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Import of services – Polish experiences in international trade in services statistics

Cross-cutting topic: Measurement challenges for import services

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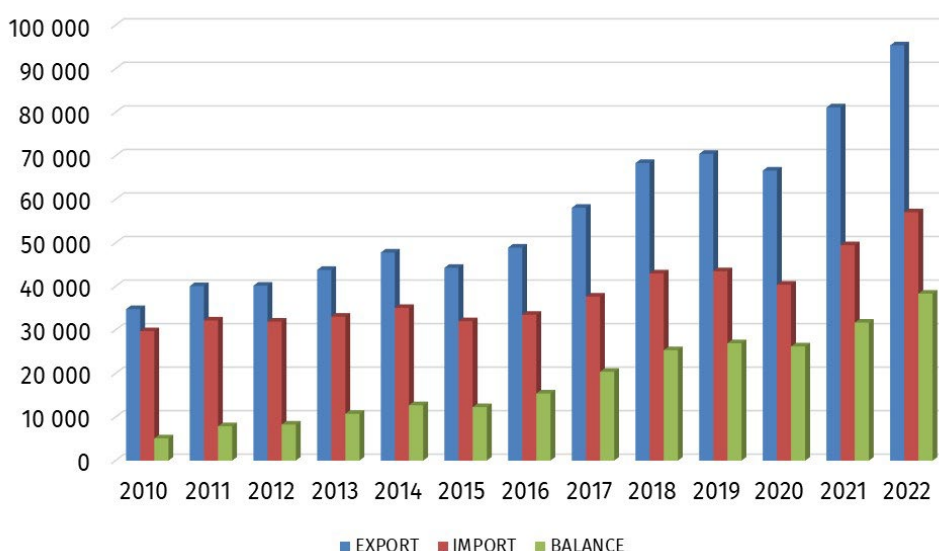
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I. Introduction

The objective of this paper is to present the experience of the Statistics Poland in compiling data on the international trade in services with special interest in the import of services as well as the development works undertaken in order to meet both the requirements imposed on official statistics and the expectations raised by data users. With the continuous development of the services market and the growing role of services turnover in the balance of payments in the majority of national economies, there is an increasing demand for the wide range of information about the services traded with non-residents.

In Poland, the value of services provided to non-residents increased from USD 34 800 million in 2010 to USD 95 362 million in 2022 (2.7 times). During the same period, the value of services purchased from non-residents almost doubled from USD 29 712 million to USD 57 019 million. Moreover, Poland is a net supplier of services, and the positive balance of services turnover has been constantly growing. As a result, services have been becoming an important component of the current account in the balance of payments. However, compared to the values recorded in the foreign trade in goods, in 2022 the export of services was approximately 3.5 times and import of services over 6 times lower than in case of goods.

Graph 1 Export, import and balance of services in USD MLN in 2010 - 2022



Source of data: Statistics Poland - ITS statistics

The development works mainly concern the compilation of more detailed information on the international trade in services than those having been produced so far by official statistics. Among them the most important are:

- characteristics of enterprises involved in service trade with abroad and the intensity of this phenomenon in the context of conducted business activities;
- the role of particular modes of services supply to non-residents in generating the value of service turnover with abroad;

Undoubtedly, the compilation of above mentioned information represents the significant challenge to the statisticians. It is mainly related with the data sources necessary for producing additional characteristics of phenomena as well as the assumptions which have to be taken. Moreover, the Statistics Poland has been continuously undertaking the works which aim at improving the quality of regular international trade in services survey.

Within the paper the following information are presented: description of methodology for compiling regular data in the international trade in services, difficulties encountered when data on the import of services are produced and the challenges the official statistics faces in order to adjust the compiled data to the needs reported by users.

II. Methodology of international trade in services survey

The international trade in services (ITS) survey is the regular survey carried out by Statistics Poland in co-operation with Narodowy Bank Polski (NBP) based on the Statistical Research Program of Polish Statistics. The survey is conducted in compliance with the Commission Regulation (EU) No 555/2012 of 22 June 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 survey was implemented into regular statistical production in 2009 (1st quarter, 2009 – the first reference period). Until 2009, information on the export and import of services were compiled by the NBP based on the bank payment system.

