



Centraal Bureau
voor de Statistiek

Report

Microdata time series 2012-2016

International trade in services

Roos Smit

Khee Fung Wong

This study was commissioned by the Ministry of Foreign Affairs. No new surveys were carried out for the purposes of the study. The results were produced by combining existing data.

CBS Heerlen

CBS-weg 11
6412 EX Heerlen
Postbus 4481
6401 CZ Heerlen
+31 (0)45 570 6000
www.cbs.nl

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Executive summary

In follow-up to the development of an integrated microdata set for international trade in services over 2014, Statistics Netherlands (CBS) has produced a time series for the 2012-2016 period. This too has been commissioned by the Ministry of Foreign Affairs. The times series will enable an analysis over time of the trends in international trade in services according to business characteristics, for subpopulations and in effects studies. To our knowledge, Statistics Netherlands is a global leader in this field.

On the basis of the study performed by Smit and Wong in 2016, Statistics Netherlands developed an enhanced methodology that allows for more accurate and more consistent estimates. Furthermore, various recommendations from the study have been explored and implemented where possible. The time series aligns much more closely with the international trade in services statistics (Smit and Wong, 2017). In the original 2014 microdata set the estimated imports deviated from the figure in the international trade in services statistics by 17%. This was improved to 5% for 2014 and 3% for 2016. The allocation of the value of the largest service traders by enterprise level has also been improved. This has significantly improved the quality of the breakdown of import and export values by, for example, business characteristics (Smit, 2017). An attempt has also been made in the time series to produce an estimate of the services traded by each company (Smit and Bruls, 2017). Better insight into the type of service imported and exported per company can help answer questions about the company's position in the value chain, the difference in growth potential between the exports of various services, as well as the shift from goods-only exports to combined goods and services exports. Unfortunately, it did not prove possible to devise an effective methodology for this purpose, so this recommendation will therefore be preserved for a future study.

The creation of the 2012-2016 microdata time series for international trade in services has produced many new insights. The number of traders in international services increased by 50% between 2012 and 2016, much more than the total business population growth of 9%. In 2016, 306,000 companies traded in services internationally, which amounts to 1 in 5 companies in the Netherlands. More than 87% of these companies imported services. The value of services traded in the EU grew by 44% in the 2012-2016 period. In 2012, imported services were worth €73 billion, and exported services €86 billion. Five years later these figures had increased to €106 billion and €114 billion respectively. This represents an import growth of €33 billion and an export growth of €28 billion.

Established two-way traders, i.e. companies that both import and export services, had the greatest impact on the total import and export growth between 2012 and 2016. New two-way traders made the second biggest contribution to this growth, but there was little difference between them and the established two-way traders, especially in terms of export value. In the case of companies that only import or only export services, it is interesting to note that growth among new importers and new exporters is stronger than that among established importers and exporters.

The bulk of international trade in services, 85% of the total value, is traded by a small number of large companies. Over 80% of service importers import services worth less than €5,000 per year. Medium-sized enterprises (companies with between 50 and 250 employees) are the most frequent importers of services. In 2016, 59% of these companies imported services. The manufacturing sector is the most important sector in terms of service imports. However, it is only the fifth largest sector for exports. The transportation and storage sector and the specialised business services sector each account for 24% of the total export value. The most rapid growth in service imports and exports can be found in the information and communication sector and the renting and leasing sector. Foreign-owned companies are gaining in importance. In 2016 this small group of companies accounted for 68% of the total import value and 60% of the total export value.

Outside the EU, the import value grew more rapidly, by 47%. Extra-EU exports grew more slowly in 2016, at 21%. The most important countries in terms of value are the United Kingdom and Germany. The most popular import country (56% of companies) is Ireland. The most popular countries for exports are Belgium (51%) and Germany (44%).

Recommendations for follow-up studies are given in chapter 4. The allocation of the largest service traders from enterprise to business level will need more structural approach to enable Statistics Netherlands to make effective breakdowns in the future. The current category 'companies with one working person' would be made much more applicable if a proper definition of 'self-employed' was available. Statistics Netherlands is currently unable to make this distinction, but a solution should be developed. There is also a lack of information relating to services trade with countries outside the EU. A number of solutions have been put forward and are now being investigated. Finally, it is recommended that the remaining discrepancies between the microdata and the observed data be narrowed by enriching the observed data with information from the microdata and visa versa.

1. Introduction

The international playing field has changed significantly in recent decades. Thanks to the internet and digital communication, the entire world is now within reach. Distance has become a far less important factor when purchasing goods and services. Digitalisation has made it easier to buy goods and services produced far away from home. It has also made it easier to have one's 'own' goods and services produced elsewhere. If a product or service can be made more economically in another part of the world, it can be attractive to outsource production. This has led to the further expansion of global value chains, where value is added to the end product in various countries (OECD, 2013).

These trends are becoming increasingly visible in international trade in services. For example, imports of IT services (software development, webhosting and systems maintenance) from the Middle East and East Asia more or less doubled to almost €1 billion between 2014 and 2016. Imports of advertising and telemarketing services almost tripled over this period. In 2016, imports of such services from this region exceeded €0.5 billion (Statline, 2017).

Dividing up production processes changes not only the way products and services are made but also the role of producers in the Netherlands. It is virtually impossible for domestic companies to compete with Asian companies on price (Wu et al., 2006), which fuels concerns that the entire production of goods and certain services will disappear from the Netherlands and other Western economies, along with the associated jobs. However, producers appear to have found a solution to this loss of production in the form of servitisation. Servitisation is the innovation of an organisation's capabilities and processes to better create mutual value through a shift from selling products to selling product-service combinations (Neely, 2008). More and more manufacturers are no longer focusing solely on selling their product, but are now also offering supporting services, such as installation, instruction, maintenance and repair. By doing so they are offering a full-service package, ensuring that their customers always have a proper functioning product. Manufacturers may opt for this strategy for a number of reasons. Providing more activities boosts revenues and ties customers to a manufacturer for a longer period of time. It also makes it more difficult for other companies to enter the market in question (Blanchard et al., 2017). Increasingly, products are being leased from manufacturers instead of being purchased. This guarantees customers a high-quality product and fixed monthly costs, and guarantees the manufacturer stable revenues. However, it does entail a sudden transition from goods trader to service provider.

