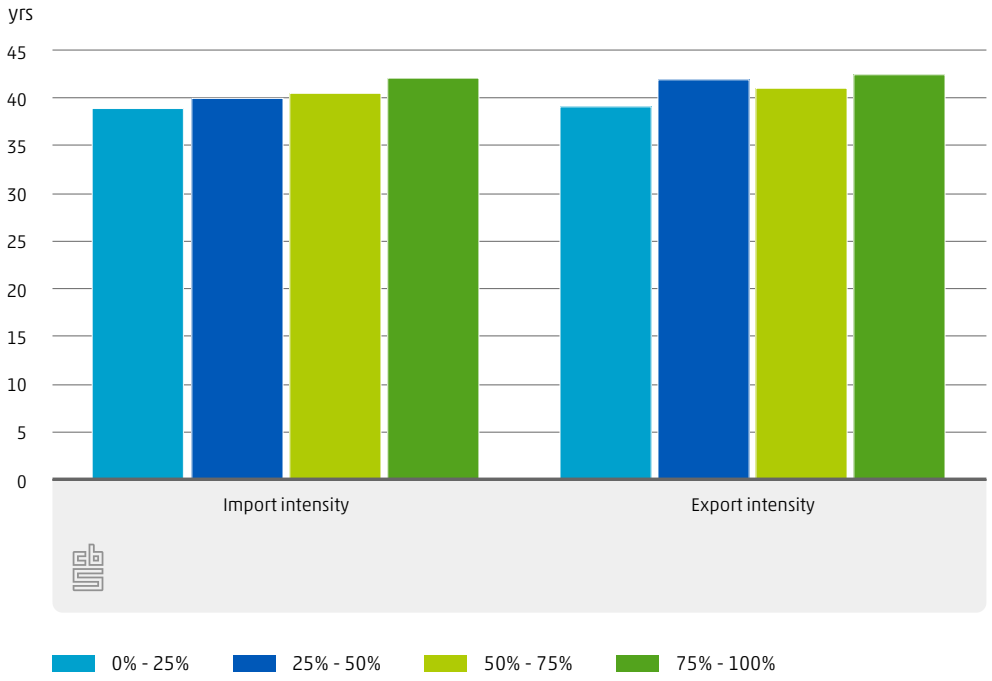
3.6.2 Average gross hourly wage by import and export intensity, 2019



Part of the wage gap could also be due to a difference in the age of the workforce (Figure 3.6.3). This is because companies that are more dependent on direct imports or exports employ older workers on average.[11)] Employees who work for companies with a ratio of imports to turnover that is no more than 25% are on average more than three years younger than employees at companies with an import intensity of more than 75%. This is also the case for the distribution according to export intensity.

11) The average age is a weighted average of the median ages at the different companies. As with gross hourly wages, the weighting has been determined on the basis of business size in full-time equivalents.

3.6.3 Average age by import and export intensity, 2019



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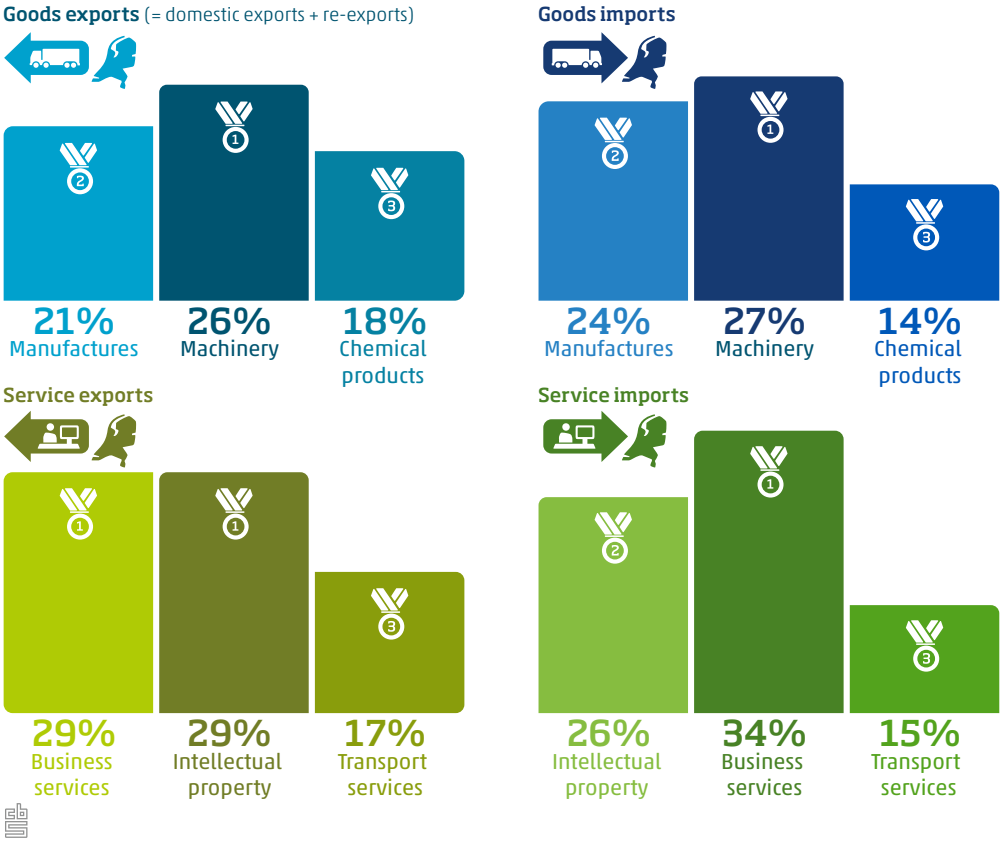
4 Composition of Dutch international trade

Authors: Marjolijn Jaarsma, Janneke Rooyakkers

Main goods and service exports, 2020



This chapter considers the development and composition of Dutch trade in goods and services. What was the situation in 2020? Which goods and services saw falls in imports and exports and which saw rises? Which sectors are responsible for this international trade and what proportion is generated by independent SMEs? The chapter also examines the concentration of international trade by type of company as well as the concentration by country. It also assesses the composition of export growth in 2019 – a year earlier. These and more questions are addressed in this chapter.

4.1 Key findings

Total Dutch goods exports amounted to nearly €483 billion in 2020. That is around 6.3% less than in 2019. The contraction occurred mainly in Q2. Exports by volume fell by 2.2% in 2020. The economy and international trade were severely impacted by the coronavirus pandemic. Lockdown measures interrupted production processes and international value chains and cut

demand for goods and services among consumers and businesses. Trade prices were also low in 2020 due to a sharply lower oil price and when demand for goods picked up in the second half of the year, there were shortages of specific raw materials and components.

Exports of mineral fuels were hit hardest in 2020, falling by more than 34.4% compared to the previous year. Lower demand for these products and lower oil prices both played a role in this decrease. Exports of chemical products nevertheless increased by 1.6%. Exports of medical and pharmaceutical products in particular grew rapidly in 2020. Independent small and medium-sized enterprises (SMEs) accounted for 19.6% of the total value of goods exports, while large enterprises accounted for more than 51.7%. An increase of 0.8% was nevertheless recorded in exports by independent SMEs in 2020. Goods exports by large enterprises decreased by 5.7%.

Domestic exports were worth more than €263 billion in 2020, a decrease of 8.0% compared to 2019. Re-exports, amounting to around €219 billion, contracted by 4.3% compared to 2019.

The Netherlands imported goods worth close to €424 billion in 2020, around 7.8% less than in the previous year. The decrease in imports was seen mainly in mineral fuels, as well as in transport equipment (–15.8%); far fewer lorries, cars and parts were imported in 2020. Imports of chemical products, food and beverages, as well as raw materials and natural products, nevertheless increased in 2020. Machinery was still the main import category in 2020.

Trade in services was also impacted by the coronavirus pandemic and the associated economic downturn. Exports of services fell by more than 6.6% to almost €230 billion in 2020. Travel in particular was hit hard by the lockdowns and travel restrictions. There were also significant impacts on travel agents and transporters, with business services and the transport sector seeing sharp falls in service exports compared to the year before. Exports of financial services and remuneration received for the use of intellectual property nevertheless increased in 2020. The growth in financial services was due to an increase in online payments. The rise in exports of intellectual property is attributable to streaming services providing music, films and series.

Service imports totalled over €209 billion in 2020, a decrease of 11.7% compared to the previous year. The large decrease in service imports was once again due to travel and associated business services.

4.2 Goods exports by type of goods

Goods exports decreased by over 6% in 2020

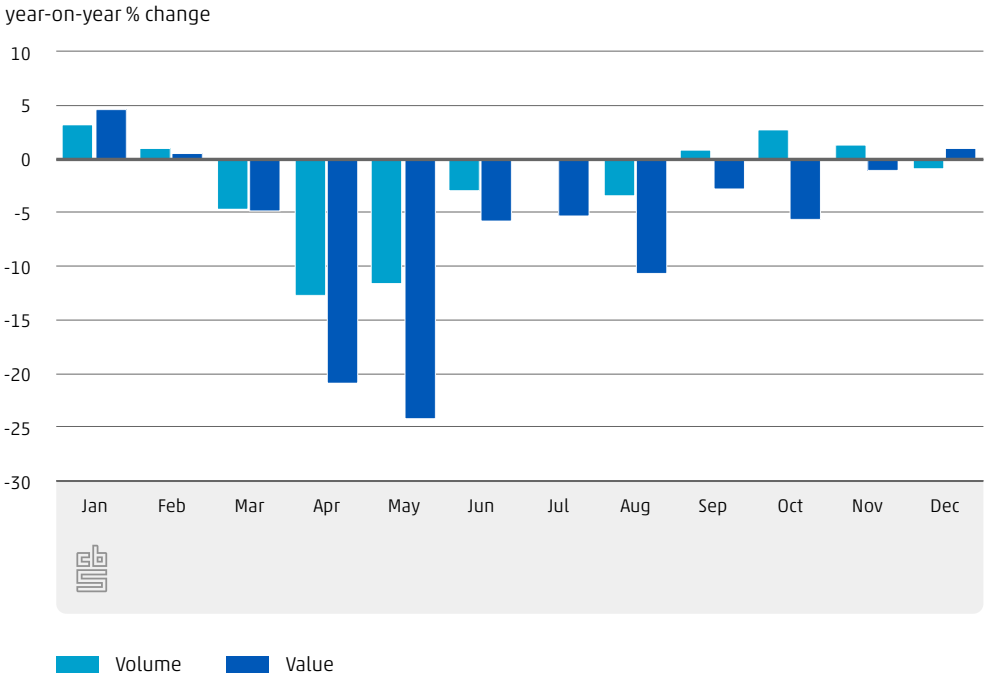
The Netherlands exported goods worth more than €483 billion in 2020. Goods exports thus contracted by 6.3% compared to 2019, marking the first time that exports had failed to increase since 2015. In 2020 the global economy and international trade were severely impacted by the outbreak of the coronavirus pandemic, which also caused a substantial reduction in Dutch goods trade. Lockdown measures hampered production processes

worldwide and production in some countries was cut or shut down completely, interrupting supply chains. Consumer and business demand for goods and services fell. Lower trade prices, partly due to a substantially lower oil price in 2020, were a major factor in the lower exports (CBS, 2020a; Schwartz, 2021). Disagreements between the oil producers Russia and Saudi Arabia combined with lower demand due to the coronavirus crisis led to substantially lower oil prices in 2020. Exports by volume fell by 2.2% in 2020.[1)]

Export value down more than 20% in April and May

Trade fell substantially, particularly in Q2 2020. Many countries went into lockdown, causing a dramatic slump in demand for many goods (ING, 2020). Factories worldwide were also shut down to protect workers from infection (Van de Weijer, 2021). The biggest year-on-year changes, reductions of over 20%, were recorded in April and May. Partly due to the rapid economic recovery in China (UNCTAD, 2021; CGTN, 2020) and the end of the first 'wave' of the pandemic in Europe, global trade and Dutch imports and exports of goods recovered fairly quickly. Various sectors worldwide, such as the automotive and consumer electronics industries, found it difficult to scale up production immediately, partly due to high demand for electronics and shortages of specific raw materials such as chips and batteries (Bown, 2021; Hijink, 2021; Leswing, 2021). Furthermore, when demand picked up again and production resumed, international transport was also hampered by shortages of containers. Major transport operators had taken ships and containers out of service after the outbreak of the pandemic. China's strong recovery combined with a long period of lockdowns and downturns in other parts of the world led to an imbalance particularly in container transport, causing transport costs to rise (ING, 2021; Rabobank, 2021).

4.2.1 Dutch goods exports, 2020



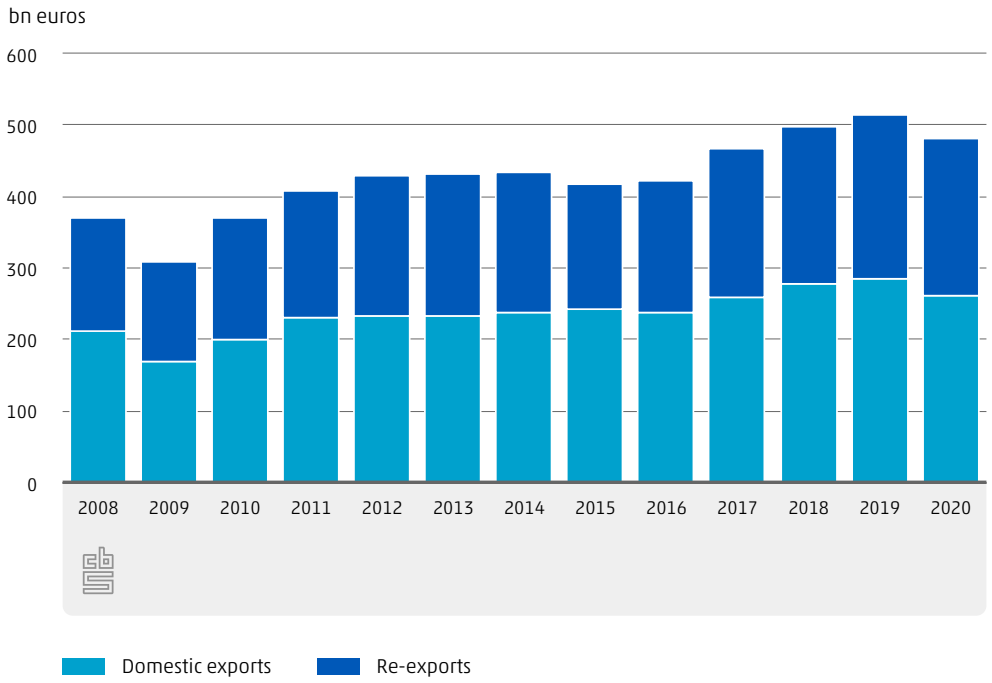
1) Exports measured according to transfer of ownership.

Exports fall less during coronavirus crisis than during financial crisis

After 2009 Dutch goods exports increased almost every year and reached a record level in 2019 (Figure 4.2.2).[2)] A 6.3% contraction in 2020 took the value of exports below the 2018 level. The fall was not as large as in 2009, however, when the export value of goods decreased by 16.5%. The crisis of more than a decade ago was very different from the 2020 crisis. In 2009 it started as a credit and financial crisis but quickly spread to the real side of the economy. The sharp downturn in global trade in 2008 also caused a steep fall in Dutch exports. Banks and financial institutions needed substantial government support to stay afloat and had to adopt a cautious approach to lending. Corporate investment stalled, construction plummeted and jobs were lost. As a result, consumers reined in their spending (CBS, 2009). Global trade did nevertheless cool in 2019 and much of 2020. The contraction in international trade that affected the world in 2020 had little to do with underlying economic factors and was mainly due to the unexpected worldwide shock of the coronavirus pandemic. Global trade – and along with it Dutch trade – recovered swiftly, partly due to the rapid reopening of the Chinese economy and broad support programmes introduced by national governments. By the end of 2020 global trade in goods was already almost back to the pre-coronavirus crisis level (CPB, 2021).

Domestic goods exports were hit harder than re-exports, falling by 8.0% compared to 2019. Re-exports contracted by 4.3%.

4.2.2 Exports of goods by export type



2) Between 2014 and 2015 there was a method break in the statistics on international trade in goods, so the figures before and after 2015 are not readily comparable. In the remainder of the chapter we therefore discuss the trade data from 2015 onwards. The data tables does nevertheless contain data from 2010. For more information on the method break, see 'Oorzaken methodebreuk internationale goederenhandel, 2014-2015' (only available in Dutch) (CBS, 2015a).

Exports of chemical products up 1.6%

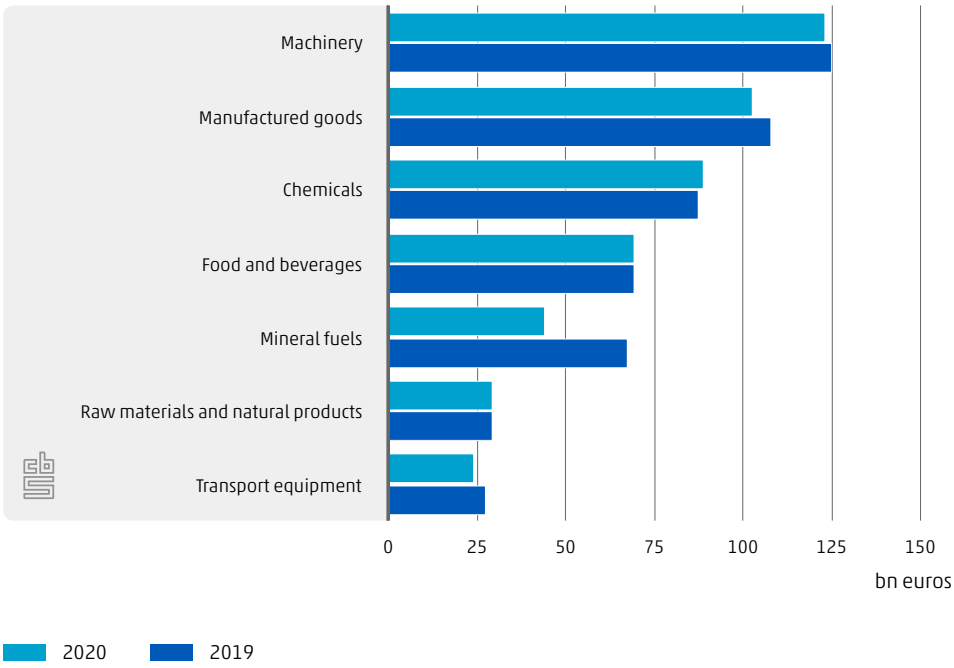
A focus on the different types of goods exported by the Netherlands shows that machinery was again the most important Dutch export in 2020 (Figure 4.2.3). At around €123 billion, this commodity group accounted for nearly 26% of total exports in 2020. The 1.6% decrease in machinery exports was relatively small. After machinery, manufactured goods (21% share) made up the largest group of exports. Examples include goods such as medical instruments and devices, iron and steel products, metal and glass products and clothing. Manufactured goods exports decreased by 4.9% in 2020, however. Chemical products (18% share) were the only commodity group whose exports increased in 2020 compared to 2019, rising by 1.6%. Chemical products include chemicals, but also perfume, soap and medicines, for example. In particular, exports of medical and pharmaceutical products, such as certain medicines, laboratory supplies as well as vaccines and antisera, grew by almost 20% between 2019 and 2020. This increase was a direct consequence of higher demand for medical supplies during the coronavirus pandemic.

€23 billion drop in exports of mineral fuels in 2020 compared to 2019

Export value of mineral fuels shows biggest fall in 2020

The export value of mineral fuels was hit hardest, falling by 34.4% compared to 2019. Exports of these goods fell from €68 billion in 2019 to €44 billion in 2020. There were falls particularly in the export value of natural gas and refined petroleum products such as petrol, diesel and kerosene. In 2020 there was not only lower demand for oil and gas, but the prices of these mineral fuels were also substantially lower. Mineral fuels thus accounted for 71% of the total contraction of goods exports in 2020. If mineral fuel exports are excluded, exports of all other goods decreased by 2.1% in 2020.

4.2.3 Exports of goods by type of good

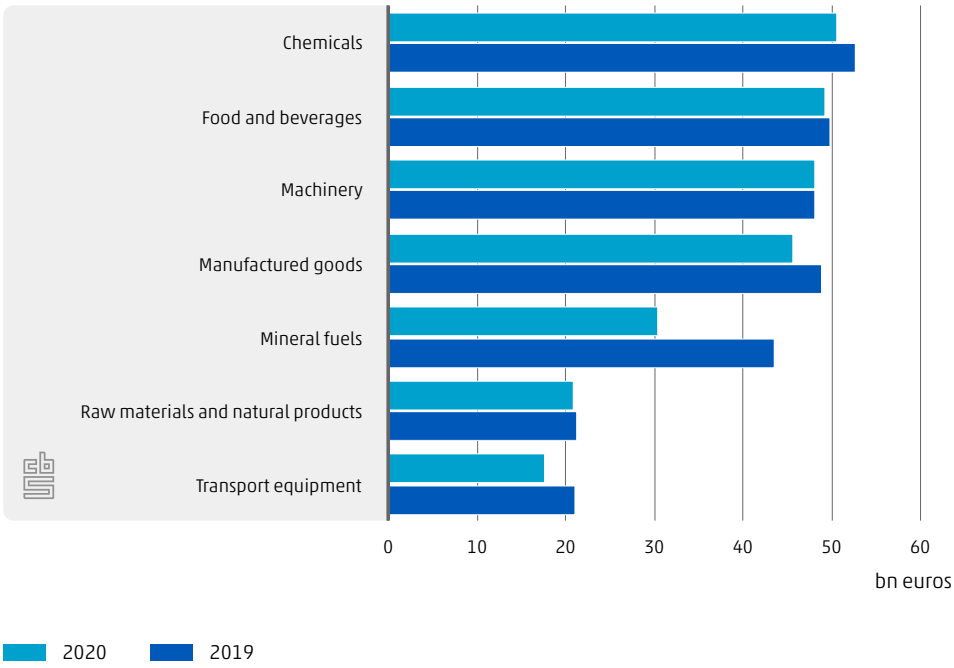


Domestic exports fall relatively sharply by 8%

Dutch companies exported domestic goods worth over €263 billion in 2020. These are goods that have either been produced or undergone significant processing in the Netherlands. A relatively large amount of income is earned from these goods: as can be seen in Chapter 2 of this publication, domestic goods exports generated around 54 cents per euro in 2019, while re-exports generated around 13 cents per euro. Domestic goods exports also supply around 1 million direct and indirect jobs in the Netherlands (see also Chapter 2). Exports of Dutch-manufactured goods are therefore particularly important for the Dutch economy. Almost 55% of total Dutch exports in 2020 comprised domestic goods, a share that has stayed fairly constant over the past decade.[3)] Partly due to the relatively large share of mineral fuels, domestic goods exports were impacted to a relatively greater degree by the coronavirus crisis and lower trade prices than re-exports. Domestic exports decreased by almost 8% in 2020 compared to 2019. This contraction occurred in almost all domestic goods groups, as can be seen in Figure 4.2.4. Exports of mineral fuels (–30.2%) and transport equipment (–16.2%) in particular fell substantially. Only machinery (–0.1%), raw materials and natural products (–1.1%) and food and beverages (–1.4%) saw limited falls in exports. The growth in exports of chemical products in Figure 4.2.3 was therefore due to re-exports rather than exports of domestic goods.

3) Elsewhere in this publication, for example in Chapters 2 and 6, it is stated that re-exports account for just over half of goods exports. The figures presented in this chapter are based on the International Trade in Goods source statistics. The figures in Chapters 2 and 6 are taken from the National Accounts. The source statistics use concepts that differ from those of the National Accounts; they are based on cross-border goods transport, for example, while the National Accounts focus on economic ownership. Integration into the National Accounts results in additional differences. The figures in Chapters 4 and 5 cannot therefore be compared directly with those in Chapters 2 and 6. For more information on these differences, see 'CBS import and export statistics' (CBS, 2015b).

4.2.4 Domestic exports by type of good



The contraction of mineral fuel exports increased the relative shares of other goods groups in total domestic exports in 2020. The main goods groups in 2020 were food and beverages (18.7% share), chemical products (19.3% share), machinery (18.3% share) and manufactured goods (17.4% share), each with an export value of around €50 billion.

Re-exports of mineral fuels down 42% in 2020

Re-exports concern goods that are imported by Dutch companies and undergo little or no processing in the Netherlands before being re-exported. Re-exports in 2020 amounted to €219 billion, representing over 45.5% of total Dutch goods exports. Most re-exports comprised machinery (34.2% share), followed by manufactured products (26.0% share) and chemical products (17.4% share). Re-exports of chemical products rose substantially over the past year, by around 9.9%. Growth in this goods group was driven particularly by the coronavirus pandemic, with increases in re-exports of medicines and other pharmaceutical products. Re-exports of food and beverages and of raw materials and natural products also increased by 3.2% and 3.3% respectively. Re-exports of the other goods groups decreased slightly, with a substantial contraction being recorded in the case of mineral fuels (-42.1%).

4.3 Exports of goods by sector and business size

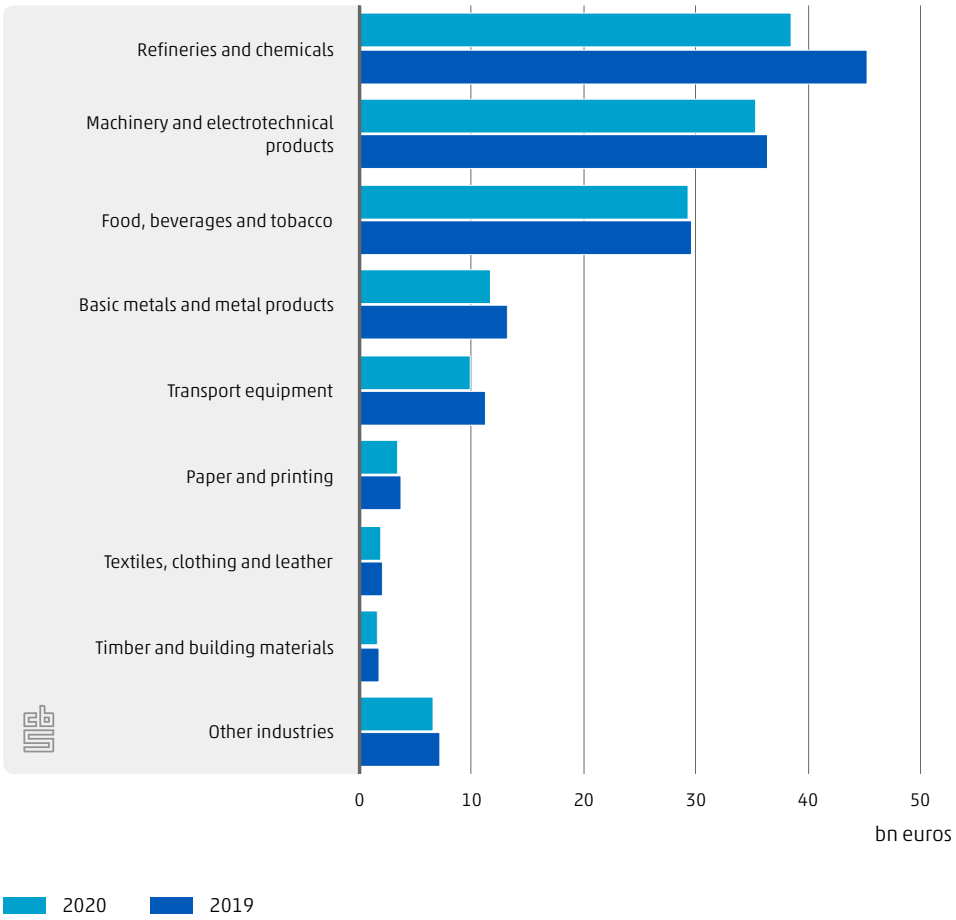
Biggest exporters are wholesale and manufacturing

Dutch goods exports are driven largely by two sectors: manufacturing and wholesale.[4)] Manufacturing is naturally the sector that produces or processes the bulk of goods in the Netherlands; in the case of wholesale and retail trade, economic activity is based on the purchase and sale of goods. Manufacturing companies exported 28.8% of all goods in 2020, while wholesalers exported 27.3%. The contraction in the wholesale sector was very limited, at less than 1.0%, while manufacturing exported 8.0% less in 2020 than in 2019. This clearly shows that the impact of the coronavirus crisis on exports was felt more strongly by manufacturing than by wholesale. This is also related to the type of exports in each sector (manufacturing exports more domestic goods, whereas wholesale is more often an intermediary for re-exports) and the impact of falling demand for certain products (mineral fuels, clothing, cars), but also the interdependence of global production chains.

Figure 4.3.1 shows a more detailed breakdown of exports by manufacturing companies. A wide variation can be seen in the increase or decrease in 2020 compared to 2019. Exports by the chemical industry in 2020, for example, amounted to €20.8 billion, or 4.3% of total exports, a decrease of 12.1%. Manufacturing of other machinery and equipment (€25 billion and a 5.3% share) decreased by 3.3%, whereas the food industry (€28 billion and a 5.8% share) recorded a decrease of just 0.6%. Other large falls were recorded in the motor vehicle industry (–20.4%) and the primary metal industry (–17.5%). Some manufacturing sectors nevertheless saw growth in 2020. Exports by the pharmaceutical industry, for example, grew by 14.4% and companies manufacturing electrical equipment exported 4.6% more than in 2019.

4) Around 29% of Dutch exports cannot be attributed to a company established in the Netherlands. These exports take place in the name of foreign operators that have no representation in the Netherlands. They do not appear in the General Business Register (ABR), which means that this part of the trade in goods cannot be assigned to individual companies and therefore cannot be differentiated by sector or size of business. The 'unknown' share is much higher in the case of re-exports than in the case of domestic exports.

4.3.1 Industrial exports by industry



In 2020 there were around 117,000 companies in the Netherlands exporting goods. These companies can be classified by business size (see Chapter 3). The independent small and medium-sized enterprises (independent SMEs) include all Dutch-owned businesses employing fewer than 250 people across the whole organisation. Companies that employ fewer than 250 people but are part of a foreign multinational are included in large enterprises (part of a foreign multinational). In this chapter Dutch multinationals (companies with foreign subsidiaries) employing fewer than 250 people are included in independent SMEs because no data on subsidiaries abroad are yet available for the 2020 reporting year. Large enterprises comprise all Dutch businesses that are part of a group employing at least 250 people and/or part of a foreign-owned group.

Independent SMEs saw exports rise in 2020

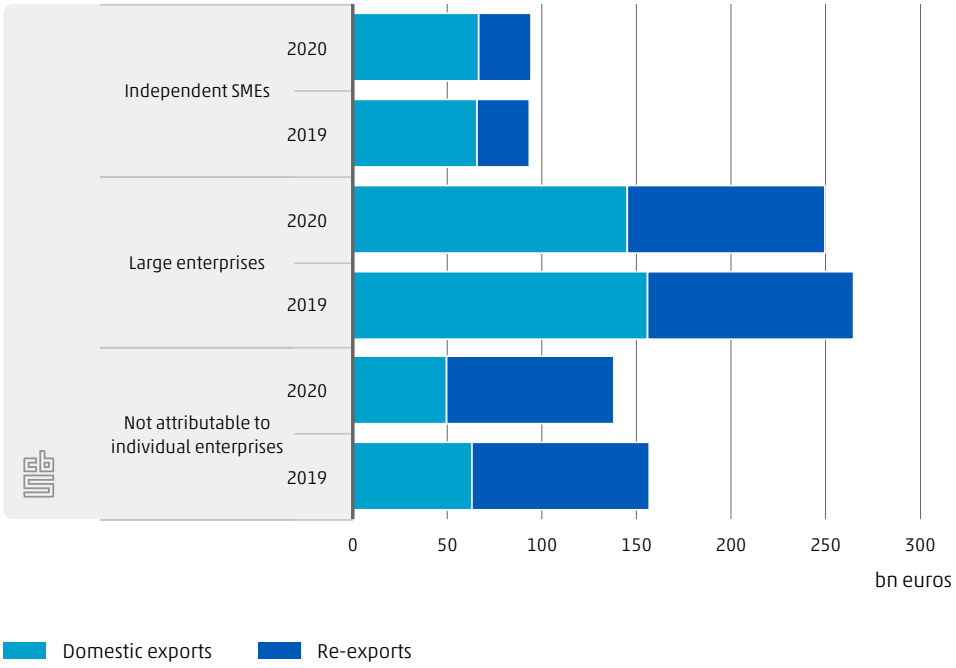
Independent SMEs accounted for 19.6% of the total value of goods exports in 2020. Large enterprises accounted for almost 52% of goods exports. As in the case of the sectors, nearly 29% cannot be attributed to an individual company, so the size category is unknown. This mainly concerns exports by foreign companies that do not report production facilities, sales or employment in the Netherlands. It is notable that although total exports decreased in 2020 compared to 2019, exports by independent SMEs increased, albeit very slightly by 0.8%. These exports were worth approximately €94.4 billion in 2020, versus €93.6 billion in 2019. Growth in exports by independent SMEs was driven both by autonomous growth of independent SMEs

and by companies that were still classified as large enterprises in 2019 and as independent SMEs in 2020.

Large enterprises generated exports worth almost €250 billion in 2020, around 5.7% less than a year earlier. The decrease in exports by companies of unknown size category was steepest at –11.6%.

Figure 4.3.2 shows that independent SMEs and large enterprises mainly export domestic goods, while unclassified companies mainly engage in re-exports.

4.3.2 Exports of goods by enterprise size



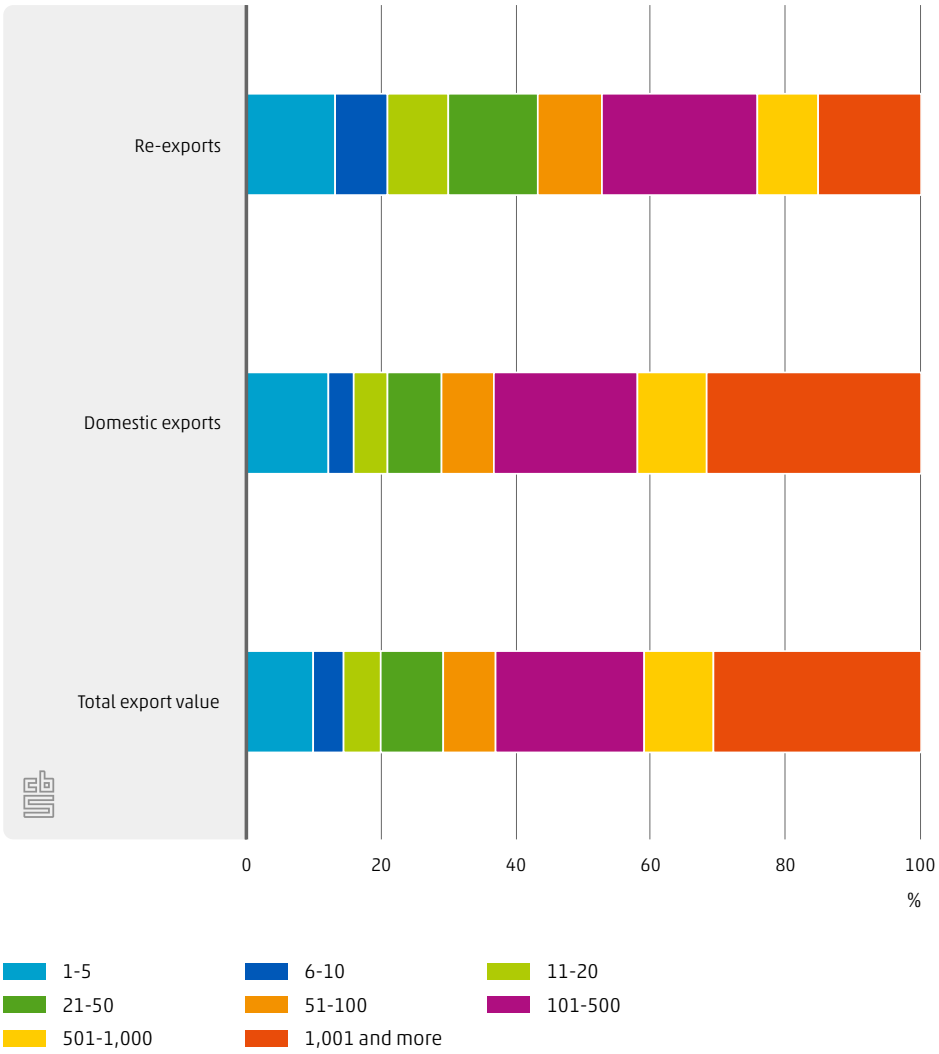
One-eighth of domestic exports is accounted for by the five largest exporters

Figure 4.3.3 shows the largest exporting companies' shares in total exports. It can be seen that the five exporters with the highest export value accounted for 10% of the total export value in 2020. The figure in 2019 was 11%. The same pattern can be seen in domestic exports. Here the five largest exporters accounted for 12% of exports of Dutch-manufactured goods in 2020 and the 10 largest accounted for 16%. The 50 largest Dutch exporters collectively account for 29% of domestic exports. The companies outside the top-1,000 account for the largest share of exports; their share of both total exports and domestic exports is around 30%.

Re-exports show an even more concentrated picture. Mid-tier companies in particular, for example the six to 100 largest re-exporters, account for a larger share of these exports than mid-tier domestic exporters. The 10 largest re-exporting companies exported over a fifth of total re-exports in 2020 and the top 100 companies over half. This picture was similar in 2019.

43% of re-exports are accounted for by the 50 largest exporters

4.3.3 Concentration of goods exports, 2020 (top x largest enterprises)

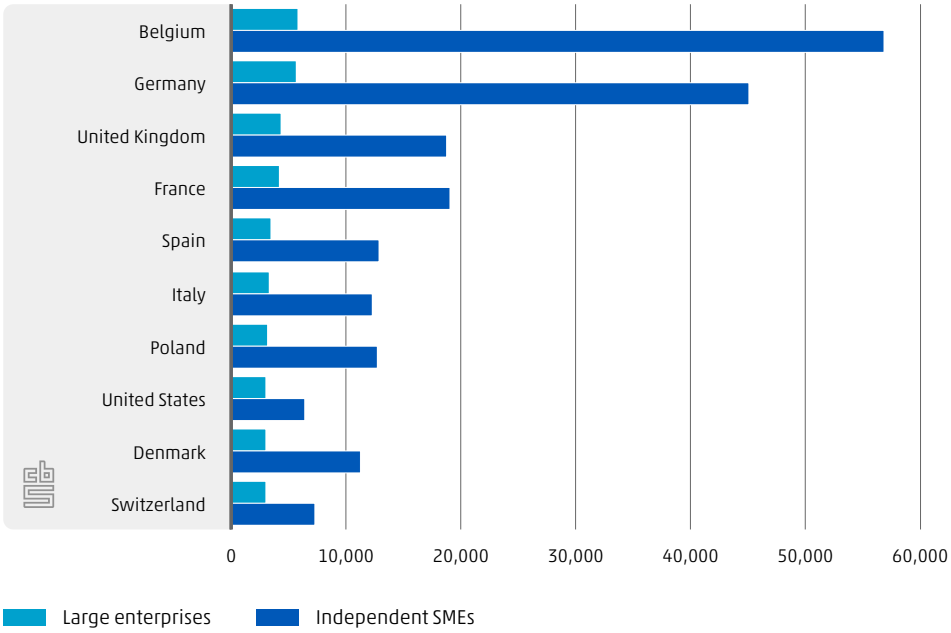


Most companies export to Belgium

Figure 4.3.4 shows the main countries to which Dutch exporters supply goods. Most independent exporting SMEs, as well as large exporting companies, supply goods to Belgium. In 2020 over 5,800 large enterprises exported to our southern neighbours, while in the case of independent SMEs the figure was almost 10 times higher. The position with regard to exports to Germany is very different; the number of independent SMEs exporting to Belgium is more than 10,000 higher than to Germany. The difference is much smaller in the case of large enterprises. Although most exporters export to Belgium, the scale of goods exports to

Germany by exporters of both types is therefore much greater. Independent SMEs exported goods worth €26.6 billion to Germany and almost €12.4 billion to Belgium in 2020 (Figure 4.3.5). Chapter 5 of this publication examines the origin and destination of Dutch goods trade in more detail.

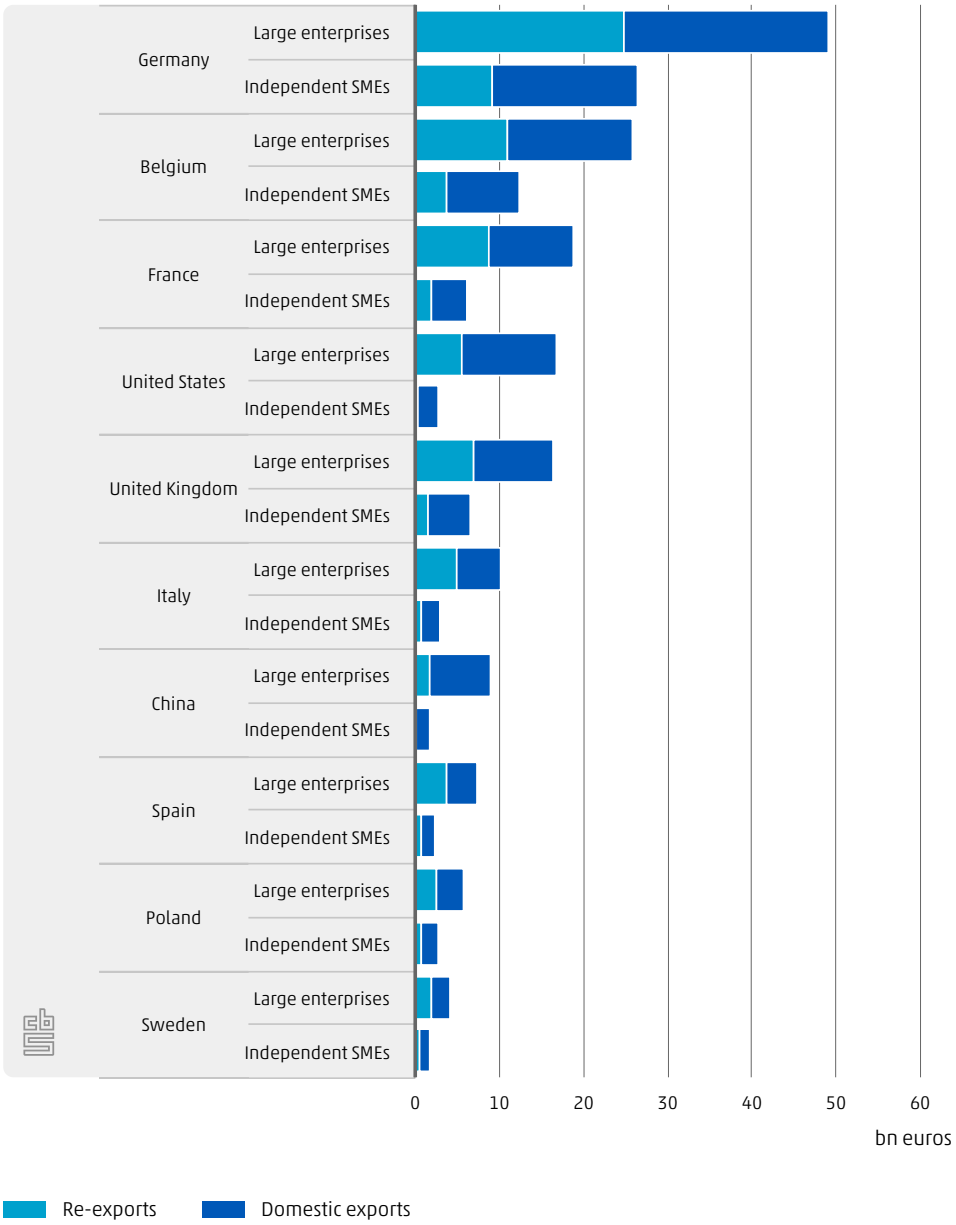
4.3.4 Number of exporting enterprises by main trading partners, 2020



United Kingdom sinks further as an export destination for large companies

In terms of export value the top three export destinations for large exporters were Germany, Belgium and France (Figure 4.3.5). In the case of independent SMEs the United Kingdom was still in 3rd place in 2020, although the gap between the UK and the number 4, France, is narrowing. In the case of large enterprises the UK sank further as an export destination in 2020; in 2019 the UK was still in fourth place, but in 2020 it fell to fifth place, after the United States. The decrease in the UK share may have been in anticipation of the UK's departure from the EU on 1 January 2021. Generally speaking, exports by large enterprises more often go to more distant destinations such as the United States or to non-EU countries such as Switzerland than those of independent SMEs. It is easier to trade within the EU, so it is more accessible for exporters, including small businesses. Figure 4.3.5 also shows that exports to more distant countries more often comprise domestic products than exports to surrounding countries.

