QUALITY DECLARATION
Foreign trade in services (FTS)

Subject area
Trade in goods and services

Statistical area
Foreign trade

Product code
HA0202

Reference period
2022 quarter, year

Statistical agency

The Riksbank (Swedish central bank)

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Quality of the statistics

1 Relevance

1.1 Purpose and information needs

1.1.1 Purpose of the statistics

The reported statistics provide the estimated values of Swedish exports and imports of services[1], by quarter. The classification of services follows international standards. The statistics also form a basis for the *balance of payments*, and for the *national accounts*.

1.1.2 User information needs

Users of the statistics on Swedish foreign trade in services are found both in Sweden and abroad, implying a substantial information need for the statistics. One of the important users is the Riksbank (Swedish central bank). Statistics Sweden compiles and produces the survey Foreign Trade in Services on behalf of the Riksbank. Other important users and areas of use are:

- The Ministry of Finance and the Ministry of Enterprise and Innovation for assessments, forecasts and decisions in economic policy and business policy;
- The National Board of Trade for negotiations and inquiries within the trade policy sphere;
- The National Institute of Economic Research, the Confederation of Swedish Enterprise, the research departments of banks and financial institutions, and industry organisations for assessing and forecasting economic progression in society;
- Business Sweden, Swedish and foreign businesses and the trade representation of foreign embassies for market analysis and assessment of market research;
- mass media for news monitoring and as a basis for articles on developments in Swedish foreign trade;
- academia (universities, institutes of higher education, etc.) for various research projects;
- Eurostat, ECB (European Central Bank), OECD (Organization for Economic Co-operation and Development), UN (United Nations) and other international bodies for analysis and the further dissemination of international statistics.

1.2 Content of the statistics

The statistical target characteristics are imports and exports of services by quarter. Services are described by service types.

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[1] Foreign trade in services does not normally cover goods. There are, however, exceptions in which flows of goods give rise to services. Construction services also contain the goods bought by the project abroad. Travel also includes goods that are consumed abroad.

1.2.1 Unit and population

The population of interest includes all (individual) transactions in one quarter between entities in Sweden and entities abroad with respect to services for exports and imports, respectively.

The target population includes the transactions defined in the Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6). All individual transactions are grouped according to the Extended Balance of Payments Services Classification (EBOPS), first into services, which are then summarised into service types. Appendix 1 provides a list of all service types, while the included services are listed in Appendix 2. Note that in Statistics Sweden's Statistical Database (SSD), the service type is designated as *Item*.

The relationship between service type and services can be one-to-one, but not always. In many cases, a service type is a summary of services, either in their entirety or as constituent parts.

The *target units* are groups of transactions grouped into service types according to Appendix 1. The *observation units* are groups of transactions grouped into services according to Appendix 2.

Data sources are primarily enterprises and authorities. Administrative data is also used.

1.2.2 Variables

The observation variables are different characteristics of observations units, namely *Service* defined in Appendix 2, *Direction* (Export/Import), *Country* according to Appendix 3, and *Service Value*, which represents the total value of all individual transactions in the observation unit under consideration. The list of countries in Appendix 3 follows Eurostat's nomenclature of countries and territories. The variable *Service Value* is also defined for all countries (*Country='whole world'*).

The observation variables are defined by quarter.

The target variables, which are also defined by quarter, are:

1. *Trade in services* – the total service value by *Service Type*, *Direction* (Export/Import), and *Country*. The target variable *Trade in Services* is thus derived from the observation variable *Service Value* by summing observed service values by *Service Type, Direction*, and *Country*;

2. *Net Trade in Services* – the difference between *Trade in Services* for Exports and *Trade in Services* for Imports by *Service Type* and by *Country* (for the details see section 1.2.4). Positive values for *Trade in Services* indicate that Sweden's income from the sale of services is greater than purchasing expense, while negative values indicate the opposite.

In SSD, the estimated value of *Net Trade in Services* is presented for *Direction=Net*.

The variables of interest are the same as the target variables.

The value of trade is presented in SEK million.

1.2.3 Statistical measures

The statistical measure that is used is the sum.

1.2.4 Study domains

The statistics on trade in services are presented either at service type level or at country level. Statistics for combinations of service type and country are not presented.

At the service type level, the estimates of trade in services are presented for 27 service types per direction (Export, Import and Net) for the whole world.

Concerning trade in services by country, the focus is on the 24 countries (instead of all countries given in Appendix 3) for which estimated trade in services is greatest. Trade in services by country is also estimated and presented for the whole world, all EU countries together and all non-EU countries together. In each case, the estimates are presented per direction (Export, Import and Net).

1.2.5 Reference times

The presentation refers to one quarter (three months) and one year.

2 Accuracy

2.1 Overall accuracy

On the whole, the level of accuracy of estimates at service type level (also called *estimates by service type*) is judged to be high. In addition, it is judged higher than for estimates at country level (also called *estimates by country*).

Overcoverage in the sample during quarter 3 2022 turned out to be negligible (0.2%), which is at the same level as the same quarter last year. For the current quarter, the overcovering was mostly due to mergers of companies either with another object in the sample or with an object outside the sample. Overcoverage is expected to be much higher at the end of the reference year 2022. This is because overcoverage is defined on an annual basis (for details, see section 2.2.2). The degree of the increase mainly depends on the number of companies that turn out not to have had FTS in any quarter of the reference year. Currently, there are approx. 9% companies in the sample that did not have FTS during the first three quarters of 2022.