The trend triggered by digitalisation and the emergence of servitisation has made international trade, especially that in services, more important to the economy. The Netherlands earns almost one third of its gross domestic product (GDP) from international trade, with goods accounting for 20% of GDP and services for over 11% of GDP (Statistics Netherlands, 2016a). The share of international trade in services in the GDP has increased in recent years because international trade is generally growing faster than domestic expenditure. Between 1995 and 2015, the share of international trade in services in GDP rose by 3 percentage points (€20 billion). The shift from local to international and from goods to product-service combinations raises many questions. Until last year, it was not

possible to answer basic questions regarding international trade in services. For example, it was not known how many service traders there were in the Netherlands, in which sectors they were active or whether trade was primarily with EU countries or countries outside the EU. To solve this problem, the Ministry of Foreign Affairs commissioned Statistics Netherlands to compile a microdata set for international trade in services by combining various already existing and some new sources. Smit and Wong (2016) described the steps taken in creating this data set, and a number of initial analyses were carried out on it. Further analyses were published in the Internationalisation Monitor for the second quarter of 2016 (Statistics Netherlands, 2017).

Now that the first step towards obtaining more information about international trade in services has been taken, it is time to carry out a follow-up. Several of the recommendations made by Smit and Wong (2016) concerned making significant improvements to the quality of the data. There were also questions regarding international trade in services that needed to be answered, but little could be said about trends among companies involved in this trade given the relatively short period of just one year. The Ministry of Foreign Affairs therefore asked Statistics Netherlands to look at the recommendations made by Smit and Wong (2016) and develop a methodology that could produce a time series for the years 2012 to 2016.

This report is structured as follows. Chapter 2 has a short introduction on the methodology used, but mainly focusses on the scope of the population. The knowledge gained from the time series and various breakdowns of this series is described in chapter 3. Finally, chapter 4 sets out the recommendations made on the basis of this study.

2. Short methodology and Scope

2.1 Methodology

The starting point for the 2012-2016 time series is the method devised to make the 2014 micro data (Smit and Wong, 2016). In order to make coherent choices for all years a method was devised to use the information from the tax and survey data for all years in considering the best choice (services or no services, all intra-EU trade or some extra-EU, etc.) for each record.

Also some recommendations from the 2016 Smit and Wong report were implemented. Considerable attention has been paid to the found difference between the estimate of the international trade in services by the 2016 Smit and Wong research compared to the international trade in services statistic. As a result the international trade in services statistics and the estimation method are now much better aligned (Smit and Wong, 2017).

Another recommendation of Smit and Wong (2016) that has been implemented is the revised allocation of the larger service traders by enterprise level (Smit, 2016). This part of the project has also been successful, significantly boosting the quality of the time series. According to Smit (2016), the experts at the largest companies attributed the observed data for international trade in services to the correct companies within the group for 2015. This information was used in this time series for all years, in combination with data from logbooks from recent years.

2.2 Scope

The above described methodology is devised to obtain as complete a picture as possible of companies involved in international trade in services. In order to produce an optimum data set, a number of choices were made, as set out in this paragraph.

The international trade in services statistics tries to provide an accurate picture of service-related transactions between all Dutch residents and entities and foreign residents and entities. This is a relatively broad population, which includes services provided by government organisations, services provided or received by private individuals, services that are not easily attributed to companies and financial flows within multinationals that add little value to the Dutch economy (re-exports of services). This population is larger than the group of interest for most (policy related) questions, which primarily focus on companies in the business sector that actively import or export services (excluding re-exports). For the purposes of this study we defined the research population as follows:

Limiting the population for this study means that certain sets of statistics on international trade in services will not be included below. Table 1 shows how this affects the number of traders and the import and export values.

<u>Businesses</u>	This study focuses only on international trade in services carried out by businesses and not by private individuals.
<u>Business sector</u>	In this study the business sector comprises all sectors that are not primarily publicly funded. This excludes the public administration (CBS standard industrial classification code SBI 84), education (SBI 85) and care (SBI 86, 87, 88) sectors from the research population.
<u>Active</u>	The total of the international trade in services includes expenditure by foreign visitors to the Netherlands. This represents the export of travel-related services provided primarily by the Dutch hotel and catering sector and retail trade. Because these companies do not actively decide to export these services, expenditure by foreign visitors to the Netherlands has not been included in this study.
<u>Re-exports (financial sector)</u>	Some multinationals in the Netherlands have little active involvement in the export of services, but do facilitate sizeable financial flows through the Netherlands by the enterprise group they form part of. This is known as the re-export of services. The export and import values of these financial flows are often high and almost identical. Although these re-export flows have a significant impact on the total export and import values, they add little value to the Dutch economy, which is why they have not been included in this study. The companies in question belong to the financial sector, a sector which in itself is hard to include in this study. ¹ Furthermore, there is no accurate information available on ownership of businesses in this sector. For these reasons it was decided to exclude the entire financial sector in this study (SBI 64, 65, 66).

Excluding the financial sector from the study has a significant impact on trade value but has little effect on the number of companies. Furthermore, in table 1 the difference between the estimate made using the method described in paragraph 2.1 and the figure calculated on the basis of the international trade in services statistics for Statline is significantly lower than in the previous study. The €3 billion (2%) discrepancy for exports is comparable to that noted by Smit and Wong (2016), and even a slight improvement. Following the study by Smit and Wong (2017), the import figures (both the observed and estimated data) were adjusted, and for good reason. In the original 2014 data set the estimated imports deviated from the observed figure in the international trade in services statistics by 17%. The discrepancy for 2016 was only 3%. For exports, this percentage is also around 2% for the other years in the time series. For imports, 2016 is the year with the smallest discrepancy. In previous years the difference was a little over 5%.

¹ The financial sector in the Netherlands is primarily monitored by De Nederlandsche Bank (DNB). The international trade in services statistic combines the survey data from the companies active in the field (excluding such factors as re-exports by companies and banks) with various figures regarding the financial sector obtained from DNB and a number of other sources.

Table 1: Research population compared with international trade in services statistics (2016)

	Value (billions of euros)		Number of companies (x 1,000)	
	Import	Export	Import	Export
Research population	106	114	269	70
Financial sector (SBI 64, 65, 66)	46	40	3	3
Government organisations and private individuals (SBI 84, 85, 86, 87, 88, 98, 99)	1	2	1	1
Travel	17	12	n/a	n/a
Difference between estimated and observed figure	-3	3		
Total	167	171	272	73