The subjective scope of survey results from the needs of the balance of payments (BoP) statistics. It covers transactions in which one side of transaction (of providing/acquiring services) has its head office/domicile in Poland, whereas the other side of the transaction has its head office/domicile abroad, is international organization or diplomatic unit (embassy, consulate) of foreign country. It is not important where a service was provided but the fact of occurrence of the transaction between a resident and a non-resident (e.g. cross-border trade in services, consumption of services abroad, provision of services by individuals in the territory of another country).

Data are collected on the quarterly and annual basis with the usage of the on-line applications for data collection:

- DNU-K - Quarterly questionnaire on international trade in services,
- DNU-R - Annual questionnaire on international trade in services.

The scope of information collected within both applications is the same. It is divided into two parts: the first one (part A) concerns services and the second one (part B) – other transactions covered by the survey i.a. merchandising, remuneration of non-residents employees or rent of land and natural resources. In case of part A, data on transactions are collected for all services specified by Extended Balance of Payments Services Classification (EBOPS 2010) at the lowest level of detail and for partner countries¹. In accordance with Commission Regulation (EU) No 555/2012 of 22 June 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 population frame includes all residents of the national economy who run the international trade in services regardless of their organizational structure or ownership form. The residents whose revenues or/and expenditures from international trade in services exceeded in the previous reporting year or during the current reporting year the threshold of PLN 2 000 000² are obliged to provide quarterly data via DNU-K application. The entities which do not meet the above specified thresholds are required to participate in the

¹ In accordance with Commission Regulation (EU) No 555/2012 of 22 June 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.

² Till 2021 the thresholds were for: export of services was 800 000 PLN and import of services – 1 000 000 PLN.

annual survey (DNU-R). Furthermore, regardless of whether the entity has been identified as an exporter or importer of services, it is required to complete both parts of questionnaire (for export as well as for import).

The first population frame was determined by the NBP using information recorded in the bank payment system and then it was supplemented with entities which recorded the value of services import in the VAT declaration. Currently, entities engaged in the international trade in services are mainly identified on the basis of data collected in the previous editions of the ITS survey, however, for import of services, additionally information from the VAT declaration is used.

In order to compile the quarterly data on the value of services traded with non-residents the value of turnover below the established threshold is imputed based on the system of estimation coefficients compiled in the cooperation with the central bank (NBP). Additionally, regardless the frequency of survey in case of enterprises, which do not respond, the value of services traded with non-residents is estimated based on the average measures.

Moreover, datasets collected within the questionnaires are supplemented with data on travel as well as the financial services measured indirectly (FISIM) compiled by the central bank for the needs of balance of payments statistics.

III. Challenges in the measurement of services import – regular survey

The challenges related with the measurement of services import result from the constraints encountered at the consecutive stages of data compilation, beginning from selecting the population frame, through collecting data and its processing up to the results dissemination and the assessment of data quality.

Among the most significant difficulties which are met when data on international trade in services is produced the following should be specified:

- Identification of population engaged in import of services

How to capture the enterprises engaged in trade in services in order to measure the import (but also the export of services) as precisely as possible? Regarding growing number of enterprises identified as exporters or importers of services what size should the sample be?

When the international trade in services survey was overtaken by the Statistics Poland the primary population of enterprises engaged in international trade in service was indicated by central bank (NBP). The NBP prepared list of enterprises which imported and/or exported services based on information coming from the banking system of payments. The initial population frame for quarterly data collection designated by the NBP was accounted for almost 1.8 thous. for the 1st Q 2009 while in case of annual frequency of survey – about 10.5 thous. of units.

