Methodology of international trade in services by enterprise characteristics (STEC) compilation

Foreign trade, understood as balance of income flow between residents and non-residents, constitutes, apart from consumption, investments and state expenditure for the purchase of goods, part of the gross national product (GNP). Compiling data on this phenomenon in a more comprehensive manner allows for a better understanding of the impact of foreign trade on economic development, employment and economic independence of individual countries.

The growing demand for data on foreign trade obliges domestic and international institutions responsible for collecting, compiling and publishing statistical data to create more and more new compilations of these data in order to better reflect the economic situation of individual countries or their groups. An example of such compilation is the data set on foreign trade in goods by enterprise characteristics (TEC[[1]](#footnote-1)). As part of the statistics of international trade in services, such a task is to be fulfilled by the project *Services trade by enterprise characteristic*s (STEC). Both TEC and STEC output data represent an important first step towards integration of international trade and business statistics. Plans for compilation of STEC tables are included in the Framework Regulation Integrating Economic Statistics (FRIBS), which is currently processed in the European Parliament.

# Objective

The general objective of the projects "Statistics on services trade by enterprise characteristics (STEC)", carried out by Statistics Poland within the grant agreements of the European Commission, was to develop data on international trade in services statistics by enterprise characteristics (STEC). The projects were of a research nature, within which authors were obliged to develop and check the methodology of data on international trade in services by enterprise characteristics compilation.

The methodology described in this note was used in two editions of the project, whose objective was to develop databases on international trade in services by enterprise characteristics (STEC) for 2016 and 2018.

# Description of the methodology

In the process of STEC tables compilation, the following data sources available for official Polish statistics were used:

1. to calculate values of services provided to non-residents and acquired from non-residents - *International trade in services* survey based on data collected on “Quarterly questionnaire on international trade in services”(DNU-K) and “Annual questionnaire on international trade in services” (DNU-R);
2. to calculate export and import intensity ratios:
	1. annual survey *Current financial results and outlays on fixed assets of enterprises as well as financial assets and liabilities* based on data collected on “Report on revenues, costs and financial results and outlays on fixed assets” (F-01/I-01),
	2. annual survey *Higher education institutions and their finances* based on data collected on “Report on revenues, costs and the financial result of higher education institutions” (F-01/s),
	3. annual survey *Financial survey of cultural institutions* based on data collected on “Report on finances of cultural institutions” (F-02/dk),
	4. annual survey *Care of children and young people* based on data collected on “Report on revenues, costs and the financial result of schools and other educational institutions” (F-01/o),
	5. *Annual business survey of enterprises* based on data collected on:
		1. “Annual enterprise survey” (SP) – for units with the number of persons employed 10 and more,
		2. “Report on business activity of enterprises” (SP-3) – for units with the number of persons employed 9 and less,
	6. Administrative data of Ministry of Finance derived from the information system about payers of goods and services tax (VAT);
3. to obtain information about enterprises characteristics in the scope of the main economic activity (NACE Rev. 2), number of employees and type of ownership - Base of Statistical Units (BJS).

ID number called REGON was the basic identifier of national economy entities engaged in international trade in services and according to which micro data were linked with other databases or other surveys outcomes.

As a result of works carried out, the STEC datasets for Poland for 2016 and 2018 were compiled. The values of turnover in international trade in services reported in those tables were aggregated according to the following variables:

1. main economic activity (NACE Rev. 2) and size class (tables 1.1-1.6),
2. main economic activity (NACE Rev. 2) and service item (EBOPS 2010[[2]](#footnote-2)) (tables 2.1-2.6),
3. main economic activity (NACE Rev. 2) and type of ownership (tables 3.1-3.6),
4. main economic activity (NACE Rev. 2) (at section and division level) (tables 4.1-4.6),
5. service item (EBOPS 20102) and size class (tables 5.5-5.6),
6. service item (EBOPS 20102) and type of ownership (tables 6.5-6.6).

Moreover, exports and imports intensity ratios were presented respectively in tables 4.5 and 4.6.

All a.m. tables were broken down into total exports of services and total imports of services. Moreover layouts 1. – 4. are additionally divided by the trade direction:

1. countries and organizations of European Union (intra-EU; tables 1.2, 1.4, 2.2, 2.4, 3.2, 3.4, 4.2, 4.4) and
2. countries and organizations outside European Union (extra-EU; tables 1.1, 1.3, 2.1, 2.3, 3.1, 3.3, 4.1, 4.3).

In accordance with balance of payments, countries and organizations of European Union comprise of all EU countries and all institutions, organizations and organs of European Union.

Tables 1.5-1.6, 2.5-2.6, 3.5-3.6, 4.5-4.6 and 5.5 – 6.6 contain data on total exports of services and imports of services in the international exchange with all partner-countries and institutions, organizations and international organs.