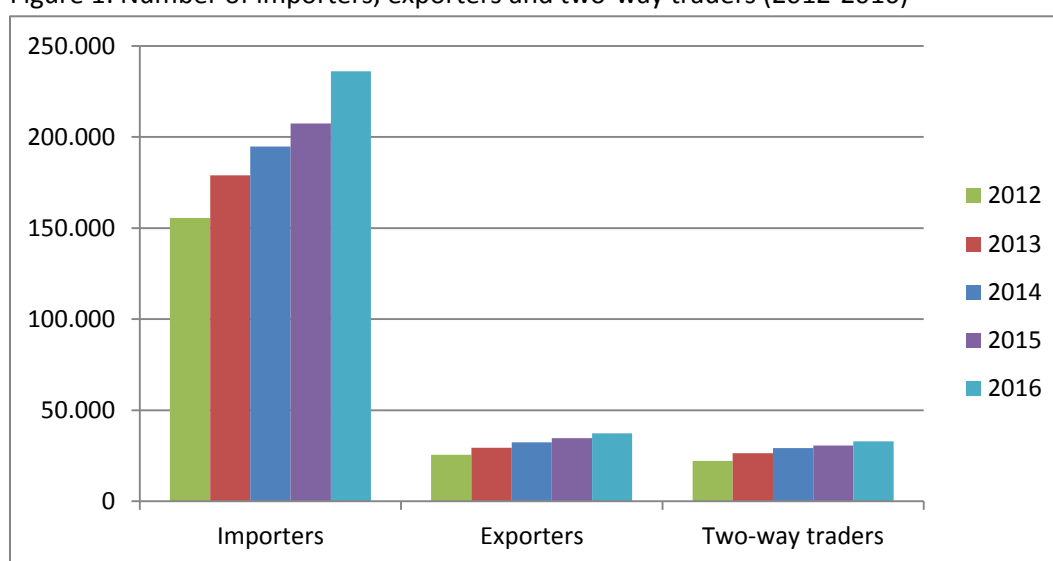
Smit and Wong (2016) decided that estimates for one specific year should match the international trade in services statistics as far as possible. To achieve this, a macro estimate adjustment was made for transport services by enterprise level, and the differences between the observed and estimated data were uniformly corrected on the basis of the estimated figures. When compiling a time series, distributions of this kind are not desirable. Applying a correction factor that differs from year to year across all entities can potentially produce distorted growth patterns. Furthermore, the fact that there is so little difference between the observed and estimated figures means that there is less of a need to adjust the estimate. The results set out in chapter 4 therefore relate to the defined research population, with the total import and export values differing by a few per cent from the figures generated on the basis of the international trade in services statistics.

3. Results

Based on the research population and methodology described above, a time series of integrated microdata sets was created for international trade in services for the 2012-2016 period.

In 2012, 203,000 companies traded in services internationally. Of these companies, 155,000 imported services, just under 26,000 exported services and 22,000 both imported and exported services (two-way traders). Figure 1 shows that four years later, the number of companies totalled 306,229; an increase of almost 50%. The biggest growth (52%) occurred among the importers, especially between 2015 and 2016 (14%), when there were over 28,000 new importers.

Figure 1: Number of importers, exporters and two-way traders (2012-2016)



Between 2012 and 2016 the total import value rose by €33 billion to €106 billion, as can be seen in table 2. Despite the considerable increase in the number of importers, the import value of companies that only import services only grew by €2 billion to €14 billion. The two-way traders account for the remaining growth of €31 billion. In 2016 they imported over 50% more than in 2012.

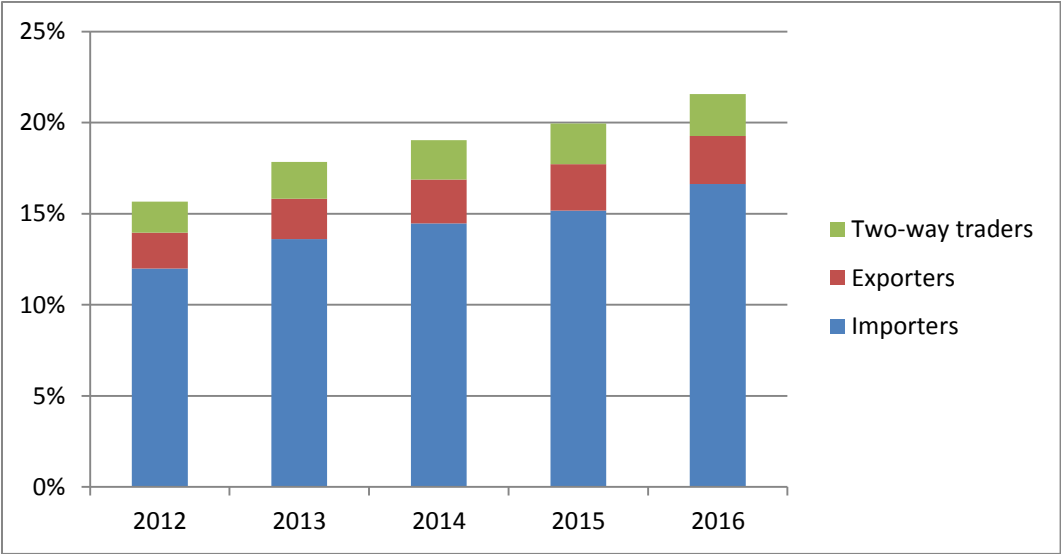
When it comes to exports, there was no difference between exporters and two-way traders. Both types of traders saw their export value increase by approximately one third. In 2016 the research population exported services worth €114 billion; €28 billion more than in 2012.

Table 2: Import and export values by trader type in billions of euros (2012-2016)

	Import value (billions)					Export value (billions)				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Importers	12	12	12	13	14	-	-	-	-	-
Exporters	-	-	-	-	-	7	8	9	10	9
Two-way traders	61	66	78	89	92	79	85	94	102	105
Total	73	78	90	102	106	86	93	103	112	114

Figure 2 compares the number of companies that trade internationally in services with the total number of companies. Here too there is a significant increase to be seen over the period under review. In 2012, 16% of companies were active in international trade in services. In 2016 this had risen to 22%, i.e. more than 1 in 5 companies. This growth is not related to the increase in the number of companies in the research population. More and more companies are becoming active in international trade in services, in both absolute and relative terms.