The non-response rate in the sample during quarter 3 2022 is at the same level as the same quarter last year (compare 20% with 19%). The non-response occurs most among companies in size classes 1–4, where size class 1 dominates. This makes it reasonable to assume that late responses from companies in these size classes may be a major reason for significant revisions of the estimates for the third quarter of 2022, which will be carried out when the estimates of the fourth quarter of 2022 are published (for the revision schedule, see section 3.2).

The same target variables, methods and assumptions, used before 2022, were also used during the first two quarters of 2022.

2.2 Sources of uncertainty

For estimates by service type, various model assumptions – and to a lesser extent measurement errors – are considered to be the sources of uncertainty that contribute most to overall uncertainty. As for estimates by country,

measurement of the sample rather than the entire population is considered to be the greatest source of uncertainty, followed by various model assumptions and measurement errors. Besides the sample uncertainty, it is not possible to quantify the uncertainty linked to the other sources of uncertainty.

2.2.1 Sampling

If there were a register of all transactions with other countries, the data on the target variables would be sampled from that. However, because such a register does not exist, direct data collection is used in practice from a sample of Swedish companies and authorities. Administrative data is also used (for details on service types that involve administrative data, see section 5.1.2).

In order to draw the sample, a frame is constructed. Initially, the frame consists of all active legal entities in Statistics Sweden's business register. Further, the frame is supplemented with data from other sources, which in different ways indicate that the company conducts foreign trade in services in the year concerned, and the extent thereof.

Great importance is attached to identifying particularly important companies that can have sizeable foreign trade in services. These companies come into the sample with the probability 1, that is, they are totally surveyed. Around one fifth of the total sample consists of totally surveyed companies.

The companies in the basic frame are stratified according to three dimensions: industry, participant status and size. The type of industry is determined by the company's main SNI code. Participant status is an indicator variable that indicates the scope of foreign trade in services. Participant status is determined based on the above-mentioned indication sources, knowledge of industry and information from previous sample rounds. The size is based on the company's annual turnover.

The stratified basic frame is limited to companies with an annual turnover exceeding SEK 1 million (this requirement applies to all industries, apart from financial and VAT-exempt ones, which are allowed to have an annual turnover of below SEK 1 million). The frame is further stripped down according to various indicators of foreign trade in services. The final delimited frame consists of around 50 000–65 000 companies, identified as companies that have the conditions to execute large foreign transactions some time during the year irrespective of direction and service.

Each year, an independent random stratified sample is drawn of around 6 100 companies from the delimited frame. When it comes to allocating sample sizes in defined strata, collected data from previous survey rounds are used. The aspects considered in connection with allocation are:

1. meeting precision requirements in terms of *relative standard deviation*, i.e., *standard deviation/point estimate*, which is placed on estimates of trade in services by service type for both directions together, and
2. reducing the burden on respondents for companies in the smaller size classes.

It should be pointed out that estimates by country are not subject to any precision requirements. For this reason, the sample uncertainty in estimates by

country is judged to constitute the largest part of their overall uncertainty (more about the uncertainty in the estimates by country is provided in section 2.2.4).

No sample is drawn for companies outside of the delimited frame, which requires making model assumptions regarding their foreign trade in services (see section 2.2.6). Although excluding companies from the frame entails the deviation from probability sampling, it does, however, reduce the risk of drawing a sample of companies either that do not have any foreign trade in services or that do so only to a very narrow extent. Other positive consequences of the exclusion is that it reduces both the burden on respondents and costs.

The effect of surveying a sample instead of the whole population has been measured with the relative standard deviation (*RSD)* of the estimates, defined as *standard deviation/point estimate*. From this definition it follows that the higher the *RSD* values, the lower the precision of estimates is. An advantage of using this measure is that it enables comparisons between estimates of different magnitude, for example the estimates for the service type *Transport* and its subcomponents associated with different types of transport.

Note that the sample uncertainty is not calculated for estimates by country, which makes it possible to reduce calculation time (and calculation costs) considerably.

Appendix 7 contains the *RSD* values of the service level type estimates obtained for the second quarter of 2022 and reported in SSD. The same appendix also contains the *RSD* values for the estimates of *Net trade in service*, or simply *Net* estimates. (see the definition of *Net trade in services* in section 1.2.2). As one can see, the precision in most of the *Net* estimates is substantially worse than the precision in the corresponding estimates per direction. The explanation for this result is that the sample is not designed to obtain a high precision of *Net* estimates, each of which is a difference of two (probably highly correlated) estimates per direction.

Regarding the precision of the estimates per direction, we note in Appendix 7 that the estimates for Import tend to have a better precision compared to the export estimates. The improvement is particularly evident for the export estimates (compare, for example, the RSD for *Transport* with the *RSD* for its sub-aggregates 3.1–3.6).

Remember that the reported statistics are not final and will be revised (for details, see section 3.2).

In summary, sample uncertainty is judged relatively low for estimates by service type, both for Export and Import, while estimation uncertainty for estimates by country is considered to be greater.

2.2.2 Frame coverage

Because the target units are transactions, both over- and undercoverage are defined in terms of transactions. The frame of transactions is obtained through companies in the sample.

Overcoverage of transactions arises when, for some reason, a company has not had foreign trade in services throughout the entire year. From an estimation perspective, the overcoverage does not have any effect.