4.3.5 Export value of independent SMEs and large enterprises by trading partner, 2020



4.4 Composition of growth in goods exports in 2019

The preceding sections showed that Dutch goods exports grew almost every year after 2009, and even reached a record level in 2019. Goods exports rose by €17.5 billion to €515 billion in 2019. That represents an increase of 3.5% compared to 2018, when the Netherlands exported goods worth €498 billion. This section describes the composition of that growth: did companies start exporting new products or did they find new destination countries for their goods exports? Which types of company were responsible for the growth? These questions and more are addressed below. Figures are only available on the composition of

the increase or decrease in goods exports up to and including 2019. This section will therefore discuss 2019.

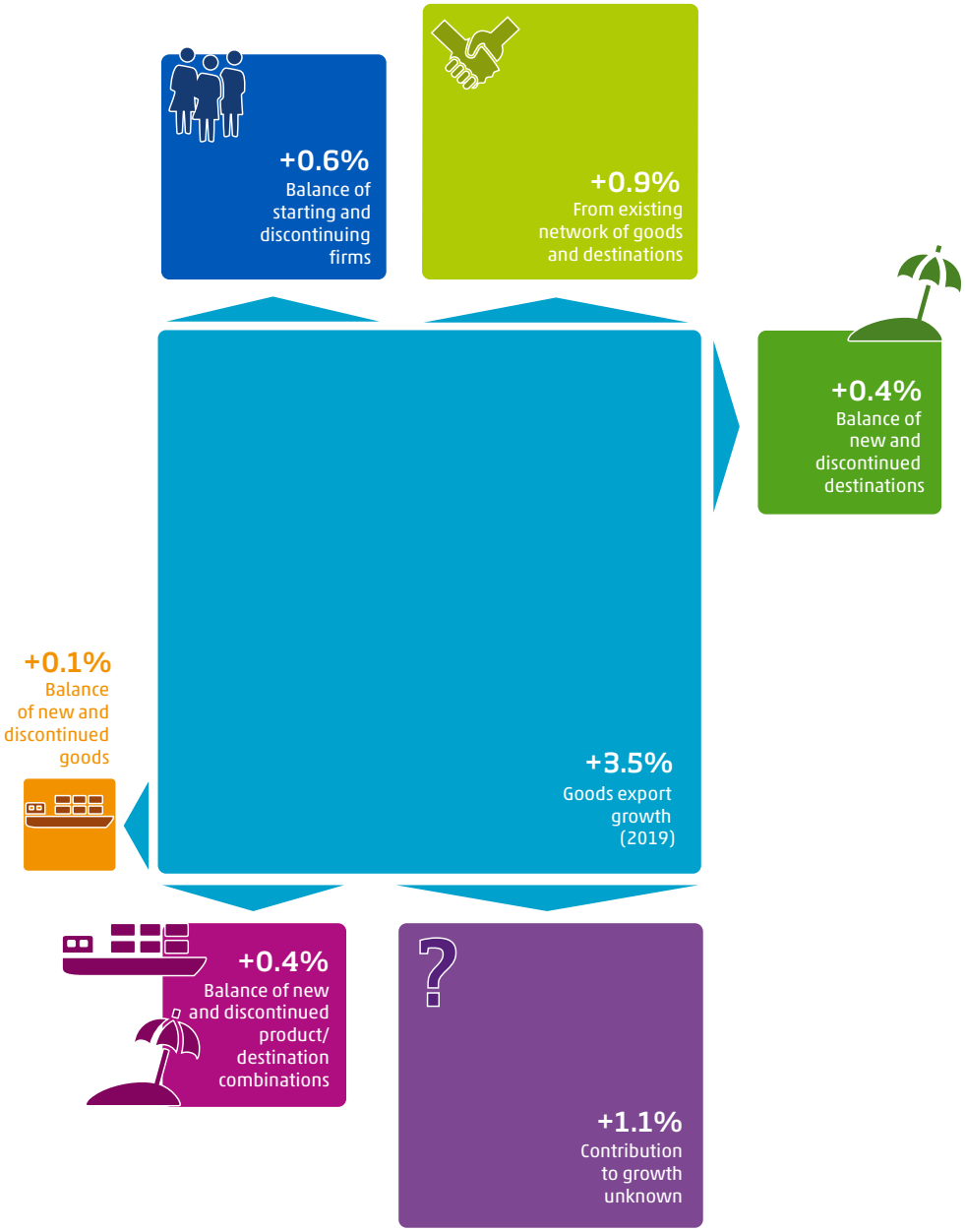
Behaviour of the exporter

There are several ways in which companies can generate higher or lower exports (see infographic below). First, companies exporting for the first time in 2019 generated growth of 1.1%. On the other hand there were companies that had exported before 2019 but which had no goods exports in 2019; they stopped exporting. These were responsible for a 0.5% contraction, so taken together the companies that started or stopped exporting in 2019 jointly accounted for growth of 0.6% compared to 2018. The difference between companies starting and stopping exports is also referred to as the extensive margin.

Growth in the intensive margin represents an increase in exports of existing products to existing destinations: a company sees its exports grow as sales to existing companies rise. The average export value per company, product or destination thus increases or decreases. In this case the growth is 12.5% and the contraction is 11.6%. The intensive margin thus represents growth of 0.9%.

Another aspect of the intensive margin is that there is one new (or discontinued) dimension. A new destination country for an existing product generated growth of 1.5%, which was offset by a 1.1% contraction in respect of a discontinued destination country. The net growth was 0.4%. A new product exported to an existing destination country generated export growth of 0.5%, with the discontinuation of a product leading to a 0.4% contraction. Hence there was limited growth of 0.1% overall. A new combination of product and destination resulted in growth of 1.9%, whereas a discontinued combination led to a contraction of 1.5%. Once again the combined result was therefore export growth of 0.4% in 2019. Finally, there is once again an unknown portion: not all exports can be attributed to a company, so with regard to the unattributed portion of exports no statement can be made about the composition of the growth in goods exports in relation to the exporter's behaviour. The unknown portion generated export growth of 1.1%. All the combined dimensions of the exporter's behaviour – for example growth offset against contraction – generated export growth of 3.5% in 2019.

Composition of goods export growth, 2019



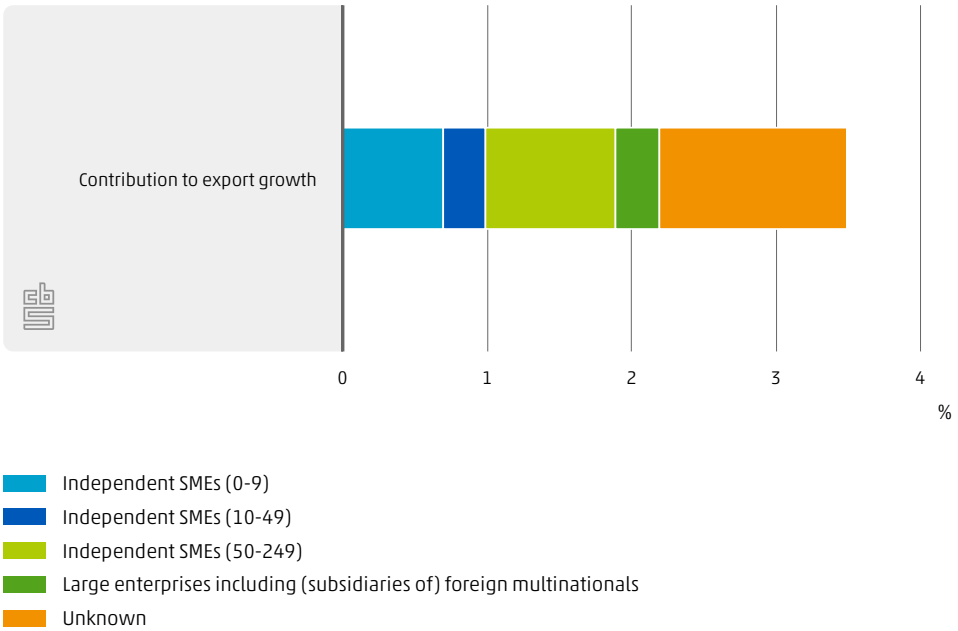
Export growth by business size

The export growth can be broken down further according to other characteristics, the first being business size. Companies can be broken down into large enterprises with at least 250 employees (including subsidiaries of foreign multinationals) and independent small and medium-sized enterprises (SMEs) with fewer than 250 employees. Here we break down independent SMEs further into micro (fewer than 10 employees), small (10 to 49 employees) and medium (50 to 249 employees).

Large enterprises accounted for more than 51% of the total value of goods exports in 2019. The growth generated by companies in this size category is fairly limited at 0.3% (Figure 4.4.1). Independent SMEs had a considerably smaller share (19.5%) of the total export

value of goods but contributed more than half (1.9%) of the 3.5% growth in goods exports. Of that amount, 0.9% was generated by medium-sized SMEs with 50 to 249 employees; micro-SMEs contributed 0.7% and small SMEs a further 0.3%. The growth of companies that cannot be classified by business size amounted to 1.3%.

4.4.1 Contribution to export growth by enterprise size, 2019



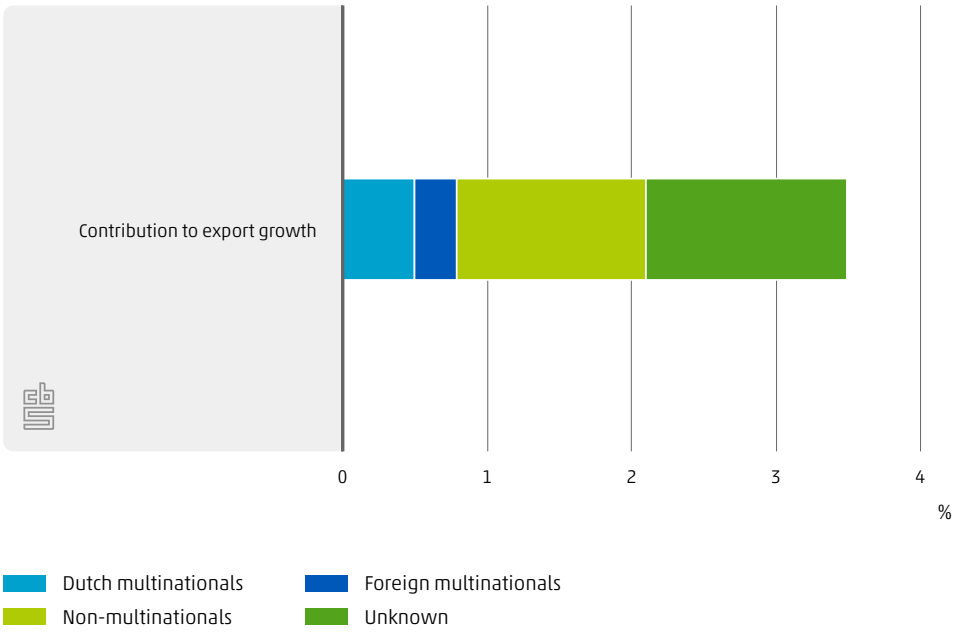
Highest growth in exports to non-EU countries

In 2019 the highest growth was recorded in exports to more distant destinations, such as the United States (0.7%) and Taiwan (0.7%), outside the EU. Previous sections have already shown that a relatively large proportion of domestic exports go to more distant destinations, including large volumes of machinery and other high-tech goods. Chapter 5 of this publication analyses exports by destination in greater detail. Other destinations contributing to the export growth were the neighbouring countries to which the Netherlands already exports large volumes, namely Germany (0.3%) and Belgium (0.3%).

Export growth driven mainly by non-multinationals in 2019

In 2019 the largest growth in goods exports came from non-multinationals (excluding the unknown portion) (Figure 4.4.2). Non-multinationals generated export growth of 1.3%, while Dutch and foreign multinationals jointly accounted for export growth of 0.8%. This is a notable development, because in the previous year non-multinationals generated export growth of barely 0.2% and multinationals 3.1%.

4.4.2 Contribution to export growth by multinationality, 2019



Main sectors for export growth are wholesale and retail trade and manufacturing

Section 4.3 has already shown that manufacturing and wholesale and retail trade account for a large proportion of goods exports by type of production and economic activity. These two sectors also play an important role in the growth of exports. Manufacturing accounted for the bulk of export growth (1.4%) in 2019. More specifically, the petroleum industry (0.3%), the machinery industry (0.4%) and repair and installation of machinery (0.4%) were key drivers of export growth. In the trade sector a large part of the export growth came from wholesale trade (0.9%).

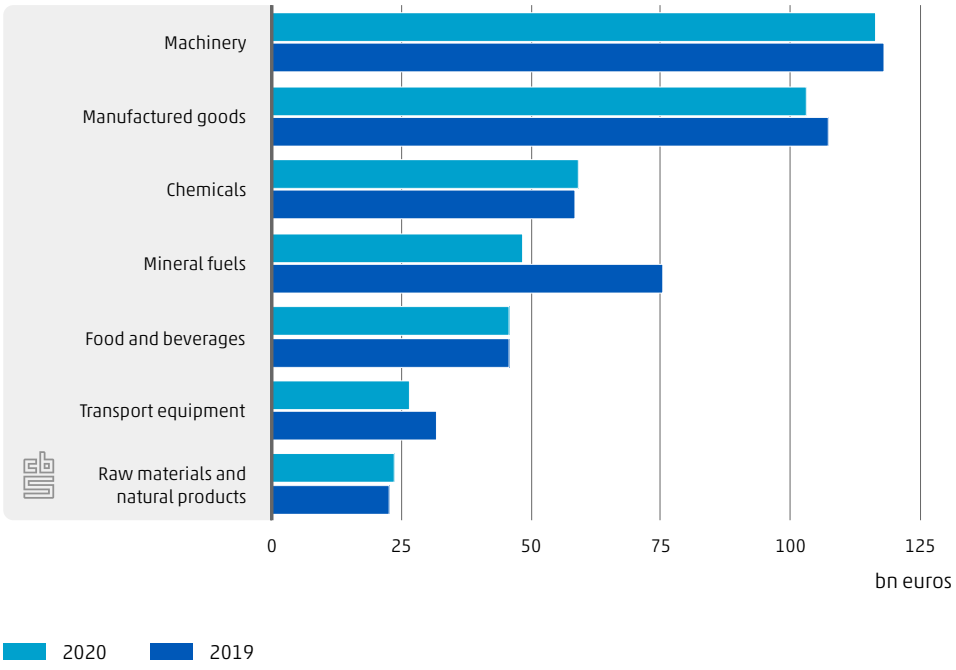
4.5 Goods imports by type of goods, sector and business size

The Netherlands is not only a major exporter but also a major importer of goods. These two facts are largely interrelated, since around half of imports are re-exported after little or no processing (re-exports). The other half are immediately consumed in the Netherlands or used as intermediate goods in production processes in the Netherlands. Chapter 6 of this publication focuses in greater detail on the destinations of goods (and services) imported by the Netherlands.

Imports down almost 8% in 2020

Total goods imports amounted to more than €424 billion in 2020, 7.8% less than in 2019. Here too the impact of the coronavirus crisis, lower demand and disruptions to production chains were clearly evident. Imports of mineral fuels again play a major role. The import value of these products was hit hardest, declining by 35.8%. Both the volume and price of mineral fuel imports were lower than a year earlier. If mineral fuel imports are excluded, Dutch imports fell by 2.3% in 2020. This was largely due to a 15.8% decrease in imports of transport equipment. Fewer lorries, cars and parts were imported, as well as fewer aircraft components. This is reflected in the 6.9% decrease in turnover in the motor vehicle and motorcycle industry in 2020. Importers of new cars in particular had a tough year: they were the first to be hit by plant closures in the Netherlands and abroad and saw their turnover decrease by 10.5% compared to the same period a year earlier, partly due to lower consumer demand for new cars (Bovag, 2021; CBS, 2021a). The other goods groups showed small falls or even growth in imports, as in the case of chemical products (vaccines and antisera, laboratory supplies, medicines), food and beverages (pork, tropical fruit, cocoa and prepared foods), raw materials and natural products (rape- and colzaseed, plants, vegetable seeds). Figure 4.5.1 shows imports by commodity group in 2019 and 2020.

4.5.1 Imports of goods by type of good



The main import category in 2020 was machinery, which accounted for 27.5% of total imports. Next came manufactured products (24.3% share) and, some distance behind, chemical products (14.0% share), mineral fuels (11.4% share) and food and beverages (10.8% share).

Wholesale imports down almost 1%

As in the case of exports, imports were also dominated by the same two sectors, namely manufacturing and wholesale. The latter sector imported goods worth almost €135 billion in 2020, representing 32% of the total import value. The decrease in imports was limited for wholesale businesses (–0.8%). This limited decrease partly reflects the wide range of goods imported by wholesalers, but also the fact that demand for certain goods (such as refined petroleum products) fell more sharply than demand for other products. For example, wholesale imported more plastic (for example packaging material and plastic products), more fruit, more medicines and pharmaceutical products, furniture and certain consumer and high-tech electronics (computers, chips) in 2020.

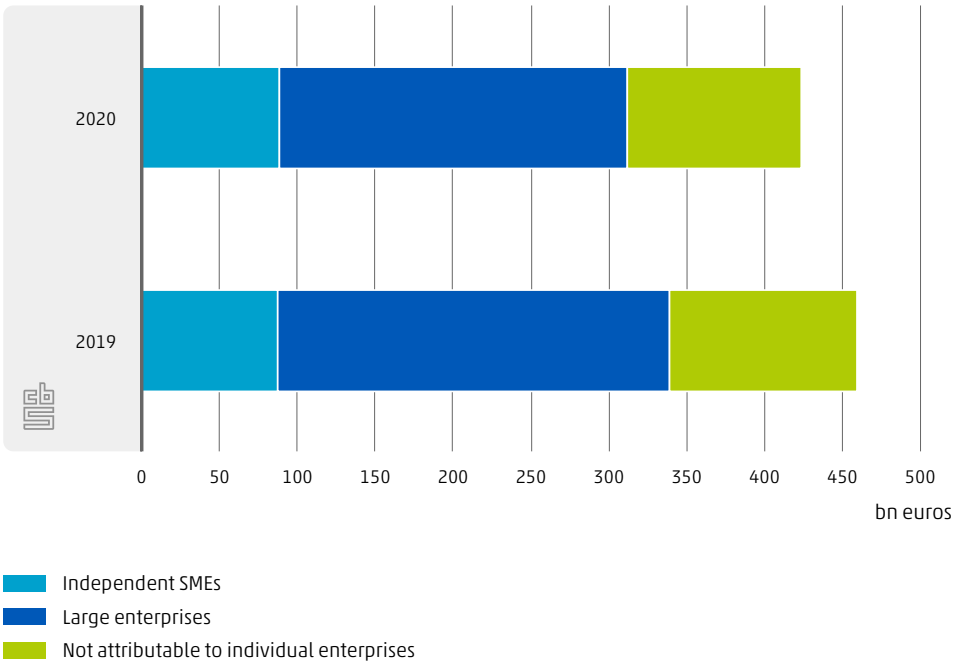
Goods imports by manufacturers down more than 15% in 2020

Manufacturing, by contrast, had a more difficult year in 2020 with regard to import opportunities, although here too there were exceptions. Overall, manufacturing imports amounted to more than €89 million in 2020. That is €16 billion less than in 2019 (–15.2%). The manufacturing share in 2020 was still 21.1% of the total import value, compared to 22.9% in 2019. Some manufacturing sectors recorded sharp falls, including the motor vehicle industry (–30.0%), the chemical industry (–15.5%) and the petroleum industry (–38.0%). There were also manufacturing sectors that imported substantially more in 2020, namely the pharmaceutical industry (+29.5%) and the manufacture of other transport equipment (+12.6%). Companies in the other transport equipment industry imported particularly bicycles, motorcycles and parts thereof in 2020. Trading and maintenance of ships and pleasure yachts also took place in 2020, which is directly reflected in high import and export values in the trade figures. The share of imports that cannot be attributed to a sector amounts to 26.5% of the total import value.

One-fifth of goods imported by independent SMEs

As in the case of exports, it was mainly large companies that imported less in 2020. In the case of large enterprises, the value of goods imports decreased by 11.2%; imports by independent SMEs grew slightly, by 0.6%. The large enterprises' share of total goods imports thus decreased from 54.8% in 2019 to 52.7% in 2020. The independent SMEs' share increased from 19.1% to 20.9%. The import value of unknown companies remained unchanged. Figure 4.5.2 shows the shares of the various categories.

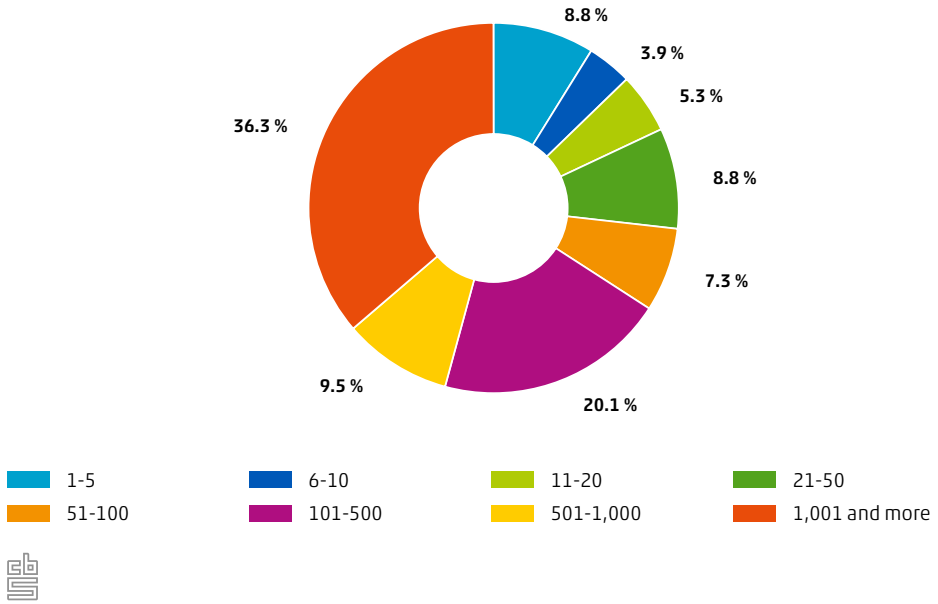
4.5.2 Imports of goods by enterprise size



Five largest importers accounted for 9% of goods imports

Figure 4.5.3 shows the largest importing companies' share of total goods imports in 2020. In 2019 the five largest importing companies accounted for 10.9% of the total import value, whereas in 2020 this figure was 8.8%. This pattern of a declining share of the total can be seen among the 100 largest importers, which means that the hundred largest companies in particular lost substantial ground compared to 2019. The 101st to 1,000th largest importers were able to maintain their share of total imports in 2020. The smallest importers saw their share grow compared to 2019. In absolute terms, however, imports in each category decreased between 2019 and 2020.

4.5.3 Concentration of goods imports, 2020 (top x enterprises)

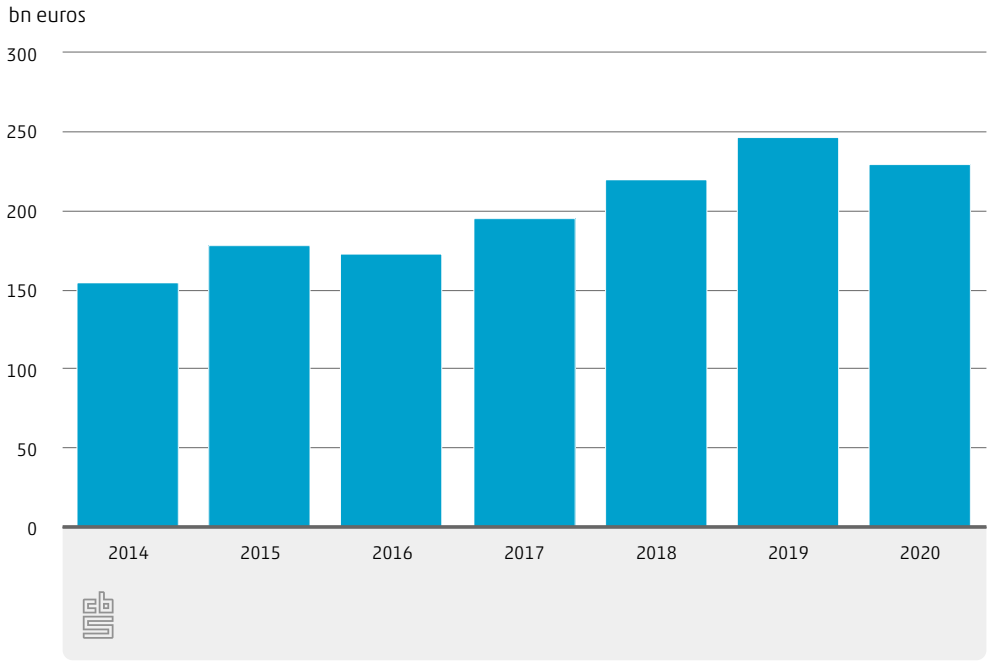


4.6 Service exports

The coronavirus crisis had a major impact on goods exports, as can be seen in section 4.2. The impact on service exports was even greater in relative terms, as can be seen in Figure 4.6.1. Compared to 2019, this export value fell by 6.6% to €230 billion.[5] The steepest falls were in service exports to Germany (–9.7%), the United Kingdom (–8.7%), Singapore (–18.1%) and the United States (–5.0%).

5) The service export figures in this chapter are based on the source statistics. Chapters 2 and 6 of this publication also provide information on service exports from the perspective of the National Accounts. These two figures differ. On the one hand there are inconsistencies due to the way in which the National Accounts and the source statistics have to deal with Special Purpose Entities. On the other hand the National Accounts compare service trade data with other source statistics, and any inconsistencies between the sources can lead to adjustments to the source data in order to provide a consistent picture of the economy as a whole. The focus on continuity in the National Accounts also leads to divergences in level between the source statistics and the National Accounts. This will be reviewed in a revision year.

4.6.1 Development of service exports



Biggest falls in 2020 were in exports of other business services, travel and transport services

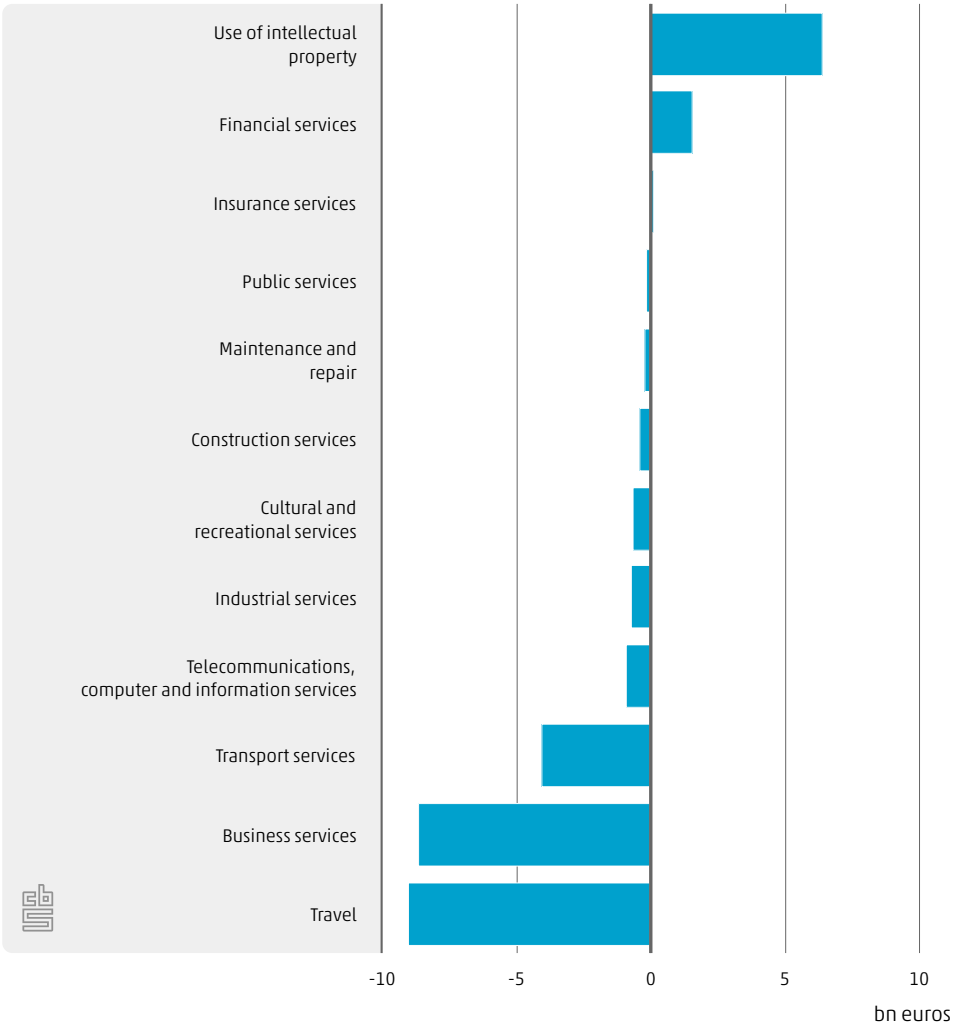
The lockdowns and travel restrictions that countries introduced to curb the coronavirus outbreak had an unprecedented impact on international tourism and travel (CBS, 2021b). Spending on goods or services by foreign business travellers, tourists and day visitors during their stay in the Netherlands is measured as an export of travel services. This export value fell by €9 billion in 2020, as can be seen in Figure 4.6.2, which means it halved compared to 2019 (CBS, 2021c). The travel restrictions and lockdowns also had a major impact on travel agents and travel and holiday platforms. This is reflected in a sharp fall in exports of business services of around €9 billion (–11.5%). Exports of transport services also contracted sharply in 2020, by €4 billion (–9.5%). This decline was largely associated with the contraction in air passenger transport and associated services. The number of airline passengers entering the Netherlands fell by 71% in 2020 (CBS, 2021c).

Higher intellectual property income and exports of financial services

Exports associated with the use of intellectual property grew from €61 billion to over €67 billion in 2020. This increase was mainly generated by companies engaged in the distribution of audiovisual products such as streaming services for music, films and series to consumers outside the Netherlands. The fees that countries paid to the Netherlands for these grew strongly in 2020 – as in 2019 – by 10.5%. Exports associated with the use of intellectual property thus became the largest export category in 2020, as can be seen from the infographic at the beginning of this chapter. Exports of financial services also grew in 2020. This was due particularly to the strong growth in online payments resulting from the strong

growth of online purchases (including internationally), for which Dutch companies provide supporting payment services.

4.6.2 Development of service exports by type of service, year-on-year change, 2019-2020



Biggest service exporters are consulting, research and other specialised business services

Service exports grew by 11.8% to a total of over €246 billion in 2019.[6] Of all non-financial business sectors[7], the consulting, research and other business services sector provided the most services in 2019, with a value of almost €42 million, as shown in Figure 4.6.3. That amounts to 17.0% of total service exports. Compared to 2018, service exports by this sector grew by €5 billion (+13.7%). This sector includes companies in legal services and administration, research, (non-financial) holding companies and management consulting

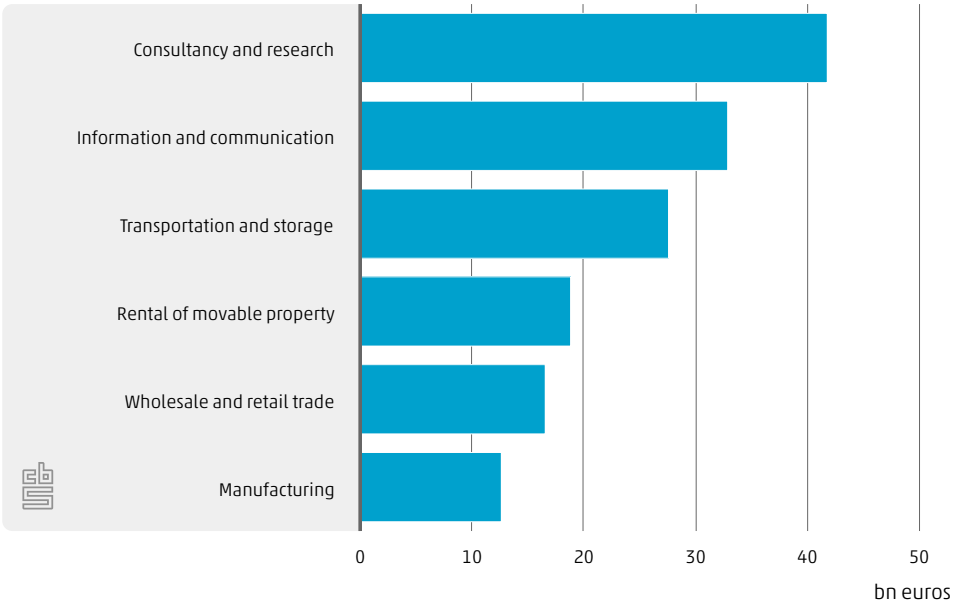
6) No breakdown by sector and destination is yet available for 2020.
7) This section examines service exports by non-financial Dutch businesses (sectors B to N inclusive and S95, excluding K). Partly for this reason around 37% of service exports are not included in these charts for 2019. This particularly concerns transactions by the financial sector, which is overseen primarily by De Nederlandsche Bank (Smit & Wong, 2017).

firms. Holding companies in particular are often involved in international trade in services, such as scientific and other technical services, R&D and licences. Holding companies often trade with associated companies in the group, sometimes exclusively. Within international groups, they recharge costs from one country to another (Smit & Balabay, 2018).

Another large service-exporting sector is the information and communication sector. In 2019 this sector exported services worth almost €33 billion, over €6 billion more than in 2018. Service exports in this sector largely comprise computer and information services, such as software development or the provision of database services (Smit & Balabay, 2018).

The transportation and storage sector, with an export value of almost €28 billion, was the third largest exporter of services in 2019. These include, for example, goods and passenger transport by land (freight and rail traffic), water (inland shipping and sea and coastal shipping) and air for residents outside the Netherlands. This sector also includes the provision of transport-related services, such as storage.

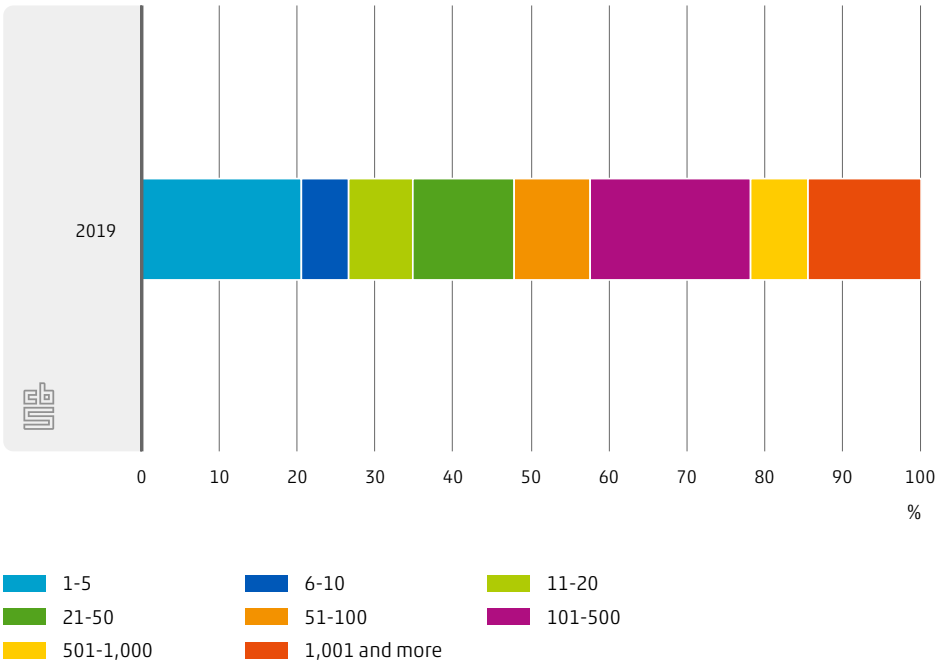
4.6.3 Service exports in the six largest exporting sectors, 2019



The five largest exporting businesses collectively account for one-fifth of service exports

Figure 4.6.4 shows the largest exporting companies' share of total service exports in 2019. Compared to goods trade, service trade is even more concentrated among a limited number of companies (over 82,000). The five largest exporting companies collectively accounted for 20.6% of the total value of service exports in 2019. The 50 biggest exporters collectively account for almost half of total service exports. This pattern does not differ greatly from that of 2018.

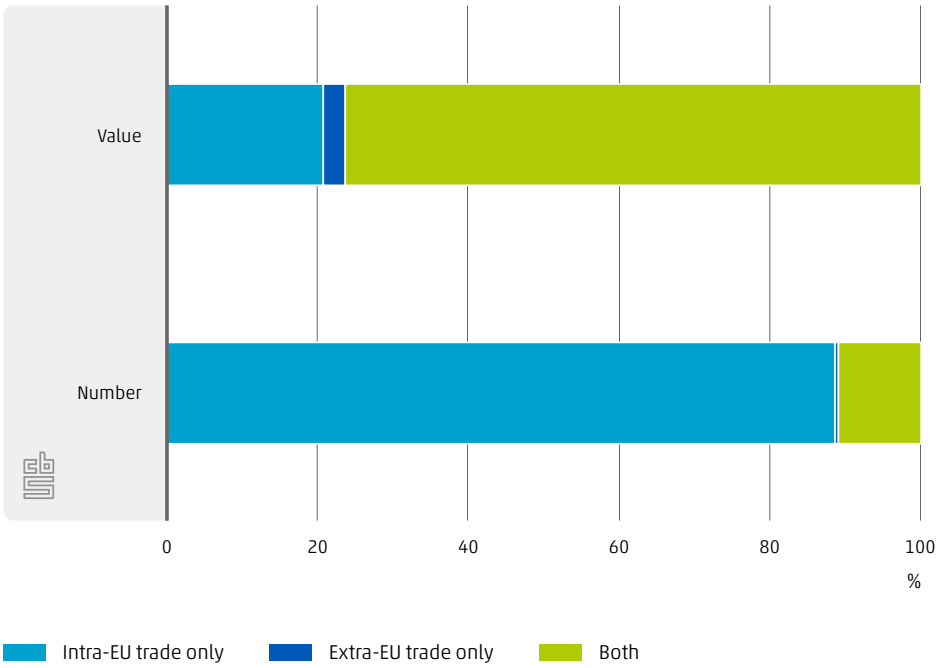
4.6.4 Concentration of service exports, 2019



Nine out of 10 service exporters trade only within the EU

Figure 4.6.5 shows the destinations of Dutch service exports. Over 21% of the value of service exports by Dutch businesses in 2019 was attributable to companies that only export within the EU. Just under 3% of service exports are carried out by companies that only export to countries outside the EU. The bulk (76%) of the export value is generated by exporters that export to both EU and non-EU countries. The picture is very different with regard to the number of service exporters. This shows that around 90% of service exporters operate only within the EU. Only just over 10% trade both within and outside the EU and a fraction of service exporters export only to non-EU countries. That means that – like companies exporting goods – proximity to the trading partner also appears to be important for service exporters (Smit & Wong, 2017).

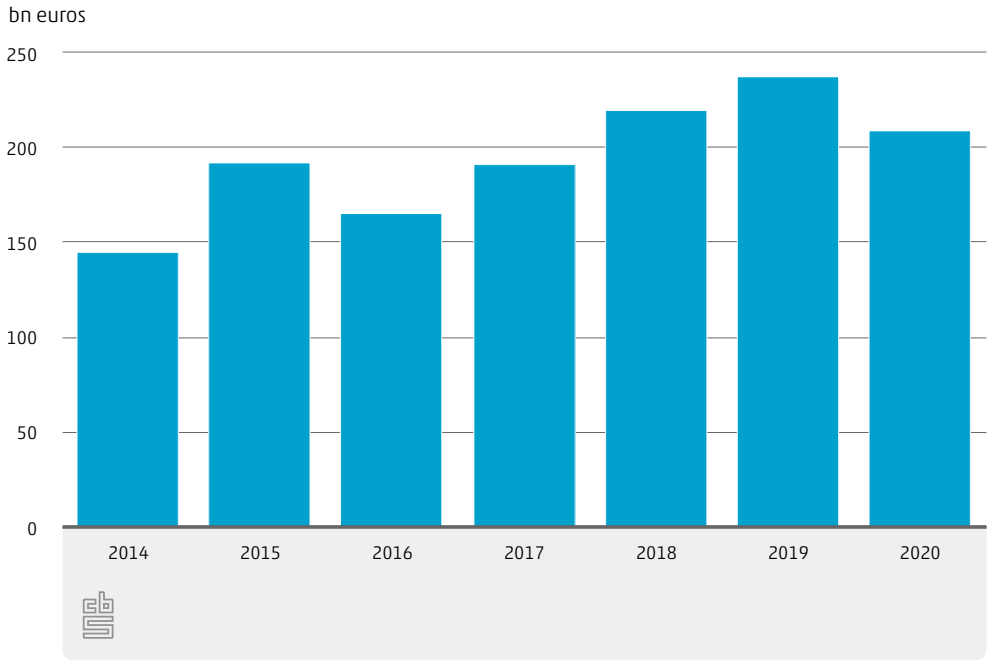
4.6.5 Intra-EU and extra-EU exports of services, 2019



4.7 Service imports

As in the case of service exports, service imports were severely impacted by the coronavirus crisis in 2020. With a contraction of 11.7% this impact on imports of services was even greater than on exports. The import value thus amounted to more than €209 billion. Service imports have not fallen as sharply as in 2016, when the contraction was almost 14% (Figure 4.7.1). In 2020 there were falls particularly in service imports from the UK (–10.8%), Germany (–11.8%), Switzerland (–29.8%) and the United States (–5.6%).

4.7.1 Development of service imports



Sharp fall in foreign spending by Dutch travellers due to coronavirus crisis

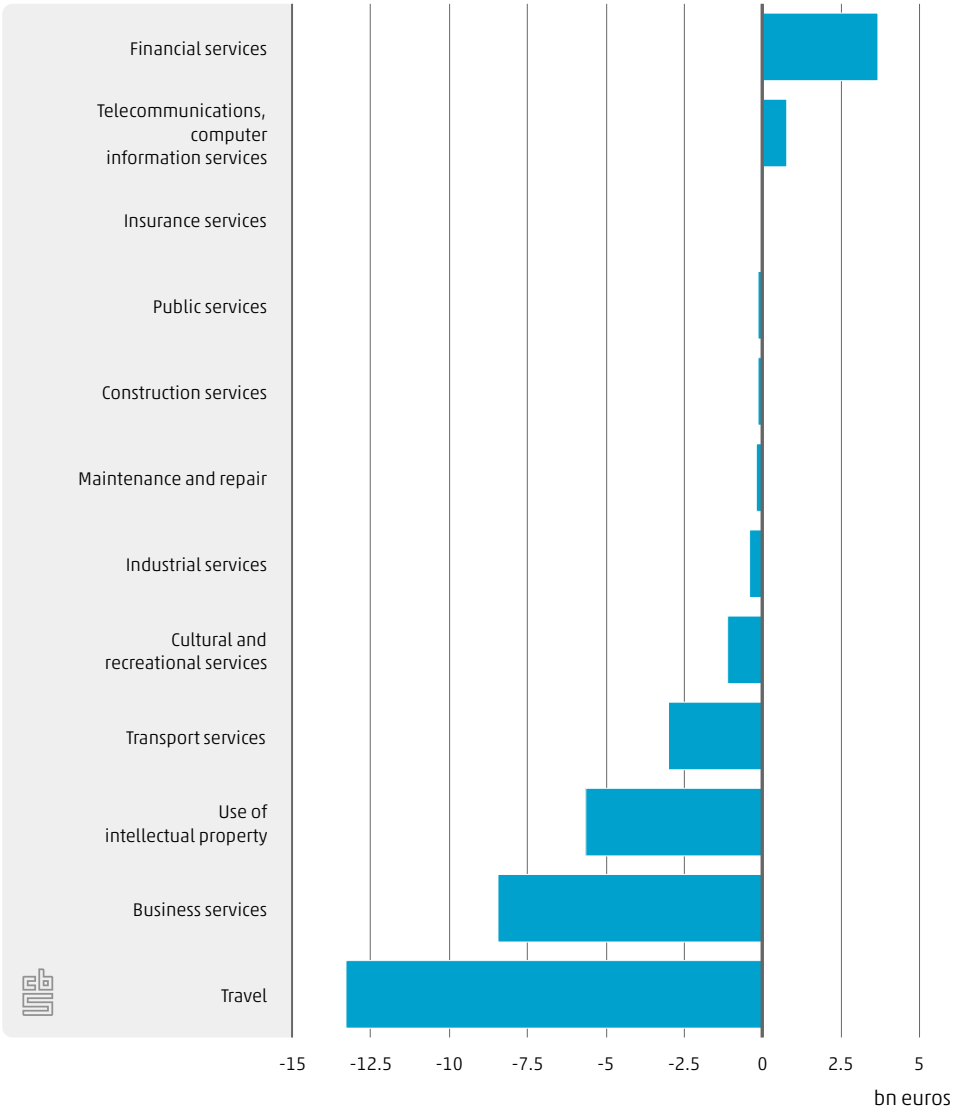
The measures introduced to limit the coronavirus outbreak also had an unprecedented impact on imports particularly of travel services (Figure 4.7.2). This includes spending by Dutch business travellers, tourists and day visitors during their stay abroad. This import value fell by more than €13 billion in 2020, a reduction of almost 67% compared to 2019. On the other hand, the number of Dutch people taking holidays in the Netherlands in the summer of 2020 was a quarter higher than in 2019 (CBS, 2020). People took far fewer holidays abroad and, of those who did, 98% stayed in Europe (compared to 86% in 2019).