Then the population of enterprises obliged to provide the official statistics with data on the value of services traded with non-residents was updated for each reference period (quarter or annual). The main source of information on the new enterprises which should be covered by the annual or quarter ITS survey the VAT data is as in the VAT declaration enterprises are obliged to record information on the value of imported services. Moreover, due to the reporting obligation imposed on the enterprises (by law) some entities report their activity in international trade in services to the Statistics Poland.

Apart from identifying the enterprises engaged in the international trade in services it is also important to establish the amount of traded services in order assign the given enterprise to the suitable data collection

of ITS survey – quarter or annual. For the quarterly survey there are some thresholds applied as specified in the table below.

In case of quarterly data collection, the population frame increased from almost 7.4 thous. units in 4thQ 2009 to almost 16.9 thous. in 4th Q 2020 whereas in case of annual frequency the survey for 2009 covered almost 23.7 thous. enterprises and for 2020 over 20.1 thous. Therefore, in order to limit the costs of survey as well as the respondent burden it was decided to raise the threshold for quarterly data collection.

Table 1 Number of units covered by annual and quarterly ITS survey in years 2009, 2010, 2015, 2020 and 2022

DATA COLLECTION		2009	2010	2015	2020	2022
THRESHOLD FOR QUARTERLY ITS IN MLN PLN	EXPORT	0.8				2.0
	IMPORT	1.0				
QUARTERLY (4 TH Q)		7 394	10 073	12 220	16 898	13 635
ANNUAL		23 673	20 017	30 585	20 082	30 032

Moreover, due to the growing number of enterprises which should be covered by the ITS survey it is considered to limit the population of enterprises obliged to fill in the annual questionnaire of survey by establishing some thresholds. In such a case it is required to estimate the value of services traded internationally below settled thresholds. It is thought that the tax data is the most suitable data source for imputation. The official statistics has access to the VAT data, which can be used to impute the value of imported services, while on the export side, the Statistics Poland has made efforts to obtain VIES data sets containing information on the transactions between European Union member states.

- Asymmetries in data between countries

The differences identified in data on the value of services traded between countries are the next challenge for statistics. In the theory the B country's services import to the A country should be equal to the A country's services export to the A country. In practice such equilibrium is very rare situation and explaining the asymmetries identified in data between countries requires a lot of bilateral works between countries they concern.

The Statistics Poland participates in the works managed by Eurostat in compliance with the Asymmetry Resolution Mechanism (ARM) which are related with explaining the asymmetries in the ITSS. Generally, the analysis are conducted in three stages – comparison of: methodologies of surveys, unidentified unit data and identified unit data.

Based on the so far obtained experiences it can be concluded that even if there are some discrepancies in the applied methodologies of ITS survey identified the detailed analysis of unit data are very often recommended. However, such works require sharing the unit data between countries what is very often contradictory to the domestic law. In case of Poland, despite the fact that the exchange of unit data for the statistical purposes is allowed in compliance with the EU's statistical law the sharing data requires additionally the acceptance of the President of Statistics Poland.

- Searching for alternative data sources

At present the informative system of the Ministry of Finance (VAT data) is non-statistical source of data on the services import available for official statistics. Data collected in the VAT declaration concerns the total value of imported services without any additional information which could allow to establish the kind of traded services or country of transaction partner. Therefore, at present information recorded in the VAT declarations are used for identifying the enterprises engaged in the import of services. Moreover, it could be

also applied to impute the value of services imported by enterprises which did not fulfill the reporting duty and did not provide data to official statistics. Moreover, as mentioned above, the Statistics Poland applied for the access to VIES data³ which is thought to be useful for imputing data on export of services between the residents of the European Union's countries.

IV. Challenges related to new data requirements

As mentioned in the *Introduction* together with fast growing role of services in the global markets more and more detailed data are needed in order to identify the impact of international trade in services on the economic development of countries and regions and the progressing process of globalization. Moreover, in the response to the changes observed in the world economy the new concepts are created which are the modification of old phenomena.