On the other hand, estimates may be underestimated due to undercoverage of transactions, which arises when new companies are formed after the sample has been drawn. Importantly, if sizeable foreign transactions are discovered after the sample has been drawn, the companies in question are added to the sample retroactively, in separate strata. However, no adjustment for undetected undercoverage is performed (see section 2.2.6). This may lead to an underestimation of trade, which is, however, considered negligible. This is because the absence of companies in the delimited frame does not necessarily mean undercoverage of the transactions in the target population.

To sum up, it is considered that the companies in the final delimited frame provide good coverage value-wise of the Swedish companies' foreign trade in services for the entire year.

2.2.3 Measurement

Collection is done electronically using an online form or file reading. Automated validation controls render a certain type of erroneous reporting impossible. The companies that report substantial changes in exports or imports of services are studied in more detail by means of comparisons with VAT returns and other statistical sources, and direct contacts with the companies.

Reporting is done by service. It can sometimes be difficult for the respondents to choose the right service, particularly when the boundary between good and service is ambiguous. An example of this is the definition of software, which can contain both a good and a service component. Another problem is that many companies do not have accounting systems that support submitting data on the requested services.

All of this may lead to substantial measurement uncertainty in submitted data. However, measurement uncertainty is considered to be much lower at service type level due to summing. As for reported service values by country, the measurement uncertainty can be greater. This is because the respondents themselves sometimes need to make approximations to derive service values per country for a given service from the corresponding service value for *Country='whole world'*.

To reduce the effect of measurement uncertainty on estimates, various controls are performed that aim to detect deviant values. The controls primarily consist of comparisons with previously submitted values, comparisons with VAT information for the same period and various screening of data associated with a specified industry. Suspected erroneous values are investigated, which can sometimes be a protracted process. For this reason, measurement uncertainty can have a greater effect on preliminary statistics than the final version (see section 2.3).

Knowledge about measurement uncertainty is largely empirical and unquantifiable. Neither is it possible to determine whether measurement uncertainty is largely systematic or random (systematic measurement errors are generally more difficult to detect and adjusting them tends to be more problematic).

To sum up, it is considered that both systematic and random measurement errors may contribute to the overall estimation uncertainty in both estimates by

service type and in estimates by country. However, it is judged to be relatively low, especially for estimates by service type.

2.2.4   Non-response

Compensation for unit non-response depends on the size of companies. Missing data for the larger, totally surveyed companies (although not authorities) are imputed with data from the prior quarter (if available). In the case with totally surveyed authorities, missing data for are instead replaced by data from the same quarter of the *prior* year (if available). This is because many transactions performed by authorities have clear seasonal patterns. These imputation methods are considered to have relatively little effect on the statistics.

Unit non-response of sample-surveyed companies is compensated using mean compensation, which entails imputation of the mean of submitted values by service within the stratum concerned (for details on the assumption, see section 2.2.6).

Mean compensation can lead to overestimation if there are sharply diverging values within the stratum. In order to avoid such overestimation, the companies reported these values, known as outliers, are moved to a separate stratum in which they only represent themselves. In the original strata, the weight is corrected for the number of outliers that have been moved elsewhere.

Another type of non-response, item non-response, arises when there is no counterpart country for services. To derive service values by country for a certain service from the corresponding service value for *Country='whole world'*, either predetermined quota or various distribution keys based on submitted data are applied (for details on assumptions, see section 2.2.6). In general, the higher the proportion of the collected service values by country the better the estimation of the statistics by country will be.

The overall effect of non-response on the statistics is considered to be relatively small because the response rate among the most significant companies is high (more than 90 percent).

It should be mentioned that the non-response in the second quarter of 2022 was not compensated in any special way beyond the methods described above, which were done in 2020 to minimize the impact of the covid-19 pandemic.

2.2.5   Data processing

The data is collected using two different sub-surveys. The first covers general foreign trade in services and has two different forms that differentiate between insurance and non-insurance companies[2]. The second sub-survey is in order to collect information on travel and is directed at banks, foreign exchange bureaux and charge card companies.

All companies submit information on their foreign trade in services broken down by services and counterpart country. Some review is performed already upon initial measurement (see section 2.2.3). In the next step, microdata is

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[2] In connection with the sample 2021, the number of forms was reduced from eight to two in order to simplify the administration of the forms in the survey (for the effects of the reduction see section 5).

reviewed using the tool SELEKT. Through the tool, a prioritisation list is created based on the probability of a value being erroneous in combination with the impact the erroneous value would have on the estimated result. The values are then carefully inspected according to the prioritisation list.

Automatically imputed values are also checked manually at the company level, regardless of whether their adjustment has been carried out or not.

After the review at company level has taken place, review is also performed at macro level in the VERITAS program. In this review, aggregate values are studied for the various service types in which substantial changes in percentage and values are further checked by means of reverting to the micro level and seeing which companies have contributed to the changes and whether they appear reasonable. Great importance is attached to the review of companies that represent substantial proportions in various service types.

The overall view is that processing uncertainty constitutes a negligible part of total uncertainty in both non-allocated estimations and estimations by country.

2.2.6 Model assumptions

As emphasised earlier, model assumptions probably account for a largest part of the overall uncertainty in estimates by service type, and may contribute substantially to the overall uncertainty in estimates by country.

An important model assumption is that companies below the so-called cut-off limit contribute with the value zero. The cut-off limit varies depending on the industry that companies belong to and their participant status. Although some companies under the cut-off limit may have foreign trade in services, the assumption is that their overall contribution to total trade ought to be small.