As in the case of service exports, imports of other business services also contracted sharply in 2020, by more than €8 billion (–10.4%). Imports of associated technical services, such as those relating to mining and oil and gas extraction and trade-related services, fell sharply by almost €5 billion. Imports of professional and management consulting services, including accounting or legal services and advice, fell by almost €4 billion. Imports associated with the use of intellectual property fell by around €6 billion in 2020 to a total of almost €55 billion (–9.2%).

Strong growth in imports of financial services in 2020

Imports of financial services were one of the few service categories that grew in 2020. Imports of this type of service grew by almost 41% to nearly €13 billion. They comprise payments for intermediary and support services for financial transactions, including services provided by companies that process financial transactions for online retailers. The high growth in financial services may be due to the tremendous growth of e-commerce in 2020.

4.7.2 Development of service imports by type of service, year-on-year change, 2019-2020



Wholesale was the largest service importer in 2019

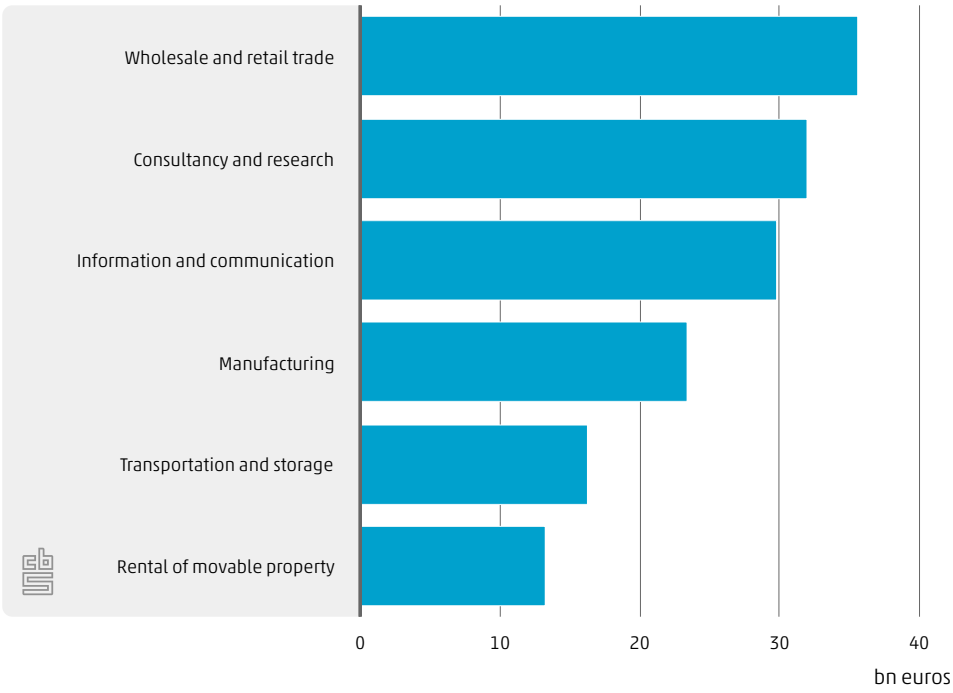
With almost €36 billion of imports, the wholesale and retail trade and motor vehicle repairs sector was the largest importer of services among Dutch non-financial companies in 2019, as can be seen in Figure 4.7.3. By far the largest imports in this sector were carried out by wholesalers (€33.2 billion). These include wholesale trade in computers, peripherals and software, where licences are often imported under franchises and trademarks. Many services are also imported in other branches of wholesaling. Again these are often services provided under licence, but also trade-related and other business services (Smit & Balabay, 2018).

The second largest importing sector (by import value) in 2019 was the consulting, research and other business services sector. This sector imported services worth €32 billion during that year, representing 13% of total service imports. As in the case of exports, holding companies are often engaged in international trade in services in this sector, particularly scientific and

other technical services, R&D and licences. Given the often central function of the holding company in a group and in international trade in services, it is logical that holding companies will also play a major role in service imports (Smit & Balabay, 2018).

The third largest service-importing sector is the information and communication sector, which imported services worth almost €30 billion in 2019. That represents an increase of over €7 billion compared to 2018, making it one of the strongest-growing importing sectors in 2019. As in the case of exports by this sector, the imports largely comprise computer and information services, such as software development or the provision of database services (Smit & Balabay, 2018).

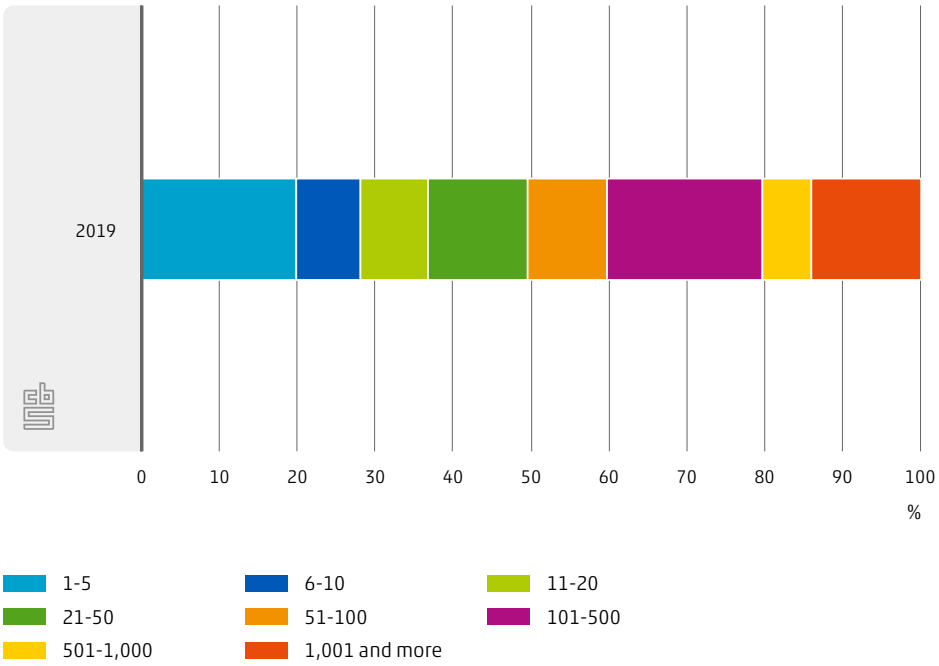
4.7.3 Service imports in the six largest importing sectors, 2019



Fifty largest importers account for half of service imports by Dutch business

Dutch business included over 320,000 service import companies in 2019. Figure 4.7.4 shows the largest importing companies' share of total service imports in 2019. As in the case of service exports, a large proportion of the import value is accounted for by a limited number of companies. The five largest importers collectively accounted for 20% of total service imports in 2019. The 50 largest importers collectively account for half of total service imports.

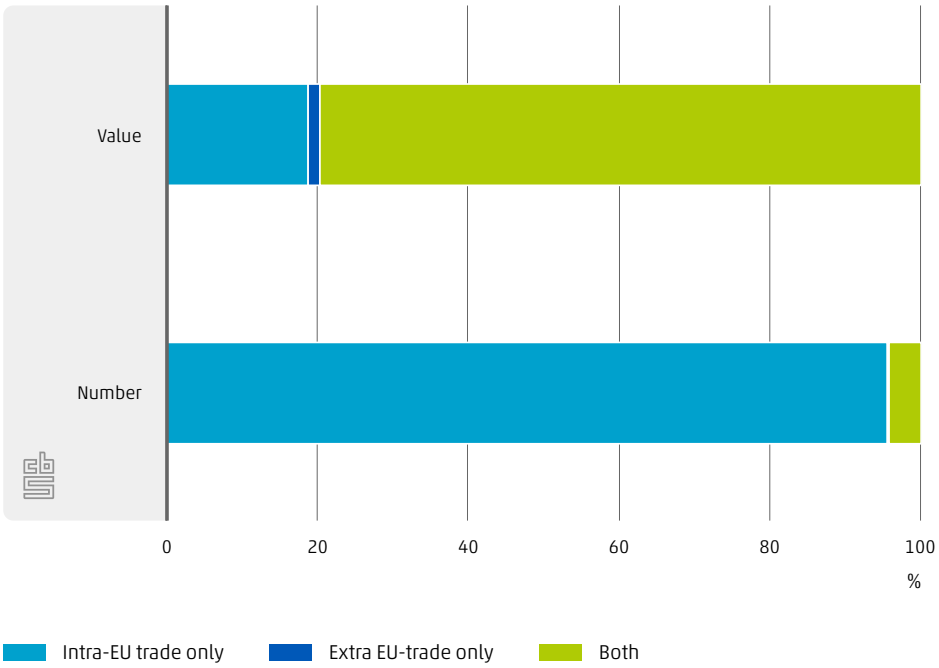
4.7.4 Concentration of service imports, 2019



Most service importers stay close to home

Almost 80% of service imports by Dutch businesses are carried out by companies that import from both EU and non-EU countries. In terms of the number of importers this group nevertheless represents a minority; only 4% of all service importers source services from both the EU and elsewhere. Most companies that import services do so from the EU. Service importers too therefore often stay close to home (Smit & Wong, 2017).

4.7.5 Intra-EU and extra-EU imports of services, 2019



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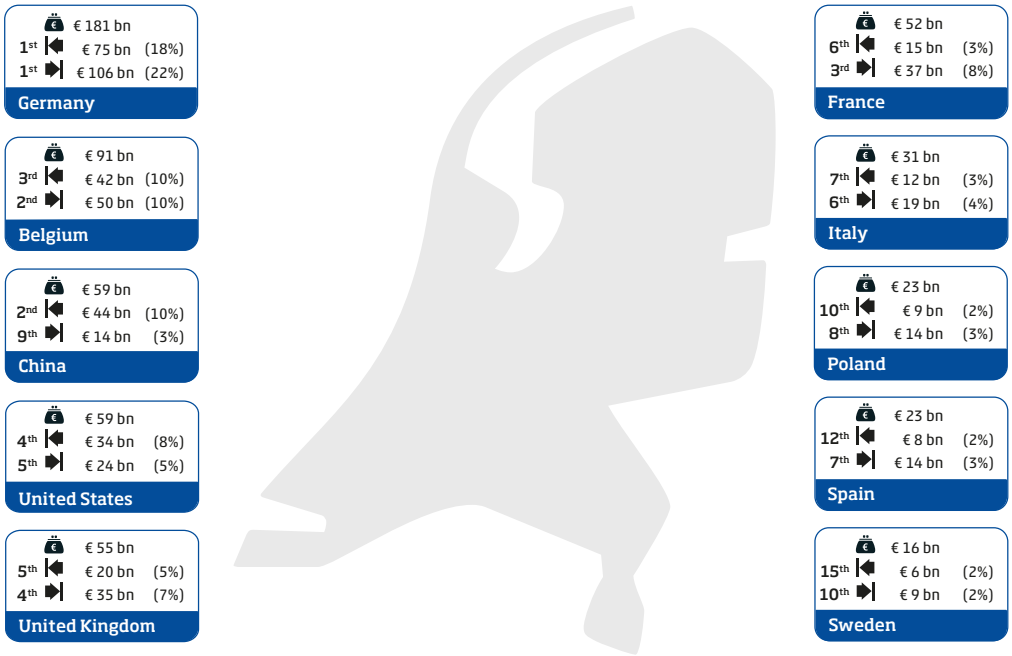
5 Geographical dimension of Dutch goods trade

Authors: Sarah Creemers, Hans Draper

Top 10 trading partners in foreign trade, 2020



Total trade value
Import of goods: position, value, (% share of NL imports)
Export of goods: position, value, (% share of NL exports)
Source: CBS.

How important is the European Union for Dutch trade and how important is the Netherlands for other EU countries' trade? What are the main countries of origin and destination for Dutch trade in goods? How important is the Netherlands for the goods trade of all other countries in the world? How is the Dutch market share developing in the countries on the Dutch trade agenda? In this chapter, we answer these and many other questions by analysing the geographical dimension of Dutch goods imports and exports. We do so by assessing the position from a Dutch perspective (with CBS statistics) and from the perspective of the trading partners (with international trade statistics).

5.1 Key findings

Goods trade viewed from a Dutch perspective

Goods exports fell by €32 billion to €483 billion in 2020. That is a decrease of 6% compared to 2019. In 2020 the value of Dutch goods imports was €424 billion. That is a decrease of 8% compared to 2019. The decrease in exports and imports is a direct consequence of the coronavirus crisis and strong fluctuations in trading prices.

The European Union (EU) continues to be very important for Dutch trade. CBS statistics show that in 2020 the share of exports destined for the EU (including the United Kingdom) remained high at 70%. Of the 50 most important export partners, 21 were in the EU. As for Dutch goods imports, more than half of the value (53%) came from the EU in 2020. Of the 50 most important goods suppliers, 18 were EU countries.

Nearly 22% of Dutch goods exports go to Germany. Belgium follows a long way behind in 2nd place with over 10%. France completes the top 3 with a share of nearly 8%. The United States and China are the only non-European countries among the top 10 export destinations. Only China (+10%) and Poland (+5%) imported more goods from the Netherlands than in 2019. Our neighbours are the main destinations for both domestic exports and re-exports.

Dutch goods imports are less focused on the EU compared to exports, but here too the EU share is the largest (53% of the total). In 2020, the ten largest international goods suppliers were responsible for 64% of total Dutch imports. Of those ten countries, seven are European (Germany, Belgium, the United Kingdom, France, Italy, Ireland and Poland) and three are non-European (China, the United States and Russia). The goods imports from nine partners among these top 10 decreased in 2020 compared to the year before. China is the only country in the top 10 goods suppliers showing import growth. China thus grew to be our 2nd largest import partner, at the expense of Belgium.

Goods trade viewed from an international perspective

The Dutch economy ranks 17th in the world (in terms of nominal GDP in 2019 according to UNCTAD). Goods trade accounts for 19.7% of GDP and is thus of great importance to the Dutch economy. The Netherlands has intensive trading relationships with the 10 largest economies in the world (top 10 according to UNCTAD figures). Exports to this group of countries, including quasi-transit trade, amounted to €230 billion in 2019. That represents 36% of total Dutch goods exports. In that year the Netherlands sourced 50% of all goods (€279 billion) from these countries. The trade deficit with the 10 largest economies thus amounted to €49 billion. The Netherlands had a large trade surplus (€128 billion) with the other countries. The surplus on total goods trade amounted to €79 billion in 2019.

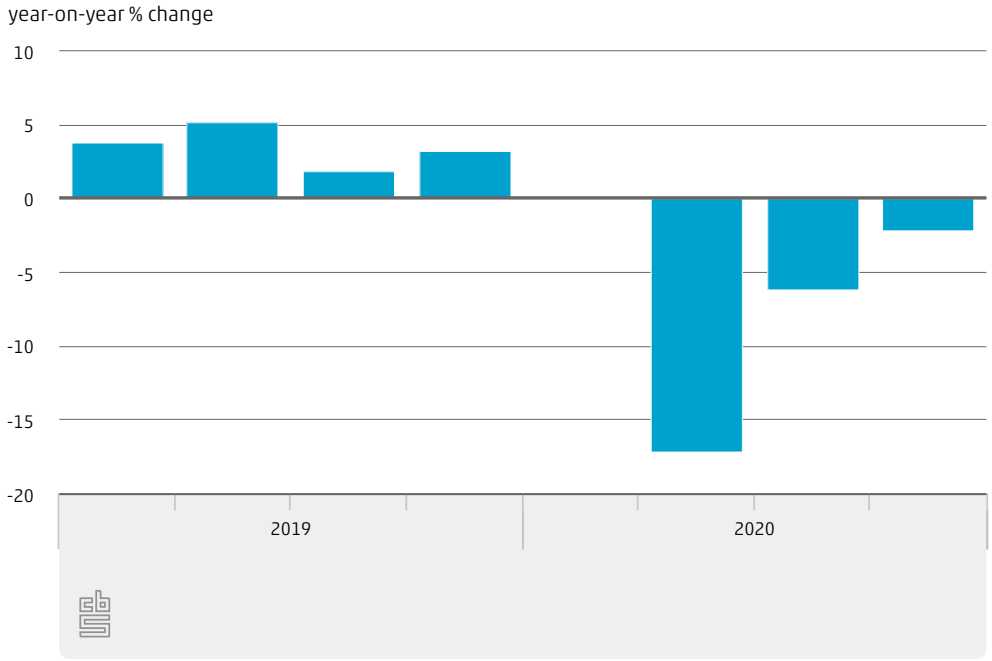
UNCTAD and UN Comtrade figures show the Netherlands to be well-placed as a supplier of goods to the neighbouring countries. The Netherlands was Belgium's main supplier of goods throughout the 2015–2019 period. The Dutch share in Belgian goods imports amounted to over 17% in 2019. For Germany, the Netherlands is the 2nd largest supplier of goods. Not only does the Netherlands have an intensive export trade relationship with Belgium and Germany,

but it is also well positioned as an importer of goods from these countries. The Netherlands has been the 3rd largest export destination for Belgium for the last five years. Among German goods exporters the Netherlands has remained in 4th place since 2015, except in 2017, when it was the 5th largest export partner.

5.2 Dutch goods exports

Sections 5.2 and 5.3 analyse goods trade from the Dutch perspective based on CBS statistics. In 2020, the value of Dutch goods exports totalled €483 billion according to the International Trade in Goods statistics. That is a decrease of 6% compared to 2019, when Dutch companies exported goods worth €515 billion. The decrease is a direct consequence of the coronavirus crisis and the oil surplus in the spring of 2020. Both events led to lower demand and lower trade prices. After the coronavirus outbreak a large proportion of China's production chains were shut down for several weeks at the end of January 2020. Dutch importers were therefore unable to obtain goods, causing manufacturers to halt production already in March due to the unavailability of components. This led to a 17% drop in exports in Q2, as can be seen in Figure 5.2.1. A recovery began in the autumn of 2020. Manufacturing was able to resume production and the crude oil price rose steadily over the course of 2020. The year 2020 ended with a 2% drop in export value compared to the same quarter in 2019. The lower export value in Q4 was due entirely to lower prices.

5.2.1 Dutch goods exports, quarterly development



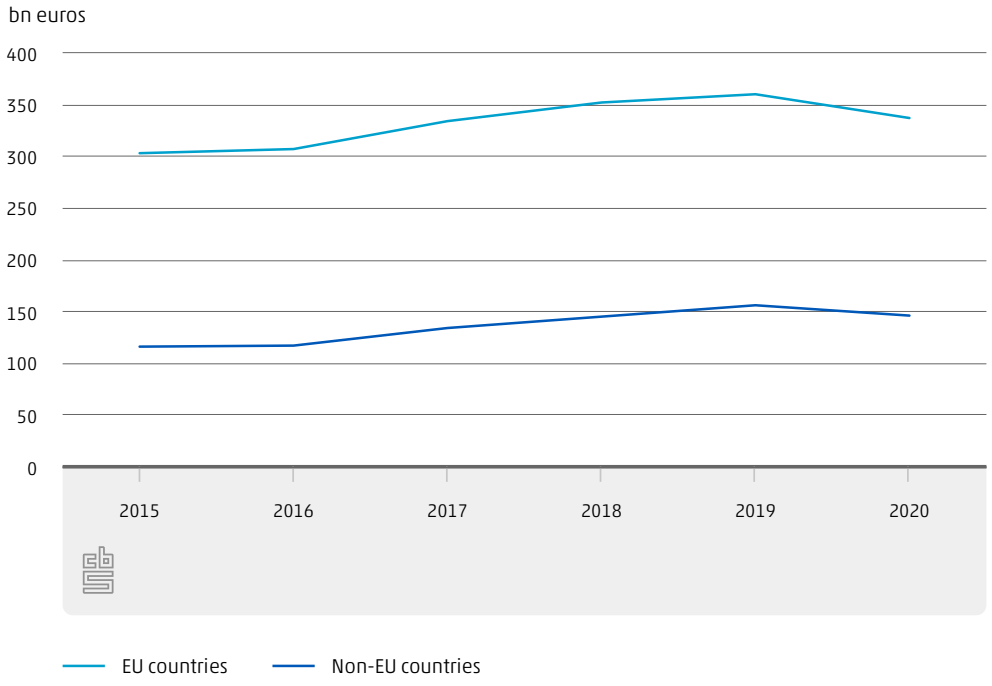
The United Kingdom withdrew from the European Union on 1 February 2020. During the whole of 2020, however, trade with the United Kingdom was conducted under the trade agreements applicable to all EU countries. The United Kingdom is therefore treated as a full EU member state in this chapter. The United Kingdom left the EU with a new trade agreement on 1 January 2021. Goods exports in Q1 2021 are considered at the end of this section. Here,

and here alone, the United Kingdom is naturally treated as a non-member of the European Union.

Seven of every ten export euros earned from EU customers

The European Union is by far the most important sales area, with an export share of 70%. Goods worth €337 billion were exported to the EU (including the United Kingdom) in 2020 (Figure 5.2.2). Exports to the EU grew by 11% between 2015 and 2020. As a consequence of increasing globalisation, the EU's share in Dutch exports is declining slightly year by year. In 2015, 72% of goods exports were still destined for EU countries. Goods exports from the Netherlands to non-EU countries totalled €146 billion in 2020. Between 2015 and 2020, Dutch exports to non-EU countries grew by 25%. The non-EU share in 2015 was 28% of the value of total goods exports. Five years later, 30% of Dutch goods exports went to this group of countries.

5.2.2 Dutch goods exports to EU and non-EU countries

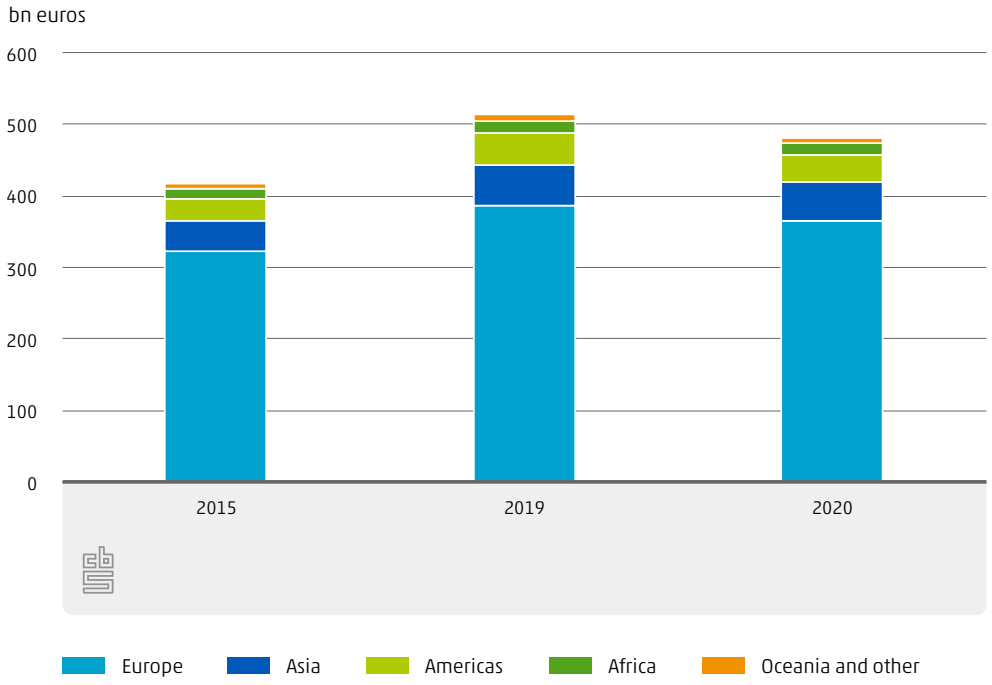


Dutch goods trade in 2020 was considerably lower than in 2019 (Figure 5.2.1). The Netherlands exported goods worth €33 billion less in 2020 than in 2019. That is a decrease of 6.3%. There is little difference between the decreases of 6.2% and 6.5% respectively in goods exports to EU and non-EU countries.

76% to Europe and 12% to Asia

In 2020 more than three-quarters of Dutch goods exports were destined for the European continent (Figure 5.2.3). This share has been decreasing for many years, mainly in favour of Asian countries, including China.[1)] Asia had a 12% share in Dutch exports in 2020, amounting to almost €56 billion. That is somewhat higher than in 2015. In 2020 8% of Dutch goods exports (€38 billion) were destined for the American continent. With a 3% export share, Africa was a small player among the destinations for Dutch goods. The African continent receives slightly more goods than Spain, for example. Spain ranks 7th as an export destination.

5.2.3 Dutch goods exports by continent



With a drop of 13% compared to 2019, exports to the Americas saw an above-average contraction in 2020. Goods exports to Africa also fell faster than total Dutch exports in 2020. The fall in exports to the Americas and Africa is largely attributable to the coronavirus crisis and lower oil prices. With Africa in particular there was above-average trade in oil and petroleum products (Creemers & Draper, 2021; CBS, 2021a). Goods exports to Asia were least affected in 2020. Oil and gas barely play a significant role in exports to Asia. Dutch exports to Asia were affected less severely in 2020, partly due to substantially higher machinery exports.

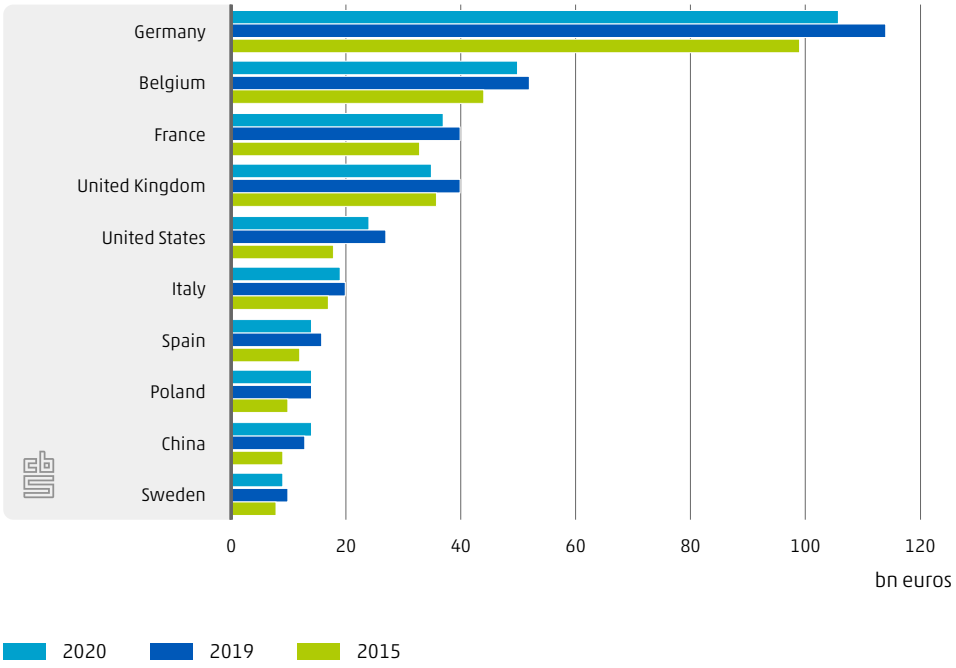
Eight European countries are among the top 10 export destinations

The 10 most important export markets accounted for two-thirds of the total value of Dutch goods exports in 2020. This share has barely changed since 2015. Germany (€107 billion, 22% share) and Belgium (€50 billion, 10% share) have traditionally been our main export partners (Figure 5.2.4). Between 2020 and 2019, exports to these countries fell by 7% and

1) See Chapter 2 of the Q2 2020 Internationalisation Monitor for a detailed analysis of bilateral trade between the Netherlands and China (Creemers et al., 2020).

5% respectively. In addition to the Netherlands' two neighbours, a further six European countries feature among the 10 most important export destinations, the main ones being France and the United Kingdom. Goods exports to the United Kingdom fell by around 12% in 2020, to below the 2015 level. The United Kingdom is the only country among the top 10 export destinations whose export value was lower in 2020 than in 2015.

5.2.4 Top 10 export destinations for the Netherlands



10% more exports to China and 5% more to Poland

Of the 10 most important export destinations only exports to China and Poland grew in 2020 compared to 2019. Exports to China increased by more than 10% to €14 billion in 2020. This growth was achieved mainly through higher exports of machinery manufactured in the Netherlands (CBS, 2020a). It is notable that Poland was the only European country in the top 10 with an increase in Dutch exports, of over 5%. With an export value of €14 billion, Poland was the Netherlands' 8th largest export destination. The growth in exports to Poland was due to strong growth in re-exports of electrical equipment (CBS, 2020b).

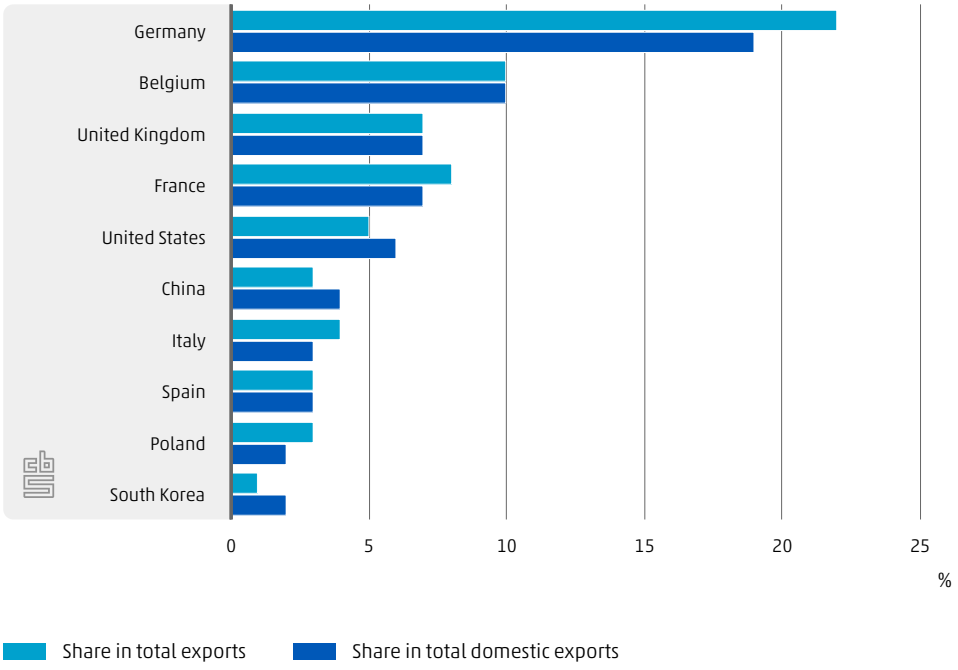
Domestic exports were worth €263 billion in 2020, 8% less than in 2019. Domestic goods thus made up 54% of total exports. The decrease in exports was due in part to the coronavirus crisis but mainly to the fact that exports of Dutch manufactured goods were hit by substantially lower oil and gas prices. Exports to the 10 most important trading partners differ greatly depending on whether the goods are Dutch-made or re-exports. China and the United States in particular receive above-average amounts worth of domestic goods. Goods

produced by Dutch manufacturers made up 80% and 68% of good exports to China and the United States respectively. Dutch companies produced baby milk powder for export worth €2.3 billion in 2020. No less than two-thirds of this went to China. Dutch breweries produced beer worth €1.7 billion for customers outside the Netherlands. Of this, 42% went to the United States.

South Korea among top 10 destinations for Dutch products

Focusing on domestic goods (because they generate the highest earnings[2)], see Chapter 2 of this publication), we note that the main export destinations are countries bordering the Netherlands (Figure 5.2.5). Germany (€50 billion, 19% share) is in 1st place, followed by Belgium (€27 billion, 10% share).

5.2.5 Main destinations for domestic exports, 2020



Exports of domestic goods to South Korea rose by €2.4 billion to €5.7 billion in 2020, representing a 71% increase compared to 2019. Oil and gas barely play a significant role in exports to South Korea. Partly for this reason the South Korea share in total domestic exports increased. South Korea thus climbed to 10th place in the ranking of export destinations for goods produced in the Netherlands. In 2019 it was still in 16th place. In 2020 South Korea was the principal trade destination for the Netherlands in Asia after China. Thanks in part to the trade agreement between the European Union and South Korea, trade between the Netherlands and South Korea has grown rapidly in recent years (RVO, 2021a). Dutch exports to the peninsula mainly consisted of specialised machinery. In 2020 the Netherlands exported around 16% of specialised machinery to South Korea, making the country the 2nd largest purchaser of specialised machinery. High-technology companies in South Korea use this machinery in part for the production of electronics (Evofenedex, 2021).

2) Exports of domestic goods generated the highest earnings for the Netherlands in 2019, at almost €125 billion. Exports of services and re-exports earned less, €112 billion and €35 billion respectively.

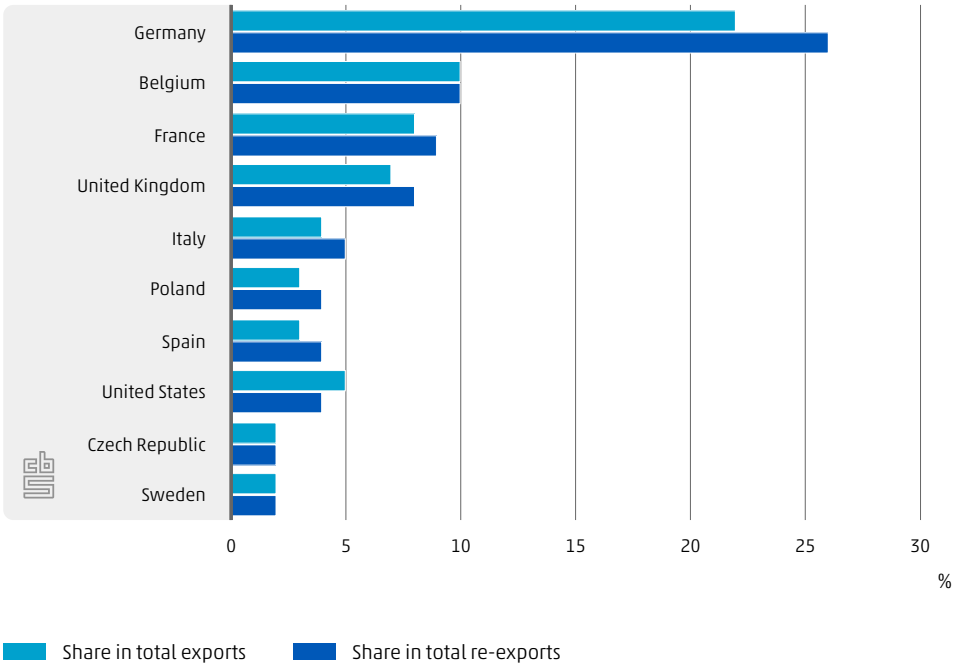
This enables South Korea to maintain a lead in the development and production of semiconductors, monitors and batteries. These components are crucial to the high-tech industry (RVO, 2021b). The Netherlands is also a major exporter of technology for the South Korean food industry (RVO, 2021b).

China rose to 6th place among the export destinations for goods produced in the Netherlands. Domestic exports to China grew by 15% to €11.2 billion in 2020. As in the case of South Korea, hardly any mineral fuels are exported to China.

Re-exports mainly to European destinations

The export value of re-exports amounted to €219 billion in 2020. That is a decrease of 4% compared to 2019. Dutch companies import a relatively large amount of goods that undergo little or no processing in the Netherlands before being re-exported. These re-exports accounted for 45% of the total value of goods exports in 2020. The Netherlands has a very important distribution function as a gateway to Europe. The Port of Rotterdam plays an important role in this regard (Creemers et al., 2021). This is due, for example, to its favourable geographic location combined with the advanced Dutch logistical and data infrastructure, experience with complex logistics processes and a relatively highly educated labour force (Kuypers et al., 2012; NFIA, 2019). The Netherlands is an important hub for goods from all corners of the world and the first point of arrival in Europe. From there the goods continue their journey into the European hinterland. Almost 85% of Dutch re-exports in 2020 were consequently destined for European partners, principal among which were Germany, Belgium, France, the United Kingdom and Italy (Figure 5.2.6). Many high-tech products, for example, are transported from Asia to the European hinterland via the Netherlands.

5.2.6 Main destinations for re-exports, 2020



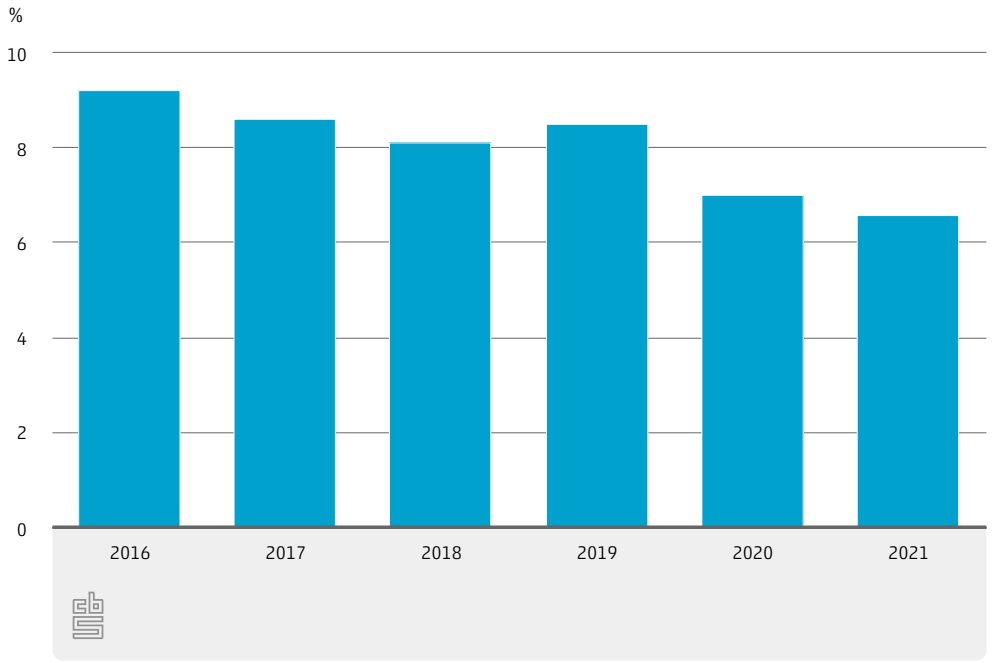
Re-exports amounted to 53% of total exports to Germany, France and Italy, with Belgium lagging behind at 45%. The share of re-exports to Belgium is in line with average Dutch exports. The United States, in 8th place, is the only non-European destination among the top 10 partners for Dutch re-exports. The re-export share among the Netherlands' Eastern European trading partners is notably high. Re-exports make up 64% of total exports to the Czech Republic, 61% to Hungary and 58% to Poland.

UK export share at all-time low in Q1 2021

The share of exports going to the United Kingdom reached an all-time low in Q1 2021 (Figure 5.2.7). A 6.6% share of total goods exports went to the United Kingdom in Q1. Never before has the UK's share in Dutch goods exports been so low.

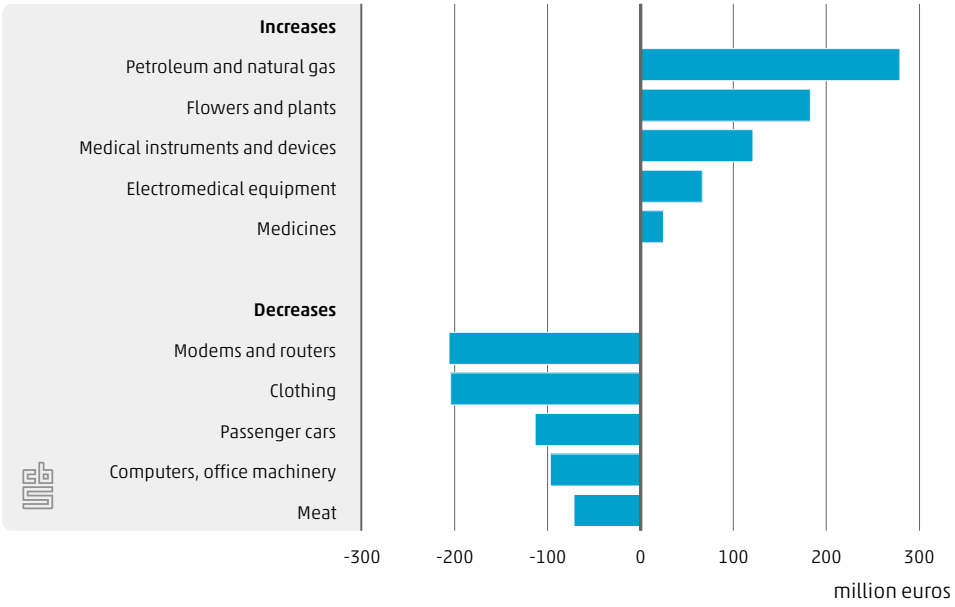
Total Dutch goods exports grew by more than 5% to €134 billion in Q1. Exports to the United Kingdom were positively impacted by higher demand for oil and gas in Q1. Oil and gas prices were substantially higher than in the previous year. Exports to the United Kingdom nevertheless remained stagnant at €8.9 billion, almost the same level as in the previous year. This result puts the United Kingdom in 4th place among export destinations. Germany (22% export share), Belgium (11%) and France (8%) make up the top 3.

5.2.7 Export share of the United Kingdom, Q1



In Q1 the export value of oil and gas increased by 49% to €853 million (Figure 5.2.8). Exporters of flowers and plants fared exceptionally well, partly due to the poorer performance in 2020. Exports of flowers and plants to the United Kingdom grew by 52% to €533 million. Exports of medical equipment and other medical supplies made good progress in the first three months of this year. Conversely, exports of Asian-produced goods in particular, such as modems, routers, clothing and computers, were substantially lower than a year earlier. Demand from the United Kingdom for cars and meat was also significantly lower in the first three months of 2021 than in 2020.

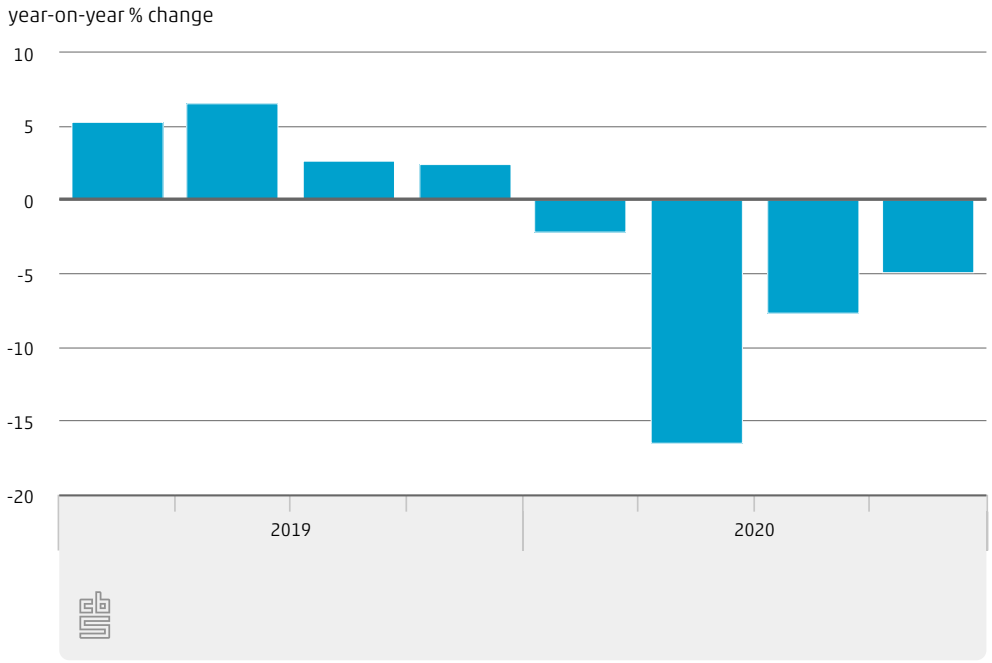
5.2.8 Largest increases and decreases in exports to the UK, Q1 2021 relative to Q1 2020



5.3 Dutch goods imports

Dutch importers purchased goods abroad worth €424 billion in 2020. In the previous year the value of Dutch goods imports was 8% higher at €460 billion. The drop in imports was due to a combination of the oil and coronavirus crises. The oil crisis resulted from disagreements between oil-producing countries concerning the oil price. This situation resulted in a large supply and an exceptionally low oil price. At the same time the coronavirus pandemic depressed demand for goods. Import prices consequently fell sharply in the spring of 2020. These events led to a substantial fall of over 16% in imports in Q2 2020 (Figure 5.3.1). In the course of 2020 demand for goods among consumers and producers picked up and the crude oil price moved higher. The fall in goods imports in Q4 was consequently limited to 5%. This contraction of imports was due entirely to lower import prices.