Figure 2: Number of companies active in international trade in services by trader type compared with total number of companies within the research population (2012-2016)

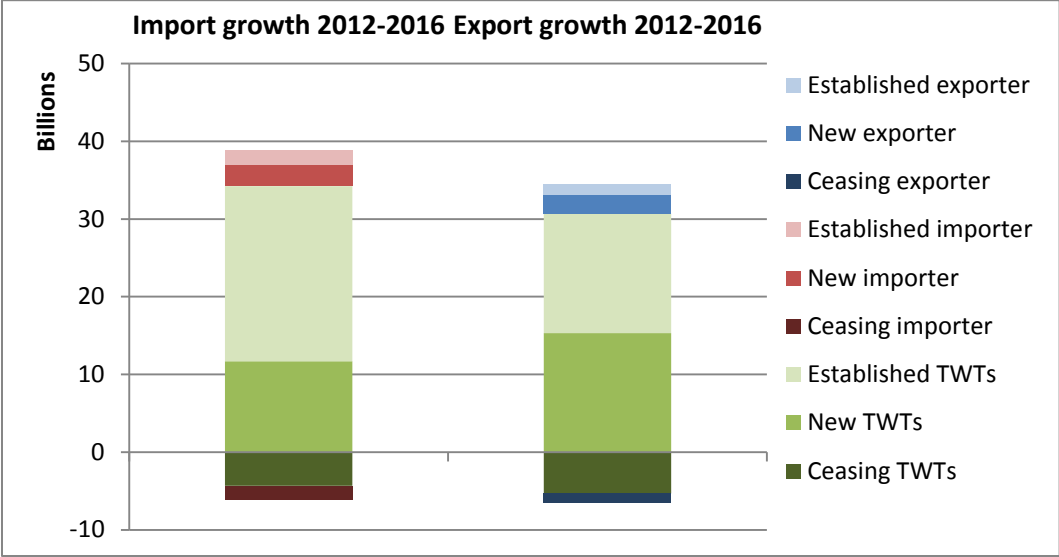


The increase in the number of service traders led to only a limited increase in trade in services. Figure 3 gives a breakdown of the increase in the total import and export values among the various types of traders (those ceasing, starting or continuing trade). Established two-way traders (TWTs), i.e. companies that both import and export services, had the greatest impact on the total import and export growth between 2012 and 2016. New two-way traders made the second biggest contribution to this growth, but there was little difference between them and established two-way traders, especially in terms of export value.²

In the case of companies that only import or only export services, it is interesting to note that growth among new importers or exporters is stronger than that among established importers or exporters. In absolute terms there are more new traders than established traders among companies that only trade in one category. The established traders have more of an impact on the growth per company than the smaller new traders.

² Two-way traders were defined per year in previous analyses. This analysis defines a two-way trader as one that imported and exported services in 2012, 2016 or in both years.

Figure 3: Growth in imports and exports by trader type in billions of euros (2012-2016)



3.1 Trade in services by value

Many of the companies that trade internationally in services make only a small contribution to the total. Over 80% of importers purchase services worth less than €5,000 from abroad (see table 3). These small import amounts are often payments to foreign companies to make the trader easier to find online or to purchase software licences.

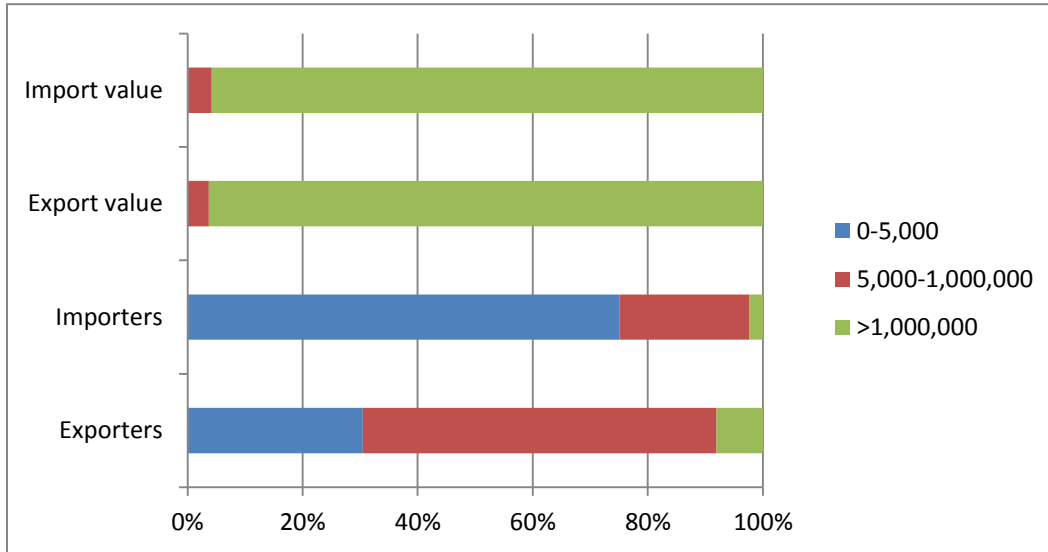
Table 3: Numbers of traders by service value (2016)

	Importer	Exporter	TWT	Total
€0 - €5,000	195,942	15,342	6,006	217,290
€5,000 - €1,000,000	38,784	21,155	21,961	81,900
> €1,000,000	1,378	741	4,918	7,037
Total for all traders	236,104	37,238	32,885	306,227

Exporters and two-way traders tend to trade in larger amounts. The majority of these companies trade between €5,000 and €1 million per quarter. In 2016 a little over 7,000 companies imported or exported services worth over €1 million.

As is to be expected, the many minor importers contribute little to the total import value, as can be seen in figure 4. Only 2% of importers and 8% of exporters (including two-way traders in both cases) have traded in services worth more than €1 million, but these companies account for 96% of the total import and export values.

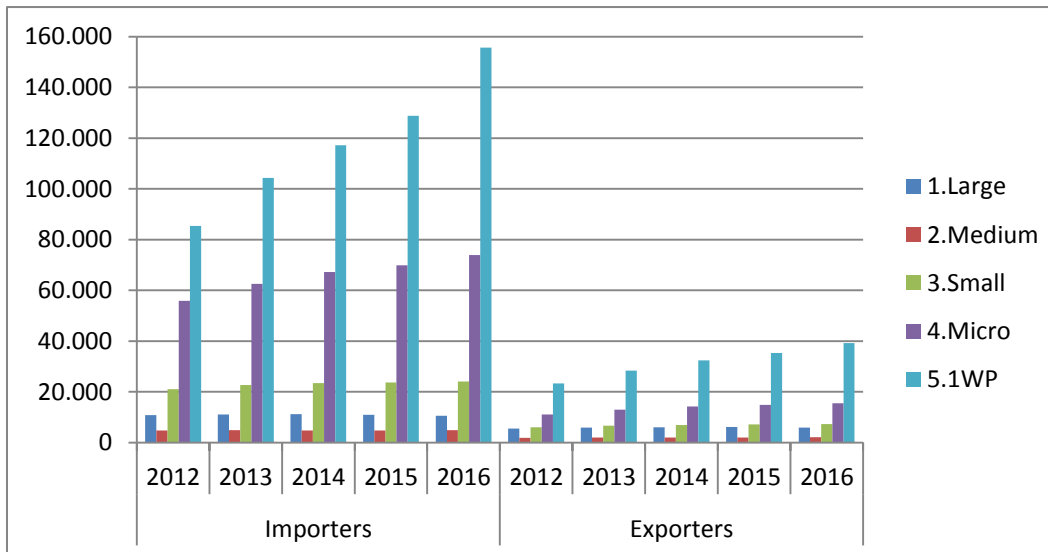
Figure 4: Contribution to import and export values (2016)³



3.2 Trade in services among independent SMEs

Independent SMEs are small and medium-sized enterprises in the Netherlands with fewer than 250 employees (working persons) that do not form part of a larger parent company in the Netherlands or abroad. This differs from the common definition of an SME because it takes into account other parts of the same enterprise. This means that smaller entities of multinationals such as Philips are no longer classified as SMEs. SME refers to an independent business with a small team of staff, such as bakeries, manufacturers of specialist agricultural machinery, local contractors, furniture makers and industrial designers, i.e. independent SMEs.