Another model assumption is applied when it comes to derive service values by country from the data submitted in an undistributed form, that is, only for *Country='whole world'*. The assumption is that all companies, irrespective of the stratum to which they belong, have the same net of partner countries. The assumption is supported by empirical studies on trade in both goods and services, which did not reveal clear patterns between the companies' properties, e.g., the size, and their trade relationships to other countries.

Additional model assumptions are made when calculating model estimates that apply to those types of services for which it is not possible to collect reliable data. These types of services include transport services (CIF/FOB correction), insurance services, diplomatic services, municipalities and county councils and households. The resulting model estimates are regularly reviewed and replaced by collected data where possible.

2.3 Preliminary statistics compared with final statistics

On each publishing occasion (quarter) published values from the prior quarter are revised. Similarly, the seven prior quarters are revised each time the fourth quarter is published. Sometimes, revisions occur outside of the ordinary revision schedule, often prompted by it having transpired that significant data has been inaccurate, or new information having emerged. This type of revision often covers a longer period.

The revisions that are made outside of the ordinary revision schedule are often much greater and are more commonly in either direction, up or down. These revisions can ensue from new information from respondents having become available, or a manual change having been made. Revisions can also be due to altered interpretations of data or definitions. The ambition is to make these extraordinary revisions in coordination with other economic statistics. This can for example occur in connection with general revisions of the national accounts. The quality of the statistics is however considered to improve as this type of revision gives better accuracy.

According to the above-described revision plan, the revision of the statistics for the second quarter of 2022 has been carried out on the publication of the statistics for the third quarter of 2022. In the analysis of revisions, the focus was on two of the three main service classes, *Transport* and *Other Services*. The latter type of service is an aggregate of all service types presented in Appendix 1 except *Transport* and *Travel*. *Travel* has been excluded from the analysis because approx. 95% of its estimate is based on administrative data.

The analysis is based on data for the first quarter of 2022 available on 01/09/2022 (the publication) and 01/12/2022 (the first revision). The result of the analysis per direction has shown (unit: MSEK):

Export:
Transport has been revised by 237 MSEK with the corresponding 95% confidence interval (-433, 906), which is interpreted as the revision being statistically insignificant at the 5% significance level. The revision was caused first of all by late responses among the companies in size class 1 – 4. Their positive contribution was, however, mitigated by negative contributions from late responses among the companies in size class 5 - 6.

Other services have been revised by 2 108 MSEK with the corresponding 95% confidence interval (94, 4 122), indicating that the revision is statistically significant. Late responses from the companies in size classes 1–4 had a strong positive contribution, which, in addition, was enhanced by corrections to previously submitted values made by some companies in size classes 5–6 and by late responses from the companies in the same size classes. A dampening effect has had a negative contribution from corrections to model-calculated values.

Import:
Transports have been revised by 838 MSEK with the corresponding 95% confidence interval (28, 1 649), which is interpreted as the revision being statistically significant. The strongest positive contribution to the revision was caused by late responses from the companies in size classes 1–4, which were enhanced somewhat by the positive contribution of late responses from the companies in size classes 5 - 6.

Other services have been revised by 4 722 with the corresponding 95% confidence interval (3 271, 6 173), which is interpreted as the revision being statistically significant. The main reasons for the revision were corrections to previously submitted values made by some companies in size classes 1 - 4 as well as corrections to previously submitted values made by some companies in size classes 5–6.

Regarding the effect of the revision on the precision of the estimates, Appendix 6 indicates that the revision had a varying effect both on estimates per direction and Net estimates For example, for the service type *10.2.1 Legal services*, a clear improvement in precision has been observed for all three types of estimates, i.e.

RSD has been reduced for the export-, import- and *Net* estimates, while for the service type *10.2.2 Accounting, bookkeeping and audit services*, the precision has deteriorated for the export-, and import estimates, but not for the *Net* estimate.

3 Timeliness and punctuality

3.1 Production time
The preliminary statistics on foreign trade in services for a given quarter are published approximately two months after the end of the quarter. The quarter's final statistics according to the revision plan above are published approx. two months after the end of the fourth quarter of the following year. Expressed in months, the production time for the final statistics for a given year is approx. 26 months for quarter 1, approx. 23 months for quarter 2, approx. 20 months for quarter 3 and approx. 17 months for quarter 4.

3.2 Frequency
Foreign trade in services is collected and published quarterly.

3.3 Punctuality
Publication punctually follows the publishing schedule for the Official Statistics of Sweden. Historically, delays have very seldom occurred.

4 Accessibility and clarity

4.1 Access to the statistics
Statistics Sweden's website is primarily used as the channel for mediating the statistics. There, the statistics are found via the Statistical Database and in statistical news items and reports. Statistics on foreign trade in services are accessed via www.scb.se/HA0202.

When retrieving statistics, the user should note that the values are stated in millions of Swedish kronor and that the figures may be revised. Note also that the statistics for four quarters in one and the same year are aggregated into annual statistics.

The statistics are also available via Eurostat's statistical database together with the published statistics of other countries.

4.2 Possibility of additional statistics
Besides the statistics that are freely available on scb.se and through Eurostat, it is also possible to commission further orders of the statistics in return for a fee. Detailed statistics however pose a risk of disclosing respondents and also of accuracy that is considered to be low. There are therefore limitations on what can be issued.