Therefore, for few years the Statistics Poland has been undertaking actions in order to develop the methodologies for compiling the new data sets for which demand is reported by data users. The works have been carried out within the grant agreements with the European Commission and co-financed by this institution. As a result, at present the Statistics Poland is fully prepared to compile the datasets in compliance with requirements imposed on the EU's member states.

The challenges related with the new requirements concerning the international trade in services focus on the following areas:

1) International trade in services by the enterprises characteristics

Datasets on international trade in services by enterprise characteristics (STEC) provide information which can be used in analysis of enterprises engaged in international trade in services both as an input in compiling the multi-regional supply-use and input-output tables (SUIOT) and in improving the national accounts estimates or in-depth analysis on value added (Global Value Chains).

Information produced within the STEC statistics are compiled according to requirements of Commission Implementing Regulation (EU) 2020/1197 of 30 July 2020 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics repealing 10 legal acts in the field of business statistics. In June 2024, member states of European Union are obliged to provide STEC data for 2022 as a reference year.

Annual datasets will comprise the values of both imported and exported services with breakdowns by the following variables:

- 1) enterprise size class and NACE activity,
- 2) service item (EBOPS 2010) and NACE activity,
- 3) NACE activity and type of ownership.

In order to compile the above specified datasets it is required to combine data obtained within the international trade in services survey (DNU-K/DNU-R questionnaires) with information gathered in the Base of Statistical Units (BJS). The BJS is run by the Statistics Poland for the needs of survey completion, in particular for selecting the population frames of surveys. Data coming from the statistical surveys and the BJS are linked on the basis of the unique identifier of national economy entities - the ID number called REGON.

³ VAT Information Exchange System – system for monitoring the flow of intra-Community trade;

2) International trade in services by modes of supply (international supply of services)

The international trade in services by modes of supply follows the concept of international supply of services, which is defined in the MSITS 2010. While *international trade in services* statistics covers only the services transactions between residents and non-residents (i.e. as covered in the goods and services account of the balance of payments), the *international supply of services* is broader concept which covers both the value of services traded between residents and non-residents as well as the value of services supplied through the operations of foreign affiliates. In compliance with the balance of payment statistics those transactions comprise the trade between the residents of the same economy.

Therefore, according to the above mentioned concept the import of services comprises the value of:

- ① services purchased by residents from non-residents diminished by the value of services imported by foreign affiliates located in Poland (IFATS enterprises⁴) from their mother company as well as affiliates;
- ② services provided by foreign affiliates located in Poland (IFATS enterprises) to Polish residents through the commercial presence (excluding the value of goods included in the value of services provided by the IFATS enterprises to Polish residents);
- ③ distributive services purchased from non-residents due to the import of goods reduced by the value of distributive services purchased by IFATS enterprises from their mother company as well as affiliates;

Similarly, the export of services includes the value of:

- ① services provided by residents to non-residents diminished by the value of services exported by IFATS enterprises to their mother company as well as affiliates;
- ② services provided by the foreign entities of domestic enterprises located abroad (OFATS enterprises⁵) to the residents of host country;
- ③ distributive services provided to non-residents due to the export of goods reduced by the value of distributive services provided by IFATS to their mother company as well as affiliates;

In order to compile the above specified datasets it is required to combine data obtained within the international trade in services survey (DNU-K/DNU-R questionnaires) with information collected within other statistical surveys:

- *Annual business survey of enterprises* and *Entities with foreign capital* (SP *Annual enterprise survey*– for units with the number of persons employed 10 and more and SP-3 *Report on business activity of enterprises*– for units with the number of persons employed 9 and less);
- *Entities with foreign capital* (SP questionnaire, SP-3 questionnaire, F-01/I-01 *Report on revenues, costs and financial results and outlays on fixed assets*),
- *Activity of enterprises having foreign entities* (KZZ *Report of enterprises having foreign entities*) the
- *Foreign trade in goods statistics*;

The REGON was used as a identifier for linking data coming from different statistical surveys.