Figure 5: Number of importers and exporters by independent SME category



³ The figures for the import and export values and importers and exporters include two-way traders.

Figure 5 shows large businesses (with more than 250 working persons or that belong to a foreign parent company) and divides independent SMEs into the following categories: medium-sized (50 to 250 working persons), small (10 to 50 working persons), micro (2 to 9 working persons) and companies with only one working person. The latter group consists mainly of self-employed persons but also includes private limited liability companies (BVs) with a single major shareholder, as well as foundations. As expected, the majority of service importers and exporters are companies with one working person, which is what most companies comprise.

Figure 6 shows the number of service traders compared with the total number of companies in the same SME category per year. It is interesting to note that, although in absolute terms very few medium-sized companies (the smallest group) import or export services, relatively speaking they are the ones that import services from abroad the most frequently. In 2016, 59% of medium-sized companies imported services. Large companies are the most likely to export services (32% in 2016), but medium-sized companies come in a close second with 26%. The difference between small companies and micro companies is striking. Micro companies and companies with one working person are far less active in international trade in services than businesses with a slightly larger staff.

Figure 6: Number of importers and exporters by independent SME category (2012-2016)

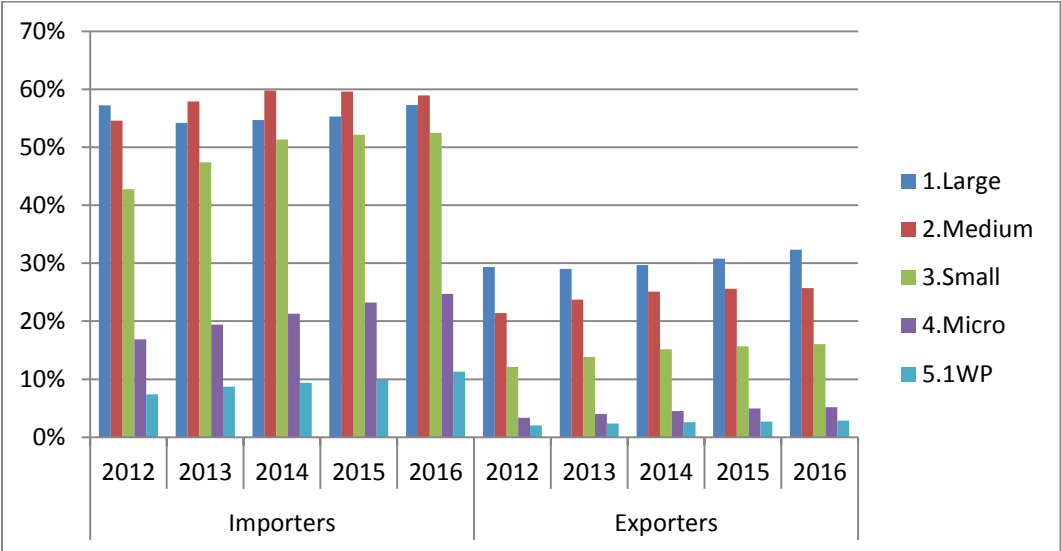
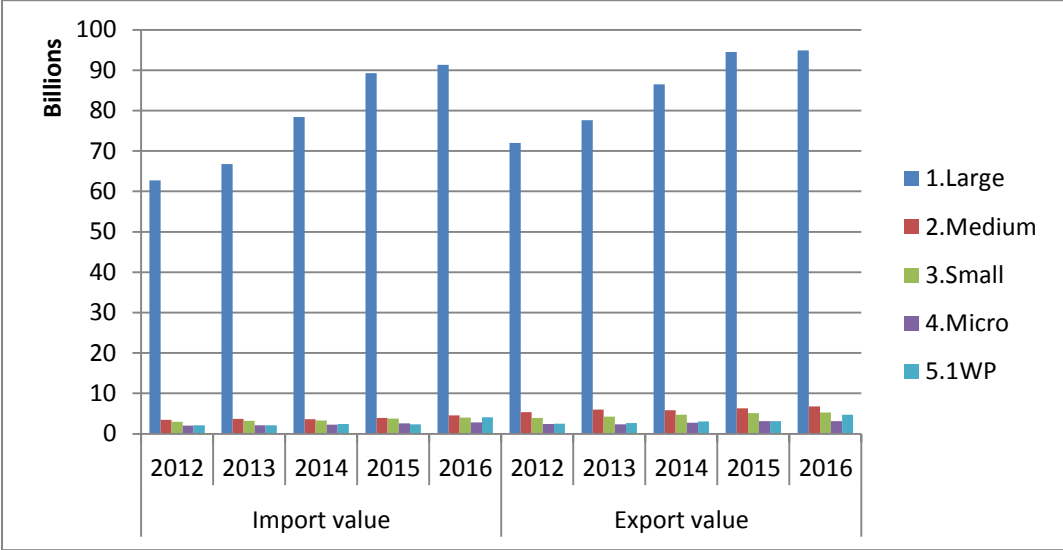


Figure 7 clearly shows the overrepresentation of large companies in the import and export values for international trade in services. Large companies make up only 4% of importers and 8% of exporters, but together they were responsible for 85% of trade in the period in question.

Figure 7: Import and export values by independent SME category (2012-2016)



3.3 Trade in services by business characteristics

In Smit and Wong (2016), international trade in services was broken down by sector and by domestic or foreign ownership for the first time. These analyses were performed again with the time series.

Trade in services by sector

Tables 4 and 5 show international trade in services by sector, for imports and exports respectively. The share of most sectors in imports remained stable in the period under review. Rapid growth has continued to occur in the renting and leasing and other business support services sector and the information and communication sector. The renting and leasing sector imported twice as much in 2016 as it did in 2012, representing an absolute growth of over €5 billion. The most active importing sector throughout the period was the manufacturing sector, accounting for a quarter of all service imports. It experienced a 52% growth (over €9 billion). Imports in the specialised business services sector grew more strongly than in the trade sector. In 2016, this sector was the second largest in terms of service imports, just above trade and well above transportation and storage. Together, the three most important sectors accounted for 65% of all imported services.