4.3 Presentation
As already mentioned in section 4.1, the statistical information is presented both quarterly and annually on scb.se. In connection with publishing, the tables in the statistical database are updated. Four different tables for trade in services are found there. These include trade by account item and country,

annually and quarterly. Trade by account item is available as of 1982 while the tables by country contain data as of 2004.

4.4   Documentation
Documentation prepared by Statistics Sweden is available on the web page for the survey on Statistics Sweden's website, www.scb.se/HA0202.

Other documentation that may be of interest is Balance of *Payments and International Investment Position Manual (BPM6).*

Detailed documentation in the form of Production of the Statistics (StaF) and *The detailed content of the statistics (MetaPlus)* are currently absent but planned for next year.

5   Comparability and coherence
As explained in section 2.1, the same targets, methods, and assumptions used before 2022 have also been used for producing the statistics for the first two quarters of 2022. This also applies to the reduction in the number of forms, which was introduced first in the first quarter of 2021. Although this reduction entails a different collection procedure for services, listed in Appendix 5 (these services are collected as part of other services), it is still possible to use the same estimation procedure that considers industry affiliation (including non-insurance companies). Therefore, comparability over time and between groups as well as compatibility are not affected.

5.1   Comparability over time
Statistics Sweden started to produce statistics on foreign trade in services in 2003. Before then, they were published by the Riksbank. The transfer to Statistics Sweden also affected the production methods, which caused a break in the time series. In 2012, the sample was enlarged from 5,200 to 6,100 and somewhat later reporting by country was extended from only the 1,500 largest companies to all companies. That same year, use of the new manual, BPM6, was also implemented, which increased the number of service types from 11 to 26 (presented in Appendix 1). All changes over this period caused a break in the time series, but this has been addressed by performing retroactive revisions to the extent considered feasible. Reviews of services in Appendix 2 take place in line with altered trading patterns and can make it harder to have long time series.

5.2   Comparability among groups
All reported estimates are obtained according to one and the same estimation method for estimating totals known as the Horvitz-Thompson estimator. Together with the fact that the definitions of all service types follow one and the same manual – BPM6 – this means that all estimates are comparable with each other.

It is worth emphasising that the estimates for the service type FISIM, Financial Intermediation Services Indirectly Measured, are not calculated in the survey Foreign trade in services. It is the National Accounts that obtain undistributed over countries estimates of trade in services. Distributed service values by country are obtained by the Balance of Payments. The calculations are

performed according to a special model, based on data collected by the Balance of Payments and the National Accounts within a total population survey (more information on FISIM is available on Statistics Sweden's website https://www.scb.se/contentassets/c89bb85e14184e92a4d5e4eec5ce4b98/sweden-gni-inventory-2016_public_rev_oct2016.pdf). Because the definition of FISIM follows the guidelines in the BPM6 and SNA manuals, where SNA stands for System of National Accounts, the estimates of FISIM are comparable with the estimates for the other service types.

When comparing the reported estimates with corresponding estimates from other surveys, it is important that the same definitions of service types are applied, and that the estimation is based on the same data sources and under the same model assumptions. Some of the service types in Appendix 1 differ from the others in this respect. These are:

- *Transport* with all subcomponents, particularly sea transport and road transport services for which CIF/FOB adjustment of submitted values is performed;
- *Travel*, which is calculated both on the basis of collected data and administrative data, and also specially computed quotas are used to distribute data;
- *Insurance*, which is based on collected data allocated using specially computed quotas;
- *Financial services*
    - Financial services excl. FISIM, which is calculated based on collected data and various model assumptions;
    - FISIM (see discussion above);
- *Other services*, which are based on both administrative data and collected data.

As regards the estimates by country, it could be said that they are comparable with those obtained in other countries that adhere to Eurostat's nomenclature of countries and territories that are followed by the Foreign trade in services survey. However, comparability is complicated by the fact that all countries draw their own samples based on their national business registers and stratify them in other ways than that described here in section 2.2.1. At transaction level, each import of services should be matched by another country's export of services (and vice versa). However, data by country reported by companies in different countries can differ even if these companies are linked to the same transactions (for possible reasons, see section 2). Naturally, this may cause asymmetries of varying degrees with other countries' statistics on foreign trade in services.

Yet another comparison group of interest is microdata, i.e. collected data. Interlinking and comparing microdata from other surveys may be complicated or in some cases impossible because

- the properties of the companies in the sample drawn for the Foreign trade in services survey do not necessarily coincide with the properties of the companies of interest within other surveys, and that
- other surveys draw their own samples or they may be total population surveys.

5.3   Other coherence

Foreign trade in services is included as a basis in the National Accounts' calculation of GDP, and in the current account of the Balance of Payments. Because of adjustments made in the National Accounts, and which are also used by the Balance of Payments, the data in Foreign trade in services differs from the data in the National Accounts and in the Balance of Payments.

Non-border-crossing goods are collected through trade in services, but are subsequently counted as trade in goods in the trade balance.

5.4   Numerical consistency

Substantial elements within financial services are corrected with data produced by the Balance of Payments. This concerns data on FISIM, commissions in equity trading, and the service margin (spread) in trade in debt securities. Also, the National Accounts Department performs reclassifications of codes according to SPIN and certain adjustments based on their own judgements. These adjustments are also used in the Balance of Payments.

General information

A   The classification Official Statistics of Sweden

The statistics are not official.

B   Confidentiality and the handling of personal data

In the special task of agencies for producing statistics, confidentiality applies according to Chapter 24, Section 8 of the Public Access to Information and Secrecy Act (2009:400).