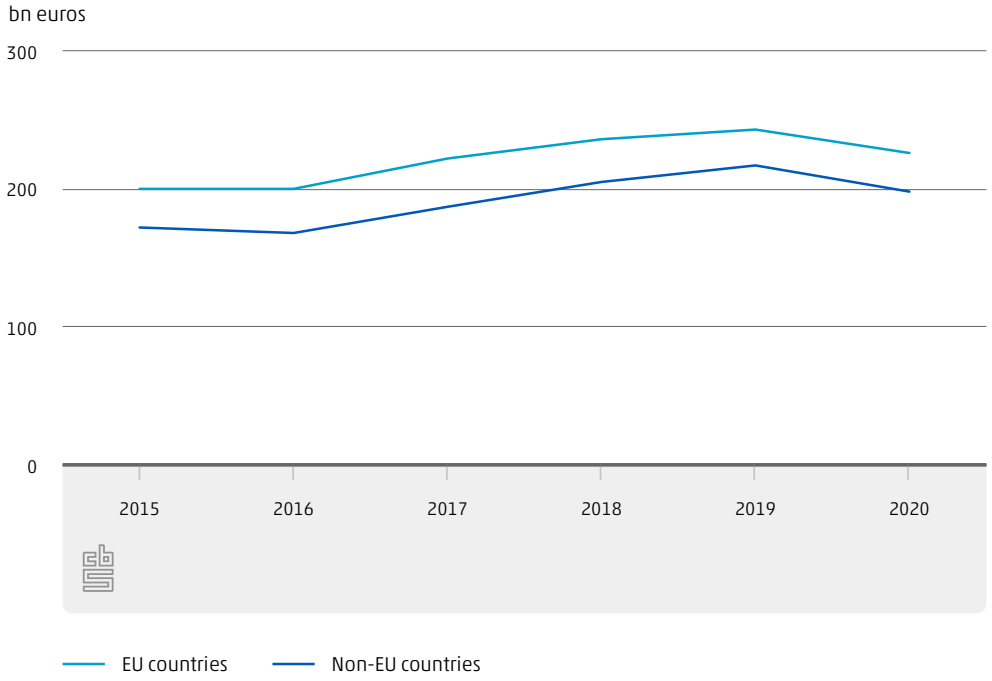
5.3.1 Dutch goods imports, quarterly development



Over half of imports are from the EU

The Netherlands imported goods worth €424 billion in 2020, 14% more than in 2015. With a share of over 53% in 2020, most goods imported by the Netherlands came from EU countries, as in the previous five years (Figure 5.3.2). Imports from non-EU countries amounted to €198 billion in 2020, an increase of 15% compared to 2015.

5.3.2 Dutch goods imports from EU and non-EU countries

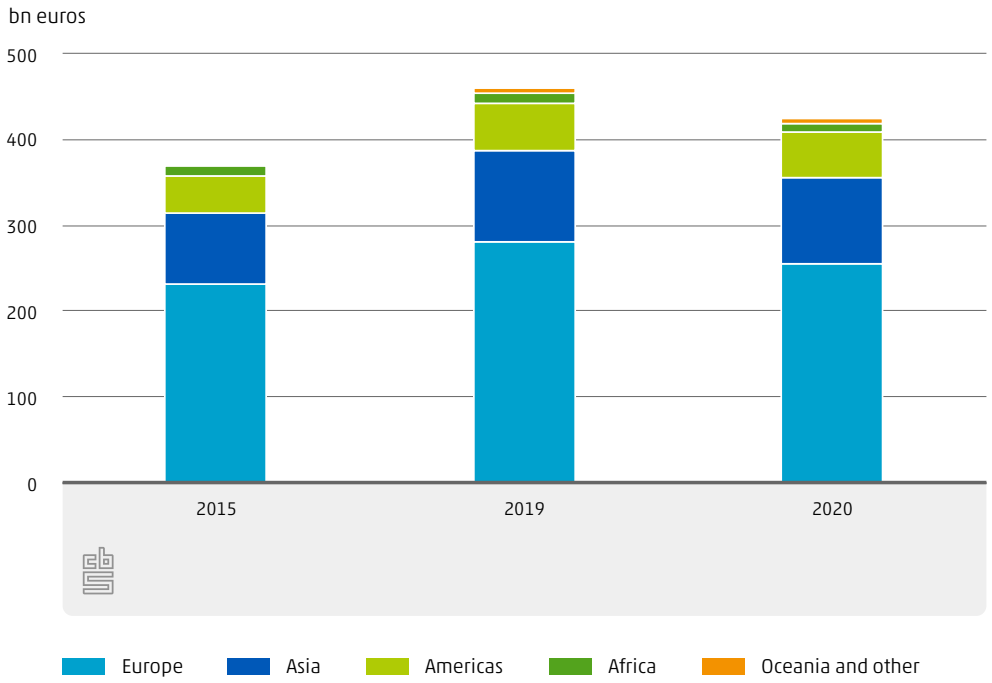


Dutch goods imports were considerably lower in 2020 than in 2019. In 2020 the Netherlands imported goods worth €36 billion less than in the previous year. That represents a decrease of 8%. This decrease is reflected in goods imports from the EU (–7%) and from non-EU countries (–9%).

60% from Europe and 24% from Asia

Dutch goods imports came mainly from the continent of Europe. In 2020 more than 60% of Dutch imports came from European countries (Figure 5.3.3). Alongside Europe, Asia was also a major supplier of goods to the Netherlands. In 2020 Dutch imports from Asian countries amounted to €102 billion, twice the level of imports from the Americas and nine times more than imports from Africa. The imports to the Netherlands from Asia comprised mainly machinery and manufactured goods.

5.3.3 Dutch goods imports by continent

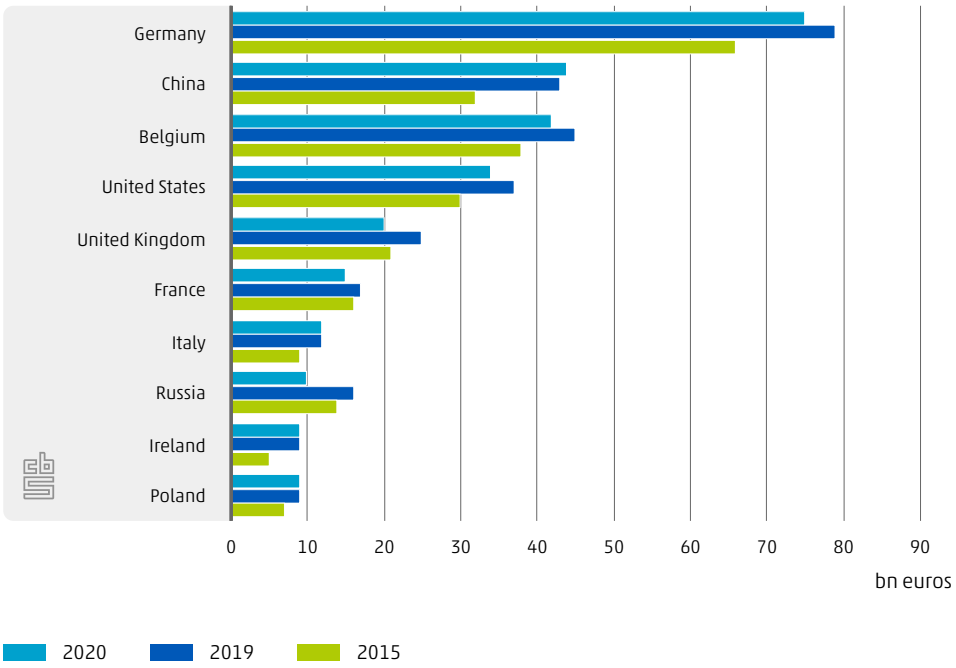


Compared to 2019 imports from Asia fell by 4.4% in 2020, while total Dutch imports contracted by nearly 8%. Asia's import share consequently rose by one percentage point to 24% in 2020. The decrease in goods imports was attributable particularly to lower imports of mineral fuels and transport equipment. Imports of mineral fuels fell in 2020 compared to the year before, but this fall was partly offset by higher imports of chemical products and natural products. The lockdown measures led to a shift in the spending pattern among consumers. Restaurants were closed for long periods, so consumers were unable to eat out and instead spent their money on new things. Many people also worked from home, leading to rising demand for electronics (Van der Duin, 2021).

China becomes 2nd largest import partner at expense of Belgium

China overtook Belgium to become the 2nd largest import partner in 2020, as the Netherlands imported goods from China worth over €44 billion (3.2% growth compared to 2019). By contrast, exports from Belgium amounted to €42 billion, a decrease of 8.1% compared to 2019. China's share in Dutch goods imports has grown from 8.7% to 10.5% over the past five years. Germany remains the most important supplier of goods, with a share of 17.6% (€75 billion). The value of imports from Germany in 2020 was around 5% less than in 2019. In addition to Germany and Belgium, five other European countries are among the 10 largest import partners. Among these countries, the growth in imports from Ireland (+78%), Italy (+30%) and Poland (+26%) exceeded the average of 14% over the 2015–2020 period. Italy climbed two places to become the 7th largest import partner in 2020. Ireland rose one place. Goods imports from the United Kingdom fell by 19% in 2020 compared to the previous year; they fell by 15% over the 2015–2020 period. In addition to China, two other non-EU partners are included in the top 10: the United States (4th place) and Russia (8th place).

5.3.4 Top 10 origin countries for Dutch imports



Goods imports from nine partners among the 10 most important goods suppliers fell in 2020 compared to the previous year. China was the only country in the top 10 with import growth. The Netherlands mainly imported more electrical equipment from China. Russia saw the biggest fall in imports among the top 10. Imports from Russia decreased by 39%. Russia was our 8th largest import partner in 2020, with €9.5 billion in import value, and consequently fell one place compared to 2019. Russia is by far the largest supplier of mineral fuels. Lower demand and lower trade prices for mineral fuels led to a substantial contraction of imports from Russia.

Norway outside the top 10

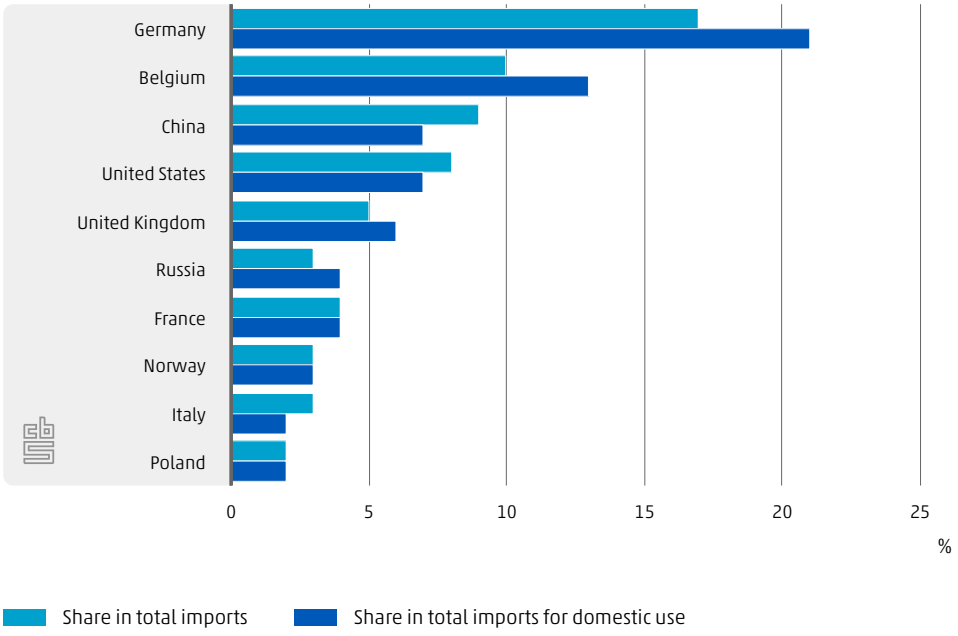
Among the partners outside the 10 largest suppliers of goods to the Netherlands, Norway saw its exports fall by €4 billion (-31%) in 2020. The country supplied goods to the Netherlands worth €8.5 billion during the year. Norway still ranked 8th in 2019 but is now the Netherlands' 12th largest import partner, with a 2% share. Like Russia, Norway is particularly important to the Netherlands as a supplier of oil and gas. We also see lower imports from Nigeria (€-1.1 billion), the main oil producer in Africa, and Saudi Arabia (€-0.6 billion). The Netherlands also imports large amounts of oil from these countries. The rather unsteady trend in oil and gas imports is not only due to changes in demand and prices. It is usual for oil importing companies to enter into longer-term contracts with their suppliers.

One-third of imports for the Dutch domestic market come from neighbouring countries

In section 5.2, goods exports are divided into two export flows: domestic exports and re-exports. Imports of goods can also be broken down into imports for domestic expenditure (consumption, intermediate use, capital goods) and imports for re-export.[3)]

Focusing on goods imports for domestic expenditure, it can be seen that the Netherlands' neighbours were still the main suppliers in 2019 (Figure 5.3.5). In 1st place was Germany (€45 billion, 21% share), followed by Belgium (€27 billion, 13% share). China completes the top 3 with a 7% share and imports worth €16 billion.

5.3.5 Largest suppliers to the Dutch domestic market, 2019



3) This information has become available as a result of new analysis techniques at CBS (Lemmers & Wong, 2019). The data shown in Figure 5.3.5 are taken from the National Accounts and are available up to 2019 inclusive. The other figures in this paragraph are based on the International Trade in Goods source statistics. The source statistics use different concepts than the National Accounts; for example, the source statistics are based on cross-border trade in goods, while the National Accounts are based on economic ownership. Integration into the National Accounts results in additional differences. As a result, the totals in Figure 5.3.5 and the other figures in this section may differ. For more information on these differences, see 'CBS import and export statistics' (CBS, 2015).

Imports from China, the United States and Ireland are mainly destined for the European hinterland and leave our country after import in the form of re-exports. This is particularly due to the Netherlands' favourable location, good infrastructural connections and the presence of large, central ports. Conversely, imports from Germany, Belgium and Russia are mainly intended for the Dutch domestic market. Around 71% of imports from Russia are processed or consumed in the Netherlands. The remainder of imports leave the Netherlands again as re-exports. For the other countries (the UK, France, Italy and Poland) among the top 10 goods suppliers (Figure 5.3.4) the ratio of imports for domestic expenditure to imports for re-export is in line with the average Dutch imports. Around half of the total imports are destined for the Dutch market. The remainder leave the Netherlands as re-exports.

Japan is a major supplier of goods for re-export

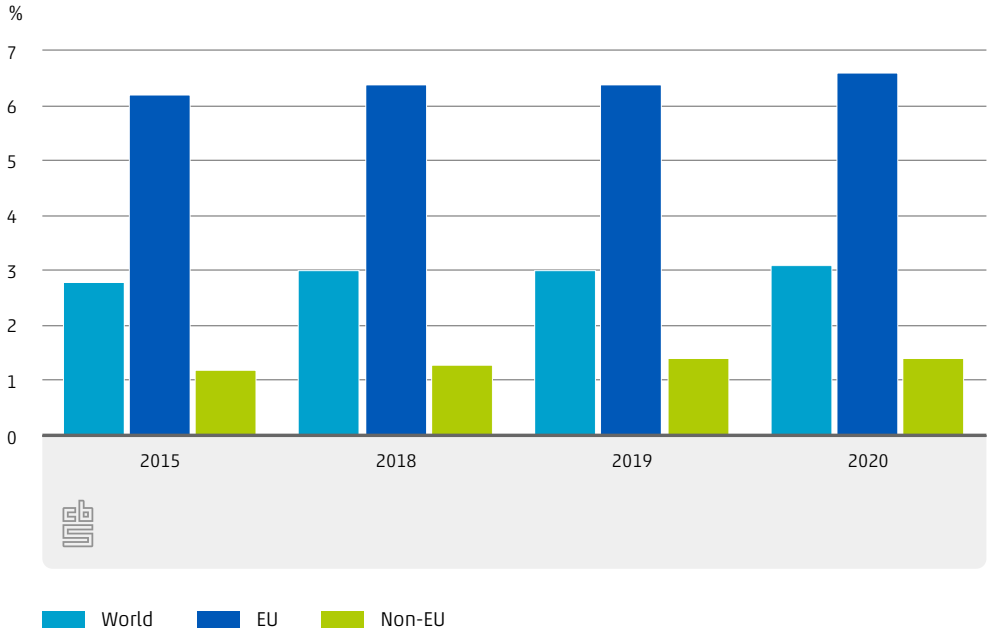
In 2020 the Netherlands' main suppliers for re-export products were Germany (€31 billion, 15% share), China (€27 billion, 13% share) and the United States (€20 billion, 9% share). It is notable that Japan ranks 7th. In 2019 the Netherlands imported €6.1 billion worth of goods from Japan that were immediately re-exported. More than half of these imports comprised machinery. Japan does not figure among the 10 most important goods suppliers and with an import value of €8.1 billion was only the Netherlands' 13th goods supplier in 2019.

5.4 Importance of the Netherlands as a supplier of goods to other countries

The Netherlands exported goods worth €483 billion in 2020. Figure 5.4.1 shows that the Netherlands was responsible for 3.1% of global exports in 2020. The Dutch contribution to global exports between 2015 and 2020 increased by 0.3 percentage points. The share also increased slightly in 2020 compared to 2019. In 2020 the Netherlands ranked 4th among exporting countries worldwide after China, the United States and Germany.

Dutch exports to the EU (including the United Kingdom) increased by 0.2 percentage points in 2020 compared to 2019, reaching 6.6%. The Dutch share in EU exports remained almost unchanged at 1.4% in 2020. Over the 2015–2020 period we also see an increase of 0.4 percentage points in the Dutch contribution to EU exports. At the same time the export share to non-EU countries grew by 0.2 percentage points. The Dutch share in global exports grew by 0.1 percentage points to 3.1% in 2020. Between 2015 and 2020 the Dutch share in global exports grew by 0.3 percentage points.

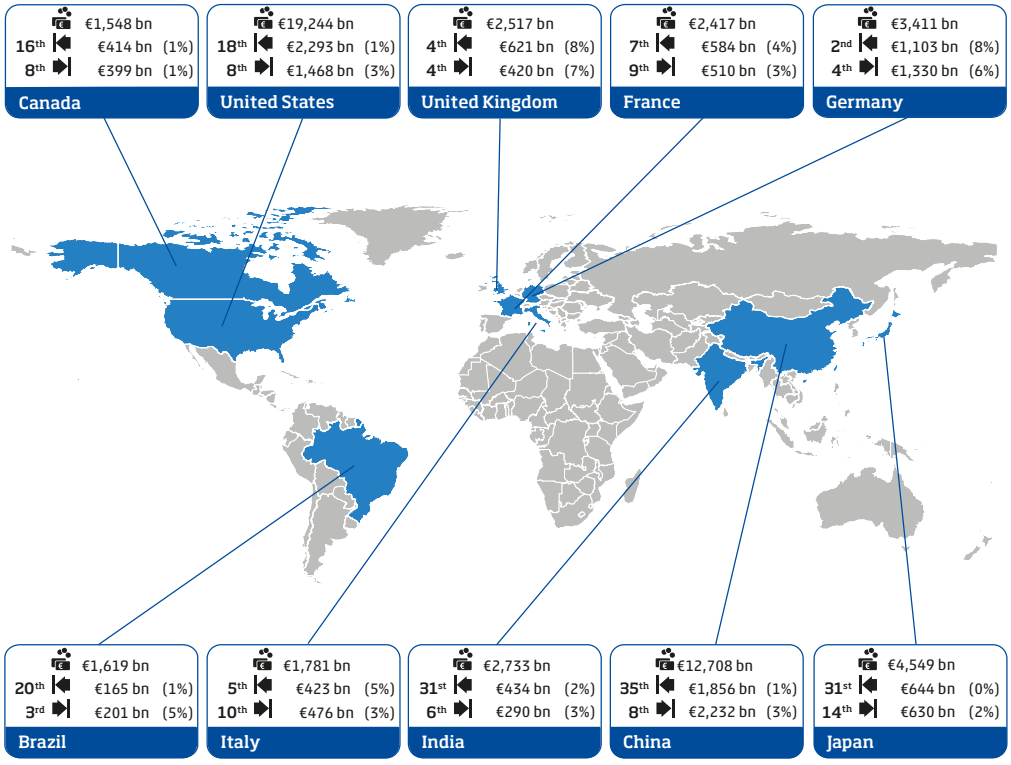
5.4.1 Contribution of the Netherlands to global exports



Source: CBS, UNCTAD

The large EU share (between 2015 and 2019) was mainly due to the Netherlands' favourable geographic location. Many goods arrive from Asia and the Americas through the mainports of the Port of Rotterdam and Schiphol Airport and pass through the Netherlands as re-exports or transit trade by inland waterway, rail or road to countries in Europe. The Netherlands consequently has a large trade surplus with almost all EU countries.

Dutch goods trade with the world's 10 largest economies, 2019



Gross domestic product
Import of goods: NL position, total import value, (NL % share)
Export of goods: NL position, total export value, (NL % share)

*)Trade figures include transit trade
Source: UNCTAD, UN Comtrade.

Netherlands ranks 2nd among goods suppliers to Germany after China

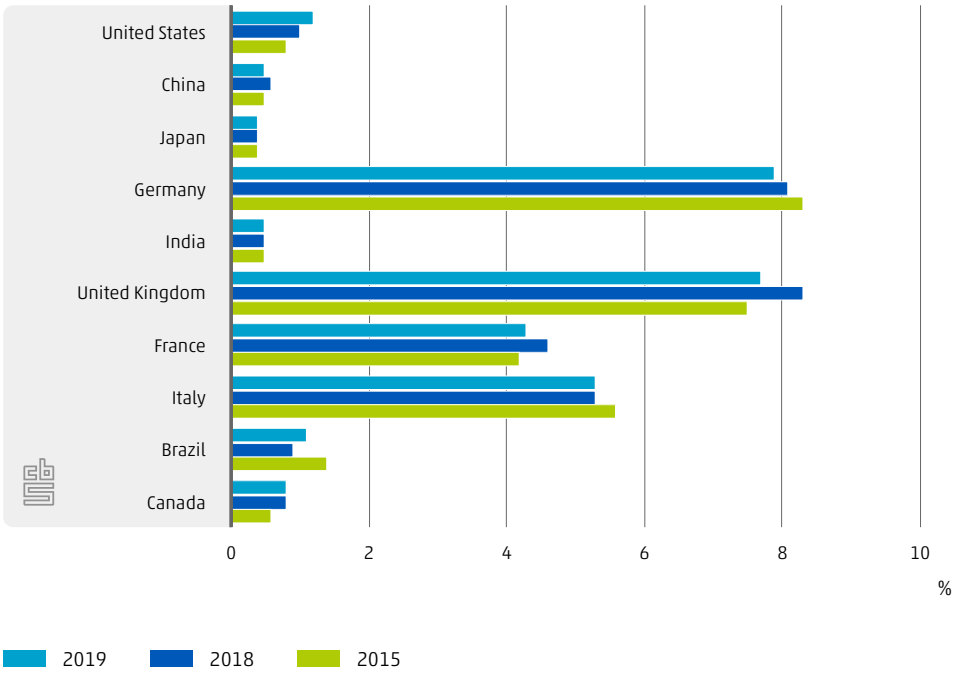
Dutch exports to the 10 largest economies in the world based on UNCTAD figures amounted to €230 billion in 2019. That represents 36% of total Dutch exports. The Dutch share in imports of Germany and the United Kingdom was by far the highest (Figure 5.4.2). Both countries imported almost 8% of their goods from the Netherlands in 2019 and thus remained well above the EU average of 6.4%. From a German perspective the Netherlands is the 2nd largest import partner after China (CBS, 2020a; CBS, 2020b). In the case of the United Kingdom the Netherlands was the 4th largest import partner in 2019. As a supplier of goods the Netherlands ranks 7th and 5th respectively for imports of France and Italy.

Import share almost unchanged five years after the Brexit referendum

The United Kingdoms' share in Dutch exports shrank every year between 2015 and 2019 (CBS, 2020c). By contrast the Dutch share in imports of the United Kingdom remained almost unchanged over the same period. In 2015, the year before the Brexit referendum, the Netherlands held a 7.5% share in UK imports. In 2019, before the trade barriers were erected, the United Kingdom imported 7.7% of its goods from the Netherlands. Dutch goods became increasingly expensive for British importers after the Brexit referendum. In 2015 the pound sterling was worth €0.73. Four years later it had fallen in value by 21% (€0.88). Goods from

the eurozone became on average 21% more expensive for companies in the United Kingdom due to this fall in the exchange rate. Other important trading partners in the eurozone such as Germany, France, Belgium and Ireland were of course also affected by the fall in the exchange rate. Between 2015 and 2019 these countries suffered more than the Netherlands from declining demand from the United Kingdom. CBS has regularly published figures on the importance of the United Kingdom for Dutch goods exports in recent years (see CBS, 2020c; CBS, 2020d; CBS, 2021b; CBS, 2021c).

5.4.2 The Netherlands' share in goods imports of the largest economies



Source: CBS, UNCTAD, UN Comtrade

The Dutch share of imports into the largest non-EU economies is significantly smaller. In the case of Brazil, the Netherlands was the 20th country of origin for imports in 2019. In that year the Netherlands exported particularly crude oil, petroleum products and medicines to Brazil. China, the United States and Argentina are the main goods suppliers for Brazil.
The Netherlands occupies a modest position with regard to goods imports into Canada (16th), China (35th), India (31st), Japan (31st) and the United States (18th).

17% of Belgian goods imports come from the Netherlands

Netherlands is an important supplier of goods for Belgium, Nigeria and Sweden

Among countries importing goods worth more than €1 billion from the Netherlands, Belgium is most dependent on the Netherlands (over 17%) (Table 5.4.3). After the Netherlands, Belgium imports the highest value in goods from Germany and France. In Sweden and Germany the Netherlands ranks 2nd. Sweden imports most goods from Germany, while China is the largest supplier for German importers. It is notable that the Netherlands occupies a prominent position in Lithuania, where it is the 5th largest supplier of goods.

Of the ten countries most dependent on the Netherlands for their goods imports, nine are EU members. Nigeria is in the top 10 because it imports in particular large amounts worth of petroleum products from the Netherlands (see also CBS, 2021a). Petrol and diesel made up 73% (€3.8 billion) of exports to Nigeria in 2019. From a Nigerian perspective, the Netherlands was the 4th most important country of origin for imports in 2019. Only the economic heavyweights China, India and the United States were ahead of the Netherlands. In 2018 the top 10 countries with imports from the Netherlands worth more than €1 billion were the same as in 2019, although some countries changed positions. Germany and Denmark rose one place, pushing the United Kingdom down to 6th place.

Trade agenda

The Netherlands earned €160 billion in value added from exports of goods in 2019 (see also Chapter 2 of this publication). Goods exports thus made a major contribution to the economy and employment. As the Netherlands earns a major share of its national income from exports, efforts are being made to strengthen its export position. Particular attention is being paid to trade with 30 specific countries, shown in bold in the tables below (Kaag, 2018). The Netherlands' share in these countries' imports, together with other countries' imports, is shown in Table 5.4.3 (for countries with imports worth more than €1 billion from the Netherlands) and Table 5.4.4 (for countries with imports worth less than €1 billion from the Netherlands). Greece is in 11th place. The Netherlands has a 4.8% share in Greek imports. This strikingly large share is due to high exports of Dutch pork and cheese to Greece. According to Eurostat the Netherlands is by far the largest source of pork imports, with a 45% share. The Netherlands ranks 2nd as a supplier of cheese to Greece.

5.4.3 Market shares of countries that import ≥ €1 bn in goods from the Netherlands, 2019

	2015	2016	2017	2018	2019
Market share greater than 5% (2019)					
Belgium	16.5	15.8	17.1	18.0	17.4
Nigeria	7.4	7.3	8.9	11.6	10.7
Sweden	8.3	8.6	8.9	9.4	9.4
Germany	8.4	8.8	8.1	8.2	7.9
Denmark	8.0	7.9	7.7	7.7	7.9
United Kingdom	7.5	7.4	8.0	8.3	7.7
Lithuania	5.1	4.8	5.0	4.9	5.4
Italy	5.5	5.5	5.6	5.3	5.3
Hungary	4.5	5.0	5.0	5.1	5.1
Portugal	5.1	5.1	5.4	5.2	5.0

5.4.3 Market shares of countries that import ≥ €1 bn in goods from the Netherlands, 2019 (continued)

	2015	2016	2017	2018	2019
Market share between 3% and 5% (2019)					
Greece	5.5	5.5	5.2	4.9	4.8
Finland	5.3	5.0	4.6	4.6	4.5
France	4.2	4.5	4.6	4.4	4.3
Spain	4.2	4.3	4.0	4.1	4.2
Romania	4.0	4.1	4.0	3.9	3.9
Croatia	.	.	.	3.7	3.9
Norway	3.6	4.0	3.9	3.7	3.8
Poland	3.8	3.5	3.1	3.3	3.8
Bulgaria	3.3	3.6	3.7	3.8	3.6
Ireland	3.8	3.5	3.1	3.3	3.4
Market share between 1% and 3% (2019)					
Czech Republic	3.0	2.9	2.7	2.8	2.9
Taiwan	1.3	1.5	1.5	1.4	2.8
Austria	2.6	2.6	2.7	2.7	2.7
Saudi Arabia	1.0	1.7	2.1	2.7	2.5
Switzerland	2.1	1.9	2.0	2.0	2.0
Israel	3.9	4.1	4.2	1.9	1.8
Russia	1.5	1.6	1.5	1.5	1.6
Turkey	1.4	1.5	1.6	1.4	1.5
Slovakia	1.4	1.5	1.3	1.4	1.4
United States	0.8	0.7	0.8	1.0	1.2
Brazil	1.4	1.3	1.3	0.9	1.2
United Arab Emirates	0.5	1.2	1.2	1.4	1.1
Australia	0.8	0.9	0.8	1.0	1.1
South Africa	1.2	1.4	1.2	1.2	1.0
Market share lower than 1% (2019)					
Singapore	1.4	1.4	1.9	1.7	0.9
Egypt	2.0	2.6	2.2	2.3	0.9
South Korea	1.0	1.0	1.3	1.3	0.8
Canada	0.6	0.7	0.7	0.7	0.8
Thailand	0.5	0.6	0.6	0.5	0.8
India	0.5	0.5	0.5	0.5	0.5
China	0.5	0.6	0.6	0.6	0.5
Mexico	0.8	0.5	0.6	0.5	0.5
Hong Kong	0.5	0.5	0.4	0.4	0.4
Japan	0.4	0.4	0.4	0.4	0.4

Source: UNCTAD, UN Comtrade, processed by CBS
Note: Countries in bold are on the trade agenda.

Cape Verde imports a relatively large amount of goods from the Netherlands

If the countries importing goods worth more than €1 billion from the Netherlands are excluded, Cape Verde is the country in which the Netherlands has the largest share of goods imports (Table 5.4.4). This table shows the countries importing goods worth less than €1 billion from the Netherlands. These partners are less important for Dutch exports than the partners shown in Table 5.4.3. Table 5.4.4 also shows the Netherlands' share in the import of each country. In 2019, for example, the Netherlands exported a particularly large amount of oil products to Cape Verde. The Netherlands was consequently the 2nd largest supplier of

goods to Cape Verde after Portugal. The Netherlands also ranks 2nd as a supplier of goods to Aruba and Suriname.

5.4.4 Market shares of countries that import <€1 bn in goods from the Netherlands, 2019

	2015	2016	2017	2018	2019
Market share greater than 1% (2019)					
Cape Verde	11.6	6.4	4.6	6.0	12.7
Suriname	9.3	11.5	12.2	9.7	12.5
Barbados	1.5	1.9	1.5	2.4	8.2
Aruba	10.4	8.9	11.7	10.4	8.1
Iceland	5.9	7.5	6.6	6.3	6.9
Senegal	4.1	5.3	5.6	6.5	6.8
Cyprus	5.1	3.3	5.0	3.3	4.3
Gambia	2.7	3.7	2.9	2.6	4.3
Luxembourg	3.5	3.4	3.6	3.9	4.1
Latvia	3.7	4.1	4.0	3.5	3.7
Malta	7.2	3.6	3.4	4.7	3.1
Ivory Coast	2.9	2.0	3.2	3.6	2.8
Estonia	4.1	5.0	4.5	3.3	2.7
Morocco	1.8	2.7	2.5	2.3	2.4
Qatar	1.2	1.3	1.9	1.9	2.4
Belarus	0.7	0.8	0.9	0.8	2.3
Kuwait	1.6	1.8	1.7	2.0	2.0
Benin	3.2	4.8	7.2	3.4	1.9
Georgia	1.8	3.0	2.0	2.2	1.9
Northern Macedonia	1.8	1.2	1.3	1.6	1.8
Burkina Faso	7.6	4.5	7.1	3.2	1.8
Ghana	.	2.4	1.9	2.2	1.7
Kenya	.	.	1.1	1.1	1.7
Serbia	1.6	1.6	1.7	1.6	1.6
Pakistan	0.8	0.8	1.6	0.9	1.6
Slovenia	2.1	2.3	2.0	1.9	1.5
Ecuador	1.4	1.1	2.2	1.9	1.4
Bosnia and Herzegovina	1.5	1.5	1.4	1.4	1.4
Ukraine	1.2	1.4	1.3	1.4	1.3
Jordan	1.0	1.5	1.5	1.2	1.2
Antigua and Barbuda	0.8	0.7	0.8	1.1	1.2
Guinea	1.8	1.6	1.8	1.4	1.1
New Zealand	1.1	1.1	1.1	1.1	1.0
Market share lower than 1% (2019)					
Argentinia	0.8	0.7	0.7	0.8	0.8
Burundi	6.3	1.1	1.5	1.4	0.8
Armenia	0.9	0.9	0.8	1.1	0.8
Peru	0.5	0.7	0.7	0.6	0.6
Kazakhstan	1.0	1.1	1.0	0.9	0.6
Chili	0.7	0.9	0.8	0.6	0.6
Philippines	0.6	0.6	0.7	0.6	0.6
Paraguay	4.3	4.3	3.8	3.5	0.5

Source: UNCTAD, UN Comtrade, processed by CBS
Note: Countries in bold are on the trade agenda.

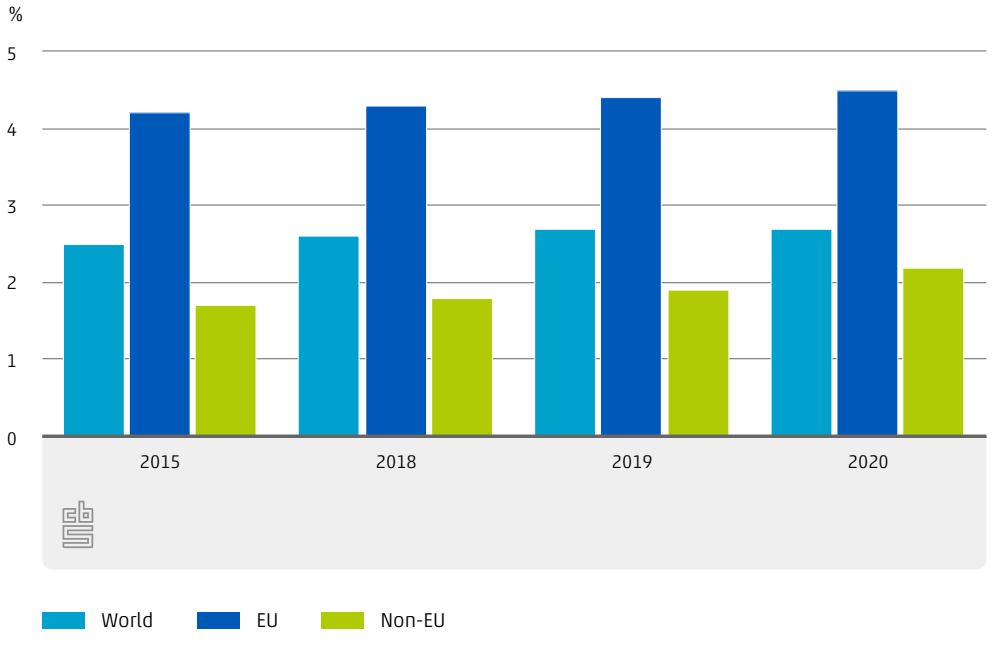
5.5 Importance of the Netherlands as a market for other countries

Dutch goods imports were worth €425 billion in 2020. Figure 5.5.1 shows that the Netherlands was responsible for 2.7% of global imports in 2020, which means the Dutch contribution to global imports rose by 0.2 percentage points between 2015 and 2020. Compared to 2019 the share remained almost unchanged in 2020. The Netherlands was the 6th largest import country worldwide in 2020.

6th largest importer in the world in 2020 was the Netherlands with €425 billion

The Dutch share in EU imports (including the United Kingdom) grew by 0.1 percentage points to 4.5% in 2020. At the same time the Dutch share in non-EU imports was 0.3 percentage points higher than in 2019. Between 2015 and 2020 the Dutch contribution to EU imports rose by 0.3 percentage points. Among non-EU countries the Dutch import share rose by 0.5 percentage points to 2.2% between 2015 and 2020.

5.5.1 Contribution of the Netherlands to global imports



Source: CBS, UNCTAD

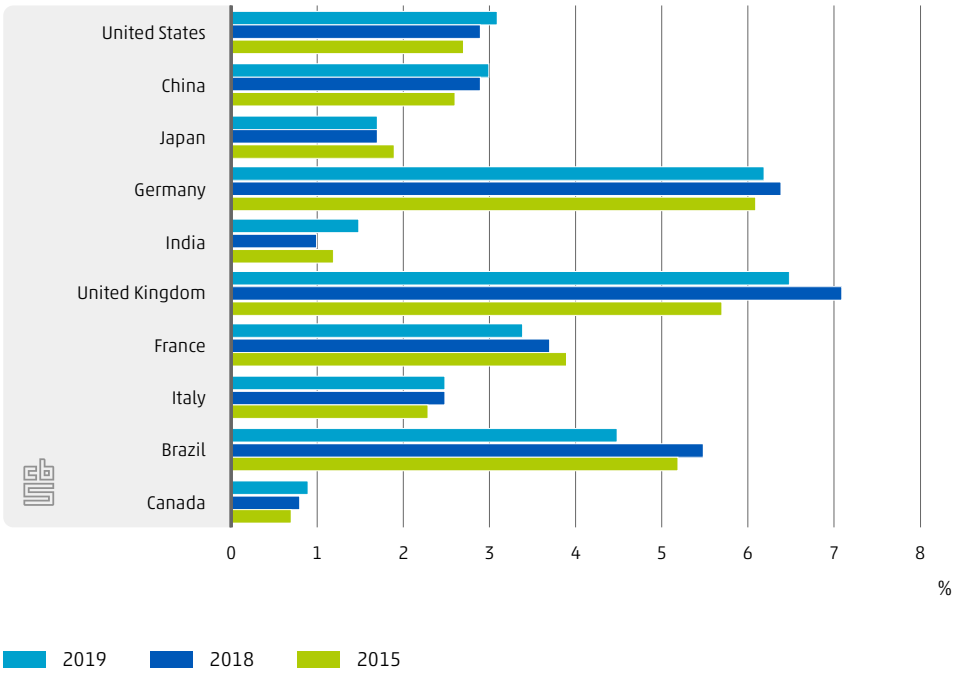
The Netherlands recorded imports worth €279 billion from the world's 10 largest economies in 2019 according to UNCTAD. That represents 50% of total Dutch imports. The Netherlands had a trade deficit of €49 billion with these 10 largest economies in 2019. The Netherlands has substantial deficits particularly with China (€30 billion), the United States (€10 billion) and Japan (€3 billion). A large proportion of the goods that the Netherlands imports from these countries ultimately leave the country as re-exports or transit trade. In its role as a 'Gateway to Europe' the Netherlands thus has an important function as a supplier of goods to countries both inside and outside Europe. Partly for this reason the Netherlands has a substantial trade surplus with Germany, the United Kingdom, France and Italy (combined total of €77 billion).

Netherlands is the 3rd largest customer for Brazilian exports

The Dutch share in exports of Germany (over 6%) and the United Kingdom (around 6.5%) was higher than the EU average of 4.4% in 2019. As an export destination within the EU the Netherlands is particularly important for Germany. The Netherlands ranks 4th for exports of its eastern neighbours after the United States, France and China. The Netherlands was also the 4th export destination for the United Kingdom in 2019. The United States, Germany and China are the main customers for goods exports from the United Kingdom. The Dutch share in imports from France and Italy remained below the EU average. The Netherlands is slightly less important for these countries, ranking 9th and 10th respectively.

Among non-EU countries, the Dutch share in exports is highest in the case of Brazil, as can be seen from Figure 5.5.2. The Netherlands received 5% of Brazilian exports in 2019. That is well above the Netherlands' average share in exports of non-EU countries (1.9%). Outside the EU the Netherlands therefore plays a prominent role in Brazilian goods exports as the 3rd largest export destination. Brazil has large exports of soy beans, of which 78% go to China according to UN Comtrade. Spain and the Netherlands are the main customers for Brazilian soy beans after China. The Spanish and Dutch export shares are 3% and 2% respectively. The Netherlands is among the top 10 export destinations for Canada, China, India and the United States, but occupies a modest position as a customer for Japan.

5.5.2 The Netherlands' share in goods exports of the largest economies



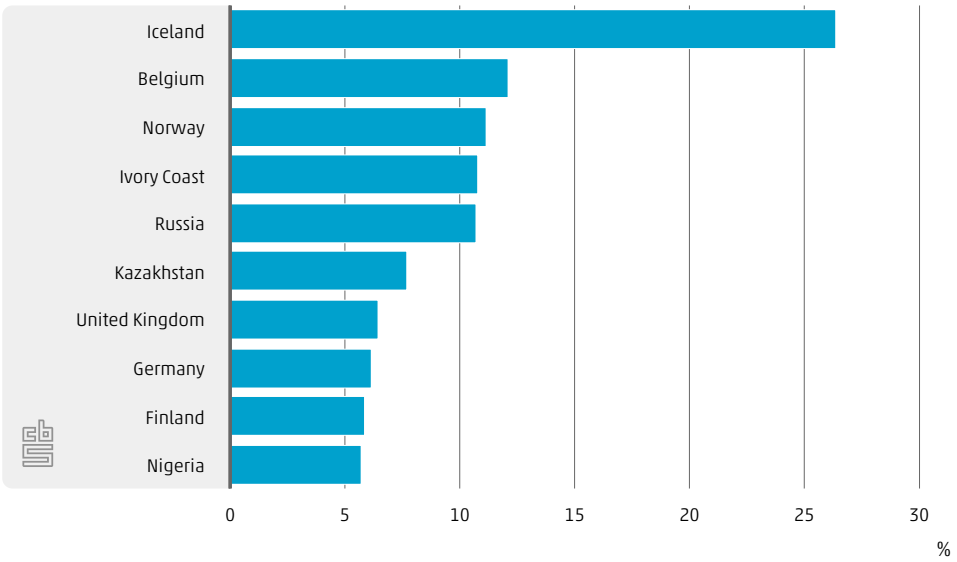
Source: CBS, UNCTAD, UN Comtrade

Netherlands is important export destination for Iceland and Ivory Coast

Of the countries with an export flow of more than €1 billion to the Netherlands, Iceland and Ivory Coast depend most on the Dutch market (Figure 5.5.3). Iceland earns more than one in four export euros from Dutch customers. Thanks to its geothermal energy sources Iceland exports in particular large amounts worth of aluminium. Over a quarter of these exports go to the Netherlands.

With Amsterdam being the largest port in the world for imports of cocoa beans, the Netherlands is a particularly important market for countries such as Ivory Coast and Ghana. The Netherlands is the main customer for cocoa beans from Ivory Coast, with an 11% export share (see also CBS, 2019; Creemers & Draper, 2021).

5.5.3 The Netherlands' share in goods exports exceeding 1 billion euros, 2019



Source: CBS, UNCTAD, UN Comtrade

Netherlands is particularly important for exports from Costa Rica

Below the €1 billion threshold for exports to the Netherlands, the main country is Kenya, followed by Cambodia, Ghana and Costa Rica. 8% of Kenyan exports were destined for the Netherlands in 2019. That means the Netherlands is the 3rd export destination after Uganda and the United States. The Netherlands imports a large quantity of cut flowers, such as roses, from Kenya. In the case of Cambodia, the Netherlands was the 10th largest export destination in 2019. Cambodia supplies particularly clothing, footwear and bags to the Netherlands (see also CBS, 2021d). After Ivory Coast and Cameroon, Ghana is the 3rd largest supplier of cocoa beans to the Netherlands, with a 14% share. It is notable that the Netherlands ranks 2nd as an export partner of Costa Rica. Almost a quarter of imported bananas come from Costa Rica. Costa Rica is also an important supplier of pineapple, with an 84% share of imports.