When it comes to exporting services, the manufacturing sector is logically less important, contributing just over 10% of the total export value during the years in question. This share is slowing decreasing, especially due to strong growth in other sectors. As with imports, the most noteworthy growth sectors are the information and communication sector and the renting and leasing and other business support services sector. Other business support services now account for 11% of the total, having increased from 6% at the beginning of the period under review. This represents an absolute growth of over €7 billion.

Table 4: Imports of services by sector in millions of euros (2012-2016)

	2012	2013	2014	2015	2016
A: Agriculture, forestry and fishing	209	276	309	302	320
B: Mining and quarrying	1,738	1,962	1,741	1,900	1,473
C: Manufacturing	18,122	16,985	19,867	25,993	27,458
D: Energy	735	1,137	933	837	561
E: Water supply and waste management	238	268	259	292	356
F: Construction	1,385	1,501	1,734	1,782	1,445
G: Trade	15,114	16,220	18,274	19,105	19,316
H: Transportation and storage	10,377	10,932	11,866	12,509	12,751
I: Hotel and catering	147	167	175	194	200
J: Information and communication	7,424	8,980	9,936	11,696	13,457
L: Renting and buying and selling of real estate	262	209	200	365	351
M: Specialised business services	13,735	15,174	19,353	20,095	19,899
N: Renting and leasing and other business support services	3,328	3,686	4,920	6,267	7,908
R: Culture, sports and recreation	232	239	274	315	311
S: Other service activities	200	178	189	201	231
Total	73,247	77,916	90,029	101,852	106,036

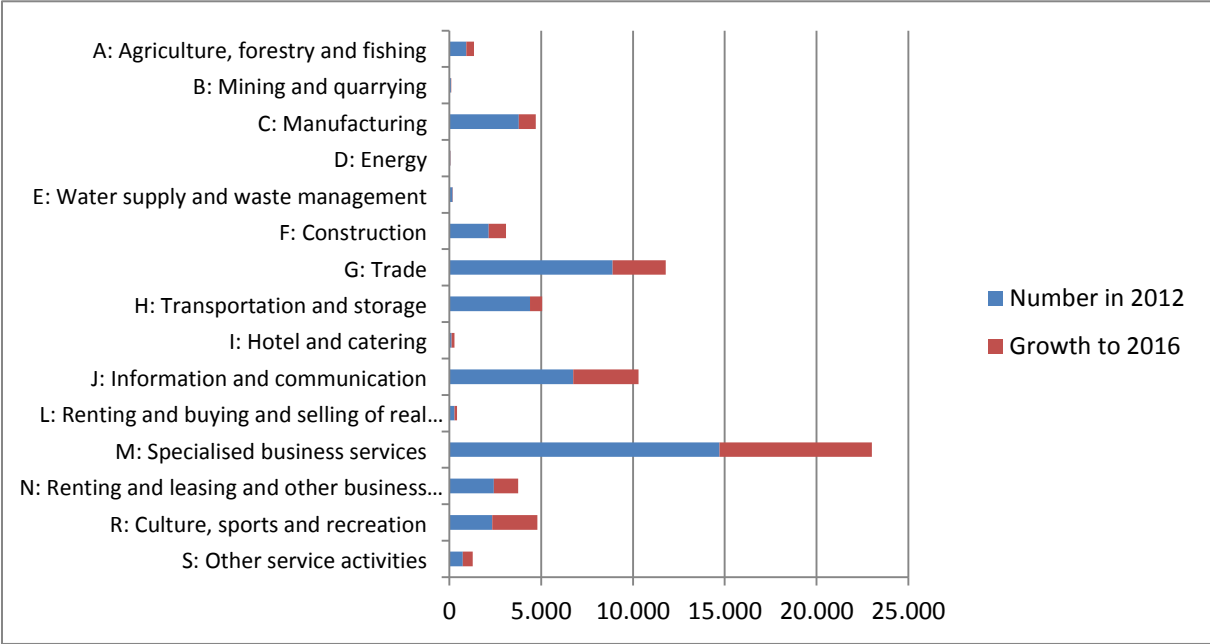
The biggest service exporters are the transportation and storage sector and the specialised business services sector. Together they accounted for 24% of all service exports in 2016. Growth in the specialised business services sector (44%, €8 billion) was considerably higher than in the transportation and storage sector (16%, almost €4 billion). The third biggest sector when it comes to exporting services is the information and communication sector, which saw exports virtually double to almost €19 billion between 2012 and 2016.

Table 5: Exports of services by sector in millions of euros (2012-2016)

	2012	2013	2014	2015	2016
A: Agriculture, forestry and fishing	196	366	162	176	183
B: Mining and quarrying	3,277	3,681	4,059	4,903	3,340
C: Manufacturing	12,775	13,399	12,022	11,552	12,136
D: Energy	391	761	235	296	213
E: Water supply and waste management	288	366	282	285	361
F: Construction	1,819	1,757	1,747	1,979	1,559
G: Trade	9,431	9,713	10,850	10,583	10,845
H: Transportation and storage	23,417	24,740	26,902	27,828	27,145
I: Hotel and catering	71	175	218	140	139
J: Information and communication	9,969	11,203	13,188	16,000	18,561
L: Renting and buying and selling of real estate	77	78	65	125	76
M: Specialised business services	18,823	20,182	24,770	28,020	27,097
N: Renting and leasing and other business support services	5,239	5,887	7,726	9,643	11,718
R: Culture, sports and recreation	296	319	350	380	372
S: Other services	121	157	216	235	268
Total	86,191	92,783	102,792	112,147	114,015