To protect the data on natural persons or enterprises that is subject to confidentiality, it is ensured that such data cannot be disclosed directly or indirectly in the published statistics.

Processing personal data is subject to the Official Statistics Act (2001:99), the Official Statistics Ordinance (2001:100) and the EU General Data Protection Regulation (2016/679).

C   Storage and elimination

A copy of all statistical reporting in the form of reports, books and Statistical Reports that have been published as printed matter or reported as a pdf document is archived at the Royal Library of Sweden and delivered to the National Archives.

The need to archive material is being investigated.

D   Obligation to provide information

There is an obligation to supply information in accordance with theRiksbank Act (1988:1385) and regulations (RBFS 2002:4). This means that there is a legal obligation to provide data to Statistics Sweden. The Riksbank has the right to impose a fine on companies/organisations/authorities that fail to report.

E EU regulation and international reporting

The obligation to supply information is also regulated at EU level through the following regulations:

REGULATION (EC) OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL No 184/2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment.

COMMISSION REGULATION (EU) No 555/2012 amending Regulation (EC) No 184/2005 of the European Parliament and of the Council on Community statistics concerning balance of payments, international trade in services and foreign direct investment, as regards the update of data requirements and definitions

The statistics are included in the international reporting to Eurostat, ECB, IMF, OECD and UN.

F History

Foreign trade in services has existed at Statistics Sweden since 2003, but statistics have been kept since long before then. Before responsibility for the statistics was transferred to Statistics Sweden, the Riksbank was responsible for producing the statistics.

The present manual from the International Monetary Fund (IMF), BPM6, was provided in 2013 and changes according thereto were made at the end of 2013.

In 2015, work commenced on a new IT system, which was launched at the beginning of 2017.

G Contact details

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Appendices

Appendix 1. *Service type*

1. Manufacturing services
2. Maintenance and repair services
3. Transport
    3.1 Sea transport services
    3.2 Air transport services
    3.3 Rail transport services
    3.4 Road transport services
    3.5 Postal and courier services
    3.6 Other transport services
4. Travel
5. Construction services
6. Insurance
7. Financial services
    7.1 Financial services excl. FISIM
    7.2 FISIM (Financial intermediation services indirectly measured)
8. Charges for the use of intellectual property
9. Telecommunications, computer, and information services
    9.1 Telecommunications services
    9.2 Computer services
    9.3 Information services
10. Other business services
    10.1 Research and development services
    10.2 Professional and management consulting services
        10.2.1 Legal services
        10.2.2 Accounting and administrative services
        10.2.3 Management and PR
    10.3 Marketing services
    10.4 Technical, trade-related and other business services
        10.4.1 Architectural, engineering and scientific services
        10.4.2 Agricultural, mining and waste treatment/de-pollution services
        10.4.3 Other services
11. Personal, cultural/recreational services, etc.
12. Government goods and services

Appendix 2. *Services*

Purchase of goods for construction projects abroad
Processing of goods owned by other parties
Repair and maintenance of goods (ex. computers and buildings)
CIF-adjusted exported resp. imported goods, air
CIF-adjusted exported resp. imported goods, sea
Adjustment for CIF transport
CIF-adjusted exported resp. imported goods, rail
CIF-adjusted exported resp. imported goods, road
Goods freight by sea
Goods freight by air
Goods freight by rail
Goods freight by road
Road freight with own vehicles/own personnel
Road freight with hired vehicles/hired personnel
Goods freight by vessel
Goods freight by air
Goods freight by rail
Goods freight by road
Gross income/expense from pools, goods traffic
Purchase of fuels
Purchase of spare parts, accessories, etc.
Purchase of goods for restaurants and sale of goods on board
Port and waterway services
Auxiliary transport services
Other transport services (incl. storage, forwarding and transit services)
Space transport
Pipeline transport
Electricity transmission
Passenger transport (inland waterways)
Freight transport (inland waterways)
Supporting and auxiliary transport services
Passenger transport, sea
Passenger transport, air
Passenger transport, rail
Passenger transport, road
Passenger transport, vessel
Passenger transport, air
Passenger transport, rail
Passenger transport, road
Other travel-related services (accommodation, conferences, etc.)
Education services conducted in Sweden
Education services conducted abroad
Healthcare services conducted in Sweden
Healthcare services conducted abroad
Swedish banknotes
Life and pension insurance
Other non-life insurance

Other direct insurance
Freight insurance
Reinsurance
Reinsurance
Auxiliary insurance services
Financial services
Pension services
Pension and standardised guarantee services
CIF-adjusted imported goods, freight insurance
CIF-adjusted exported goods, freight insurance
Computer services
Information services
Construction services performed abroad
Construction services performed in Sweden
Franchising and similar rights
Charges for the use of intellectual property ex. right of use of software and audio-visual products)
Provision of customised and non-customised research and development services
Sale and purchase of proprietary rights arising from research and development (ex. rights for software and audio-visual products)
Other research and development
Legal services
Collection contribution EU (customs and agricultural charge)
Accounting, book-keeping and auditing services
Business and management consulting and public relations services
Advertising and marketing services
Architectural services
Engineering services
Scientific and other technical services
Agricultural and forestry services
Services incidental to mining and oil extraction
Waste treatment and de-pollution
Audio-visual and artistic related services
Cultural and recreational services
Other business services
Other personal services
Military expenses
Diplomatic representation in Sweden
Diplomatic representation abroad