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6 The Netherlands as part of global value chains

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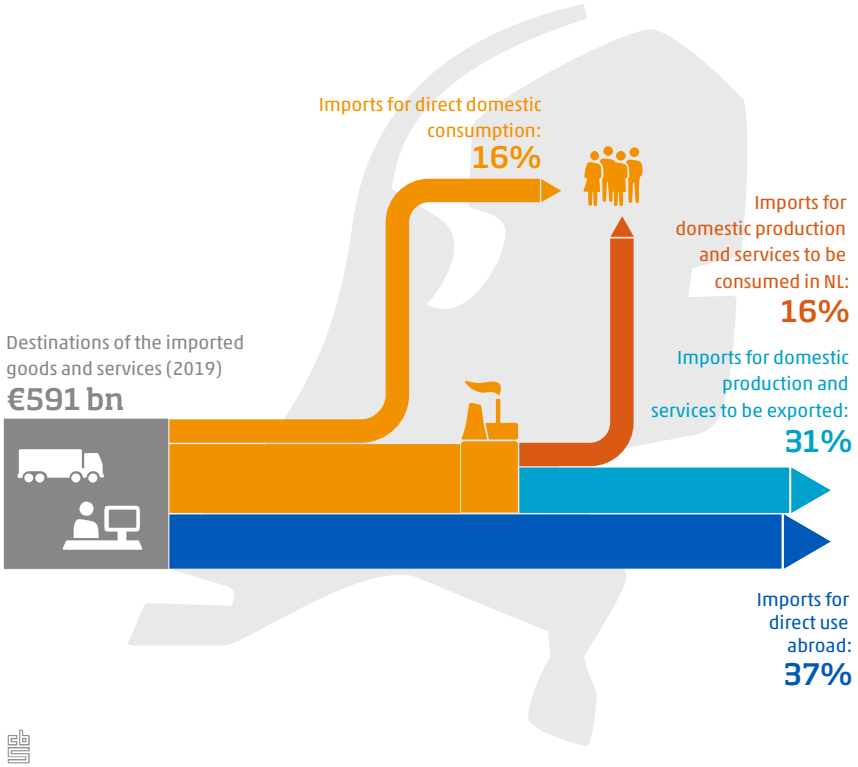
Destination of goods and service imports, bn euros, 2019



Bron: CBS.

By participating in global value chains, the Netherlands has strong ties with other countries. It plays an important role as a link in global trade, especially in intraregional trade within the internal market. This chapter looks at the origin and composition of imports to the Netherlands. We also examine precisely what happens to these imports of goods and services. Dutch companies generally import many goods and services that are produced more efficiently in other countries or that they cannot produce themselves. A substantial proportion of these goods and services are essential to enable companies to export competitively.

6.1 Key findings

The rise of global value chains means that global production processes are increasingly fragmented and scattered throughout the world. Raw materials, semi-finished products and even services are more likely to cross multiple borders, with the result that more than two-thirds of global trade now takes place through these global value chains (Baldwin & Lopez-Gonzalez, 2015; World Bank & WTO, 2019). Each country involved in these chains plays a

different role. According to the OECD (2013), for example, small (and open) economies are generally highly dependent on foreign inputs that enable them to produce goods and services for the foreign market, and we find a similar pattern in the Netherlands. As Chapter 2 of this publication and various CBS studies (for example Lammertsma & Notten, 2019; Wong et al., 2019; Aerts et al., 2020b) have shown, the import content of Dutch exports is fairly large (approximately 60%); indeed, that share has grown steadily in recent years.
The Netherlands' active participation in global value chains is also reflected in the kinds of goods that the country trades in. Intermediate goods, for example, make up an important share of Dutch imports and exports (Jaarsma & Wong, 2019; 2020).

Imports that remain unprocessed

In this chapter we examine how various goods and services from the Rest of the World work their way through the Netherlands. The infographic at the beginning of this chapter shows what happens to imports entering the Netherlands. In 2019, the Netherlands imported around €590.7 billion worth of goods and services, of which €425.7 billion was accounted for by goods and €164.9 billion by services.[1)] A substantial proportion of total imports of goods and services (37%: the dark blue arrow) found its way directly to the foreign market in the form of re-exports. The vast majority of these are goods, in particular imports for the re-export of ICT products (such as telecommunications equipment and electrical appliances – which are generally ideally suited to container transport), chemical products, and petroleum and petroleum products. Only a small proportion of imports for re-export were services: for example, charges for the use of intellectual property that are paid through the Netherlands. The smallest import flow (the light orange arrow) in the infographic is imported goods and services intended directly for domestic consumption, in which road transport vehicles (including parts) are the largest goods category. Spending by Dutch tourists abroad constitutes the largest category of imports of services intended for the domestic market.

47% **of total Dutch imports intended for further processing by Dutch companies**

Imports that are processed

The majority of imported goods and services were intended for further processing by Dutch companies (see the dark orange and light blue arrows in the infographic). These 'intermediate imports' had a value of €278.2 billion, thus representing 47% of total Dutch imports. Intermediate imports comprise raw materials, semi-finished products, intermediates

1) The figures in this chapter have been obtained by combining the data from the National Accounts with the International Trade in Goods and International Trade in Services statistics, with figures from the National Accounts used as the benchmark. Because of differences in definitions and methods, these figures differ from those shown on StatLine or in the other chapters of this publication, which are both based on the trade statistics.

or support services that, in the Netherlands, are incorporated in other products, or used to provide services. The products or services that the Netherlands produces with them are destined either for the domestic market or for export. As the infographic shows, the Dutch economy processes two-thirds of intermediate imports to serve foreign customers (the light blue arrow). In 2019, €99.8 billion of goods and €83.4 billion of services were incorporated in exports. Petroleum products and chemicals are the main type of intermediate imports. The vast majority of imports of crude oil and petroleum products are incorporated in exported goods and services: for example, refined petroleum products manufactured from crude oil, or petroleum-based plastics and fuels used in exports of services by the transport sector. Chemical products are used mainly in export-driven production processes. The services imported by companies were mainly business services. A good deal of intellectual property was also imported by Dutch companies: this was used mainly for export production. The United States, the United Kingdom and Germany were the main countries of origin of services incorporated into Dutch exports.

Origin of intermediate imports incorporated in exports

The Netherlands plays an important role as a link in global trade, especially in intraregional trade within the internal market. A large share of the imports that are incorporated in exports came from the EU-28 and went to another (or the same) EU-28 country. Of the four EU countries considered separately in this chapter, the Netherlands required the most imports from Germany, followed by the United Kingdom, Belgium and France. Countries geographically close to the Netherlands – neighbouring countries in particular – are thus the main suppliers of the intermediate inputs needed for Dutch exports. The relatively high degree of dependence on imports from Europe applies particularly to industrial and chemical products. Crude oil and petroleum products were by far the most important imported products incorporated in Dutch exports, but the majority of these imports came from countries outside Europe (for example Russia, Norway and Nigeria). Lastly, the United States and China are also important players as regards imports to the Netherlands that are processed by Dutch companies. China was particularly important with regard to imports of machinery, transport equipment and industrial products. The United States was important with regard to imports of machinery and transport equipment, and raw materials and mineral fuels, but its importance to Dutch imports was particularly high as it relates to imports of services, especially American intellectual property.

6.2 How the imports are used

This section provides a detailed description of the destinations of goods and services imported into the Netherlands in 2019. As the infographic at the beginning of this chapter shows, we also examine precisely what happens to Dutch imports of goods and services. Are they intended for Dutch consumers, are they processed by a Dutch company as part of its production for the domestic or foreign market, or do they leave the Netherlands for another country in a more or less unprocessed state in the form of re-exports? What goods and services do these imports comprise? And how have they changed in recent years?

Almost half of goods imports destined for re-export

In 2019, imports of goods amounted to €425.7 billion and those of services €164.9 billion, with a total of just under €590.7 billion (Table 6.2.1).[2)] As Table 6.2.1 shows (also represented by the dark blue arrow in the infographic), a substantial proportion of these imports are sent abroad directly: almost half of the goods imported (€425.7 billion) were destined for re-export (for example, a shipping container full of consumer electronics from China that is cleared through customs in the Port of Rotterdam and sold on to a wholesaler in Germany by a company in the Netherlands). In 2017, for instance, approximately €51 billion of the €55 billion of goods imported to the Netherlands from Asia was intended for re-export to Europe (Franssen et al., 2020).

Not only goods are re-exported, services are too. Re-exports of services, amounting to €11.1 billion, are much smaller, consisting mainly of royalty and licence payments to special purpose entities (SPEs) registered in the Netherlands that manage intellectual property rights and transfer the payments they collect directly to foreign parent companies (Mellens, 2011; CBS, 2016).

6.2.1 Destination of goods and service imports, 2019

	Imports for domestic consumption			**Imports destined directly for foreign market (imports for re-export)**	**Total**
	imports for intermediate consumption		imports intended for direct domestic consumption		
	domestic consumption	exports			
	x billion euros				
Goods imports	51.8	99.8	64.9	209.2	425.7
Service imports	43.2	83.4	27.3	11.1	164.9
Total	95.0	183.2	92.2	220.3	590.7

Approximately 16% of imports go directly to Dutch consumers

The smallest import flow (the light orange arrow) in the infographic consists of imported goods and services intended directly for domestic consumption: for example, a bottle of wine produced and bottled in France is an example of an import intended directly for Dutch consumers. A piece of agricultural machinery imported from the United States by a Dutch agribusiness, however, also falls into the category of imports intended directly for domestic consumption (investments in fixed assets). These goods imports amounted to €64.9 billion in 2019. Imports of services intended directly for domestic consumption amounted to €27.3 billion. Spending by Dutch tourists abroad, for instance, falls into this category. Altogether, imports of goods and services that were intended directly for domestic consumption in 2019 made up approximately 16% of total imports.

2) The figures in this chapter have been obtained by combining the data from the National Accounts with the International Trade in Goods and International Trade in Services statistics, with figures from the National Accounts used as the benchmark. Because of differences in definitions and methods, these figures differ from those shown in previous chapters of this publication, or on StatLine, which are both based on the trade statistics. The figures referred to in this chapter on exports of services are based on the National Accounts. Chapter 4 of this publication also provides information on services exports, from the perspective of the source statistics. The two figures differ. On the one hand there are inconsistencies due to the way in which the National Accounts and the source statistics have to deal with Special Purpose Entities. On the other hand the National Accounts compare services trade data with other source statistics, and any inconsistencies between the sources can lead to adjustments to the source data in order to provide a consistent picture of the economy as a whole. The focus on continuity in the National Accounts also leads to discrepancies between the source statistics and the National Accounts. This is always reviewed in a revision year.

Two-thirds of intermediate imports further incorporated in exports

The majority of imported goods and services were intended for further processing by Dutch companies. These intermediate imports amounted to €278.2 billion, thus representing 47% of total Dutch imports. Intermediate imports can be subdivided into intermediate imports of goods and intermediate imports of services: these amounted to €151.6 billion and €126.6 billion respectively in 2019. Intermediate imports are incorporated in products or used to provide services either for the domestic market or for export. The Dutch economy processed almost two-thirds of these intermediate imports to serve foreign customers, as €99.8 billion worth of goods and €83.4 billion worth of services were incorporated in exports in 2019. Large quantities of computers, computer parts and telecommunications equipment imported from China, for instance, are incorporated in exports. Many financial services, intellectual property rights and licences from the United States are also used in Dutch exports (Aerts et al., 2020a). Section 6.5 considers in more detail these imports that are incorporated in exports.

Intermediate imports of goods and services incorporated in products or services for the domestic market by Dutch companies amounted to €95.0 billion, of which €51.8 was accounted for by goods and €43.2 billion by services. Coal from Russia is an example of an intermediate import destined partly for the domestic market, as Dutch energy companies can use it to generate power for Dutch households or industry. LED lamps from China used by Dutch construction companies building commercial premises are another example. Fees paid by Dutch media companies to American companies for broadcasting rights to films, series or television shows are an example of imported services incorporated in services for the domestic market (Aerts et al., 2020a).

6.3 Composition and origin of goods imports

Highest import value: crude oil and petroleum products

Crude oil and petroleum products were by far the largest category of imported goods, with an import value of €51.0 billion (Table 6.3.1). These imported products are used mainly in further processing for export, or leave the country in an unprocessed state as re-exports. The crude oil and petroleum products category is also the one with the highest import value with regard to further processing for domestic consumption. The second largest category is telecommunications equipment, with an import value of €27.1 billion. More than three-quarters (78%) of these imports are destined for re-export. Imports of electrical appliances, the third largest import category, amounted to €26.0 billion, and almost two-thirds of these imports (66%) were intended for re-export.

6.3.1 Destination of goods imports by goods category, top 20, 2019

	Imports for domestic consumption				
	imports for intermediate consumption				
	domestic consumption	exports	imports intended for direct domestic consumption	**Imports destined directly for foreign market (imports for re-export)**	**Total**
Goods category (SITC-2)	**x billion euros**				
Total (goods)	51.8	99.8	64.9	209.2	425.7
Crude oil and petroleum products	4.8	24.9	0.9	20.5	51.0
Telecommunication and sound recording apparatus	0.9	3.2	2.0	21.0	27.1
Electrical appliances, n.e.s.	3.2	3.5	2.1	17.2	26.0
Road vehicles	1.5	4.1	13.6	4.5	23.6
Computers and office machines	1.1	1.3	3.8	16.6	22.8
Miscellaneous manufactured articles, n.e.s.	2.4	2.1	2.8	12.0	19.2
Miscellaneous machinery, n.e.s.	1.5	3.1	3.1	7.7	15.3
Professional and scientific instruments, n.e.s.	0.5	1.0	1.3	11.4	14.2
Articles of apparel & clothing accessories	0.6	0.2	3.1	9.1	13.0
Medicinal and pharmaceutical products	2.7	1.0	2.9	6.0	12.6
Vegetables and fruits	1.1	1.1	2.4	7.9	12.5
Organic chemicals	0.6	6.9	0.3	4.3	12.1
Specialised machinery	1.2	2.6	2.6	4.9	11.3
Manufactures of metal, n.e.s.	2.9	2.6	1.0	3.5	10.0
Gas, natural and manufactured	2.1	2.8	1.6	2.4	8.9
Iron and steel	1.7	2.9	0.1	3.4	8.1
Chemical materials and products, n.e.s.	0.7	1.7	0.2	5.4	8.0
Generators and motors	0.7	1.1	0.9	4.3	6.9
Coffee, tea, cocoa, spices, and manufactures thereof	0.6	2.5	0.7	2.2	6.0
Plastics in primary forms	0.6	2.0	0.0	3.3	6.0

Imports for re-export: dominated by ICT products

Imports for re-export, amounting to €209.2 billion, were the largest category of imports into the Netherlands in 2019 (Table 6.3.1). Mellens et al. (2007) found that re-exports worldwide are dominated by ICT products – such as machinery, computers and electronics –, which are generally ideally suited for container transport. We find the same pattern in the composition of Dutch imports for re-export in 2019, of which these goods comprised more than a quarter. Imports of telecommunications equipment for re-export amounted to €21.0 billion, electrical appliances €17.2 billion and office and automatic data processing machines (computers) €16.6 billion. In addition to ICT products, Mellens et al. (2007) also emphasised that chemical products play a major role in re-exports. This is confirmed by the 2019 figures, in which imports of chemical products for re-export amounted to €25.8 billion, or one-eighth of total imports for re-export.[3)] The Rotterdam oil port plays a vital role in imports of crude oil and petroleum products for re-export. These products had a value of €20.5 billion in 2019. Imports of clothing and accessories for re-export, with a value of €9.1 billion, and fruit and vegetables, with a value of €7.9 billion, were also substantial.

3) Chemical products include SITC 2 categories 51, 52, 53, 54, 55, 56, 57, 58 and 59.

Petroleum products and chemicals: important intermediate imports

After imports for re-export, imports for intermediate consumption were the next largest category, amounting to more than €151.6 billion in 2019. These imports are incorporated in goods and services sold both in the Netherlands and elsewhere. Imports of crude oil and petroleum products for intermediate consumption amounted to €29.7 billion, of which imports worth €24.9 billion were incorporated in exported goods and services: for example, refined petroleum products manufactured from crude oil, or petroleum-based plastics and fuels used in exports of services by the transport sector. Imports of chemical products for intermediate use amounted to €22.1 billion. Chemical products are used mainly in export-induced production processes. Electrical appliances to the value of €6.7 billion were imported for intermediate consumption. Intermediate consumption includes electronic components and parts, which are included in the broad category of electrical appliances. Other goods categories for intermediate consumption with a substantial import value are road transport vehicles (including parts) with an import value of €5.6 billion, metal goods to the value of €5.5 billion, and iron and steel to the value of €4.6 billion. Sections 6.6–6.8 look in more detail at the countries of origin of goods incorporated in exports and the exports particularly reliant on processed imports, as is the case, for example, with exports of crude oil and chemical products.

Road transport vehicles: the largest category for direct domestic consumption

Imports intended directly for domestic consumption, amounting to €64.9 billion, were much smaller than the two types of imports mentioned above. Among these imports, the largest goods category was road transport vehicles (including parts), with an import value of €13.6 billion. These imports accounted for 57.6% of total imports of road transport vehicles, hence more than half of the road transport vehicles (for example private cars and motorcycles) were intended directly for Dutch consumers or entrepreneurs. This category also includes after market products such as replacement parts and accessories. Imports of computers and office machinery intended directly for domestic consumption amounted to €3.8 billion, and miscellaneous machinery €3.1 billion. Imports of typical consumer goods intended directly for domestic consumption, such as clothing and accessories, amounted to €3.1 billion, and medicines and pharmaceutical products €2.9 billion. In addition to road transport vehicles, more than half the imports of other transport equipment (including aircraft and ships and boats) and furniture and accessories are intended for direct domestic consumption.

Intermediate imports and Factory Europe

Table 6.3.2 shows what ultimately happens to imports from particular countries. Germany is the largest import partner for goods, accounting for €76.5 billion, followed by Belgium (€42.8 billion) and China (€42.3 billion). Looking at the European Union (EU) as a whole, we find that it accounts for €242.3 billion, thus the EU internal market accounted for 57% of total goods imports into the Netherlands.

Imports from EU countries intended for further processing by Dutch companies amounted to €90.1 billion, accounting for 59% of total intermediate goods imports. The fact that the Netherlands imports large quantities of goods for intermediate consumption from EU countries confirms the hypothesis of Baldwin and Lopez-Gonzalez (2015) that global production chains are not evenly spread throughout the world but concentrated in regional blocks. The Netherlands is part of the European regional block, known as 'Factory Europe', in which the European internal market probably plays a major role (Fritsch & Matthes, 2017).

6.3.2 Destination of goods imports by country (group) of origin, 2019

	Imports for domestic consumption				
	imports for intermediate consumption				
	domestic consumption	exports	imports intended for direct domestic consumption	**Imports destined directly for foreign market (imports for re-export)**	**Total**
Countries and country groups	**x billion euros**				
Germany	11.9	17.5	15.4	31.7	76.5
Belgium	6.5	11.5	9.1	15.8	42.8
France	2.1	3.6	2.9	8.2	16.8
United Kingdom	2.8	7.0	2.8	11.6	24.2
Other EU-28	10.5	16.7	12.6	42.3	82.0
United States	2.7	6.6	5.1	20.1	34.5
Other America	1.3	3.7	1.1	8.4	14.5
China	4.0	5.3	6.1	27.0	42.3
Other Asia	4.2	9.7	6.1	37.6	57.7
Rest of the world	5.8	18.2	3.7	6.5	34.4

Relatively large amounts of intermediate goods imports from the United Kingdom

The United Kingdom ranks fifth among the Netherlands' main import partners, with an import value of €24.2 billion. Of that €24.2 billion, slightly less than half (€11.6 billion) was intended for re-export. According to Franssen et al. (2020), these re-exports were destined mainly for the European hinterland: they show that the Netherlands is an important intermediary between the United Kingdom and the European hinterland. Compared with goods imports from other EU countries, Dutch companies import relatively large quantities of goods for further processing from the United Kingdom, as 41% of imports from the United Kingdom are intended for further processing, as compared to 37% in the case of other EU countries. It should be noted, however, that crude oil and petroleum products account for a substantial share of the goods imported from the United Kingdom (CBS, 2019).

Importance of imports from China and United States increased

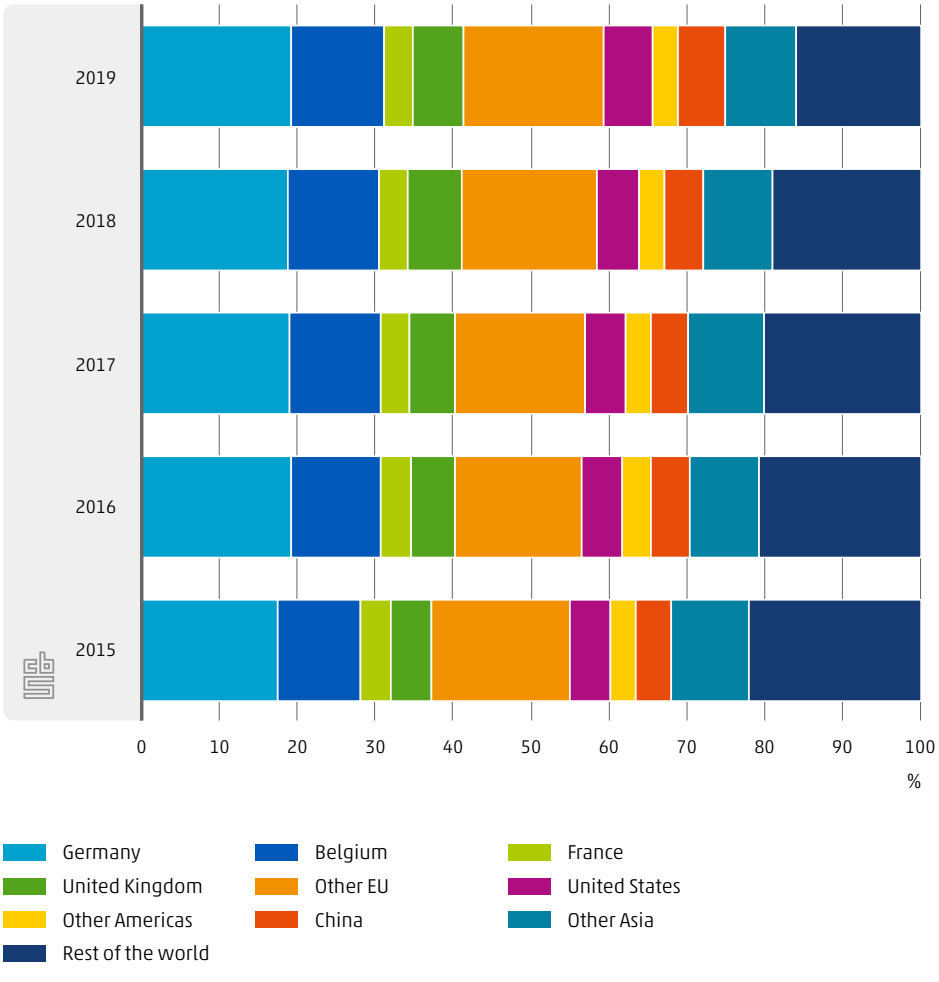
China and the United States are the main non-European import partners, with an import value of €42.3 billion and €34.5 billion respectively. The majority of imports from China, the United States and other overseas countries/country groups are destined for the foreign market, in particular for re-export to the European hinterland (Franssen et al., 2020), thus highlighting the Netherlands' position as a trading hub. Imports for intermediate consumption from both China and the United States amounted to €9.3 billion in 2019: those from China were used more, relatively speaking, to serve the Dutch market (€4.0 billion) than those from the United

States (€2.6 billion). Both countries' shares of total imports for further processing have increased in recent years (Figure 6.3.3). China's share increased from 5.1% in 2015 to 6.3% in 2019, whereas that of the United States went up from 5.8% to 6.3% (Aerts et al., 2020b).

Share of imports from the European Union also increased

As Figure 6.3.3 shows, in addition to those of China and the United States, the United Kingdom's share of total imports for intermediate consumption has gone up, from 5.2% in 2015 to 6.2% in 2019. This increase is due mainly to higher imports of crude oil and petroleum products (CBS, 2019). This growth in import value was due to price increases as well as due to higher volumes of imports. The EU countries' share of goods imports for intermediate consumption has also gone up, from 55.3% in 2015 to 59.5% in 2019 (the EU-28 is shown from the left vertical axis to the orange bar). Excluding the United Kingdom, the EU countries' share of goods imports for further processing rose from 50.0% to 53.0%.

6.3.3 Shares in total goods imports for intermediate consumption, by country (group)



6.4 Composition and origin of services imports

Other business services predominant in services imports

The largest category among imports of services was 'other business services' (Table 6.4.1). The Netherlands imported business services to the value of €51.3 billion in 2019, the vast majority of which (91.6%) were imported by companies. Almost two-thirds of this €47.0 billion worth of imports of business services intended for intermediate consumption was used to enable goods and services to be exported from the Netherlands. Of these business services incorporated in exports, professional and management consulting services accounted for €15.4 billion and technical and trade-related services for €14.9 billion.

Intellectual property: an important foreign services input to generate exports

Payments to other countries for the use of intellectual property were the second largest category, with an import value of €25.0 billion, and the majority of these (97%) were intended for intermediate consumption. More than three-quarters of these intermediate imports were intended for further processing in Dutch exports of goods and services. Payments for the use of intellectual property include for example software licences and fees for the use of patents.

6.4.1 Destination of service imports by service category, top 10, 2019

	Imports for domestic consumption			
	imports for intermediate consumption		imports intended for direct domestic consumption	**Total**
	domestic consumption	exports		
Service category	**x billion euros**			
Total (services)	43.2	83.4	27.3	164.9[1)]
Other business services	16.1	30.9	4.3	51.3
Royalties	5.9	18.3	0.8	25.0
Travel	2.1	1.7	15.3	19.2
Transport	4.6	12.5	0.9	18.1
ICT services	4.4	6.7	4.2	15.3
Financial services	4.4	2.8	0.3	7.5
Manufacturing services	0.8	3.3	0.1	4.2
Construction	2.0	0.4	0.5	2.8
Personal, cultural and recreational services	0.9	1.7	0.1	2.6
Maintenance and repair services	0.7	1.1	0.0	1.8

1) Includes imports for re-export of services.

The third largest category is travel, with an import value of €19.2 billion. Unlike the two previous service categories, 80.1% of imports of travel services are intended for private consumption. These include spending by Dutch tourists abroad. Other imports of travel services fall into the category of business travel.

Imports of transport services amounted to €18.1 billion in 2019, of which 94.7% were intended for intermediate consumption. Freight transport falls into this category: Dutch companies hiring foreign freight forwarders to transport goods, for example. The remaining 5.3% are imports of transport services for domestic consumption, including passenger transport.

The Netherlands imported telecommunications and computer services to the value of €15.3 billion in 2019, of which 72.8% were intended for intermediate consumption, and again the majority of which were incorporated in Dutch exports of goods and services, for example imported ICT services. The remaining 27.2% were intended for domestic consumption, for example the use of telecommunications networks by Dutch consumers using their mobile phones on holiday abroad.

The US, Germany and the UK: very important in Dutch imports of services

Table 6.4.2 shows how services imported from various countries/country groups work their way through the Netherlands. The United States is the largest import partner for services (€21.8 billion), followed by Germany (€19.9 billion) and the United Kingdom (€19.6 billion). The EU internal market, with €96.2 billion, accounted for 58% of total services imports. Imports from EU countries intended for further processing by Dutch companies amounted to €77.5 billion, accounting for 61% of total imports of services for intermediate consumption. Compared with imports of goods, China and other Asian countries had a modest share of intermediate imports of services.

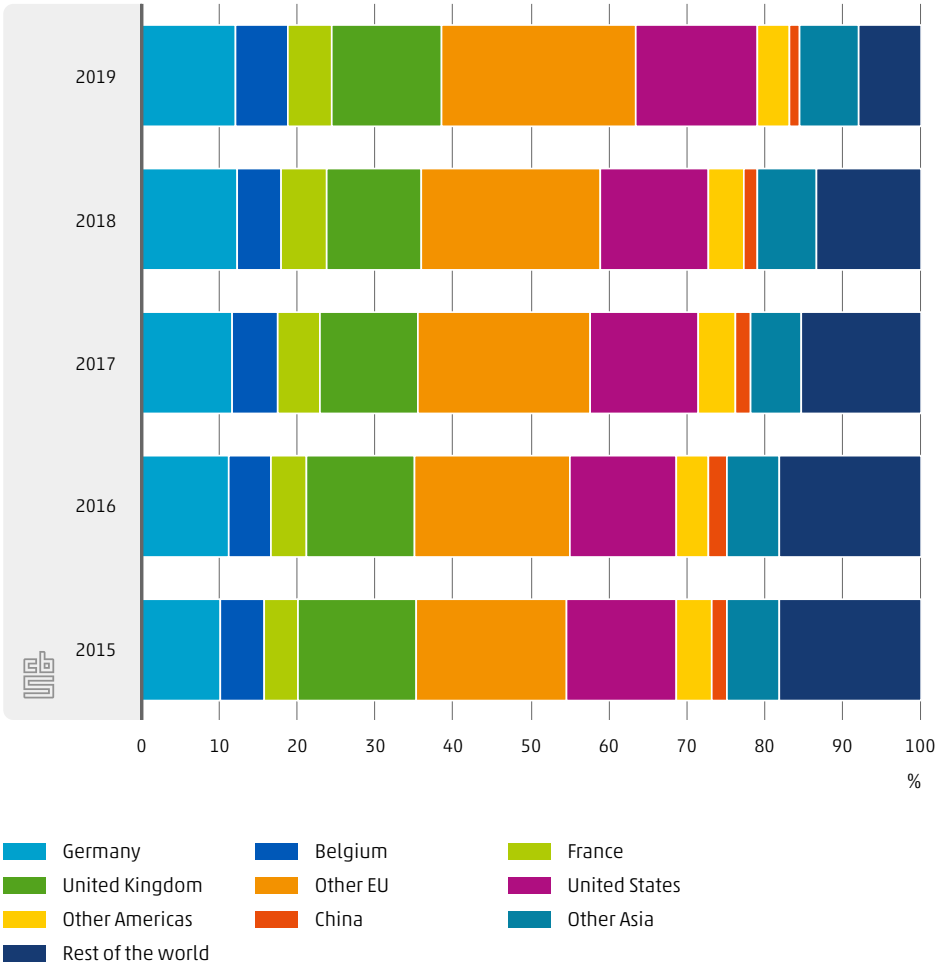
6.4.2 Destination of service imports by country (group) of origin, 2019

	Imports for domestic consumption			
	imports for intermediate consumption			
	domestic consumption	exports	imports intended for direct domestic consumption	**Total**
Countries and country groups	**x billion euros**			
Germany	5.1	9.8	5.0	19.9
Belgium	3.0	5.0	2.0	10.0
France	2.5	4.5	1.8	8.9
United Kingdom	6.0	11.2	2.4	19.6
Other EU-28	10.7	19.7	7.4	37.8
United States	6.5	12.6	2.7	21.8
Other America	1.7	3.4	0.8	6.0
China	0.5	1.0	0.4	1.8
Other Asia	3.3	5.9	2.4	11.5
Rest of the world	2.9	6.7	2.3	12.0

As Figure 6.4.3 shows, the EU countries' share of total intermediate imports of services has increased from 54.7% in 2015 to 61.3% in 2019 (the EU-28 is shown from the left vertical axis to the orange bar). This growth is broad-based. Imports of services from Germany, Belgium, France, the United Kingdom and other EU countries (in particular Ireland and Poland) contributed to this growth. This is in line with Lemmers (2015) and Bohn et al. (2018), who observed that the proportion of trade in the services sector has grown sharply since 2000 compared with trade in the manufacturing sector. Excluding the United Kingdom, the EU

countries' share rose from 39.5% in 2015 to 47.4% in 2019. Although intermediary imports of services from the United Kingdom did go up, that country's share fell from 15.2% to 13.6%.

6.4.3 Shares in total service imports for intermediate consumption, by country (group)



6.5 The importance of imports to Dutch exports

As the previous sections have shown, less than a quarter (23.4%) of goods imports and slightly more than half (50.5%) of services imports are used in the production of goods and/or services for export. Conversely, Dutch exports of goods and services are generally highly dependent on foreign inputs. Chapter 2 of this publication, for example, shows that in 2019 each euro of domestically exported goods required approximately 46 cents worth of imported goods and services. This 'import content' was 38% in the case of Dutch exports of services. Sections 6.5–6.8 look in more detail at the origin and composition of the imports that are incorporated in Dutch exports. We will see, for instance, which imports from which countries are incorporated in exports to certain major trading partners. We also examine in detail which foreign inputs are ultimately vital to enable particular export products to be made, or particular Dutch services to be provided abroad.

In general, exports of services are more reliant on the import of services than exports of goods (Table 6.5.1). More than three-quarters (77%) of the embodied imports are services. The same pattern can be seen in exports of goods:[4] the majority (76%) of total imports required for these exports are goods.

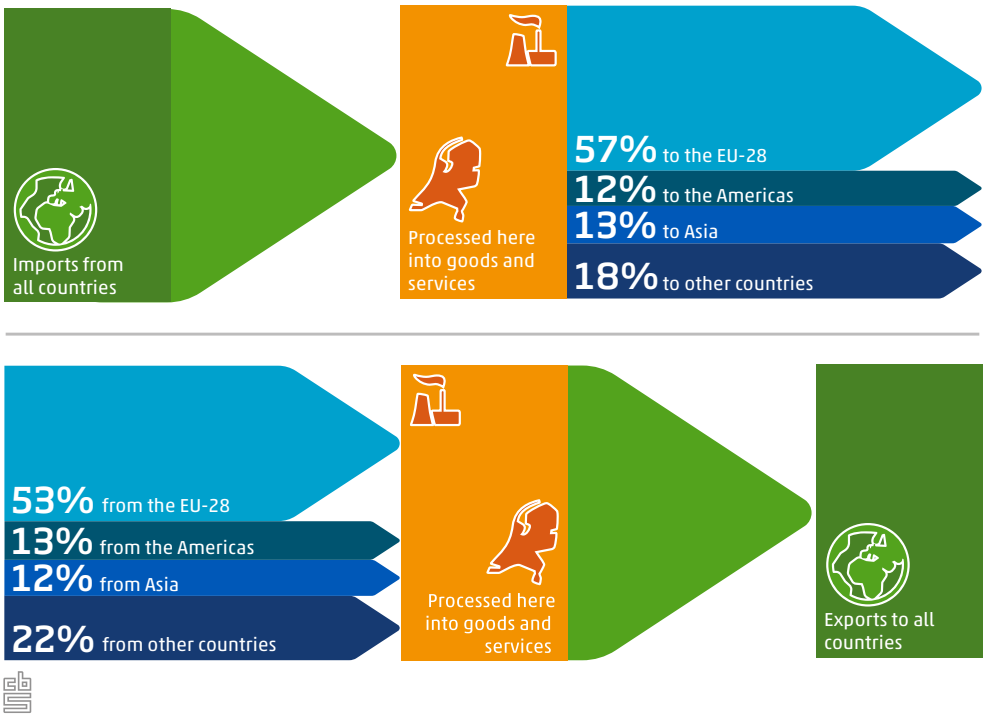
6.5.1 Composition of exports in 2019 (with shares of required imports)

	Goods exports		Service exports	
	x million euros	%	x million euros	%
Total exports	232,472		172,634	
Goods imports	82,101	76	14,437	23
Service imports	25,663	24	48,051	77

6.6 International interrelatedness via Dutch imports and exports

Nowadays more and more goods and services are produced in long, geographically fragmented value chains. Table 6.6.1 illustrates the interrelatedness of the global economy via the Dutch chain. It shows to what extent imports of goods and services from one country (or region) are incorporated in exports to another country in 2019. In 2019, for example, goods and services to the value of €24.5 billion that were ultimately destined for other countries were imported from Germany. Of these imports from Germany, 16% – €3.9 billion – were incorporated in exports to Asia. At the same time, Dutch companies used €19.7 billion worth of imports to enable them to export goods or services to the Americas. Of these imports, 56% came from the EU (€10.9 billion), 16% from the Americas itself (€3.1 billion), and 13% from Asia (€2.6 billion).

4) This section relates solely to imports used by companies for exports of domestic goods and services; it does not consider re-exports.



European production chains: important for the Netherlands

The figures show once more that the Netherlands plays an important role in intraregional trade within the internal market, as previously highlighted by Baldwin & Lopez-Gonzalez (2013). A large share of the imports that are incorporated in exports (€57.1 billion, accounting for 34% of total imports for intermediate consumption) came from the EU-28 and went to another (or the same) EU-28 country. This should come as no surprise, as a large amount of trade still takes place within Europe. Imports from the EU-28 intended for Dutch exports to all countries (both inside and outside the EU) are very important, amounting to 53% (€90.3 billion). Of the four EU countries examined (in 2019), the Netherlands required imports mainly from Germany (€24.5 billion), followed by the United Kingdom (€15.8 billion), Belgium (€15.1 billion) and France (€7.2 billion). Altogether, the imports from the other 24 EU countries used to process exports amounted to €27.8 billion. Countries geographically close to the Netherlands – neighbouring countries in particular – are thus the main suppliers of the intermediate inputs needed for Dutch exports. The figures also suggest, however, that imports from the United Kingdom are also important (accounting for almost 10% of total imports incorporated in Dutch exports), and that any trade barriers due to Brexit may be problematic for Dutch exports in general.

€24.5 billion of
imports from Germany incorporated in Dutch exports by companies

Imports from the United States: more important for Dutch producers than imports from China

Outside Europe, the United States and China are important players for imports to the Netherlands processed by Dutch companies (Aerts et al., 2020a). Despite the growing influence of China in recent years (Creemers et al., 2020; Draper, 2020), Dutch companies still require imports from the United States worth more than three times the value (€16.5 billion) of imports from China (€5.2 billion) in order to produce their exports. This is partly explained by the fact that the United States is not only an important supplier of goods but also the main supplier of services (Notten & Voncken, 2019; Aerts et al., 2020a). Imports from China, on the other hand, are almost entirely goods. Compared with other trading partners listed in Table 6.6.1, imports from China would seem to be less important for Dutch exports. This only applies at an overall level, however: imports of particular products from China, especially computers and parts (for example chips), are vital for Dutch exports. These high-tech imports from China are incorporated mainly in exports of various services, road vehicles and specialist machinery (Aerts et al. 2020a).

6.6.1 Imports as input for exports, billion euros, 2019

Origin of imports	Destination of exports: EU-28	Americas	Asia	Elsewhere[1)]	Total
EU-28					
Belgium	9.8 (65%) (10%)	1.6 (11%) (8%)	2.1 (14%) (9%)	1.5 (10%) (5%)	15.1 (100%)
Germany	15.4 (63%) (16%)	2.9 (12%) (15%)	3.9 (16%) (17%)	2.4 (10%) (8%)	24.5 (100%)
France	4.7 (65%) (5%)	0.8 (11%) (4%)	1.0 (14%) (5%)	0.7 (10%) (2%)	7.2 (100%)
UK	9.6 (61%) (10%)	2.2 (14%) (11%)	2.2 (14%) (10%)	1.8 (11%) (6%)	15.8 (100%)
Other EU-28	17.7 (64%) (18%)	3.4 (12%) (18%)	4.0 (15%) (18%)	2.6 (9%) (8%)	27.8 (100%)
Americas					
US	9.9 (60%) (10%)	2.4 (14%) (12%)	2.5 (15%) (11%)	1.7 (11%) (6%)	16.5 (100%)
Other America	4.2 (65%) (4%)	0.8 (12%) (4%)	0.8 (13%) (4%)	0.7 (10%) (2%)	6.5 (100%)
Asia					
China	3.1 (60%) (3%)	0.7 (13%) (3%)	0.9 (17%) (4%)	0.5 (10%) (2%)	5.2 (100%)
Other Asia	8.8 (60%) (9%)	1.9 (13%) (10%)	2.2 (15%) (10%)	1.7 (12%) (6%)	14.7 (100%)
Elsewhere[1)]	14.0 (38%) (14%)	3.0 (8%) (15%)	2.9 (8%) (13%)	17.1 (46%) (55%)	37.0 (100%)
Total	97.2 (100%)	19.7 (100%)	22.6 (100%)	30.8 (100%)	170.3 (100%)

[1)] The group 'Elsewhere' comprises all other countries worldwide including a group 'unknown'. While linking data from the national accounts with statistics on international trade in goods and international trade in services, part of the import and/or export value could not be linked to a specific country.

Note: In this chapter, the United Kingdom is consistently referred to as part of the EU-28 because, in 2019, the UK was still officially a member. The figure reflects both goods and services that are incorporated into exports.

6.7 Unravelling export-related imports in more detail

Goods imports incorporated in exports

Figure 6.7.1 shows the composition of imported goods[5] used in the production of Dutch exports in 2019. It distinguishes between chemical products; mineral fuels and raw materials; industrial products; machinery and transport equipment; and food and beverages.[6] Imports of raw materials and mineral fuels in the amount of €32.5 billion were required to produce exports in 2019. As we saw in section 6.3, these were mainly imports of crude oil and petroleum products. Dutch companies additionally used (for example imported) between €12.6 and €16.3 billion worth of each of the other product categories.

The EU as a whole is again the Netherlands' main import partner. The 28 countries comprising the EU are shown in Figure 6.7.1 from the left vertical axis to the orange bar. The EU countries are responsible for just over half (51%) of the imported goods required for Dutch exports. This dependence is slightly less than the 53% share if we consider both goods and services (Table 6.6.1). The EU's share is higher than 50% in every product category except raw materials and mineral fuels (70% of which come from countries outside the EU).

A clear regional specialisation in imports from the EU-28

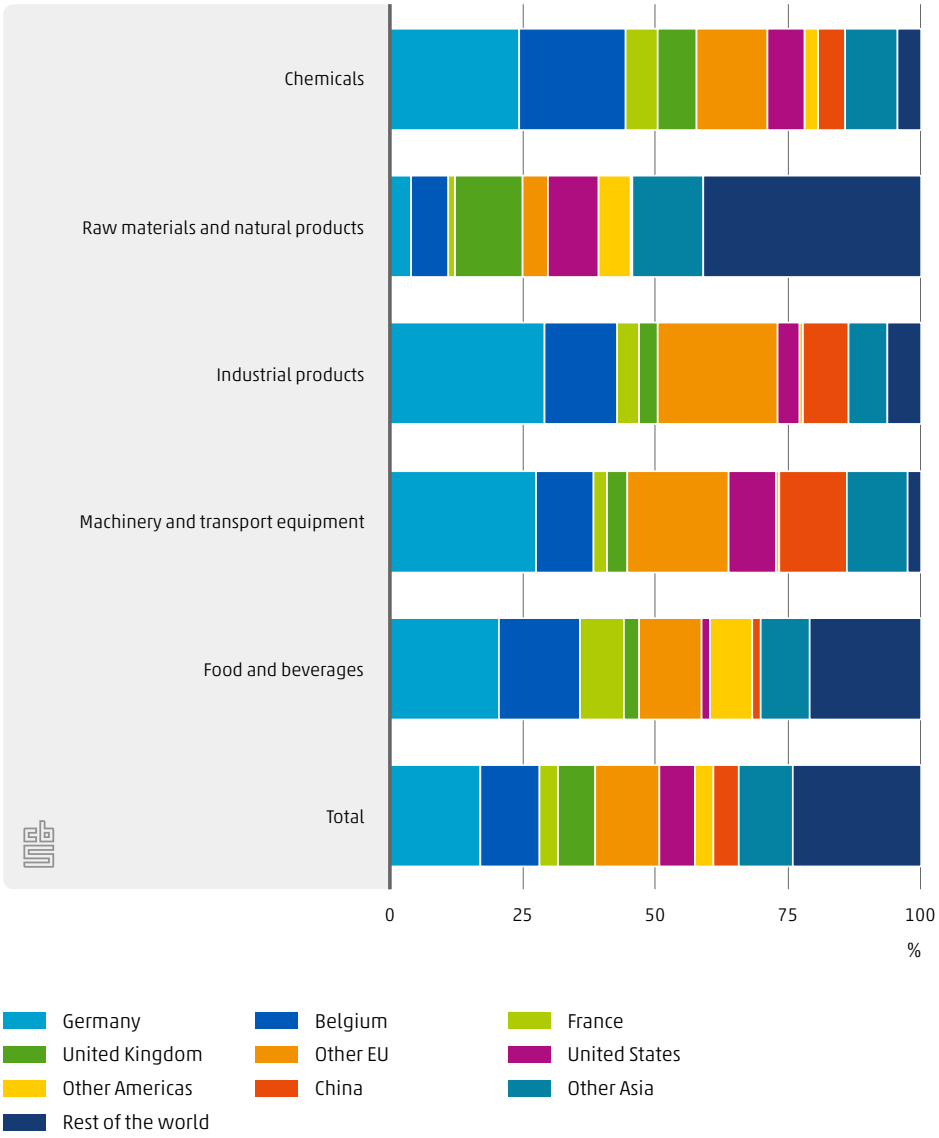
The high degree of relative dependence on imports from Europe is especially true in the case of industrial products (73%) and chemical products (71%). Notable for these two categories: the other EU-28 countries were much more important in terms of imports of industrial products (and machinery and transport equipment) than chemical products (and other categories). This may be related to the outsourcing of production to Central and Eastern Europe (Fritsch & Matthes, 2017). Belgium is also an import country of origin for imports of chemical products: 20% of these came from Belgium, almost double the Belgian share of imports of all goods (12%). Europe's limited share in Dutch imports of raw materials and mineral fuels is explained by the large amount of imports from other countries. According to Aerts et al. (2020a), these imports are attributable mainly to Russia and Norway. France – the second largest economy in the EU[7] following the departure of the United Kingdom – is not predominant in any import category compared with the other selected EU countries. The main category of imports from France was food and beverages (with an 8% share).