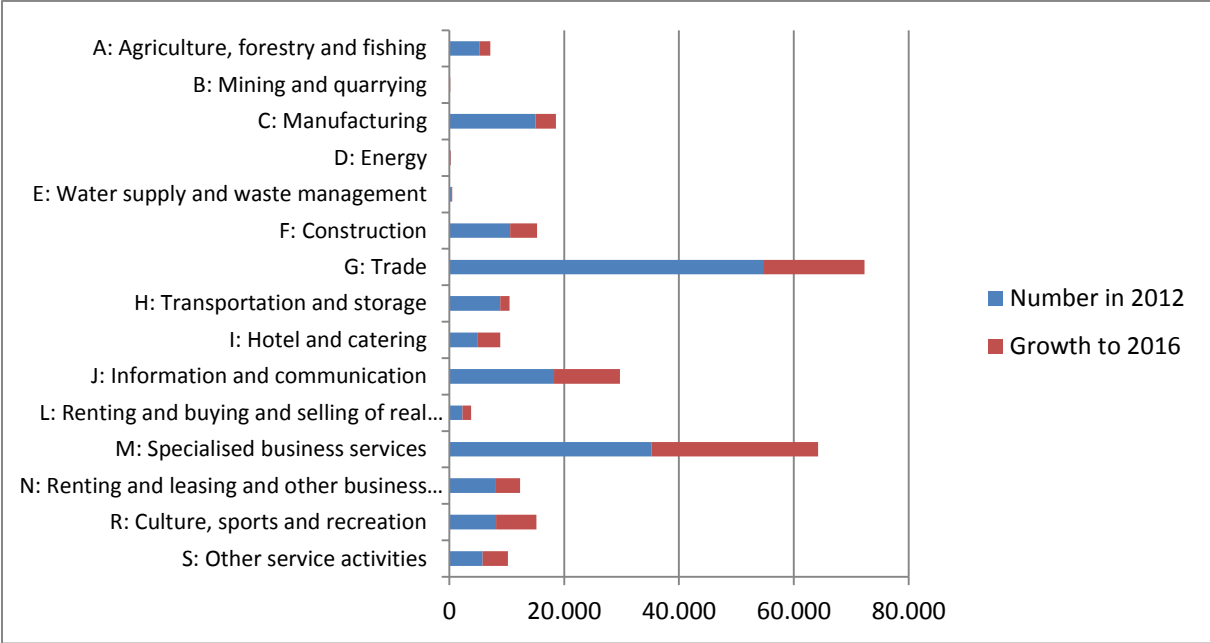
The number of service exporters has developed in line with the export value. Figure 8 shows that between 2012 and 2016 most exporters belonged to the specialised business services sector.

Figure 8: Number of exporters in 2012 and growth to 2016 per sector



Growth in the specialised business services sector was also relatively high. Between 2012 and 2016, the number of service exporters in this sector grew by almost 15 thousand to 23 thousand, an increase of 53%. In the trade and manufacturing sectors only a relatively small number of companies were more active in the export of services in 2016 than in 2012. However, the number of service exporters in the information and communication sector and the culture, sports and recreation sector more than doubled over the same period.

Figure 9: Number of importers in 2012 and the growth to 2016 per sector



The number of importers per sector is particularly striking in the manufacturing sector. Although most service imports (26%) take place in this sector, there are relatively few companies involved. Nine per cent of all service importers can be found in the manufacturing sector, which means they are relatively big players. In terms of numbers, the trade and specialised business services sectors are again the most important. The increase in the total import value among specialised business service providers is partly due to the rise in the number of importers in this sector.

Trade in services by ownership

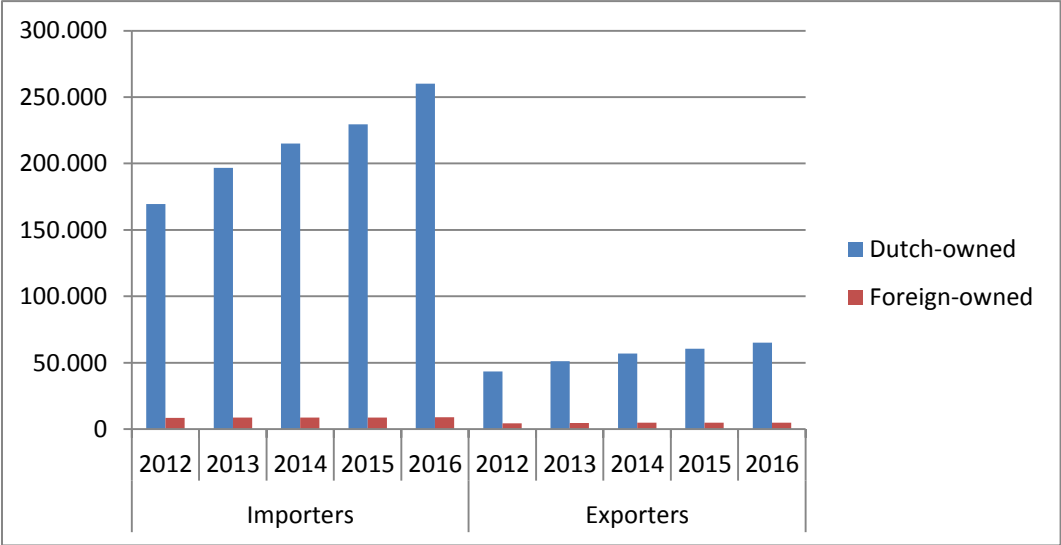
In 2016 over 68% of the total import value and almost 60% of the export value was trade by Dutch companies with a foreign parent company, as can be seen in table 6. In 2012 the percentages in both flows were lower. It is interesting to note that imports by foreign-owned companies increased considerably in 2014 and 2015, growing by over €10 billion per year, while Dutch-owned companies experienced growth of less than €2 billion per year. In 2014 service exports by foreign-owned companies also grew more sharply than average, although this also applies to Dutch-owned businesses.

Table 6: Import and export values in billions of euros by ownership (2012-2016)⁴

	Import value					Export value				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Domestic ownership	27	29	30	32	33	38	40	44	48	47
Foreign ownership	46	49	60	70	73	48	52	59	64	67
Total	73	78	90	102	106	86	93	103	112	114

Despite the sharp rise in international trade in services by foreign-owned companies, the number of foreign-owned service traders barely grew, and in some cases did not grow at all, between 2012 and 2016. Figure 10 shows that Dutch-owned companies account for almost all of the growth in the number of companies trading in services internationally. The number of foreign-owned importers and exporters increased by only 500 and 600, respectively, over the period in question. The number of domestic-owned importers increased from just under 170,000 in 2012 to over 260,000 in 2016.