⁴IFATS enterprises – enterprises classified as the foreign affiliates according to the Inward Foreign Affiliates Statistics;

⁵OFATS enterprises - enterprises classified as the foreign entities of domestic enterprises located abroad according to the Outward Foreign Affiliates Statistics;

Moreover, in order to meet the needs of data users total value of imported services has to be broken down into the modes of supply by which the services are purchased. Under the General Agreement on Trade in Services (GATS) there are four modes of services supply specified:

- cross-border supply of services (1);
- consumption of services abroad (2);
- commercial presence of a company abroad (3);
- presence of natural persons abroad (4).

Taking into account the present state of works' progress as well as all data requirements related with measuring the services import in compliance with the concept of international supply of services by modes as well as international trade in services by enterprises characteristics the **following challenges** are specified:

- Searching for new data sources with more detailed information needed for estimating the value of services imported by the modes of supply and by enterprises characteristics;

As the scope of required STEC or MoS data sets has evolved since their launching, there is a constant need to monitor new data requirements. The next step is to find data sources that contain information that can be used to compile new datasets. Once such sources have been identified, the structure of the databases should be reviewed and the coverage and quality of the data contained therein should be assessed.

- Updating the methodology for compiling required datasets regarding the data available for official statistics;

Due to the changes in the scope of required datasets and introducing new data sources the methodology for data compilation has also to be suitably updated. First of all, it requires developing the methods for combining data obtained from various data sources or establishing the assumptions which allow for the imputation of missing information.

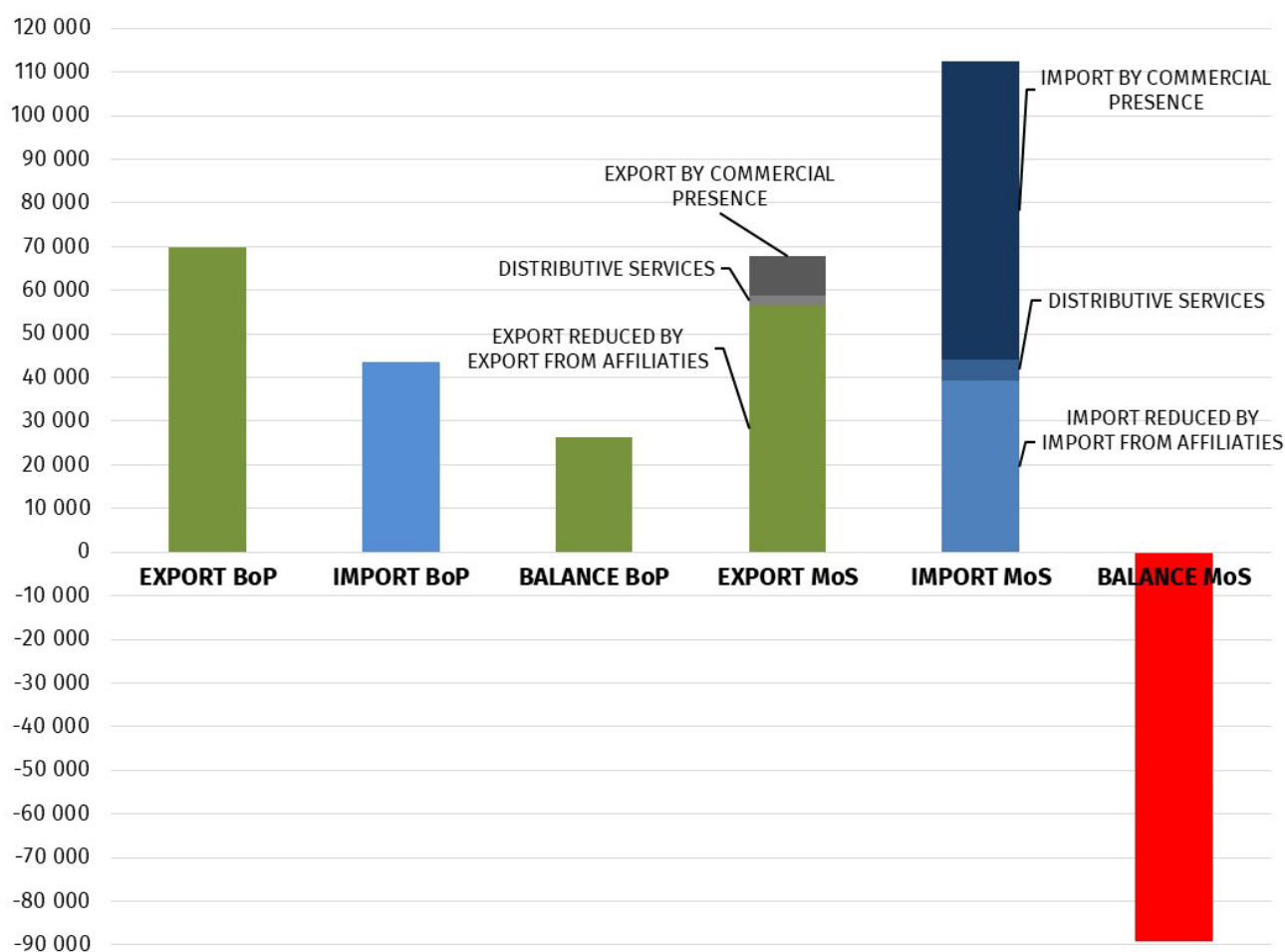
- Developing the data dissemination policy to inform the data users about the way the new information should be interpreted;