Outside the EU-28, China and the United States play a major role in Dutch imports of almost all categories except food and beverages: 11% of the total imports used for export came from those two countries. China was particularly important as regards imports of machinery and transport equipment (China's share was 13%) and to a lesser extent industrial products (9%). The United States was also important as regards imports of machinery and transport equipment (9%) and raw materials and mineral fuels (9%). Almost a quarter (24%) of imports of machinery and transport equipment came from Asia (including China). The main categories

5) This section relates solely to imports used by companies for exports of domestic goods and services; it does not consider re-exports.
6) The various goods categories are based on the one-digit SITC classification.
7) France's gross domestic product at market prices was €2,426 billion in 2019; the United Kingdom's was €2,527 (EC, 2021).

in the case of the Americas (for example the United States and Other America) were raw materials and mineral fuels (15%). A large share of imported food and beverages used in production for export also came from Other America (8%).

6.7.1 Composition of imports used for exports, by origin and goods category, 2019



Crude oil and petroleum products: the main imports required for exports

Table 6.7.2 shows the origin of the top 20 categories of imported goods incorporated in Dutch exports of goods and services. This table, which breaks down the origin of the main imported products in more detail, essentially yields the same insights as Figure 6.7.1. By far the main category of imported goods incorporated in Dutch exports was crude oil and petroleum products, with a value of €24.6 billion. More than a quarter (25.5%) of the total import value of goods for further processing consisted of crude oil and petroleum products. Almost half of those imports came from the 'Other countries group' (Rest of the World), which

mainly comprises Russia, (€5.4 billion), Norway (€2.4 billion), Iraq (€1.3 billion), Nigeria (€1.2 billion), Kuwait (€936 million) and Saudi Arabia (€664 million). The imports of crude oil and petroleum products intended for export were incorporated mainly in exports of the same category, crude oil and petroleum products (€17.5 billion), accounting for 71% of imports incorporated in exports. Large amounts of crude oil and petroleum products were also incorporated in exports of organic chemical products (€1.3 billion), plastics in primary forms (€1.2 billion), and transport services (€1.1 billion). An example of this is crude oil imported through a Dutch port, processed into end-products in oil refineries (for example petrol, kerosene, diesel and LPG) or into semi-finished products (for example as a raw material for plastics that can be made into toys and packaging materials) for distribution to other countries. The imported crude oil and petroleum products are incorporated in exports, the majority of which are intended for the EU (56%), with 15% going to America, 12% to Asia, and 17% to the Rest of the World.

Imports incorporated in exports often end up in the EU

The second largest category of imports was organic chemical products, with an import value of just under €7 billion. A quarter of these imports were used in exports of the same category (€1.9 billion), 18% in plastics in primary forms (€1.2 billion), 13% in crude oil and petroleum products (€876 million), and 9% in industrial services (€620 million). Two-thirds (67%) of the required imports that are incorporated in exports are destined for the EU and 14% for Asia. In third and fourth places respectively are road transport vehicles (€4 billion) and miscellaneous machinery (€3 billion). Of the imports of road transport vehicles required to produce exports, 87% ended up in the same export category, the remainder mainly in business and industrial services, generators and motors, and specialist engines. Electrical appliances (€3 billion) round out the top 5. As Table 6.7.2 shows, a wide variety of imported goods categories are required to produce exports, ranging from crude oil and petroleum products (for example to produce chemical products) to cereal products (for example to produce cattle feed). Almost all imported products that are incorporated in exports are destined for the EU, the only exceptions being machinery (specialist machinery, metalworking machinery and miscellaneous machinery) and miscellaneous instruments and devices. A lot of Dutch-manufactured machinery destined for export ends up in Asia (30%) and the Americas (16%), and the same pattern is found for instruments and devices.

As regards imports required for Dutch exports, the EU was the main supplier, relatively speaking, of dairy products and eggs (99% of the import value of this category), paper, cardboard and articles (90%), plastics in primary forms (85%), iron and steel (83%), road transport vehicles (81%), and meat and meat products (74%). The Americas were of more than average importance as a region of origin for imports of oil seeds and fruits (52%), vegetable oils and fats (17%), and specialist machinery (15%). Lastly, Asia (including China) was important as regards imports of devices for telecommunications and for recording and reproducing sound (61%), vegetable oils and fats (38%), and electrical appliances (31%).

6.7.2 Origin of the import of goods used for Dutch exports, by goods category and country of origin, top 20, 2019

	EU-28	Americas	Asia	Rest of the world	Total
Goods category (SITC-2)	**x million euros**				
Total	49,194	9,882	14,393	23,069	96,538
Crude oil and petroleum products	6,655	3,345	4,202	10,387	24,589
Organic chemicals	4,436	798	1,328	307	6,870
Road vehicles	3,198	399	304	50	3,951
Miscellaneous machinery, n.e.s.	2,119	184	510	127	2,940
Electrical appliances, n.e.s.	1,677	229	905	76	2,886
Iron and steel	2,311	45	171	265	2,792
Gas, natural and manufactured	699	87	2	1,819	2,608
Manufactures of metal, n.e.s.	1,826	99	510	59	2,495
Specialised machinery	1,568	378	470	62	2,478
Coffee, tea, cocoa, spices, and manufactures thereof	635	224	112	1,434	2,405
Plastics in primary forms	1,670	111	163	11	1,955
Paper and paper manufactures	1,746	62	104	30	1,941
Cereals and cereal preparations	1,376	47	33	437	1,892
Miscellaneous manufactured articles, n.e.s.	1,300	120	395	57	1,872
Fixed vegetable oils and fats, crude, refined or fractionated	511	303	682	316	1,812
Telecommunication and sound recording apparatus	499	150	1,037	12	1,697
Chemical materials and products, n.e.s.	1,134	201	205	106	1,647
Oil seeds and oleaginous fruits	438	791	62	232	1,523
Dairy products and birds' eggs	1,143	4	0	11	1,158
Meat and meat preparations	856	136	91	75	1,158

Services imports incorporated in exports

Figure 6.7.3 shows the top 6 imported services necessary to generate Dutch exports in 2019. The service category 'Other business services' came first, with an import value of €25.2 billion, followed by imports of royalties, with a value of €14.2 billion. Imports in the transport services category amounted to €10.2 billion, and imports of ICT services €5.5 billion. These four categories accounted for 75% of total imports of services required to produce exports in 2019. More than 56% of imported services came from the EU in 2019, emphasising the above-average importance of the EU in Dutch imports of services. The category with the largest EU share was industrial services, with 92%, although imports in this category were modest (€2.7 billion, for example less than 5% of total imports of services for export). The smallest EU share is of payments for intellectual property (40%). This is due to the major role played by the United States in imports of royalties, for example where a Dutch company purchases a licence to allow it to use a software product developed in the United States. Other examples are payments of royalties for movies and music, and franchise fees in the commercial sector and accommodation and food services sector.

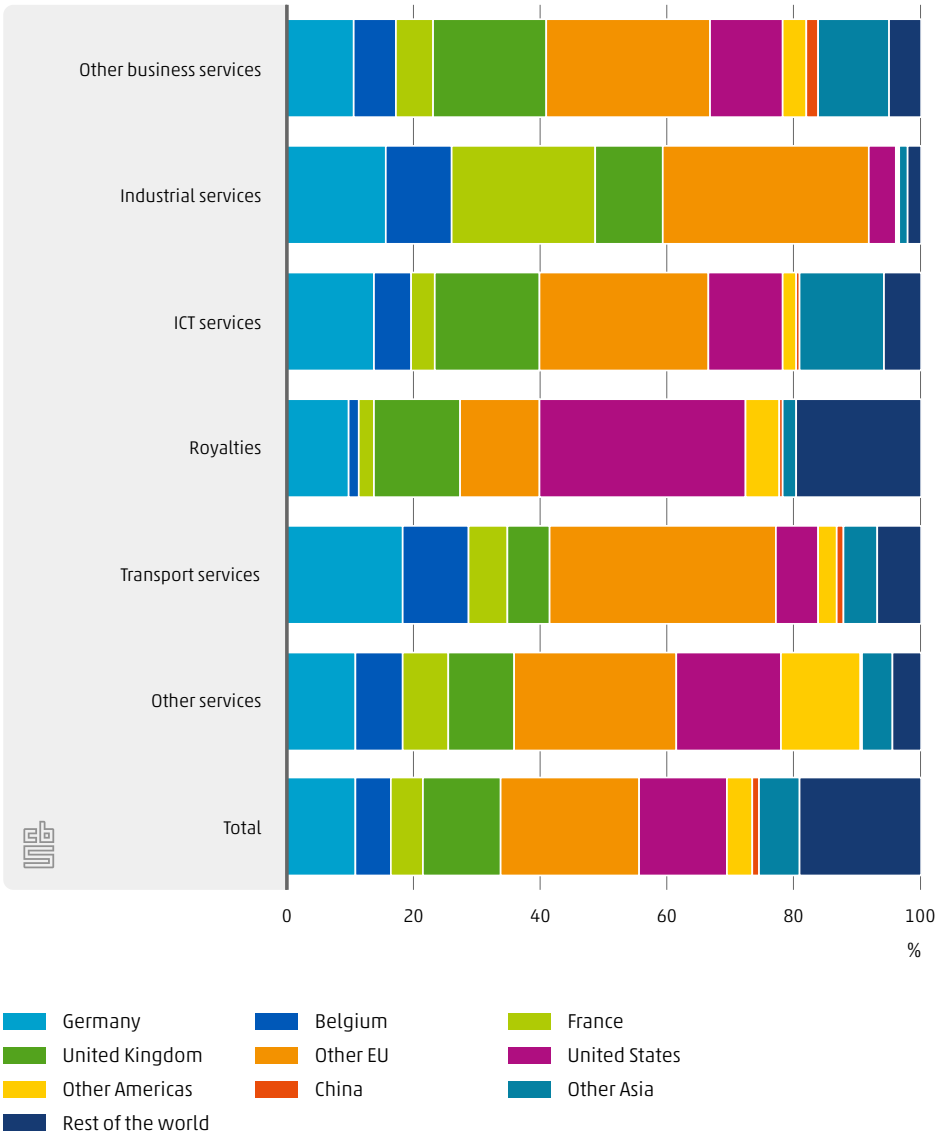
Many imports of services from the United Kingdom incorporated in exports

Interestingly, dependence on the United Kingdom for imports of services was above average in the EU-28, due largely to imports of business services. That category, accounting for 39% (€25.2 billion), was by far the largest service category in total imports of services incorporated in exports. The United Kingdom was responsible for 18% of imports of business services, but it also had a substantial share of all the other service categories: it had a 12% share of total imports of services used for exports. Relatively speaking, Dutch dependence on the United Kingdom for imports of services was almost twice as high as Dutch dependence on imports of goods (7%). It is not inconceivable that Brexit will have consequences for Dutch companies that import services particularly from the United Kingdom, as the new trade regime for services appears to introduce barriers (Kirkegaard, 2021). The United Kingdom's share of Dutch exports of processed goods imports (7%) was significantly lower than those of Germany (17%) and Belgium (11%). Conversely, the United Kingdom's share of Dutch imports of services (12%) was higher than those of Germany (11%) and Belgium (6%). Germany and Belgium were also less important than the other EU countries in terms of imports of services. The remaining EU-28 had a 12% share of imports of goods intended for export, and its share of services was almost twice as large.

Imported services often used in exports to the EU-28

In addition to the EU-28, we can see that the United States is very important as regards imports of services, especially royalties, as explained in Aerts et al. (2020a). Looking at the export markets, we find that most imports of services were used in exports of goods and services destined for the EU. The share that goes to the EU – depending on the service category – was between 59% (royalties) and 68% (industrial services). Above-average shares of processed royalties and personal services went to the Americas (approximately 16%), and the share of financial services incorporated in exports destined for Asia was also above average (18%).

6.7.3 Composition of imports used for exports, by origin and service category, 2019



6.8 Which export products are most dependent on which imports?

As we have seen in previous sections, the majority of intermediate imports of goods and services are ultimately incorporated in exports. This section examines this link between Dutch imports and exports from the point of view of exports. In other words, we shall examine which exported goods and services are highly dependent on imports, and precisely which types of goods and services from which countries are required.

No exports without imports

Table 6.8.1 shows the top 5 categories of goods that were most dependent on imports per euro exported in 2019.[8] Overall, each euro of domestic goods exported included an average of 46 cents of previously imported goods and services. The crude oil and petroleum products category was most highly dependent on imports, with foreign inputs making up more than 84% of exports. Note the exceptional role of petroleum, which also has the highest export value of all categories of goods. The share of imports in Dutch exports would be much lower (and the earnings from exports of domestic goods correspondingly higher) if this category were not included in total exports (for example 41% instead of 46% for the Dutch economy as a whole excluding crude oil and petroleum products). Of the €20 billion of imported products required, 86% (€17.5 billion) consisted of crude oil and petroleum products. Other imported products required for the export of crude oil and petroleum products were organic chemical products, accounting for 4% of the imports used. This share seems to be fairly small in percentage terms, but it nevertheless amounted to some €876 million. Natural and industrial gas accounted for a 2% share (€369 million) of processed imports.

In second place in Table 6.8.1 is the organic chemical products export category. Exports of organic chemical products required €4.5 billion worth of imports. Of this €4.5 billion of processed imports, 41% (€1.9 billion) were in the same product category (chemical products). Approximately 42% of these imports came from Belgium and Germany, 19% from Asia, and 10% from the United Kingdom. Of the imports required to enable the export of chemical products, 28% consisted of crude oil and petroleum products (€1.3 billion) and 8% of other business services (€351 million). Almost two-thirds (63%) of the business services required were imported from Europe.

Third in the list of export categories with the highest relative dependence on imports is cattle feed. Some €2 billion worth of imports was required to enable the export of €3.4 billion worth of cattle feed, amounting to 59% of the total export value of cattle feed. Of the €2 billion worth of imports, 22% (€444 million) consisted of cereals and cereal products, almost half of which were imported from France (31%) and Germany (18%). Approximately 20% (€397 million) consisted of vegetable oils and fats, half of which came from Other Asia and the Rest of the World. Soya accounted for approximately 15% of imports (€299 million).

Exports of plastics in primary forms mainly require imports of organic chemical products, which represented some 30% of the required imports (€1.2 billion), and crude oil and petroleum products, with a 28% share of the required imports (just under €1.2 billion). Almost two-thirds (65%) of the imported organic chemical products required came from Europe (Belgium and Germany in particular). Many business services and industrial services, mainly from Europe, were needed for exports of plastics in primary forms.

Fifth on the list is the coffee, tea and cocoa category. Exports of this category of goods again required a large quantity of the same category of imports (€1.7 billion, a 57% share of total imports for exports of coffee, tea and cocoa), three-quarters of which came from outside Europe. Other important imported products in the coffee, tea and cocoa export category were business and industrial services, sugar and honey, and paper and cardboard.

8) Based on a minimum of €3 billion of exports.

If we were to expand the list in Table 6.8.1, the result would be a long list containing a wide range of Dutch export products that are highly dependent on foreign inputs (not shown). For instance, the import content of exported cosmetics and cleaning products, road transport vehicles, other chemical products, professional instruments and devices, and electrical appliances ranges between 46% and 51%.

6.8.1 Top 5 export products (minimum value €3 bn) most dependent on imports per euro of exports, 2019

	Required imports (1)	Export value (2)	Import content of exports (1)/(2)*100
Goods category (SITC-2)	**x million euros**	**x million euros**	**%**
Total (goods)	107,764	232,472	46.4
Crude oil and petroleum products	20,305	24,136	84.1
Organic chemicals	4,547	7,139	63.7
Feedstuff for animals (excluding unmilled cereals)	2,017	3,422	58.9
Plastics in primary forms	4,118	7,989	51.5
Coffee, tea, cocoa, spices, and manufactures thereof	2,934	5,725	51.3

Services: less dependent on imports

The pattern is slightly different as regards exports of services, as Table 6.8.2 shows. Exports of services are on average less dependent on imports than exports of goods. Approximately 36 cents for every euro of exported services consisted of intermediate imports. This finding is in line with a study by De Backer & Miroudot (2014), which shows that services supply chains are generally shorter than goods supply chains. Only the 'industrial services' category to a large extent (50%) comprised imports of goods and services. Exports in other service categories – payments received for use of intellectual property (42%), other business services (35%), and ICT services (34%) – each comprised at least a third of previously imported goods and services. Transport services, the second largest category of exports of services (amounting to €33.4 billion), had an import content of 30%. Other service categories, such as financial services, travel, insurance services, and government services, had an import content of less than 20%.

The categories shown in Table 6.8.2 are characterised by high consumption of imported services, partly or largely in the same category. For example, slightly over half (51%) of the imports required to export royalties also consisted of royalties (plus 17% of other business services and 14% of ICT services). In the case of other business services, 56% of the imports required consisted of the same category of business services (and 11% of royalties).
The imports required for exports of ICT services were slightly more varied, with other business services (30%), royalties (28%) and ICT services (16%) being the most important. Dependence on imports was highest for industrial services, relatively speaking. Unlike the three aforementioned service categories, exports of industrial services were far less dependent on imports of services than the other service categories. The required imports of industrial services consisted mainly of crude oil and petroleum products (19%), organic chemical products (19%), and a variety of other goods. The share of the three largest service categories in exports of industrial services (other business services, royalties and industrial services) altogether amounted to only 15%. This may be due to the trend whereby the Dutch

processing industry is increasingly exporting industrial services as bundles integrated with goods. This phenomenon is known as 'servitisation' (Neely, 2008).

6.8.2 Exports of services (minimum value €3 bn) most dependent on imports per euro of exports, 2019

	Required imports (1)	Export value (2)	Import content of exports (1)/(2)*100
Service category	**x million euros**	**x million euros**	**%**
Total (services)	62,488	172,634	36.2
Manufacturing	3,340	6,660	50.1
Royalties	9,856	23,195	42.5
Other business services	17,214	49,227	35.0
ICT services	8,506	24,723	34.4
Transport	10,197	33,434	30.5

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7 Foreign direct investment and multinationals

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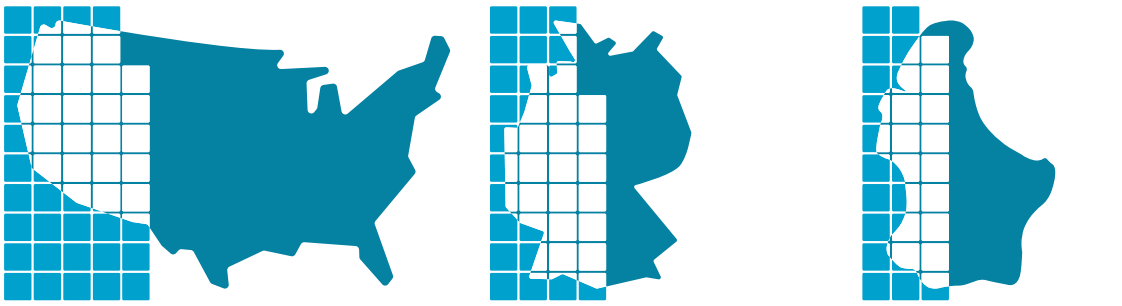
Inward and outward FDI (excluding SPEs and holdings), position in 2020

Top investors in the Netherlands



€241 bn
United States

€186 bn
Germany

€143 bn
Luxembourg

€130 bn
United Kingdom

€102 bn
Switzerland

= 5 bn

Top investment countries

€216 bn
United Kingdom

€215 bn
United States

€190 bn
Germany

€177 bn
Switzerland

€122 bn
Brazil

= 5 bn

Source: DNB.

Foreign direct investment is a key element of globalisation, as international business is more than just international trade. The Netherlands attracts foreign investment, which can lead to economic growth, innovation and more jobs. Multinationals are important actors behind this foreign direct investment, and it is therefore worthwhile to study them, which we do in this chapter. It begins by examining inward and outward direct investment in and by the Netherlands. It then zooms in on the multinationals, distinguishing between those under foreign and Dutch control.

7.1 Key findings

In addition to international trade flows, foreign direct investment (FDI) is an important measure of the interdependence of the Dutch economy with those of other countries. By investing in foreign subsidiaries, enterprises can benefit from both production scale-up and locally available production factors. However, enterprises may also be active abroad for tax or legal reasons. Large enterprises try to reduce their tax payments by channelling their investment activities through countries with a favourable tax environment. The Netherlands plays an important role in this, as shown by the establishment of a large number of Special Purpose Entities (SPEs) and holding companies. As a result, a large proportion of the investment that enters the Netherlands on paper leaves the Netherlands again without adding any substantial value to the Dutch economy. This is the case for both Special Purpose Entities and holding companies[1)], as these have few employees, many of them have no physical presence in the Netherlands, and their (possible) trading activity mainly consists of intra-concern financial activities. They are therefore shown separately in the foreign direct investment figures. Partly as a result of the presence of channelling entities of this kind, the Netherlands ranks firmly among the top 5 countries in the world with the most foreign direct investment. Nevertheless, even without SPEs and holding companies the Netherlands remained the 2nd largest player worldwide, after the United States and China, in terms of outward FDI in 2020, with €1,851 billion. As regards inward FDI, the Netherlands ranks 4th, after the United States, China and the United Kingdom, with €1,391 billion (DNB and OECD, 2021).[2)]

Looking at the Dutch business economy (almost 1.3 million companies) from an investment perspective, we find that one in fifty companies were multinationals in 2018.[3)] The Dutch business economy included approximately 26,500 multinationals in 2018, of which 53% were under foreign control and 47% under Dutch control. Multinationals, both Dutch-owned and foreign-owned, provided work for over 2.4 million people in the Netherlands in 2018, representing an increase of 92,000 full-time jobs compared to 2017. They thus account for 41% of total employment in the Dutch business economy. Of all multinationals, 35% operate in the wholesale and retail trade: employing 694,000 people, they provide over 44% of employment in that sector. Multinationals accounted for 85% of Dutch exports of goods and 90% of exports of services in 2019, in line with the figures for 2018.

1) Entities with few employees that serve a financial purpose, with both Dutch and foreign subsidiaries. Some of these entities act as global headquarters, but their activities are primarily financial.
2) Only SPEs have been omitted from the international figures, whereas holding companies have also been omitted from the Dutch figures. This will make little or even no difference to the ranking, as the number of holding companies in other countries is likely to be smaller.
3) A multinational is defined as a company that is under foreign control or that has subsidiaries abroad. Subsidiaries are defined as companies in other countries in which a company based in the Netherlands, under Dutch control, has a majority stake. See Glossary.

One in five foreign multinationals in the Netherlands in 2018 were US-controlled (over 3,000 companies). The United States was therefore the largest foreign employer in the Dutch business economy in 2018, with around 218,000 employees. Germany and France complete the top 3 largest foreign employers in the Dutch business economy. The number of multinational companies controlled by Turkey doubled between 2014 and 2018, reaching 150, enabling Turkey to climb from 22nd to 17th place. Many Turkish companies choose to establish a branch in the Netherlands in order to expand into the European Union.

Most subsidiaries of Dutch multinationals in 2018 were located in Germany (approximately 2,600), followed by the United States (1,865). Compared to 2017, in absolute terms the number of Dutch subsidiaries grew the strongest in the United States (+35). The number of subsidiaries of Dutch multinationals in the ASEAN-5 countries rose again in 2018 (by 20%), to 805. The Gulf region also saw a slight increase (+10) in the number of Dutch subsidiaries in 2018, to a total of 275. The number of Dutch subsidiaries in North Africa remained the same in 2018, compared to both 2017 and 2010.

7.2 Macro-level view of foreign direct investment

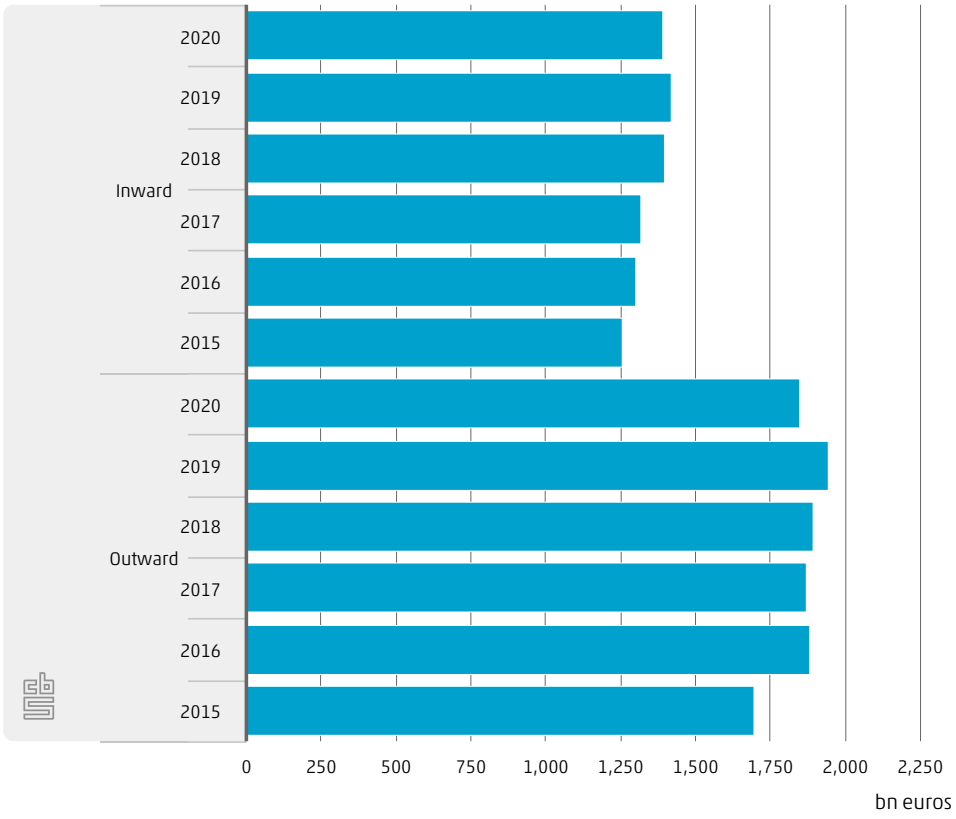
The first part of this chapter discusses the investment position of the Netherlands, based on macro-level figures from the Dutch central bank (De Nederlandsche Bank, DNB), UNCTAD and the OECD. This enables us to focus on the most recent insights from the DNB data on foreign direct investment (FDI). To what extent has the coronavirus pandemic affected these macro-level figures for 2020? Who are the most important investment partners for the Netherlands, excluding investments through SPEs and holding companies?

The Netherlands also affected by worldwide decline in investment

Global foreign investment collapsed in 2020 as a result of the coronavirus pandemic. Such a low level was last seen in the 1990s, and investment is now even below the level during and after the global financial crisis of 2008–2009 (UNCTAD, 2021). The lockdowns throughout the world in response to the coronavirus pandemic delayed existing investment projects, and the prospects of a recession led multinationals to re-assess new projects. The fall in FDI was significantly sharper than the fall in GDP and trade (UNCTAD, 2021).

In the Netherlands, too, there was a clear dip in both inward and outward foreign direct investment (Figure 7.2.1). In 2020, the Netherlands' international investment position comprised €1,391 billion in inward investments and €1,851 billion in outward investments, after adjustment for SPEs and holding companies. The year before, these totals were €1,419 billion (inward FDI) and €1,948 billion (outward FDI), hence the decline was 2% in inward and 5% in outward investments.

7.2.1 International investment position of the Netherlands, excluding SPEs and holding companies

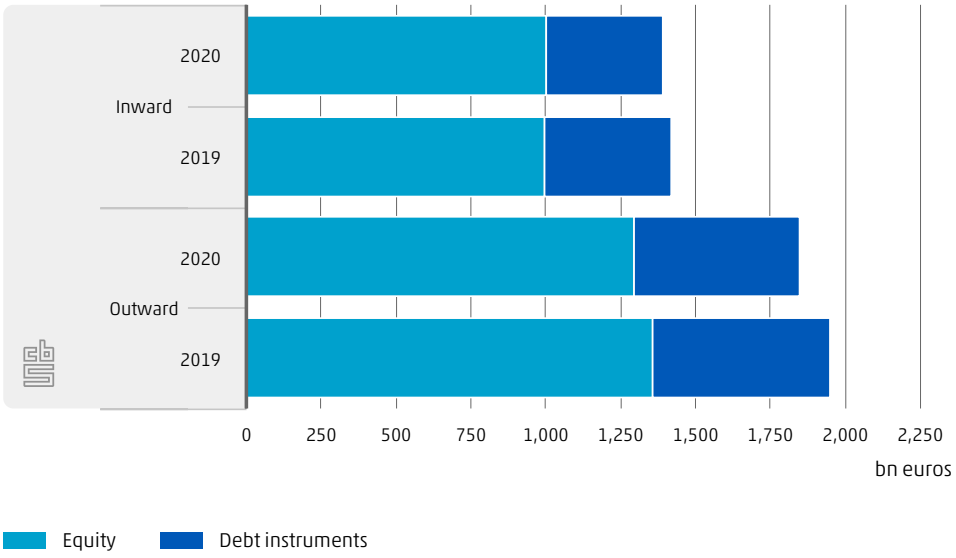


Source: CBS, DNB

Decline in inward FDI due to reduction in debt instruments

The Netherlands' investment position can be broken down into two components: equity participations (equity capital) and debt instruments (borrowings) (Figure 7.2.2). Equity participations include for example incorporations, mergers, takeovers and capital injections. Looking at a breakdown of the investment instruments used by companies, we are struck by the fact that the decline in inward FDI in 2020 was entirely due to the debt instruments. In the case of the other component of FDI, equity participations, there was even a slight increase. Debt instruments are strongly driven by multinationals' financing requirements, making them more volatile in general than equity participations. That makes this component more difficult to interpret (Hemmerlé, 2021). As regards outward FDI, the decline is more or less equally distributed between the two instruments.

7.2.2 International investment position of the Netherlands, excluding SPEs and holding companies, by instrument



Source: CBS, DNB

The Netherlands still an important intermediate station

A substantial proportion of the foreign direct investment that enters the Netherlands does not end up in the Dutch economy but leaves the country without adding value to it. This is true of both Special Purpose Entities (SPEs) and holding companies. The total FDI figures (including SPEs and holding companies) are thus not only affected by global economic trends; the increasingly critical attitude of international and Dutch politicians towards 'letterbox' companies may eventually make the Netherlands less attractive to SPE-like entities.
The G20 countries recently agreed on a 15% minimum tax rate on multinational profits. As a result of the agreement, multinationals will in future pay taxes in the countries where they earn their revenue, and less profit will be channelled to low-tax countries (Giesen & De Waard, 2021).

Dutch legislative environment attractive for headquarters

Between 2018 and 2020, the Netherlands fell from 9th to 17th place in the International Tax Competitiveness Index.[4)] This measures the extent to which a particular country's tax system is based on two vital elements of tax policy, for example competitiveness and neutrality.
Tax laws are regarded as competitive if the marginal tax rates are low, encouraging global companies to invest in that country. Tax laws are regarded as neutral if they try to generate maximum revenue with minimum economic distortion (Bunn & Asen, 2020). In particular, the index is indicative of the tax burden in the Netherlands, which has increased, relatively speaking, compared with other countries, between 2018 and 2020. For the time being, however, there is little sign of decreasing activity or increasing presence of these predominantly tax-driven entities (SPEs and holding companies) in the Netherlands. This may

4) The Netherlands still ranks 4th, however, in the Corporate Tax Haven Index of the Tax Justice Network.

be partly due to the Dutch legislation, which enables a company based in the Netherlands (for example a public limited company) to protect itself against hostile takeover relatively easily. This is why a number of large listed companies have moved their headquarters to the Netherlands on paper in recent years, without having much physical presence, and consequently economic activity, there. This has a major effect on the overall Dutch investment figures, however, as these companies are shown at market value in the direct investment figures. Investments through companies of this kind have been ignored here in order to make a cleaner distinction between Dutch and foreign companies, as listed companies with little physical presence in the Netherlands fall into the category of holding companies.

As a result of the above factors, a substantial proportion of FDI in the Netherlands has long been accounted for by SPEs and holding companies, namely 69% of inward FDI and 67% of outward FDI in 2020.[5] In addition to the €1,851 billion of outward FDI not made by SPEs or holding companies, €3,797 billion worth of investments from the Netherlands was made through SPEs or holding companies, bringing the total of outward FDI in 2020 to €5,648 billion. Excluding SPEs and holding companies, outward FDI declined more sharply than inward FDI, whereas the converse was true of investments made by SPEs or holding companies.

Most FDI (excluding SPEs and holding companies) from the US

However, if we ignore investments through SPEs and holding companies, Dutch outward FDI in 2020 amounted to approximately €1,851 billion, a 5% decline compared to 2019. In terms of outward FDI (excluding SPEs and holding companies) the Netherlands nevertheless ranked 3rd worldwide, after the United States and China. As regards inward FDI, the Netherlands ranked 4th, after the United States, China and the United Kingdom, with €1,391 billion (excluding SPEs and holding companies) (DNB and OECD, 2021). This inward FDI was 2% less in 2020 than in 2019.

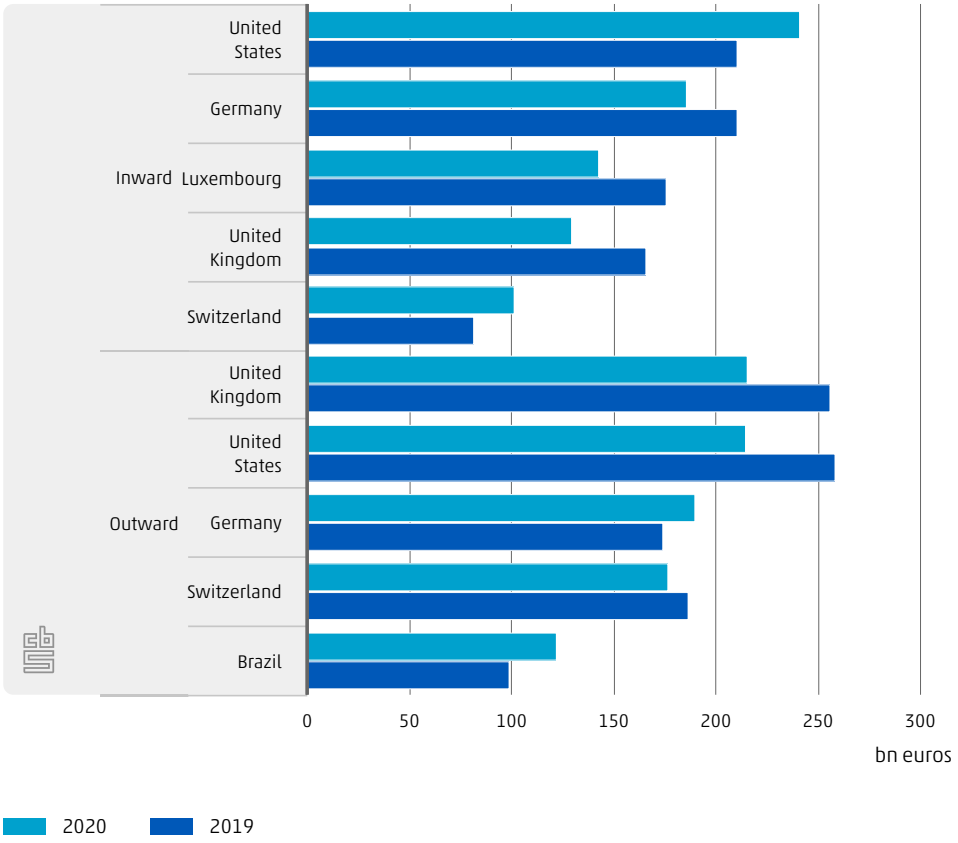
17% of inward FDI in the Netherlands from US companies

Through foreign investment, companies can scale up production, take advantage of cheaper local factors of production and save transport costs to foreign markets. Direct investment provides knowledge and employment for recipient countries. The Netherlands' main investment partners are the United States, Luxembourg, the United Kingdom, Germany and Switzerland (Figure 7.2.3). The top 3 countries that invest in the Netherlands (excluding SPEs and holding companies) remained unchanged from the previous year, led by the US (€241 billion), followed by Germany (€186 billion) and Luxembourg (€143 billion).

5) The share of SPEs and holding companies combined has remained stable for many years, although there were major shifts in the SPE sector towards holding companies or captive financial institutions in 2020 as a result of stricter statistical guidelines on the definition of Special Purpose Entities.

The figures in Figure 7.2.3 refer to the country from which the investment comes directly. However, due to different constructions (for example channelling), there may be a difference between where the investment has come from directly and where it originally came from. The Netherlands continues to exert great pulling power on US companies as an investment location. US investment enters not only directly through the United States but in many cases also through other (channelling) countries such as Luxembourg. If we look at provisional direct investment figures based on original owner, we find that the United States is even more important than the traditional figures on investment by direct owner indicate (Hagendoorn, 2020).

7.2.3 Top 5 investment partners, excluding SPEs and holding companies



Source: CBS, DNB

There have been some shifts in the rankings of countries in which the Netherlands invests in 2020 compared to 2019. The United Kingdom climbed from 2nd place in 2019 to 1st place in 2020, with the United States slipping down to 2nd place. The United Kingdom even ranked 3rd in 2018. Around 12% (€216 billion) of total inward FDI in the Netherlands in 2020 came from the United Kingdom, after adjustment for investments through SPEs and holding companies. Another striking point is Brazil's ranking, in 5th place: the Netherlands had a total of €122 billion worth of outward FDI in Brazil in 2020. This increase is accounted for mainly by companies in the petroleum industry.

No clear effect of Brexit on the direct investment relationship with the UK

Dutch investment from and into the United Kingdom declined in 2020, but this did not have a negative effect on the position of the UK as an investment partner for outward FDI. The UK direct investment figures in fact show that investment from Europe has generally declined in recent years as a result of Brexit (Office for National Statistics, 2020), but the barriers to the UK-Dutch direct investment relationship currently appear to be less serious than expected. We anticipate that further details will be available in the course of 2021. As regards inward FDI, the United Kingdom fell from 2nd place in the top 5 (excluding SPEs and holding companies) in 2018 to 4th place in 2019 and 2020.

7.3 Multinationals in the Netherlands

This section looks specifically at the companies that invest: the multinationals. CBS figures on the Inward and Outward Foreign Affiliates Statistics were used to examine multinationals in the Netherlands by nationality, for the period 2013–2018. How many multinationals are there in the Dutch business economy? What proportion of employment in the Dutch business economy is provided by multinational companies? Which sectors are they active in? Which countries control the foreign multinationals?

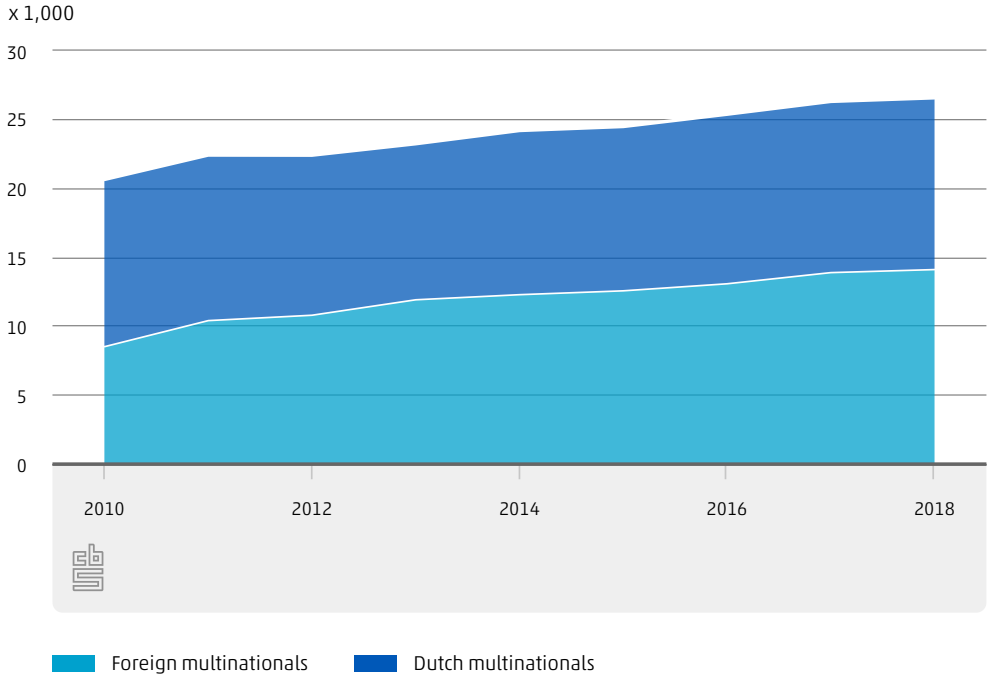
A multinational is a company that exercises ultimate control over other businesses in two or more countries. The number of multinationals is increasing, as new multinationals establish themselves in the Netherlands and Dutch companies are taken over by foreign companies. In addition, Dutch companies are increasingly crossing the national borders, enabling them to become Dutch multinationals. Research by Doyle et al. (2018) shows that, on average, domestic and foreign multinationals in OECD countries account for almost 30% of value added and trade and 20% of employment. Their foreign networks, among other things, give multinationals good import and export positions, and they supply a good deal of their production output directly to other countries (CBS, 2018).

One in fifty companies in the Dutch business economy are multinationals

The number of multinationals in the Netherlands is growing: in 2018, the most recent year for which data are available, 26,500 multinationals were active in the Dutch business economy[6)], representing 2.2% of the total. As Figure 7.3.1 shows, the number of multinationals in the Dutch business economy increased over the 2010–2018 period. Despite the growth in the number of multinationals, their share in the business economy has remained virtually the same year on year, as the number of non-multinationals (especially self-employed entrepreneurs and self-employed with employees) is growing faster.

6) The Dutch business economy comprises the companies in the General Business Register (ABR) in sections B-N plus division S95, excluding section K. Agriculture, forestry and fishing (A), financial institutions (K), public administration (O), education (P), health care (Q), culture, sports and recreation (R), ideological and political organisations (division 94), wellness and funeral services (division 96), households (T) and extraterritorial organisations and bodies (U) are therefore outside the Dutch business economy.

7.3.1 Multinationals in the Dutch business economy



CBS distinguishes between Dutch-owned and foreign-owned multinationals. A Dutch-owned multinational is a company under Dutch control with subsidiaries (majority interests) abroad. A foreign-owned multinational is a subsidiary located in the Netherlands that is ultimately controlled from abroad. Of the multinationals, 53% were under foreign control and 47% Dutch-controlled (Figure 7.3.1).

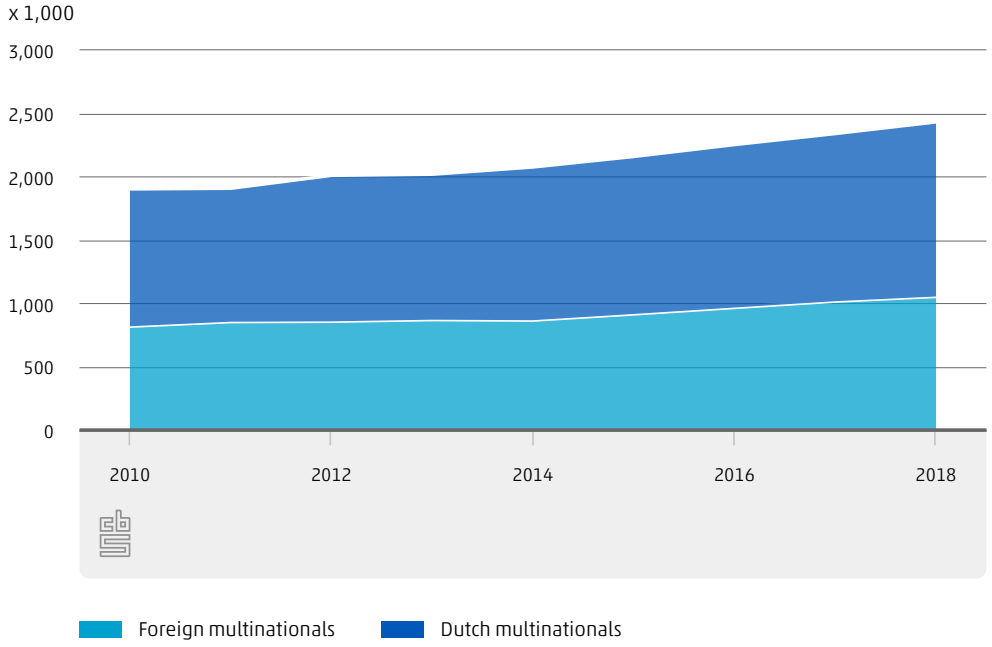
2 in 5 employees work for multinationals

Altogether, multinationals employed more than 2.4 million people in the Netherlands in 2018, accounting for 41% of total employment in the Dutch business economy. In comparison with the previous year, multinationals were responsible for a net increase of 92,000 full-time jobs (+3.9%) in 2018. Despite the fact that multinationals make up a very small proportion of the Dutch business population (approximately 2%), they provide a substantial proportion of employment in the Netherlands.