Figure 10: Numbers of importers and exporters by ownership

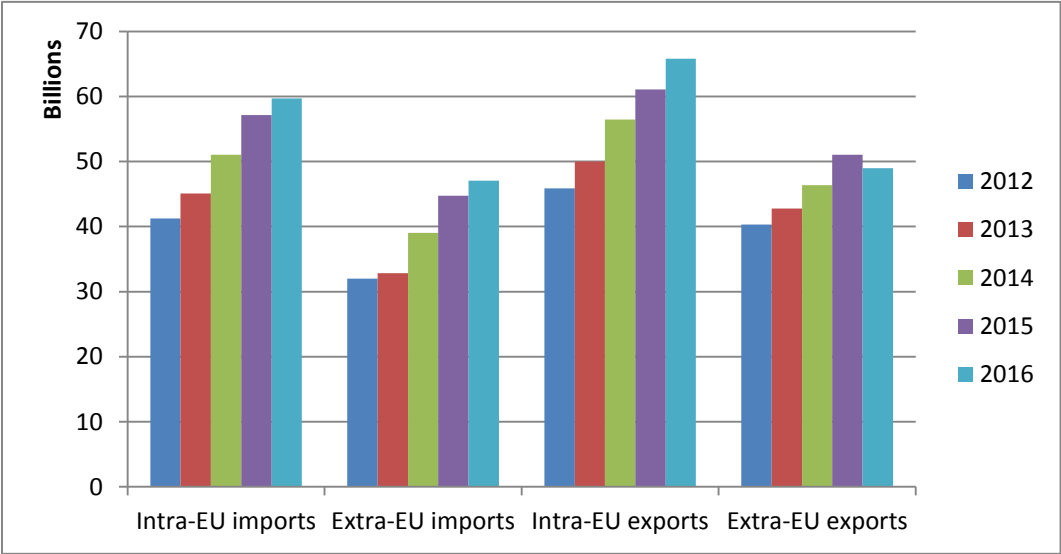


⁴ The ownership relationships for 2016 are provisional.

3.4 Trade in services by country

Between 2012 and 2016 import and export values for international trade in services rose steadily within the EU, as can be seen in figure 11. Both achieved a growth rate of more than 40% over a four-year period. Imports from outside the EU increased by 47% between 2012 and 2016, the largest growth in relative terms. This growth, which started in 2014, can be primarily attributed to a number of large companies initiating new import flows. 2015 was a good year for extra-EU exports, but 2016 saw a drop. Exports outside the EU showed the least growth over the four years, with a 21% rise.

Figure 11: International trade in services by trade flow: intra-EU and extra-EU (2012-2016)



In 2016 most international trade in services within the EU was with companies in the United Kingdom, with Germany in second place (see table 7). Dutch businesses exported services worth €17 billion to the UK and €14 billion to Germany, and imported services worth €14 billion and €12 billion, respectively. It is interesting to note that although the largest trade flows go to the UK, only a small number of importers trade with the UK (9%). A quarter of all exporters export services to the UK.

For exports, countries’ proximity to the Netherlands appears to be important. Of the companies exporting services, 51% exported to Belgium and 44% to Germany in 2016. More than half of Dutch importers import services from Ireland, mainly the many small importers that pay for advertising and licences. If the companies importing from Ireland are disregarded, Germany and Belgium are the most important import countries for Dutch companies.

Table 7: Import and export values and numbers by EU country (2016)

	Value (billions of euros)		Numbers (%)	
	Import	Export	Importers	Exporters
United Kingdom	14	17	9%	25%
Germany	12	14	34%	44%
Belgium	7	7	29%	51%
France	5	7	7%	18%
Ireland	5	3	56%	8%
Spain	3	3	4%	11%
Italy	3	3	5%	11%
Sweden	1	2	3%	8%
Poland	2	1	5%	7%
Denmark	1	2	4%	9%
Other EU	6	7	14%	23%
Extra-EU	47	48	4%	12%
Total import value	106	114		

4. Recommendations

This project has provided new insights into international trade in services, giving Statistics Netherlands a unique position. It is a significant step forward, but certainly not the last step that can be taken in this field.

In response to the first study by Smit and Wong (2016), considerable attention has been paid to the found difference between the estimate of the international trade in services by the 2016 Smit and Wong research compared to the international trade in services statistic. As a result the international trade in services statistics and the estimation method are now much better aligned (Smit and Wong, 2017). Although the gap now appears all but closed, when drawing up the estimates, several more mainly extra-EU traders were identified that had not been included in the statistics. In order to produce better quality figures more quickly, it is important to combine the strengths afforded by the observed data and the microdata. Using the microdata to determine the population for the international trade in services statistics will result in better figures, which can then be included in the microdata, whose quality will also improve. The current weighting method for the international trade in services statistics needs to be evaluated to determine whether it should be adjusted to compensate for a possible underestimation of imports (Smit and Wong, 2017).

Another recommendation of Smit and Wong (2016) that has been implemented is the revised allocation of the larger service traders by enterprise level (Smit, 2016). This part of the project has also been successful, significantly boosting the quality of the time series. According to Smit (2016), the experts at the largest companies attributed the observed data for international trade in services to the correct companies within the group for 2015. This information was used in this time series for all years, in combination with data from logbooks from recent years. For past years this will probably not have much of an impact given that this information is mostly no longer available, except for what has already been retrieved. However, this is an important point to address for the future. The current breakdown by company will become outdated within a few years. It is therefore advisable to have the company experts assess this allocation every two to three years. A more permanent solution would be to adjust the observed data for the largest companies according to enterprise level in the international trade in services statistics. This is a major operation, but it could have a significant impact on the quality of research outcomes.

Two Smit and Wong (2016) recommendations will be retained. One of these is the development of an estimation method per company to determine which specific service or services a company imports or exports. Smit and Bruls (2017) attempted to devise such a method for the type of service traded. However, that study did not produce a solution, which is why this recommendation will continue to apply. Better insight into the type of service imported and exported per company can help answer questions about the company's position in the value chain, the difference in growth potential between the export of various services and the shift from goods-only exports to combined goods and services exports.

The second recommendation still in place relates to the lack of information on countries outside the EU. No information is available on this subject in the observed data. The tax-related sources used in this study provide little information on extra-EU trade. A relatively accurate estimate can be made of the total extra-EU import and export values for smaller traders on the basis of tax sources, but there is no source available that gives a breakdown of extra-EU trade by country. Options for improving extra-EU estimates are currently being explored. There are two possibilities. The first is to extend the current observations within the international trade in services statistics. Although the population is small (5,000 companies), these are the largest companies, which would help create a more accurate breakdown for EU and extra-EU trade. Asking all companies to provide a breakdown by country would be burdensome, but could be considered if other methods fail to produce the desired results. The other option would be to look at international payment transactions. This information should give a reasonable idea of the countries a company trades with, making it possible to create an estimate that includes a breakdown by country for extra-EU countries as well as intra-EU countries. Statistics Netherlands does not have access to such information at present.

There is a demand in policy circles for better insight into the self-employed in general and, more specifically, into their international trade in both goods and services. Although Statistics Netherlands has a reasonable definition of self-employed persons at individual level, there is not yet a specific characterisation that can be used per company. This means that nothing can be said about self-employed individuals, only about companies with one working person. In order to solve this problem, a definition of self-employed persons will have to be developed that can be used on the basis of the general business register to carry out analyses for all years on a clearly defined population of companies owned by self-employed individuals.

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