While the first two points mentioned above are the subject of ongoing works, the third issue requires determining how to inform data recipients about new products of official statistics. First of all, it is crucial to explain the difference between the value of services recorded in the current account of the balance of payments statistics and the value of services purchased from abroad by modes of supply.

Based on the experimental data compilation conducted for the 2019 reference year it turned out that the value of imported services in compliance with the balance of payments statistics was accounted for almost USD 43.5 billion while regarding the concept of the international supply of services that value was 2.6 times bigger and amounted to about USD 112.4 billion. For export side, the value of services recorded in the balance of payment statistics amounted to USD 69.9 billion whereas after implementing the international supply of services it was USD 67.8 billion.

As a result, the position of Poland on the global services market reverses. Instead of being the net exporter of services country becomes a net importer of services. It shows what impact the foreign affiliated enterprises (so called IFATS) have on Polish economy.

Graph 2 Export, import and balance of services according to the BoP statistics and ITS by MoS statistics in 2019 in USD MLN



Source of data: Statistics Poland - ITS statistics and own study based on figures from Statistics Poland

Moreover, in the case of international trade in services by enterprises characteristic there are some new variables applied which have to be explained to data users, for example the import intensity ratios. It is calculated as the share of services import in the total value of costs incurred by entities.

V. Summing up

To sum up the following development works related to the survey on import of services were identified as priority tasks needed to be conducted by the Statistics Poland:

- Identifying the population engaged in international trade in services;
- Explaining the asymmetries in data between countries;
- Searching for alternative data sources with information on the import and export of services regarding the balance of payments statistics as well as new data sources with more detailed information needed for compiling the value of services imported by the modes of supply and by enterprises characteristics;
- Updating the methodology for compiling the datasets on international trade in services following the concept of international trade in services by modes of supply and by enterprises;

- Developing the data dissemination policy to inform the data users about the way the new information should be interpreted;

Apart from the challenges mentioned above there are also some other issues that should be undoubtedly undertaken by official statistics in future in order to properly monitor phenomena related to the export and import of services.

First of all, the official statistics should take steps to develop the methodology of survey on the prices in international trade in services. This type of data is extremely important for trade policy makers, as pointed out by representatives of the World Trade Organization and other economic and statistical organizations. Information on price levels in imports and exports of services makes possible to measure the volume of international trade in services and at the same time assess the terms of trade in services with non-residents.

Moreover, in the aspect of globalization phenomena, digital trade has recently become the subject of many considerations undertaken in various forum of international statistical and economic organizations. And as that issue is directly related with the international trade in services it should also be included in the future works of statistical institutes.