Appendix 3. *Countries*

Andorra	Laos
United Arab Emirates	Lebanon
Afghanistan	Saint Lucia
Antigua and Barbuda	Liechtenstein
Anguilla	Sri Lanka
Albania	Liberia
Armenia	Lesotho
Angola	Lithuania
Antarctica	Luxembourg
Argentina	Latvia
American Samoa	Libya
Austria	Morocco
Australia	Monaco
Aruba	Moldavia
Åland	Montenegro
Azerbaijan	Saint Martin
Bosnia-Herzegovina	Madagascar
Barbados	the Marshall Islands
Bangladesh	North Macedonia
Belgium	Mali
Burkina Faso	Myanmar
Bulgaria	Mongolia
Bahrain	Macau
Burundi	North Mariana Islands
Benin	Martinique
Saint Barthélemy	Mauritania
Bermuda	Montserrat
Brunei Darussalam	Malta
Bolivia	Mauritius
Bonaire, Sint Eustatius and Saba	the Maldives
Brazil	Malawi
Bahamas	Mexico
Bhutan	Malaysia
Bouvet Island	Mozambique
Botswana	Namibia
Belarus	New Caledonia
Belize	Niger
Canada	Norfolk Island
Coconut Island	Nigeria
Congo, Democratic Republic	Nicaragua
Central African Republic	The Netherlands
Congo	Norway
Switzerland	Nepal
Côte d'Ivoire	Nauru
Cook Islands	Niue
Chile	New Zealand

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Cameroon	Oman
China	Panama
Colombia	Peru
Costa Rica	French Polynesia
Cuba	Papua New Guinea
Cape Verde	the Philippines
Curaçao	Pakistan
Christmas Island	Poland
Cyprus	Saint Pierre and Miquelon
Czech Republic	Pitcairn Islands
Germany	Puerto Rico
Djibouti	Palestinian National Authority
Denmark	Portugal
Dominica	Palau
Dominican Republic	Paraguay
Algeria	Qatar
Ecuador	Réunion
Estonia	Romania
Egypt	Serbia
Western Sahara	Russia
Eritrea	Rwanda
Spain	Saudi Arabia
Ethiopia	Solomon Islands
Finland	Seychelles
Fiji	Sudan
Falkland Islands	Singapore
Federated States of Micronesia	Saint Helena, Ascension and Tristan da Cunha
Faroe Islands	Slovenia
France	Svalbard and Jan Mayen
Gabon	Slovakia
United Kingdom	Sierra Leone
Grenada	San Marino
Georgia	Senegal
French Guyana	Somalia
Guernsey	Surinam
Ghana	Sao Tomé and Principe
Gibraltar	El Salvador
Greenland	Sint Maarten
Gambia	Syria
Guinea	Swaziland
Guadeloupe	Turks and Caicos Islands
Equatorial Guinea	Chad
Greece	French Southern Territories
South Georgia and the South	Togo
Guatemala	Thailand
Guam	Tajikistan
Guinea-Bissau	Tokelau

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Guyana	East Timor
Hong Kong	Turkmenistan
Heard Island and McDonald Islands	Tunisia
Honduras	Tonga
Croatia	Turkey
Haiti	Trinidad and Tobago
Hungary	Tuvalu
Indonesia	Taiwan
Ireland	Tanzania
Israel	Ukraine
Isle of Man	Uganda
India	Small Oceania and West Indies islands of the United States
British Indian Ocean Territory	USA
Iraq	Uruguay
Iran	Uzbekistan
Iceland	Vatican City
Italy	Saint Vincent and the Grenadines
Jersey	Venezuela
Jamaica	Wallis and Futuna
Jordan	British Virgin Islands
Japan	The US Virgin Islands
Kenya	Vietnam
Kyrgyzstan	Samoa
Cambodia	Vanuatu
Kiribati	Ceuta
Union of the Comoros	Kosovo (according to the definition in UN Security Council Resolution 1244/1999)
Saint Kitts and Nevis	Yemen
North Korea	Mayotte
South Korea	South Africa
Kuwait	Zambia
Cayman Islands	Zimbabwe
Kazakhstan	

Appendix 4. *Reported countries and groups of countries*

Austria (EU 27)	Switzerland (Rest of Europe)
Belgium (EU 27)	Norway (Rest of Europe)
Germany (EU 27)	Russia (Rest of Europe)
Denmark (EU 27)	Canada (North and Central America)
Spain (EU 27)	USA (North and Central America)
Finland (EU 27)	China (Asia)
France (EU 27)	Hong Kong (Asia)
Ireland (EU 27)	India (Asia)
Italy (EU 27)	Japan (Asia)
Luxembourg (EU 27)	South Korea (Asia)
The Netherlands (EU 27)	Thailand (Asia)
Poland (EU 27)	EU27
United Kingdom (Rest of Europe)	Extra (EU 27)

Appendix 5. *Services that are collected as a part of other services from Q1 2021.*

Airport charges
Road, bridge and ferry tolls
Repair of transport equipment
Gross income/expense from pools, passenger transport
Received/paid time charters for vessels, offshore platforms
Operating leasing (ex. chartering of vessels, offshore platforms)
Operating leasing and rental
Postal and courier services
Telecommunication, transmission via telephony and data networks, satellite, etc.
Operating leasing (ex. chartering of aircraft)
Operating leasing (ex. chartering of trains)
Operating leasing (ex. chartering of vehicles)
Chartering of vehicles (without driver)
Chartering of aircraft (without crew)
Chartering of trains (without driver)
Cargo handling