More and more people in the Netherlands are working for multinationals. On average, they pay higher wages than Dutch companies located solely within the national borders (Vos et al., 2019). There are nevertheless potential drawbacks to working for a multinational. Employees of multinationals may experience a heavier workload and more mental fatigue than those of non-multinationals (Vos et al., 2019; Loog & Smits, 2014; Jaarsma, 2013). There are fewer Dutch multinationals than foreign multinationals, but Dutch multinationals lead the way in terms of employment. In 2018, all Dutch multinationals combined employed

around 324,000 more people than did foreign multinationals (Figure 7.3.2). This is partly due to the fact that foreign multinationals import a lot, and it may be, therefore, that large parts of their production processes take place abroad rather than in their Dutch companies (CBS, 2018).

7.3.2 Employed persons at multinationals in the Dutch business economy

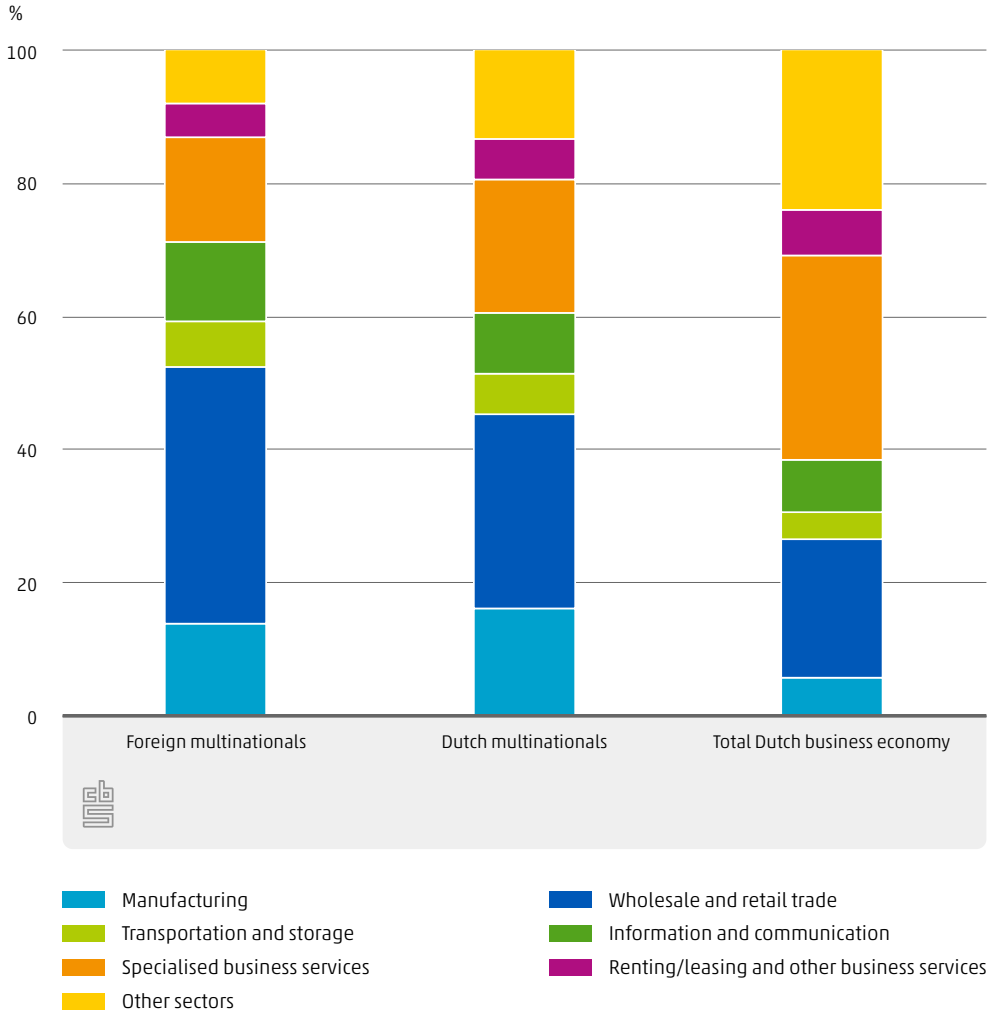


35% of multinationals active in the wholesale and retail trade

As Figure 7.3.3 shows, the distribution of multinationals by sector differs significantly from the distribution in the Dutch business economy as a whole. Approximately 31% of all companies in the Dutch business economy operate in specialised business services. This sector is also popular among the multinationals, albeit to a lesser extent. Multinationals in the Netherlands were mainly represented in the wholesale and retail sector in 2018, namely 39% of foreign multinationals and 29% of Dutch-controlled multinationals. Relatively large numbers of wholesalers in the Netherlands have a foreign parent company, owing to the nature of their activities in the Netherlands. Foreign industrial companies (for example Japanese car manufacturers with a European logistics centre in the Netherlands), for instance, are often regarded as wholesalers (Van den Berg & Mounir, 2019).

Although the majority of multinationals – both Dutch and foreign – operate in the wholesale and retail trade and specialised business services, these sectors are not dominated by multinationals. Multinationals accounted for 3.6% of the more than 254,000 companies in the wholesale and retail trade in 2018. In the specialised business services sector the proportion of multinationals was 1.3%. Multinationals have an above-average presence in manufacturing. Almost one in six Dutch multinationals and one in seven foreign multinationals operate in that sector, whereas the proportion in the Dutch business economy as a whole is only 1 in 17. The converse is the case in construction: 15% of companies in the Dutch business economy operate in that sector, whereas the proportions of foreign and Dutch multinationals there are 2% and 6% respectively.

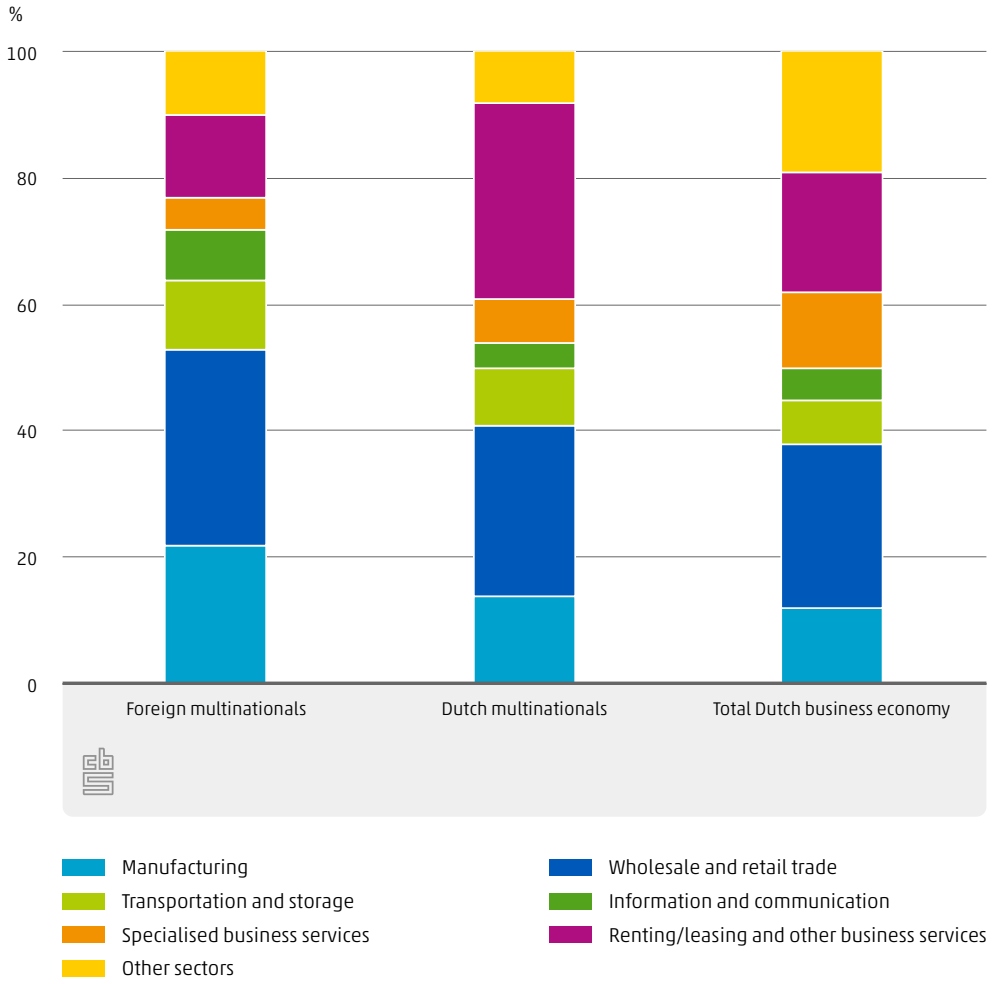
7.3.3 Distribution of enterprises by sector, 2018



Multinationals in the wholesale and retail trade employ 694,000 persons

In the Dutch business economy as a whole, the largest employers are the wholesale and retail trade, renting/leasing and other business services, and manufacturing (Figure 7.3.4). These three sectors also provide the most employment by multinationals, albeit the rankings of these top 3 differ. Dutch multinationals active in renting/leasing and other business services accounted for 31% of employment by Dutch multinationals in 2018. Among foreign multinationals, the most important sector in terms of employment is the wholesale and retail trade, followed by manufacturing.

7.3.4 Relative distribution of employment per type of enterprise by sector, 2018



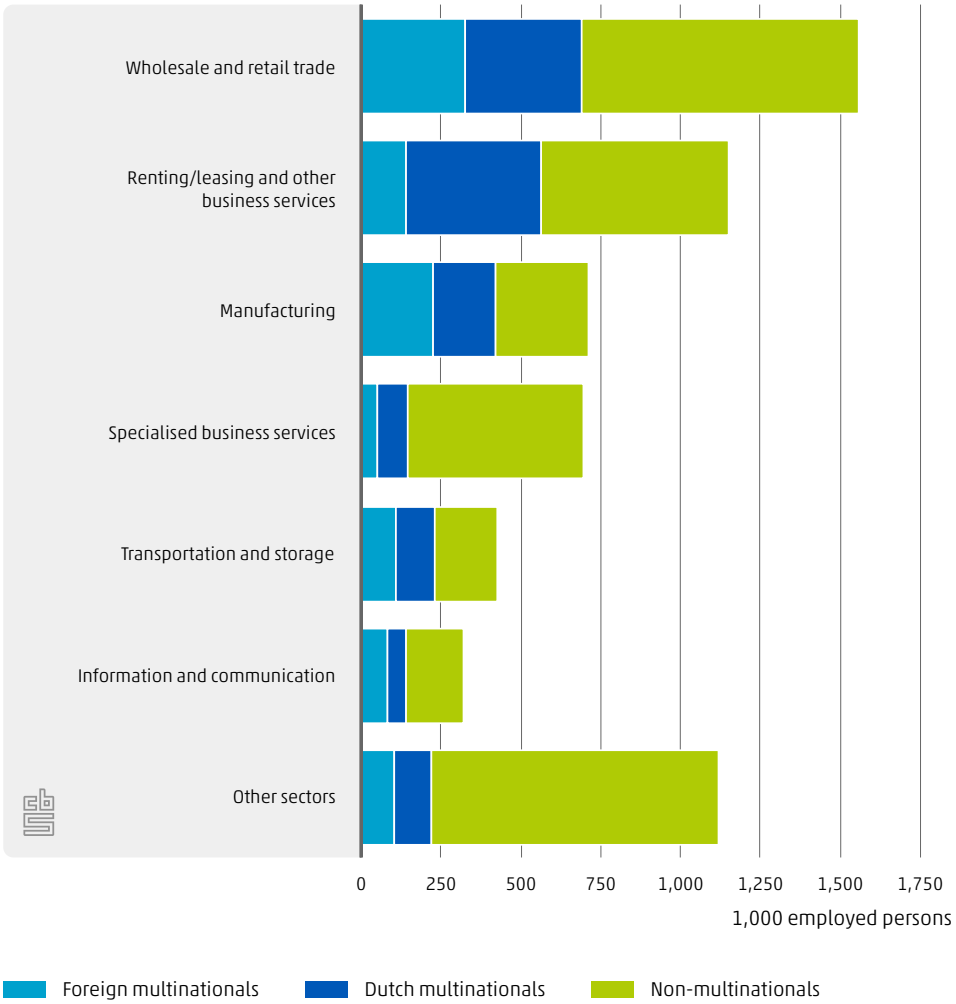
As regards employment in the Netherlands created by multinationals, there are differences between foreign and Dutch multinationals (Figure 7.3.4). For instance, construction, specialised business services, renting/leasing and other business services are larger employers, relatively speaking, if we compare Dutch multinationals with foreign multinationals. We find the largest percentage of differences in renting/leasing and other business services and manufacturing. Almost 22% of all people on the payroll of foreign multinationals in 2018 worked in manufacturing, as against 14% in the case of Dutch multinationals. Conversely, approximately 31% of all people on the payroll of Dutch multinationals in 2018 worked in renting/leasing and other business services; the proportion was 13% in the case of foreign multinationals.

Multinationals provide 55% of employment in transportation and storage

Transportation and storage employed some 427,000 people in 2018 (Figure 7.3.5), of whom approximately 234,000 work for multinationals. Broken down into Dutch and foreign multinationals, 29% are employed by Dutch multinationals and 26% by foreign multinationals. Of the 715,000 people employed in manufacturing, almost a third are on the payroll of a Dutch multinational; approximately 28% work for foreign multinationals. Thus

59% of employment in manufacturing is provided by multinationals. The wholesale and retail trade provided the most employment in the Dutch business economy in 2018. Of the 1.6 million people working in this sector, 44% are employed by multinationals. Almost 80% of employment in specialised business services was accounted for by non-multinationals in 2018.

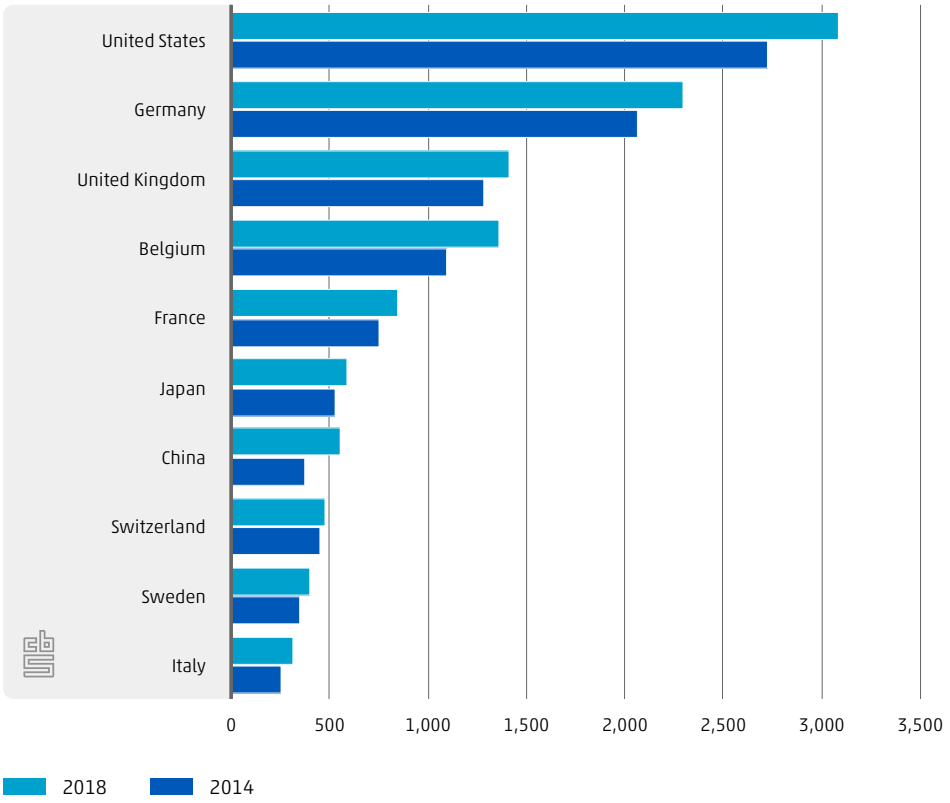
7.3.5 Employment per enterprise type by sector, 2018



One in five foreign-owned multinationals are American

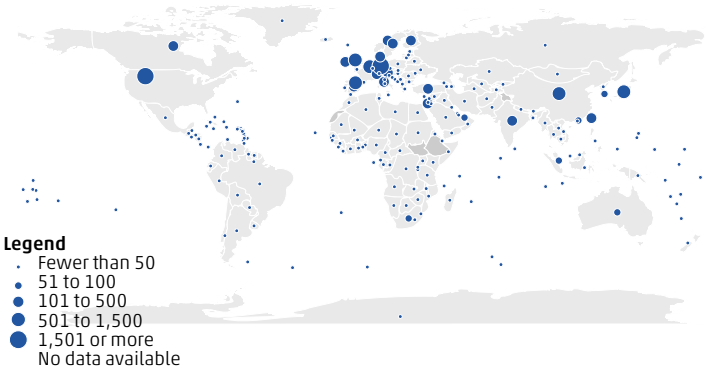
Most foreign multinationals in the Dutch business economy are still under US, German, UK, Belgian or French control (Figure 7.3.6). Altogether these five countries make up more than 62% of all foreign-owned companies in the Netherlands. The United States is still our main investment partner in terms of the number of multinationals operating in the Netherlands. There were over 3,000 US-controlled companies in the Netherlands in 2018, representing over 21% of all companies under foreign control, followed at a considerable distance by Germany, with 2,300. There are various reasons for foreign companies to locate in the Netherlands: the favourable location in Europe, for instance, the highly developed logistical and data infrastructure, the relatively well educated Dutch population and the favourable business climate exert great pulling power on foreign investors.

7.3.6 Top 10 foreign-owned multinationals in the Netherlands by country of origin



This top 10 has changed little over time. For all the countries in the top 10, we see that the number of companies under their control rose compared to both 2017 and 2014. A striking point in the figures is that the number of Chinese-controlled companies grew by 175 in 2018 compared to 2014, to 555. China has thus overtaken Switzerland as the 7th country of origin. That increase also gave China the 3rd strongest growth (in absolute terms), after the United States and Germany.

Origin of foreign multinationals in the Netherlands, 2018



Largest growth (2017-2018)

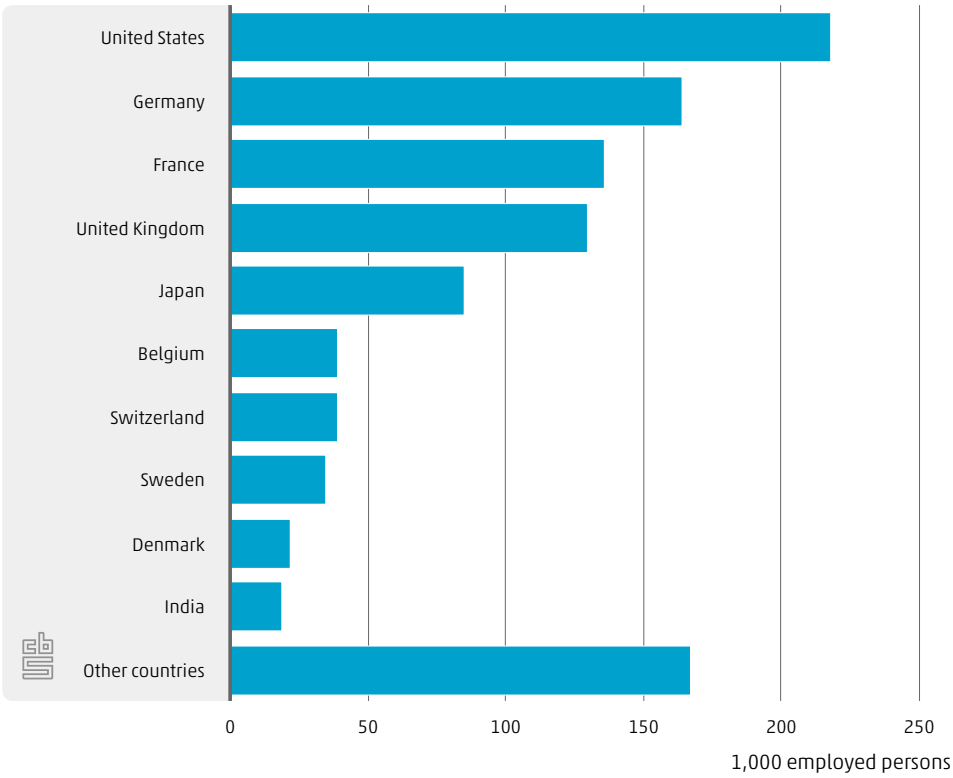
US	215
Germany	105
France	85
Belgium	70
China	60
Japan	35
UK	30
Italy	30
Denmark	30
Sweden	20

Outside the top 10 foreign-owned multinationals, Canadian, Spanish, Turkish and Australian multinationals in particular have been on the rise since 2014. The number of multinationals controlled by Turkish companies, for instance, doubled over the past five years, reaching 150 in 2018, enabling Turkey to climb from 22nd to 17th place. More and more Turkish companies

have opened branches in the Netherlands, driven partly by the insecure economic situation in Turkey itself (RTL News, 2019). The Netherlands has a good investment climate and a relatively large Turkish community (RTL News, 2019). Many Turkish companies are choosing to open branches in the Netherlands in order to expand into the European Union. This is easier from a base in the Netherlands than from Turkey, because of problems obtaining business visas and a banking system that does not run smoothly (RTL News, 2019; Kroezen, 2019). We find these Turkish companies among both service providers and production companies, for example printing companies or production companies such as fruit growers or companies in the car (and parts) industry (RTL News, 2019).

Google, Coca Cola and American Express are familiar examples of US companies in the Netherlands. Some 218,000 people worked for companies with a US parent in 2018, approximately 4,000 more than in 2014. The United States was thus the largest foreign employer in the Dutch business economy in 2018 (Figure 7.3.7). Germany and France complete the top 3 largest foreign employers in the Dutch business economy. German and UK multinationals provided employment for 34,000 (+26%) and 25,000 (+24%) more people respectively in 2018, compared to 2014.

7.3.7 Employment at foreign-owned multinationals by country of origin, 2018

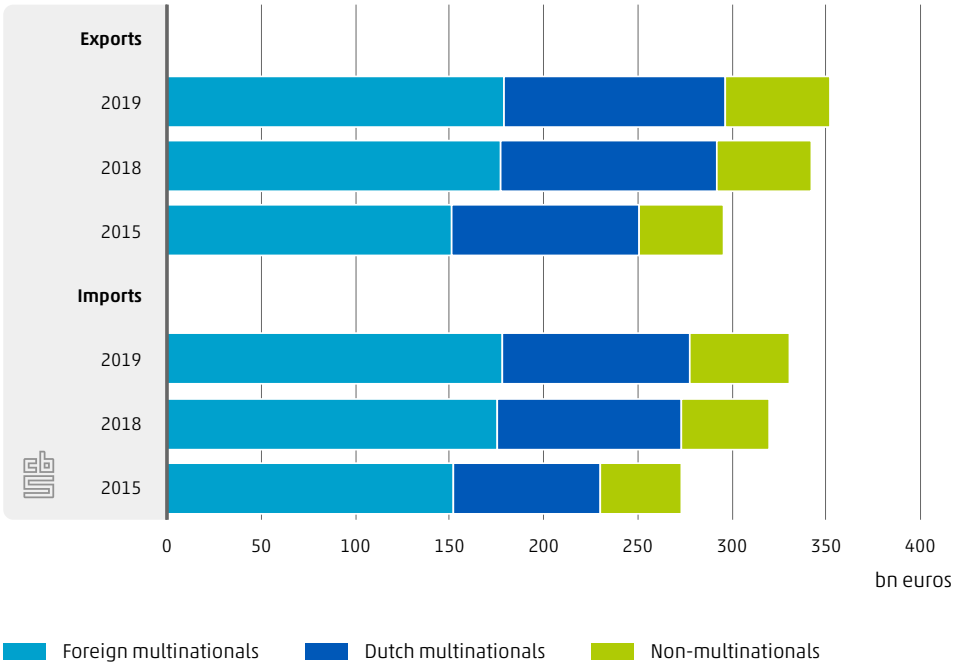


Multinationals account for 85% of the export value of goods

In addition to the relatively large role that multinationals play in employment in the Netherlands, they account for a large proportion of international trade. Whereas multinationals only take up around 2% of the Dutch business economy as a whole, they were

responsible for 83% of imports and 85% of exports of goods in 2019 (Figure 7.3.8). The foreign multinationals are most involved, as they account for 54% of the total import value of goods and 51% of the total export value of goods, as against 30% and 33% respectively among Dutch multinationals. This pattern is even more clearly discernible in the case of the international trade in services, with multinationals accounting for 91% of the import value and 90% of the export value of services in 2019. Here again, foreign multinationals contribute the bulk, with 75% and 68% of the total import value and export value of services respectively.

7.3.8 Role of multinationals in international goods trade



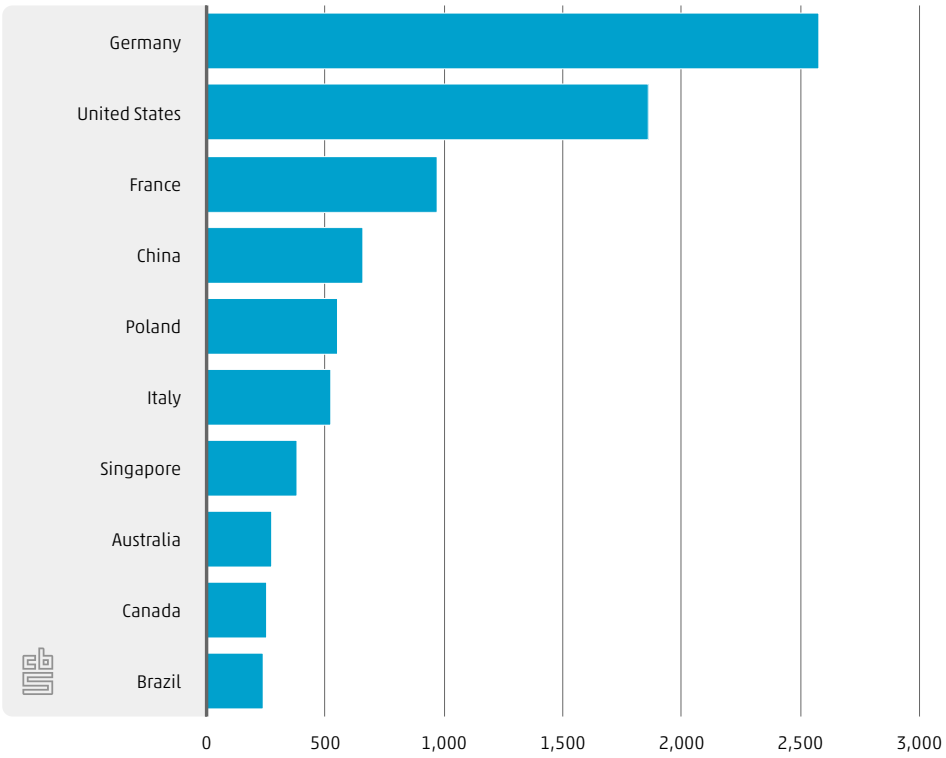
7.4 Dutch multinational activity abroad

This section focuses on the countries in which Dutch multinationals operate, their local business activities and how much employment is created in those countries as a result. We have described the trends where possible. More information and figures on this topic can be found in the datasets accompanying Chapter 7, which can be accessed through the home page of this publication.

Most Dutch subsidiaries abroad are in Germany

Dutch companies' foreign subsidiaries are most often located in Germany, as Figure 7.4.1 shows. In 2018, for example, almost 2,600 subsidiaries of Dutch multinationals were operating in Germany. After Germany, the United States had the most Dutch multinationals, with 1,865 companies. Figures for the number of Dutch companies in the United Kingdom – the 3rd country of destination in 2017 – are unavailable for 2018 at the time of writing.

7.4.1 Number of foreign subsidiaries under Dutch control, 2018 [1)]



Source: CBS, Eurostat

[1)] In the figures for Germany, Italy and Poland, there is a trend break in the number of Dutch subsidiaries (IFATS) as of 2018. For the United Kingdom, data over 2018 are missing.

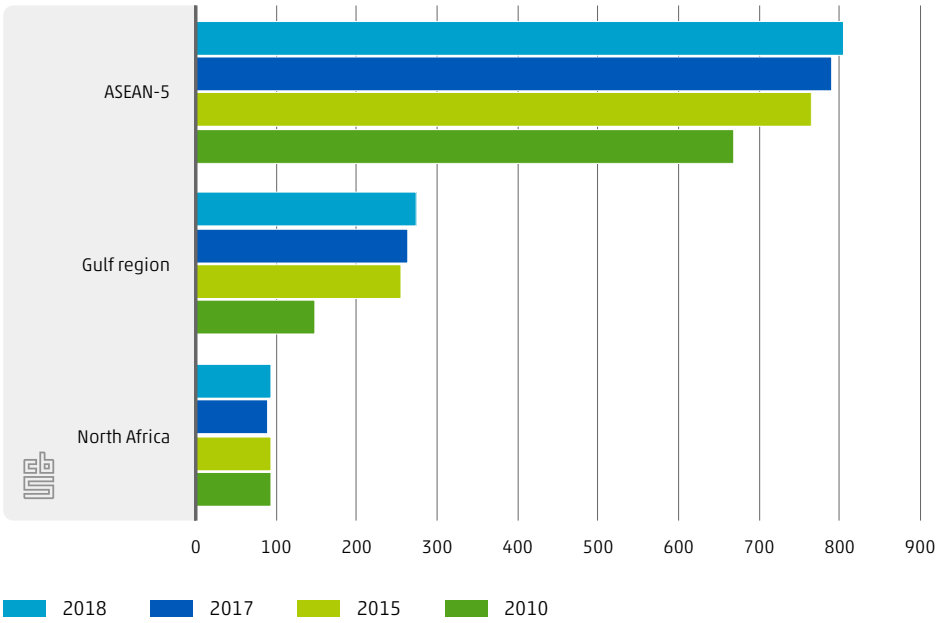
Compared to 2017, the number of Dutch subsidiaries grew the strongest in the United States (+35). The number of Dutch subsidiaries in China also grew slightly (+10).

Further growth in the number of Dutch multinationals in the ASEAN-5 and Gulf region

Creemers et al. (2020) showed that the number of subsidiaries of Dutch multinationals in the ASEAN-5 countries (Indonesia, Malaysia, Singapore, Thailand and Vietnam) grew between 2010 and 2017. This growth continued in 2018, bringing the number of Dutch subsidiaries in that region to 805 (Figure 7.4.2). This corresponds to 20% growth compared to 2010.

The number of Dutch subsidiaries in the Gulf region (Bahrain, Kuwait, Qatar, Oman, Saudi Arabia and the UAE) has also grown. That region had approximately 275 Dutch subsidiaries in 2018, 10 more than in 2017 and 125 more than in 2010. As in previous years, the number of Dutch subsidiaries in North Africa (Algeria, Morocco, Tunisia and Egypt) remained the same, compared to both 2017 and 2010.

7.4.2 Foreign subsidiaries under Dutch control



Source: CBS, Eurostat

Half of Dutch subsidiaries in the ASEAN-5 are in Singapore

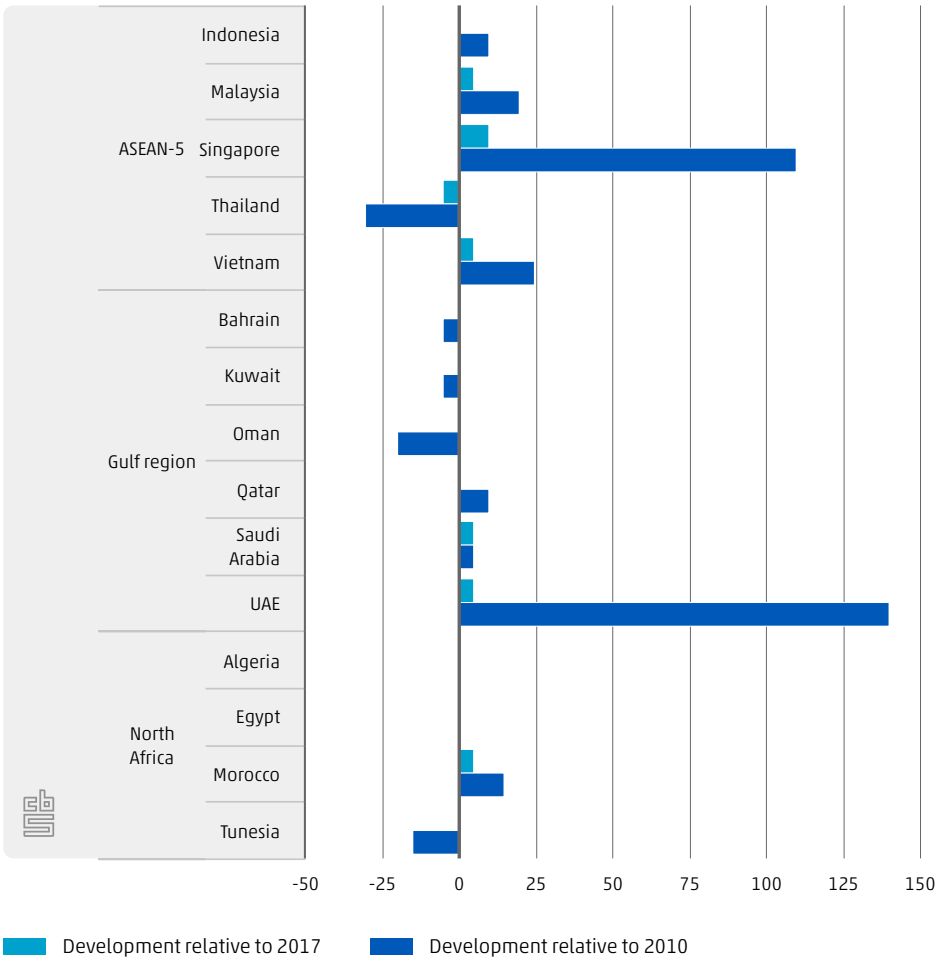
Many Dutch-controlled companies in the ASEAN-5 are located in Singapore. This was the case for approximately 385 Dutch-controlled companies in 2018, 110 more than in 2010. Dutch companies in Singapore most often operate in manufacturing, transportation and storage, and specialised business services.

The number of Dutch companies in Indonesia, Malaysia and Vietnam has also increased. Thailand continues to be notably less favoured by Dutch subsidiaries: the number declined again in 2018. The number of Dutch subsidiaries has fallen by 30 in comparison with 2010. The number of industrial companies under Dutch control decreased in particular.

Most Dutch subsidiaries abroad are in the UAE

In the Gulf region, it is still mainly the United Arab Emirates (UAE) that represents an interesting partnership for Dutch multinational investments. Of the approximately 275 companies under Dutch control in the Gulf region, 205 were established in the UAE in 2018. Compared to 2017, the number of Dutch companies in the UAE grew only slightly (+5), and most of that growth took place between 2010 and 2015. Dutch companies in the UAE operate mainly in the wholesale and retail trade, manufacturing, consulting, research and other specialised business services. There was no further decline in the number of Dutch companies in Bahrain, Oman, Qatar and Kuwait in 2018. The relatively small number of Dutch companies in Saudi Arabia grew very slightly.

7.4.3 Number of foreign enterprises under Dutch control



Source: CBS, Eurostat

Number of Dutch subsidiaries in North Africa stable

Morocco was once again the country in North Africa with the most Dutch subsidiaries in 2018. Of the 95 Dutch companies in that region, 45 were situated in Morocco. The number of Dutch companies in Morocco grew in 2018 (+5), whereas that in Tunisia declined (-15). The number of Dutch-owned companies in these four countries combined remained stable between 2010 and 2018.

Dutch subsidiaries in Germany employ almost 330,000 people

As in 2017, Dutch multinationals in Germany were the largest employers in 2018, when just under 330,000 Germans worked for Dutch-controlled companies, more than 25,000 fewer than in 2017. This may be related to changes in the German observation of foreign multinationals. After Germans, we find Americans most often working for Dutch subsidiaries, 293,000 in 2018. This is slightly more than in 2017, when 291,000 people in the US worked for Dutch companies. We have seen a large rise in employment at Dutch companies in Poland, approximately 38% growth. However, there was a trend break in the Polish figures too

in 2018, as Eurostat data shows, and this also occurred in Italy. The number of people working for Dutch-controlled companies grew in Belgium, Brazil and Mexico. It fell by 4% in China, in spite of a small rise in the number of Dutch companies there (Figure 7.4.1).

7.4.4 Top 10 employment at foreign subsidiaries under Dutch control

	Number of employed persons 2017	Number of employed persons 2018	Percentage change 2018 relative to 2017
	x 1,000	x 1,000	%
Germany	356	327	-8
United States	291	293	1
Poland	140	193	38
France	200	193	-4
United Kingdom	163	-	-
Italy	81	101	24
Belgium	84	86	2
China	74	71	-4
Brazil	45	48	7
Mexico	35	37	6

Source: CBS, Eurostat

As regards Dutch companies in the larger countries outside the top 10, the number of people working there has grown in many cases. The number of jobs in India, for instance, grew by 2,000 compared to 2017, by 3,000 in Australia and by another 3,000 in the UAE. Small dips in employment at Dutch subsidiaries abroad were seen in Argentina (–2,000), Thailand, Taiwan and Malaysia (1,000 fewer each).

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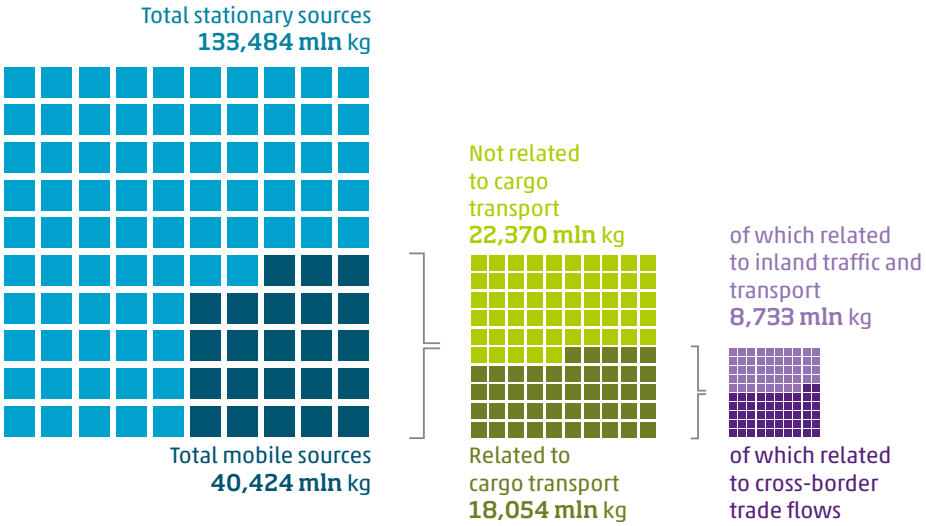
8 International trade and transit flows; emissions to air on Dutch territory

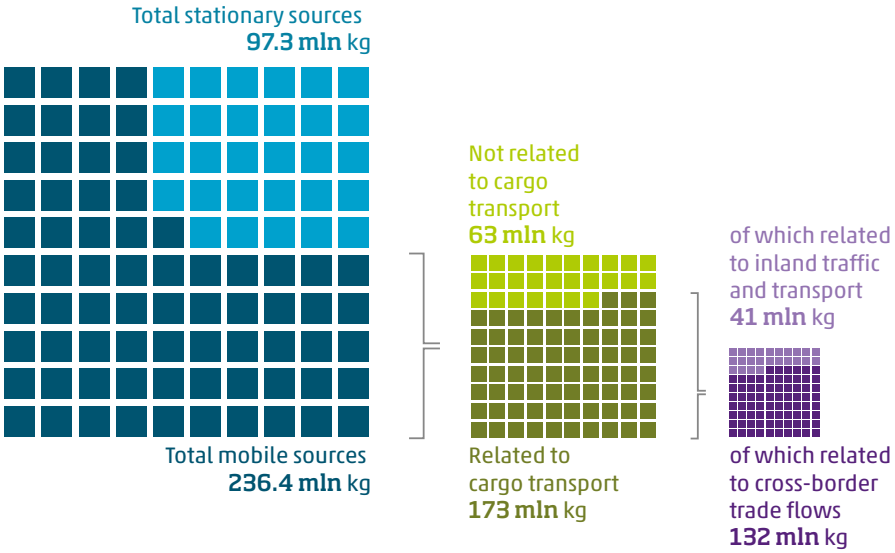
Authors: Anne-Peter Alberda, Chris de Blois

Emissions Dashboard (2019)

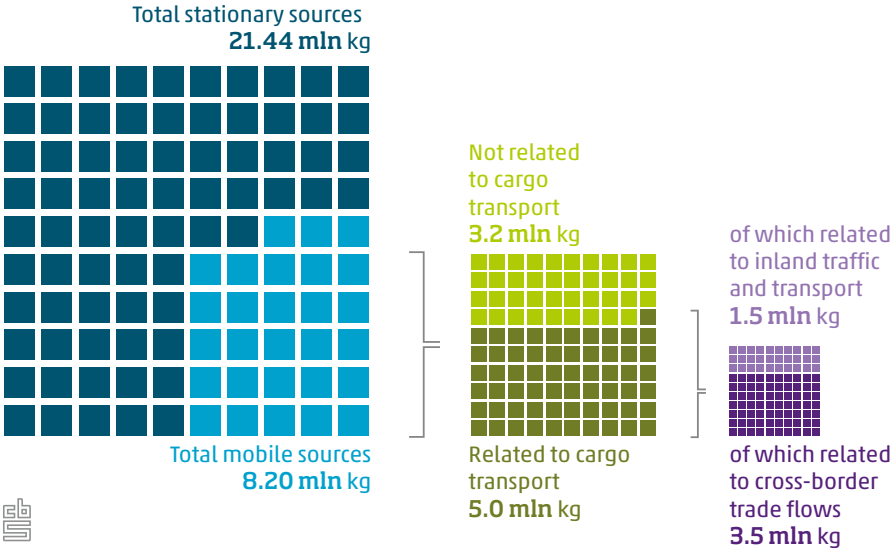
Carbon dioxide emissions on Dutch territory, 2019 (173,908 mln kg)



Nitrogen oxides emissions on Dutch territory, 2019 (333.7 mln kg)



Particulate matter emissions on Dutch territory, 2019 (29.64 mln kg)



Growth in trade and its impact on the environment is a matter of growing concern. In part as a result of the continuing fragmentation of production chains, raw materials and products to be consumed or (further) processed in the Netherlands increasingly come from remote areas. The growth in goods trade goes hand in hand with strong growth in goods transport by ship, plane, train and lorry, which is accompanied by emissions of all kinds of harmful substances. This chapter illustrates the links between emissions of carbon dioxide (CO_2), nitrogen oxide (NOx), particulate matter (PM10) and international goods flows into, through or from the Netherlands.

8.1 Key findings

The actual CO_2 emissions associated with international trade and transit flows increased between 2007 and 2019 and now account for 23.1% of emissions from all mobile sources (maritime and inland vessels, aircraft, road traffic, rail transport) on Dutch territory. The corresponding figure in 2007 was 21.7%. With regard to total emissions of nitrogen oxide (NOx) and particulate matter (PM10), there was nevertheless a reduction in absolute terms over this period, partly attributable to cross-border transport. The share of cross-border trade and transit flows in NOx and PM10 emissions from all mobile sources nevertheless remains considerable, at 56.0% and 42.7% respectively. The contribution from international goods flows to total emissions of nitrogen oxide from mobile sources also increased compared to 2007. That was not the case of particulate matter.