Main economic activity (NACE Rev. 2), service item (EBOPS 20102), size class and type of ownership aggregation in the a.m. tables were adopted in accordance with *Compilers Guide for statistics on STEC* guidelines, i.e. for:

1. main economic activity (NACE Rev. 2), sections: A-B, C, D-E, F, G, H, J, K, M, N, Other activity (I, L, O, P, Q, R, S, T, U,) (this level of aggregation does not concern tables 4.1-4.6, 5.5-5.6 and 6.5-6.6),
2. size class: 0-49, 50-249, 250 and more,
3. service item (services classification consistent with EBOPS 20102):
	1. Manufacturing services on physical inputs owned by others,
	2. Repair and maintenance services (not included elsewhere),
	3. Transport,
	4. Travel,
	5. Construction,
	6. Insurance and pension services,
	7. Financial services,
	8. Charges for the use of intellectual property (not included elsewhere),
	9. Telecommunications, computer, information services,
	10. Other business services:
		1. Research and development services,
		2. Professional and management consulting services,
		3. Technical, trade related and other business services,
	11. Personal, cultural and recreational services,
	12. Government goods and services (not included elsewhere).
4. type of ownership: domestic ownership, foreign ownership.

In case of insurance and pension services in tables 2.1-2.6 and 5.5-6.6, data reported for each NACE activity concerned auxiliary insurance services, while the value of other types of insurance and pension services was included under the item “Other non-attributed activity” (see explanation in further part of this note).

In accordance with guidelines included in *Compilers Guide for statistics on STEC*, during the data compilation process, compilers took into account all value data on international trade in services which could not be linked with information derive from Base of Statistical Units (BJS). In this case, depending on the service item, the following assumptions were made:

1. in tables 1.1-1.6, 3.1-3.6 and 4.1-4.6 in the item "Non-attributed activity – Non-attributed size/ownership" were included:
	1. value of travel,
	2. value of financial intermediation services indirectly measured (FISIM),
	3. grossed-up values on international trade in services – in case of units which had not fulfilled the reporting obligation,
	4. value of government services,
	5. value of insurance and pension services collected as part of the survey on international trade in services, but compiled by Narodowy Bank Polski based on a methodology compliant with the requirements of balance of payments,
	6. value of illegal services (only in tables on imports of services),
	7. value of expenditures incurred by private persons for international transport (only in tables concerning imports of services),
	8. value of services resulting from the addition of transport costs included in the value of imported goods for which the base is the FOB delivery terms (only in tables concerning imports of services);
2. in tables 2.1-2.6 and 5.5-6.6:
	1. values on: travel, financial intermediation services indirectly measured (FISIM), government services, insurance and pension services compiled by Narodowy Bank Polski were included in lines corresponding to the indicated services in the column “Non-attributed activity”,
	2. values on: grossed-up data on international trade in services (in case of units which had not fulfilled the reporting obligation), illegal services, expenditures incurred by private persons for international transport and services resulting from the addition of transport costs included in the value of imported goods for which the base is the FOB delivery terms (last three service items - only in tables concerning imports of services) were included in line and column intersection “Non-attributed activity/services/size/ownership”.

Tables 4.5 and 4.6 *Trade value by activity sector*, apart from total value of exports of services and imports of services, also include ratios of exports intensity (table 4.5) and imports intensity (table 4.6). Those ratios were compiled as share of total value od exports of services and imports of services in total value of turnover and expenditures of entities which were included in sample frame of *International trade in services* survey.

The tables were compiled in thousands of PLN (with one decimal). In all compiled tables the following rules were applied:

1. primary and secondary confidential values were marked as empty cells,
2. in case of phenomenon did not occur or value of service was below PLN 1,000 and was not confidential – the cells were filled with the value “0.0” (zero),
3. in tables 4.5 and 4.6 in columns concerning intensity ratios in case of:
	1. not available data on turnover or expenditures of entities, as well as low reliability of these data, the flags “:” and “:u” were adopted,
	2. confidential data – the flag “c” was adopted.

Summary

The works carried out in the projects "Statistics on international trade in services by enterprise characteristics (STEC)" for 2016 and 2018 allowed for checking the possibility of obtaining data for STEC tables compilation, but most of all for the development and testing the methodology for compilation data necessary for supply these tables, moreover identifying all difficulties and threats that may arise in the working process. An additional benefit of the projects was the consideration of the possibility of publishing data on international trade in goods and services in Poland by enterprise characteristics, which could result in better satisfaction of many stakeholders groups (e.g. scientific community).

It is expected that after the end of the work related to the carried out projects and the entry into force of FRIBS, the compilation of STEC tables will continue in line with international requirements for international trade in services.

In case of quoting Statistics Poland data, please provide information: “Source of data: Statistics Poland”, and in case of publishing calculations made on data published by Statistics Poland, please include the following disclaimer: “Own study based on figures from Statistics Poland”.

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**Related information**

[Yearbook of Foreign Trade Statistics of Poland](https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/yearbook-of-foreign-trade-statistics-of-poland-2019%2C9%2C13.html)

**Data available in databases**

[Knowledge Databases Foreign Trade](http://swaid.stat.gov.pl/en/SitePagesDBW/HandelZagraniczny.aspx)

**Terms used in official statistics**

[residents - international trade in services](http://stat.gov.pl/en/metainformations/glossary/terms-used-in-official-statistics/3180%2Cterm.html)

[international trade in services](http://stat.gov.pl/en/metainformations/glossary/terms-used-in-official-statistics/3179%2Cterm.html)

1. Trade by enterprise characteristics [↑](#footnote-ref-1)
2. Extended Balance of Payments Services Classification 2010 [↑](#footnote-ref-2)