Appendix 6. *Description of sample uncertainty in the estimates by service type in terms of the relative standard deviation (RSD), defined as Standard deviation/Point estimate. Reference period: Q2 2022.*

	Publication 1 01/09/2022			Revision 1 01/12/2022		
Service type	RSD Export	RSD, Import	RSD, Net	RSD, Export	RSD, Import	RSD, Net
1. Manufacturing services	0,07	0,08	0,72	0,10	0,04	1,82
2. Maintenance and repair services	0,27	0,06	0,04	0,17	0,03	0,04
3. Transport	0,02	0,01	0,22	0,02	0,02	0,17

3.1 Sea transport services	0,04	0,02	0,28	0,02	0,03	0,22
3.2 Air transport services	0,06	0,02	0,2	0,03	0,05	0,17
3.3 Rail transport services	0,01	0,02	0,08	0,11	0,06	0,15
3.4 Road transport services	0,03	0,02	0,11	0,04	0,03	0,09
3.5 Postal and courier services	0,01	0,02	0,01	0,00	0,01	0,01
3.6 Other modes of transport services	0,06	0,05	0,15	0,11	0,01	0,15
4. Travel	0,00	0,00	-	0,00	0,01	-
5. Construction services	0,09	0,08	0,36	0,15	0,19	0,29
6. Insurance and pension services	0,05	0,06	0,33	0,08	0,09	0,28
7.1 Financial services excl. FISIM	0,04	0,06	0,07	0,10	0,03	0,18
8. Charges for the use of intellectual property	0,05	0,03	0,03	0,03	0,01	0,03
9. Telecommunications, computer, and information services	0,02	0,02	0,09	0,02	0,02	0,08
9.1 Telecommunication services	0,05	0,03	0,36	0,03	0,03	0,15
9.2 Computer services	0,02	0,03	0,08	0,02	0,03	0,07
9.3 Information services	0,15	0,08	0,12	0,15	0,10	0,28
10. Other business services	0,02	0,02	0,1	0,02	0,01	0,10
10.1 Research and development services	0,06	0,07	0,38	0,06	0,01	0,38
10.2 Professional and management consulting services	0,03	0,03	0,15	0,03	0,03	0,09
10.2.1 Legal services	0,11	0,07	5,39	0,07	0,03	1,12
10.2.2 Accounting, book-keeping and auditing services	0,04	0,05	2,54	0,17	0,14	0,14
10.2.3 Management and PR	0,04	0,03	0,13	0,03	0,02	0,11
10.3 Marketing services	0,08	0,05	0,11	0,08	0,05	0,11
10.4 Technical, trade-related and other business services	0,05	0,03	0,27	0,03	0,02	0,40
10.4. 1 Architectural, engineering and scientific services	0,07	0,05	0,16	0,05	0,04	0,12

10.4.2 Agricultural, mining and waste treatment/de-pollution services	0,09	0,08	0,52	0,27	0,15	0,42
10.4.3 Other services	0,07	0,04	0,17	0,04	0,03	0,19
11. Personal cultural and recreational services	0,01	0,05	0,02	0,01	0,05	0,01
12. Government goods and services	0,00	0,00	0,00	0,00	0,00	0,00

Appendix 7. *Description of sample uncertainty in the estimates by service type in terms of the relative standard deviation, defined as Standard deviation/Point estimate. Reference period: Q3 2022. Publication data: 01/12/2022.*

Service type	RSD, Export	RSD, Import	RSD, Net
1. Manufacturing services	0,10	0,03	0,42
2. Maintenance and repair services	0,14	0,03	0,04
3. Transport	0,04	0,03	0,43
3.1 Sea transport services	0,05	0,04	0,36
3.2 Air transport services	0,03	0,05	0,16
3.3 Rail transport services	0,16	0,08	0,19
3.4 Road transport services	0,09	0,06	0,08
3.5 Postal and courier services	0,00	0,01	0,01
3.6 Other modes of transport services	0,20	0,01	0,26
4. Travel	0,00	0,01	
5. Construction services	0,16	0,06	0,24
6. Insurance and pension services	0,06	0,11	0,25
7.1 Financial services excl. FISIM	0,12	0,06	0,20
8. Charges for the use of intellectual property	0,04	0,01	0,03
9. Telecommunications, computer, and information services	0,03	0,03	0,12
9.1 Telecommunication services	0,21	0,15	0,47
9.2 Computer services	0,02	0,03	0,09
9.3 Information services	0,14	0,11	0,44
10. Other business services	0,02	0,01	0,06
10.1 Research and development services	0,03	0,01	0,04
10.2 Professional and management consulting services	0,05	0,03	0,14
10.2.1 Legal services	0,08	0,05	0,54
10.2.2 Accounting, book-keeping and auditing services	0,11	0,06	0,36

10.2.3 Management and PR	0,06	0,04	0,14
10.3 Marketing services	0,07	0,03	0,07
10.4 Technical, trade-related and other business services	0,03	0,03	1,13
10.4. 1 Architectural, engineering and scientific services	0,06	0,06	0,10
10.4.2 Agricultural, mining and waste treatment/de-pollution services	0,25	0,18	0,42
10.4.3 Other services	0,04	0,03	0,31
11. Personal cultural and recreational services	0,01	0,06	0,02
12. Government goods and services	0,00	0,00	0,00