Maritime transport contributes most to all three types of emissions, followed by road transport and inland shipping. Road transport has performed rather poorly when it comes to reducing CO_2 emissions related to cross-border trade and transit transport flows. This also follows from a decrease in the CO_2 emission factor[1)] for cross-border road transport. For each kilogram of CO_2 emission it was possible to transport almost 9% more international trade by road in 2007 than in 2019. In the case of nitrogen oxide and particulate matter emissions, road transport performed better in 2019 compared to 2007.

The emission factors for the three distinct trade and transit flows, namely imports for domestic use plus exports of Dutch products, re-exports plus the required imports for re-export, and transit trade, are very similar. That means the actual/total emission load for these three types of cross-border trade and transit flows are of a similar order of magnitude. Hence there is some scope for a trade-off between the various flows. Any leeway in the emission load resulting from a decrease in one flow would create room for growth in another transport flow without causing an increase in actual/total emissions on Dutch territory.

1) Factor expressing the number of kilograms of goods that can be transported across borders for 1 kilogram of emissions.

8.2 International trade and transit flows and their emissions

Cutting emissions is a challenge for the future

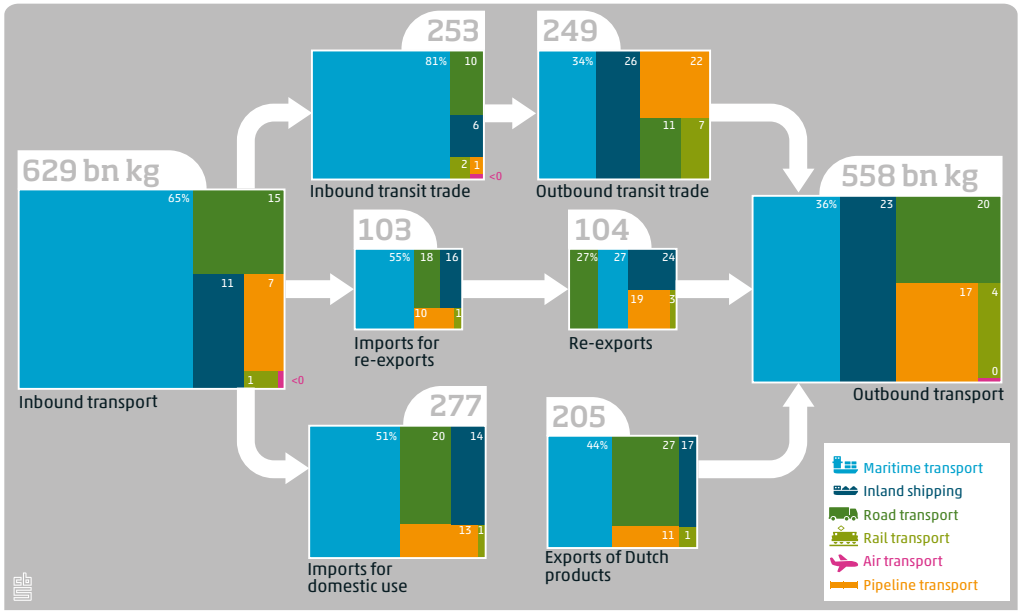
In the years ahead the social, economic and political debate will be largely fuelled by the Netherlands' need to gain control of the various emissions to air, in connection with national and international obligations up to the year 2050 (SER, 2021). The European Commission aims to have a fully circular European economy in place by that year, with no greenhouse gas emissions (Peeperkorn, 2021). A substantial part of these emissions relate to international goods flows into, through or from the Netherlands and globalisation. Globalisation and the fragmentation of production chains are the factors driving the various trade and transit flows between and through countries. As an open, export-focused system, the Dutch economy benefits from the economic growth elsewhere in Europe and the world.

Which international trade and transit flows are there?

The international flows of goods to, from and through the Netherlands can be divided into three main flows: (1) imports for domestic use plus exports of domestically produced goods, (2) re-exports plus the required imports for re-export, and (3) transit trade. These international goods flows and the different modes of transport by which goods can be conveyed are shown in the infographic below.[2)] A total of 558 billion kilograms of goods were transported from the Netherlands to other countries in 2019, 9.5% more than in 2007. The bulk consists of transit trade, with goods being shipped to the Netherlands for short periods before being transshipped, for example, onto a vehicle or inland vessel for shipment to a destination outside the Netherlands. The second largest flow comprises imports for domestic use plus exports of domestically produced goods, with 277 billion kilograms of imports and 205 billion kilograms leaving the country. Imports for re-export plus re-exports is the smallest flow. Imports for re-export plus re-exports have grown particularly strongly since 2007, by around 20.3%. Transport associated with domestic use plus exports of domestic goods grew by around 6.9%. An increase of 5.2% can be seen in transit trade.

2) During this reporting year (2019) trade flows were not yet affected by the coronavirus pandemic, although the first infections already occurred in the Chinese city of Wuhan at the end of 2019. On 11 March 2020 the World Health Organization officially confirmed that the virus outbreak had triggered a pandemic, leading to major economic disruption and social restrictions worldwide. Due to the lack of data for 2020, at the time of compiling this publication we cannot make any statements about the impact of the coronavirus crisis.

International goods flows to and from the Netherlands, gross weight
2019



The distinction between main flows is important because they differ greatly in terms of earnings measured in value added. The economic literature shows that free trade leads to large welfare gains, including as a result of lower prices, greater choice of goods and better working conditions (Berkhout et al., 2018). The Netherlands does not earn equal amounts from each main flow. Based on how much value added each flows generates for the Dutch economy, the flow of exports of domestically produced goods – amounting to €125 billion – is by far the most important. The value added of re-exports was around €35 billion (see Chapter 2 of this publication). Dutch society therefore earns around four times more from exports of Dutch-made products than from the re-export flow. The smallest flow in terms of value added is transit trade. An initial estimate is that transit trade in total generates around €5 billion to €6 billion of value added. One of the reasons for this low contribution to GDP is that compared to re-exports it requires even fewer services. The activities mainly comprise transshipment and possible storage of goods (De Blois & Alberda, 2019).

International trade and transit flows generate emissions

Free trade also entails costs, however. Examples are welfare losses from free trade due to the negative external effects of environmental pollution resulting from transportation of products between countries. All three main flows in principle make the same demands on scarce infrastructure if they are transported physically through and via the Netherlands by means of a chosen transport mode. The transportation of 1 million kilograms of Dutch products is no different than the transportation of 1 million kilograms via transit trade or 1 million kilograms of re-exports using the same transport mode.

By combining various statistics, it is possible to illustrate the emissions associated with international trade and transit flows for the years 2007 and 2019. Statistics on imports, exports and transit trade are obtained by integrating the International Trade in Goods statistics and transport statistics for six transport modes. By taking an additional step the result can be linked to the statistics on actual emissions to air on Dutch territory. These emission statistics are also used in international reports issued each year to determine the

country's IPCC greenhouse gases and NEC air pollution (NEA, 2020). The combination of these data sources provides detailed insights for policy analyses with regard to goods transport, international trade and ecological research areas. This chapter focuses on actual emissions from mobile sources in connection with cross-border trade and transit flows on Dutch territory[3] (see box for more information).

What do actual emissions from mobile sources consist of?

Emissions of CO_2, nitrogen oxide or particulate matter may come from a stationary or mobile source. Examples of stationary sources are combustion chambers (such as ovens, stoves and boilers), industrial processes and other non-mobile activities such as the use of aerosols and paint and the decomposition of fertiliser (ammonia). Mobile sources comprise means of transport (cars, lorries, diesel trains, inland vessels and aircraft) and mobile machinery with a combustion engine (such as agricultural tractors, forklift trucks and road construction machinery). This chapter focuses on emissions from mobile sources, devoting particular attention to cross-border trade and transit flows.

In the case of actual emissions the key criterion is that emissions take place on Dutch territory, including the Dutch part of the continental shelf in the North Sea. It makes no difference whether they result from a means of transport that is registered in the Netherlands or abroad. For example, the emissions of a cargo aircraft registered in Qatar but landing and taking off at Schiphol Airport are included in actual emissions on Dutch territory.

Corrections must be made in order to measure emissions from mobile sources associated with international trade and transit flows. First, goods transported through pipelines are disregarded, as emissions from items such as compressors and pump housings associated with this transport mode are included under emissions from stationary sources, even in the case of a cross-border goods flow. A second correction is necessary for supplies of goods into customs warehouses, known as entrepot flow. The associated emissions cannot yet be directly allocated to one of the three main trade flows. That is only possible once the goods have cleared customs. When these corrections have been made, there is a triptych linking international trade, transport and emissions.

Which emissions are included?

- **CO_2: Carbon dioxide**
  CO_2 is always released in the combustion of fossil fuels such as diesel or fuel oil in the engine of a vehicle, vessel or aircraft. Every kind of fossil fuel contains a certain amount of carbon, which attaches to oxygen in the air during combustion. Lower CO_2 emissions can only be achieved by cutting a vehicle's consumption by means of technical innovations or by choosing a different fuel with lower emissions per litre.

- **NOx: Nitrogen oxide**
  Although the word emissions is generally associated with CO_2, nitrogen oxide is a second important type of emission. When fossil fuels are burned in the engine of a lorry, aircraft or ship the oxygen reacts not only with the carbon in the fuel, but also, provided the temperature is high enough, with nitrogen in the air. That produces

3) Results of actual emissions on Dutch territory as determined on 4 June 2021.

nitrogen oxide. Nitrogen oxide is harmful to human and animal health and damages the environment. Combined with particulate matter (PM10), NOx can form smog. The extent of nitrogen oxide emissions is associated with efficient combustion: the more efficient the combustion, the lower the nitrogen emissions. Reducing nitrogen oxide emissions is a difficult process and in the case of diesel emissions, particulate matter and nitrogen oxide require special attention.

– **PM10: Particulate matter**
Particulate matter is a collective name for microscopically small particles of varied composition that occur in our air. The frequently used abbreviations PM10, PM2.5 and PM0.1 do not refer to the composition of the particulate matter but to the diameter of the particles. In the case of PM10 the particles have a diameter of less than 10 micrometres (0.01 millimetres). Particulate matter emissions from vehicles come partly from the exhaust, for example in the form of soot particles. Particulate matter is also released by the wearing of tyres and brakes and the overhead lines on the railway network.

8.3 Emissions to air related to international trade and transit flows

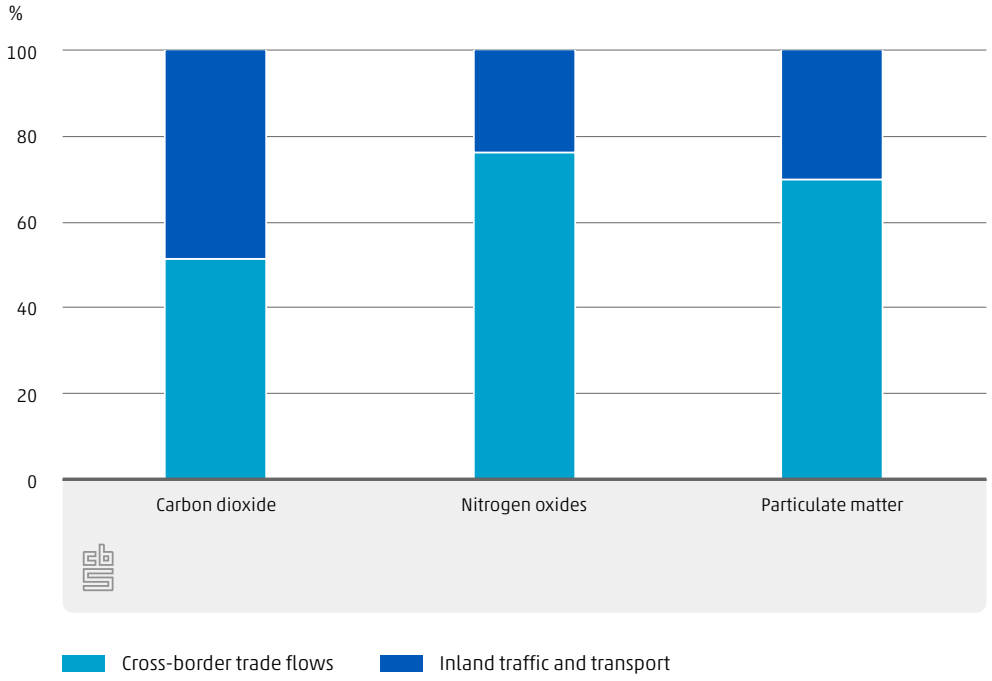
This section describes the extent and type of emissions associated with each international goods flow. It also states whether these emissions have increased or decreased over a 13-year period (2007–2019).

3.4% more CO_2 emissions due to cross-border transport

International trade and transit flows responsible for over half of freight transport emissions

The freight transport emissions resulting from international trade and transit flows differ depending on the type of emission. More than half (51.6%) of the CO_2 emissions related to freight transport in the Netherlands are associated with cross-border trade and transit flows (Figure 8.3.1 and Table 8.3.3). This component contributes 5.4% to total CO_2 emissions on Dutch territory (including stationary sources). More than three-quarters (76.4%) of the NOx emissions related to freight transport in the Netherlands are associated with cross-border trade and transit flows. In 2019 70.0% of the particulate matter emissions relating to freight transport in the Netherlands were associated with cross-border trade and transit flows. This component contributes 39.6% to the total emissions of nitrogen oxide on Dutch territory; in the case of particulate matter emissions the figure is 11.8%.

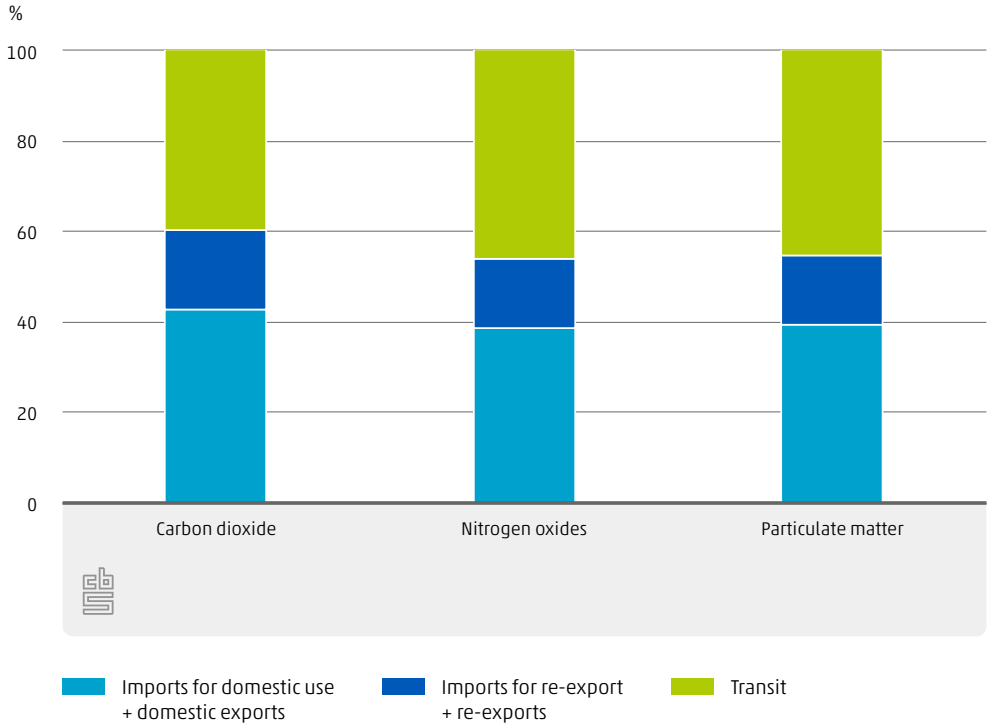
8.3.1 Breakdown of freight transport emissions, 2019



Re-exports contribute least to air pollution

Figure 8.3.2 shows the emissions of cross-border freight transport, subdivided by type of emission and type of main flow. Imports for domestic use plus exports of Dutch products in 2019 accounted for 43.2% of the CO_2 emissions related to freight transport caused by cross-border trade. In the case of NOx and particulate matter, transit trade accounted for the largest share of freight transport-related emissions caused by cross-border trade.

8.3.2 Freight transport emissions in cross-border trade flows, 2019



Lower CO_2 emissions from mobile sources, but higher CO_2 emissions from heavy goods vehicles

The overall picture is that CO_2 emissions from mobile sources in the Netherlands decreased slightly (–2.7%), but that emissions related to freight transport rose by 8.8% in the 2007–2019 period (Table 8.3.3). The actual CO_2 emissions associated with cross-border trade and transit flows increased by 3.4%. The share of total emissions from mobile sources in total emissions thus amounted to 23.1% in 2019, compared to 21.7% in 2007. The increase was due to growth in CO_2 emissions in all three international trade flows. The relative increase in the main flow of imports for re-export plus re-exports is the largest (15.7%), although the contribution from this flow to the extra CO_2 emissions was the smallest over this period.

8.3.3 Emissions to air on Dutch territory, transport of goods by main flows

	Carbon dioxide (CO2)		Nitrogen oxides (NOx)		Particulate matter (PM10)	
	2007*	2019*	2007*	2019*	2007*	2019*
	million kilograms					
Mobile sources: total	**41,554**	**40,424**	**324**	**236**	**18.4**	**8.2**
Related to freight transport	16,597	18,054	228	173	11.8	5.0
Cross-border trade and transit flows; total	9,015	9,321	162	133	8.3	3.5
Imports for domestic use + domestic exports[1)]	3,737	4,023	62	52	3.2	1.4
Imports for re-export + re-exports	1,411	1,632	23	20	1.1	0.5
Transit trade	3,460	3,708	65	61	3.4	1.6

1) The summations for the main flows do not correspond to the totals for cross-border flows as a result of flows via customs warehouses.

Smaller decrease in emissions of nitrogen oxide from cross-border flows than from total freight transport

The overall picture is different in the case of emissions of nitrogen oxide (NOx) and particulate matter from mobile sources in the Netherlands. Actual NOx emissions decreased by 27.0% over this 13-year period, from 324 million kilograms in 2007 to 236 million kilograms in 2019. The NOx emissions associated with cross-border trade and transit flows lagged behind, decreasing by only 18.1%. This decrease is also smaller than the decrease in NOx emissions by total freight transport (–24.1%) between 2007 and 2019. This takes the share of cross-border freight emissions in total emissions from mobile sources to 56.0%. 13 years ago it was 49.9%.

Cross-border flows show biggest decrease in particulate matter emissions

The actual particulate matter emissions from mobile sources decreased most over this period, by 55.3%. The PM10 emissions associated with cross-border trade and transit flows exceeded this figure with a decline of 57.8%. The decrease in particulate matter emissions was greatest in the main flow of imports for domestic use plus exports of Dutch products. This takes the share of cross-border freight emissions in total emissions from mobile sources to 42.7%. In 2007, the figure was 45.2%.

Most emissions to air are due to maritime transport

Table 8.3.4 shows which transport mode is responsible for particular emissions related to cross-border trade and transit flows and whether there was any increase or decrease over the observed 13-year period (2007–2019). There are considerable differences in the emission shares per transport mode, used for international goods flows (see infographic in section 8.2). Maritime transport has the largest share and cargo aviation has a very small

share. This pattern is also reflected in actual emissions relating to the transport modes. Maritime transport dominates all emission types.

8.3.4 Emissions to air on Dutch territory, transport of goods by transport mode

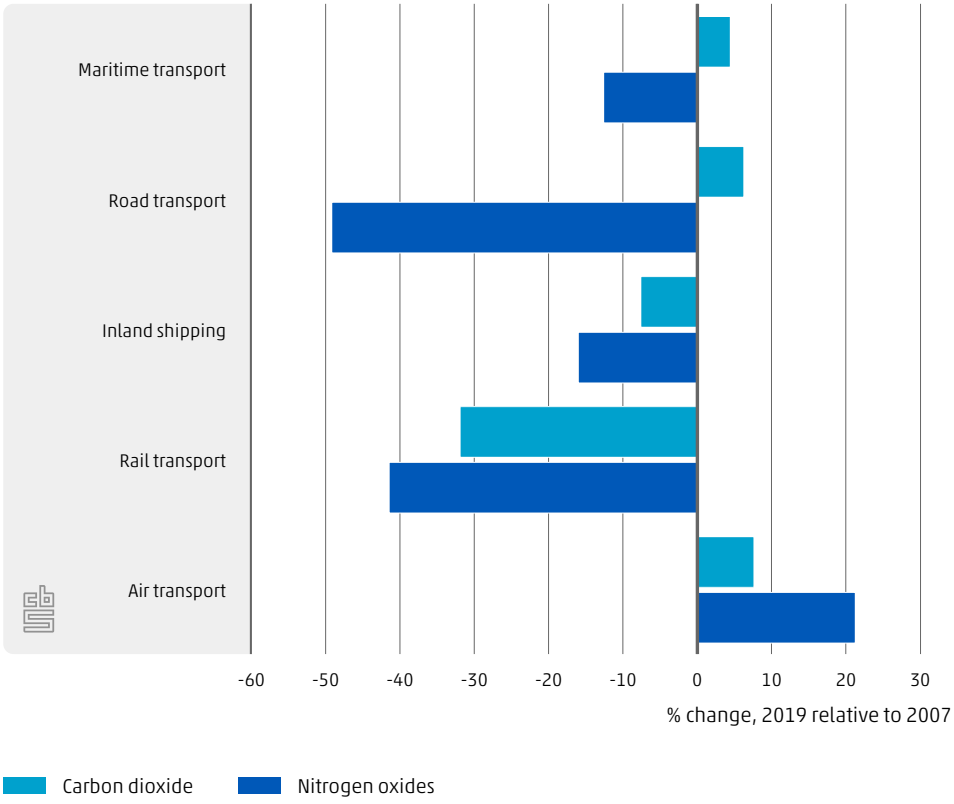
	Carbon dioxide (CO2)		Nitrogen oxides (NOx)		Particulate matter (PM10)	
	2007*	2019*	2007*	2019*	2007*	2019*
	million kilograms					
Mobile sources: total	**41,554**	**40,424**	**324**	**236**	**18.4**	**8.2**
Related to freight transport	16,597	18,054	228	173	11.8	5.0
Cross-border trade and transit flows; total	**9,015**	**9,321**	**162**	**133**	**8.3**	**3.5**
Maritime transport	5,125	5,353	122	107	7.1	2.9
Road transport	2,665	2,836	22	11	1.0	0.4
Inland shipping	1,081	1,001	16	13	0.2	0.2
Rail transport	63	43	2	1	-	-
Air transport	81	87	0	0	-	-

6.4% more CO_2 emissions as a result of cross-border trade transported by road

Growth in CO_2 emissions from international road transport, aviation and sea transport

There are differences, however, in the degree of increase or decrease in actual emissions between the transport modes (Figure 8.3.5). In the case of road transport, CO_2 emissions associated with cross-border trade and transit flows increased by 6.4% between 2007 and 2019. Only CO_2 emissions associated with aviation grew even faster over this period (+7.7%). This takes the road transport share in total emissions from mobile sources to 7.0%, a rise of 0.6 percentage points.

8.3.5 Developments in freight transport emissions related to cross-border trade, by transport mode



Road transport achieves biggest decrease in NOx emissions

Maritime transport, with a 45.2% share in total emissions from mobile sources, is responsible for the biggest contribution to nitrogen oxide emissions (Table 8.3.4). Actual NOx emissions from maritime transport related to cross-border trade and transit flows fell, however, by 12.5% between 2007 and 2019 (Figure 8.3.5). The decrease in NOx emissions was greatest in the case of road transport, at 49.2%. A key reason for this decrease is the increasing use of lorries with cleaner (Euro 6) engines (CBS, 2019). In the case of cargo aviation, an increase of 21.4% was recorded. In absolute terms this is a relatively small increase of 66,000 kilograms of nitrogen oxide.

Rise in particulate matter emissions due to inland shipping

Between 2007 and 2019, actual particulate matter emissions from inland shipping related to cross-border trade and transit flows increased by 15.5% (Table 8.3.4). With a 2.8% share in total mobile source emissions, inland shipping makes a limited contribution to PM10 emissions in the transport of cross-border trade and transit flows to, via and from the Netherlands. Both maritime transport and road transport recorded a sharp decrease of around 60%.

8.4 Emission factor for international trade and transit flows

Actual emissions are calculated by multiplying activity data, such as vehicle mileage and fuel consumption by the age of a vehicle to indicate the state of technology used in the engines and exhaust systems. This leads to an emission factor. The emission factor states the emission per unit of activity in a single figure, for example per kilometre travelled or per kilogram of fuel consumed. The same approach could be adopted for an emission factor for cross-border transport. This is a factor that states how many kilograms of goods can be transported (including across borders) for 1 kilogram of emissions.

Given the state of technology used in the various means of transport, an emission factor can be calculated for cross-border transport for emissions to air on Dutch territory in a particular year, on the basis of the number of kilograms transported in that year. It takes account of the fact that over time newer and cleaner technology becomes available that gradually replaces the old technology. It also takes account of the fact that the gross weight transported may change from year to year. Logistics changes, for example in the choice of transport method, can also play a role over a 13-year period.

Particulate matter emissions show the biggest improvement in the emission factor for cross-border transport

Table 8.4.1 shows the emission factor for cross-border transport for three types of emissions to air on Dutch territory and by main flow, for the years 2007 and 2019. The biggest improvement in the emission factor for cross-border transport can be seen in PM10 emissions. Compared to thirteen years ago, around 157.3% more international goods could be transported for each kilogram of particulate matter emissions in 2019. Put another way, whereas in 2007 almost 116,000 kilograms of goods could be transported for one kilogram of particulate matter emissions, in 2019 the figure was more than 2.5 times that amount. With regard to NOx emissions in 2019 it was possible to transport around 31.7% more goods internationally, per kilogram of nitrogen oxide emissions, than in 2007. With regard to CO_2 emissions the progress is limited, at barely 4.7%. In 2019 it was possible to carry 112 kilograms of goods exports, imports or transit trade per kilogram of carbon dioxide emissions, compared to 107 kilograms in 2007. As shown in Table 8.3.3, the amount of CO_2 emissions from cross-border transport increased by 3.4% over the 13-year period. Combined with the emission factor, it can be stated that the 8% growth in the weight transported over the 2007–2019 period did not lead to 8% more CO_2 emissions. Part of the growth in emissions was absorbed by the use of cleaner technology and innovations in the logistical process compared to 13 years earlier.

Little difference in emission load for the Netherlands across main flows

International trade flows, and hence also the required transport, are expected to grow further (ITF, 2021). Choices will have to be made when it comes to planning for the expected increase. Table 8.4.1 shows that the three main flows differ little when measured by emission factor, by emission type and hence in terms of the emission load for the country. In other

words, for each kilogram of CO_2 emissions approximately an equal amount of goods can be transported in transit, imported for re-export or imported for domestic use. A certain trade-off is also possible. The curbing of growth in the transported weight of one flow will already lead to lower emissions, or, put another way, the curbing of one flow frees up space for another flow to grow without causing an increase in actual emissions on Dutch territory (Roerink, 2021).

8.4.1 Emission factor for cross-border transport, emissions to air on Dutch territory, by main flows

	Carbon dioxide (CO2)		Nitrogen oxides (NOx)		Particulate matter (PM10)	
	2007*	2019*	2007*	2019*	2007*	2019*
	kilogram					
Cross-border trade and transit flows; total						
Kg cross-border transport per kg emissions	107	112	5,979	7,877	115,772	297,865
By main flows						
Imports for domestic use + dometic exports	104	106	6,251	8,230	122,259	306,899
Imports for re-export + re-exports	110	108	6,653	8,773	135,723	332,402
Transit trade	112	120	5,931	7,299	115,586	279,597

8.8% decrease in CO_2 emission factor for road transport

Among the individual transport modes, the CO_2 emission factor for cross-border transport declined most in the case of road transport (Table 8.4.2). In 2019, it was possible to transport 72 kilograms of goods across the border for each kilogram of carbon dioxide emissions. In 2007 the figure was 79 kilograms. That represents a decrease of 8.8%, which is a negative development. In the case of road transport, the technology or innovation in the logistical process was insufficient to keep pace with the growth of road transport in order to improve the ratio. It may also have to do with a decline in the load factor, for example the ratio of the average load to total vehicle freight capacity.

Of all transport modes, air freight has the lowest CO_2 emission factor on Dutch territory. The CO_2 emission factor for cross-border air freight deteriorated slightly by 20 kilograms per kilogram of CO_2 emission compared to 2007. An improvement can be seen, however, in the CO_2 emission factor for cross-border goods transported by seagoing vessels. The emission factor rose by 14.6% over 13 years. In the case of maritime transport the technology (such as cleaner fuel and exhaust systems) or innovation in the logistics process was certainly sufficient to improve the ratio. From 2020 new, stricter rules on fuel are once again being introduced, which will make seagoing vessels less polluting (Nagtzaam, 2019; ITF, 2020). Another important factor is the increasing scale of container transport by seagoing vessels. The continued globalisation of the economy, with production shifting partly to countries abroad, will have a further major impact on global supply chains in the years ahead. Another effect of this is ever greater competition and hence price pressure. The rising price pressure is prompting container shipping companies to pursue further increases in scale, for example through strategic alliances and the sharing of vessels (Pals, 2019). Since shipping companies are increasingly focused on costs, the size of the average ship has been growing for many years (Pals, 2019; Verberckmoes, 2018).

Rail transport has also clearly improved in terms of CO_2 emission per transported kilogram. In 2019 it was possible to carry 1.5 times more goods by rail for every kilogram of CO_2 emission than in 2007. Rail transport has been much more to the fore in recent years as an addition or even an alternative to maritime and air transport between Europe and Asia. It is environmentally friendlier than air transport and faster than transport by ship (ING Economisch Bureau, 2018; DSV, undated).

8.4.2 Emission factor for cross-border transport, emissions to air on Dutch territory, by transport mode

	Carbon dioxide (CO2)		Nitrogen oxides (NOx)		Particulate matter (PM10)	
	2007*	2019*	2007*	2019*	2007*	2019*
	kilogram					
Cross-border trade and transit flows; total						
Kg cross-border transport per kg emissions	107	112	5,979	7,877	115,772	297,865
By transport mode						
Maritime transport	99	114	4,166	5,697	71,583	211,189
Road transport	79	72	9,500	18,162	200,746	524,273
Inland shipping	200	197	13,824	14,993	1,072,635	846,147
Rail transport	476	746	19,115	34,742	-	-
Air transport	21	20	5,466	4,616	-	-

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Glossary

Air cargo transport
Carriage of goods by aircraft at Amsterdam and Maastricht airports. Air cargo flows encompass all transportation by airlines that includes carriage of goods, also in combination with carriage of passengers and mail, against payment. There is no data on domestic transport of goods in aviation. The scope is estimated to be so small that this data is not included in the total.

Born global
An enterprise which pursues international trade activities (goods or services) starting from the year of its establishment.

Cabotage and third-country transport
Carriage to and from third countries. Note: cross-border transportation of goods does not include carriage undertaken entirely abroad in Dutch vehicles.

Carbon dioxide (CO_2)
CO_2 is mainly produced when hydrocarbon fuels are burned. It is a greenhouse gas and leads to global warming.

Control of enterprises
The control of enterprises is determined on the basis of the country where strategic decision-making takes place. This control lies with the Ultimate Controlling Institutional Unit (UCI). Foreign control means that the country of residence of the UCI is a country other than the Netherlands.

Cross-border goods transport
Goods transport between the Netherlands and other countries, in which either the place of loading or the place of unloading is outside the Netherlands. It concerns the carriage of goods by both Dutch and foreign means of transport in relation to Dutch territory with the place of either loading or unloading situated in the Netherlands. Cross-border goods transport does not include carriage undertaken entirely abroad in Dutch vehicles (cabotage and third-country transport). Cross-border goods transport also does not include carriage by delivery vans.

Discontinuing exporter
A discontinuing exporter is an enterprise which does not export goods or services in year T, nor in T-1, but which did export these goods or services in year T-2. The enterprise must still be in existence in year T in order to be listed as discontinuing exporter.

Domestic exports (Dutch-manufactured exports)
Exports after production in the Netherlands, or after significant processing of foreign-produced goods (taking into account the level of adjustments in the product's HS code). Re-exports and domestic exports combined constitute the basis of total Dutch export figures.

Dutch business economy
The General Business Register (ABR) is based on the Dutch Standard Industrial Classification (SBI) which classifies business units according to their main activity. The business economy in the Netherlands comprises all enterprises listed in the Standard Industrial Classification (Dutch SBI 2008) sections B up to and including N, exclusive of K plus S95. This classification is referred to internationally as non-financial business economy.

This category is composed of the following sectors:
B Mining and quarrying
C Manufacturing
D Production and distribution of and trade in electricity, gas, steam and air conditioning supply
E Water supply; sewerage, waste and wastewater management and remediation services
F Construction
G Wholesale and retail trade; motor vehicle repair
H Transportation and storage
I Accommodation and food service activities
J Information and communication
L Renting, buying and selling of real estate
M Consultancy, research and other specialised business services
N Renting and leasing of tangible goods and other business support services
S95 Repair of personal and household goods

Emissions
Actual emissions to air from stationary and mobile sources on or above Dutch territory and the Dutch part of the Continental Shelf (DCS). The emissions are calculated by multiplying data on activities, for instance vehicle kilometres and fuel consumption, by emission factors.

Emission factor
Emission per activity unit, for example per kilometre travelled or per kilogram of fuel consumed.

Emission factor for cross-border transport
Factor indicating how many kilograms of goods can be transported across borders with 1 kilogram of emission.

Enterprise
The actual transactor in the production process, characterised by self-sufficiency with respect to the decisions about that process and by offering its products to third parties. An enterprise comprises one or several legal entities. A distinctive feature is the autonomy in the decision-making with regard to production taking place within this composite entity. The Dutch component of an entity whose activities extend across multiple countries is considered an enterprise in itself for the sake of national statistics.

Enterprise group
'The statistical unit of the EU's production system, consisting of the smallest combination of legal units (or equivalent). It is an organisational unit that produces goods and services and has a certain degree of independence in power of decision, especially with regard to how its current assets are used. It may consist of one or more legal units and carry out one or more activities in one or more locations. See also: enterprise.

Entrepreneur
A person who works for his/her own account and risk in his/her own company or practice (self-employed) or as a salaried director of his/her own company (director-major shareholder).

European Continental Shelf
The Continental Shelf is an area that is located between the low water mark and a water depth of 200 metres, and a maximum of 200 miles from the coast. Between 1960 and 1975, the North Sea states concluded treaties to define the land borders on the Continental Shelf. Actual emissions from transport and mobile equipment with engines, including foreign means of transport and shipping on the Dutch part of the (European) Continental Shelf (DCS) are part of the mobile sources.

Export earnings
The value of gross exports minus the consumption of imported raw materials, intermediate products and support services.

Exports
The sum of Dutch domestic exports and re-exports.

Foreign Direct Investment (FDI)
An enterprise receiving direct investments from abroad is an enterprise in which a foreign investor holds at least 10% of the ordinary share capital or the voting rights, or the equivalent thereof. This involves having a controlling interest and substantial influence on the management of the enterprise. Direct investment consists of share capital, participating interests in group companies abroad and credit lending.

Foreign-owned enterprise
A foreign-owned enterprise is classified according to the country where it is ultimately controlled. This is done based on the Ultimate Controlling Institutional Unit (UCI). The UCI is defined as that enterprise which is placed higher up in the chain of control of the Dutch enterprise that is not under the ultimate control of any other company or enterprise. Foreign control means that the country where the UCI is established is not the Netherlands.

Foreign subsidiary
If a Dutch company holds a majority stake in a foreign company, this company is a subsidiary of a Dutch company, or a foreign company under Dutch control. There is no minimum amount of investment or minimum share of voting rights in the foreign company. Such investments abroad, made by a company in the Netherlands and under Dutch control (Dutch multinational), are aimed at building up a lasting interest in a foreign company.

FTE
A measure of labour volume, calculated by converting all full-time and part-time jobs to full-time jobs. Two half-time jobs (0.5 FTE each) add up to a labour volume of one labour year.

Gross domestic product (GDP)
GDP is a measure for the size of a country's economy. This is calculated from the sum of the value added by enterprises, households and governments to the goods and services they have used in their production activities. This sum is referred to as the value added at basic prices. To arrive at GDP at market prices, the balance of taxes on production plus other subsidies is added as well as the difference between the attributed VAT and paid VAT.

Gross weight
Estimated gross weight of goods transported expressed in thousands of kilograms. Gross weight includes the weight of the goods and packaging, but excludes the weight of the container in which the goods are transported.

Imports
The sum of imports for domestic use and imports for re-export.

Imports for domestic use/expenditure
Goods, destined for Dutch residents, transported from a foreign country into the economic territory of the Netherlands. Included are raw materials needed for processing in the production process, semi-manufactures, fuels and fixed assets earmarked for investment.

Imports for re-export
Goods entering the Netherlands which are (temporarily) owned by a resident of the Netherlands and subsequently leave the Netherlands without having undergone any significant industrial processing.

Import intensity
The import intensity ratio is an indicator of the degree of international competitive pressure in the local market. It is expressed as a percentage share which shows to what extent domestic demand for goods or services depends on foreign imports. The higher the import intensity ratio, the larger the contribution of imports in meeting the total demand for goods and services.

Inbound transport; total
The total of goods carried into the territory of the Netherlands. Excluded is transit without transhipment on Dutch territory. Total inbound transport is equal to the sum of imports, inbound quasi-transit, inbound transport transit and the warehouse balance.

Independent SMEs
Independent small and medium-sized enterprises (SMEs) comprise all businesses in the Netherlands owned by Dutch residents with total numbers of employed persons in the entire organisation falling below 250.

Inland shipping freight transport
Traffic and transport by inland vessels, including foreign vessels, on Dutch waterways.

Intellectual property
A collective term for rights granted on detailed ideas and concepts, for example patents, trademarks and copyrights.

Intermediate goods
Inputs in the production process, such as raw materials, semi-manufactures and fuels. An intermediate product is used during the production process. It is often transformed and then incorporated into the end product. Intermediate goods are therefore used to make other products.

Internationally active enterprise
A company is internationally active when it is a multinational enterprise, or when it conducts international trade in goods and/or services.

Internationally active entrepreneur
Entrepreneur who trades internationally or is at the helm of a multinational.

International production chain (global value chain)
An international production chain comprises all activities – in more than one country – that are required to deliver a product or service from the concept phase through the various production stages to end users and post-use processing.

International trade in goods
International trade in goods involves Dutch residents who deliver goods to locations outside the Netherlands, and residents abroad who deliver goods to locations in the Netherlands. In intra-EU imports, this is the value of the goods including freight and insurance costs up to the Dutch border. In extra-EU imports, this is the value of the goods including freight and insurance costs up to the external border of the European Union. The export value is including freight and insurance costs up to the Dutch border. This is in line with the International Trade in Goods (ITG) statistics.

International trade in services
International trade in services occurs when a resident of one country provides economic services to residents of another country. Services are products that are generally not tangible, such as transportation, business services and personal, cultural and recreational services. Dutch residents refer to enterprises and individuals that engage in economic activities from any location in the Netherlands that has been in use for more than one year.

Investments in tangible fixed assets
Goods which are purchased or produced in-company for use as capital assets in the production process. This includes goods that have a life span exceeding one year, such as buildings, dwellings, machinery, transport vehicles and the like.

Large enterprise
All companies established in the Netherlands as part of a group of companies with at least 250 employed persons and/or part of a group of companies under foreign control.

Mainport
A hub where important connections and activity flows in both the Netherlands and abroad conjoin and separate again.

Maritime freight transport
Traffic and transport by seagoing vessels to and from Dutch seaports and on the Dutch portion of the continental shelf. Emissions from stationary seagoing vessels in ports and sailing and manoeuvring seagoing vessels on Dutch territory contribute to the actual emissions.
Data on domestic maritime freight transport is not known. The scope is estimated to be so small that such data is not included in the total.

Mobile sources; total
Mobile sources are means of transport and mobile equipment with a combustion engine, including foreign means of transport and shipping on the Dutch part of the (European) Continental Shelf.

Multinational
An enterprise with a parent or subsidiary abroad. See also: foreign subsidiary.

Nitrogen oxides (NO_x)
Nitrogen oxides are produced during all forms of high-temperature combustion, for example in an internal combustion engine. Compared to petrol, diesels produce more NO_x, because combustion takes place at higher pressure and consequently at a higher temperature.

Non-multinational
An enterprise without a parent or subsidiary abroad.

Outbound transport; total
The total of goods which has been carried from the territory of the Netherlands to a foreign country. Excluded is transit without transhipment on Dutch territory. Total outbound transport is equal to the sum of exports and outbound transit trade.

Outsourcing
International outsourcing of business activities to foreign suppliers.

Pipeline transport
The transport of liquid and gaseous cargo via pipelines.

PM10 (Particulate matter)
Particulate matter (PM10 = particulates with diameter smaller than 10 micrometres).
Among other causes, PM10 is formed during the combustion of diesel oil, various industrial processes,wear and tear on tyres and brakes , and storage and transhipment. Detrimental to health, penetrates deep into the lungs.

Quasi transit trade
Import of foreign goods that undergo little or no processing upon arrival in the Netherlands and are then forwarded again to a foreign country. The goods are owned by a foreign company while they are in the Netherlands (as opposed to re-exports). Furthermore, at least one of the following administrative tasks must be completed in the Netherlands in order to be deemed quasi transit.

- Upon arrival in the Netherlands, goods from outside the EU are cleared through customs;
- The goods leave the Netherlands and the EU and an export document is drawn up by customs;
- The international goods are stored in the Netherlands for at least one day. This makes the owner subject to VAT and therefore the owner has to register for VAT.

The quasi transit is not part of the Dutch trade figures, but is included in the European trade figures (Eurostat). See also: transit trade.

Rail freight transport
Traffic and transport using Dutch and foreign railway equipment on the Dutch railway network. It includes emissions from diesel traction freight transport, but not emissions due to electricity generation. In addition, emissions (particulate matter) due to wear and tear of overhead wires and the pantographs in electric traction.

Re-exports
Goods which, after being imported into the Netherlands, undergo little or no significant processing before being exported from the Netherlands again. Unlike in quasi transit trade, the goods are (temporarily) owned by a resident enterprise while in the Netherlands. Re-exports and domestic exports combined constitute the basis of total Dutch export figures.

Road freight transport
Traffic and transport by vehicles specially equipped for the carriage of goods by road.
It concerns goods transport with Dutch and foreign means of transport in relation to Dutch territory with loading or unloading in the Netherlands. These are lorries, trailers and semi-trailers, and delivery vans.

Royalties
Remuneration payments for the ongoing use of someone else's intellectual property rights. Examples include copyrights, trademark rights and patent rights.

Special Purpose Entity (SPE)
Special Purpose Entities (SPEs) are subsidiaries of foreign enterprises which are established in the Netherlands that act as cross-border financial intermediaries between various composite entities of the group in which they operate. The receivables and liabilities of these institutions usually concern direct investments from one country to another via the Netherlands, or channelling of resources collected abroad to the foreign parent. In this respect, SPEs are dedicated legal entities concerned with securitisations. As part of the securitisation transaction, an SPE takes over assets and/or credit risks and issues securities, securitisation fund units, other debt instruments and/or financial derivatives, or is the owner of any underlying assets. An SPE is safeguarded against the risk of bankruptcy or other default of the initiator (also referred to as 'originator', for example the institution transferring assets and/or credit risks to the SPE).

Starting exporter
A starting exporter is an enterprise that exports goods or services in year T, but did not (yet) do so in both years T-1 and T-2, irrespective of the existence of the enterprise in those years.

Stationary sources
Fire sources (such as furnaces, stoves and boilers), industrial processes and other non-mobile activities such as the use of aerosols and paint and decomposition of manure (ammonia).

Transit trade
The sum of quasi transit, transport transit and warehouse transit.

Transport mode
The means of transport by which goods are transported across the Dutch border. Possible transport modes are: maritime transport, inland shipping, road transport, rail transport, air transport and pipeline transport. If the goods are means of transport that move across the border by themselves, the transport mode is equal to the transport means.

Transport transit trade
Goods which, in transit from one country to another, pass through Dutch territory and are transhipped from one means of transport to another or are temporarily stored in a customs warehouse, but are not cleared by Dutch customs and remain in foreign possession. These goods may be under customs supervision during the entire time they are in the Netherlands or they were already in free circulation before coming to the Netherlands. Excluded is transit trade without transhipment on Dutch territory.

Two-way trader
An enterprise or business establishment which both imports and exports either goods or services. This is unlike what is called a one-way trader, which is either a one-way importer or a one-way exporter.

Value added
The gross value added equals the production (in basic prices) minus intermediate consumption (excl. deductible VAT).

Warehouse traffic
Transit customs goods that are stored in a warehouse for a certain period of time after arrival in the Netherlands (a storage place for goods subject to import duties that have not yet been cleared). After release from the warehouse, goods can go directly abroad (warehouse transit) or be released in the Netherlands. In the latter case, the goods are imported, whether or not followed by re-export, or quasi-transit. This depends on the final destination and who is or will be the owner of the goods. The difference between storage in the warehouse and the release for free circulation in the Netherlands is called the warehouse balance.

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