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UNSD Friends of the Chair Group

Paper on Services Trade by Enterprise Characteristics (STEC)

1. Introduction

Service Trade by Enterprise Characteristics (STEC) is the first step towards integrating services trade statistics into business statistics. It builds from the principle that combining data from different sources can increase the possibility to provide more analytical value to the user from the same statistical data. STEC can somehow answer to the questions: who are the traders and do they trade with enterprises inside or outside EU?

As witnessed at the Global Forum on trade statistics in Geneva, in 2011, policy makers, trade analysts and researchers made a strong demand for more comprehensive and integrated data on international trade and globalisation. Reusing data that already exist, is a way to get more value out of the collected data, without any burden increase for enterprises and with rather limited costs for data compilers.

In 2012, Eurostat took the initiative of launching a pilot project for measuring services' trade, not only by the "conventional" way or by service categories (products), but also by the characteristics of those who are trading with services. For that purpose, the micro-data linking (MDL) method was introduced to the countries participating in the pilot project. STEC represents the method of linking services traders' statistics dataset to the Business Register (BR). This method is known already for merchandise trade, namely TEC (Trade by Enterprise Characteristics).

2. What is measured by STEC?

Until now, services' trade has been measured based on product classification EBOPS (Extended Balance of Payments Services). From that information we only know, what is exported and imported

(to and from where) in values and also broken down by service categories. However, policy makers, scientists and public need for a more sound economic analysis of the services' trade.

STEC is "derived" statistics. At the <u>enterprise or micro level</u>, it combines datasets where services' exports and imports value by traders is linked with the Business Register (BR) information. Compiling data by the STEC method takes into account the enterprise's size class (small, medium or large), activity and ownership. Enterprises with 0 to 49 employees are considered to be small, 50-249 medium and from 250 onwards as large enterprises. By ownership, enterprises are divided into domestic and multi-national enterprises (MNE). Enterprises are classified as MNE-s, if the foreign capital exceeds 50% of the enterprise's assets.

In order to measure trade in services by enterprise characteristics, countries should link services dataset with the BR dataset and then build up the cross classification. For example, combining together services trade value by enterprise's activity and EBOPS categories (see more about the aggregated groups in the additional information below), the output is as following:

<u>Table1.</u> Example of cross classification: EBOPS categories and enterprise's activity

EBOPS/NACE	service_name	(01-09)	(10-33)	(41-43)	(45-47)	(49-53)	61	62-63 (computer, information)	(64-66)
205	Transport		245.9		208.3	4871.2		2.7	
245	Communications services				0.7		233.3	0.8	
249	Construction services		172.5	614.3	11.6				
253	Insurance services								239.5
260	Financial services		5.8	0.4	8.6				226.8
262	Computer and information services		114.5		58.4	2.0		600.4	71.2
263	Computer services				57.0			560.7	
264	Information services				1.4			39.7	
266	Royalties and licence fees		20.6					15.8	
268	Other business services	81.7	1012.5	76.9	711.4	72.0		186.4	

In STEC compilation method, there are tables that consist of two different classifications. The tables are combined together with following enterprise's characteristics: e.g. size class and activity; enterprise's activity and service category etc. The characteristics that were used in STEC tables were:

- Size class (0-49 employees; 50-249: 250-…)
- Activity (NACE Rev.2)
- Ownership (domestic or foreign controlled)
- Service category (EBOPS 2002)
- Extra-EU; Intra-EU; Extra-EU + Intra-EU
- Flows: exports, imports

First results have been drawn from the data of the six EU member states, namely CZ, PL, DK, LU, EE, AT. In exports of those six countries, 15% of the total services value was exported by small enterprises, 12% medium and 31% large enterprises. There was no confidential data on the aggregated level (0%). Non-linkable share includes data from "secondary" sources e.g. travel, financial services, SPE-s and transport and insurance adjustment (difference between CIF and FOB price), but also estimations below the threshold due to the survey data.

Table2. Services trade distributed by the enterprise's size class (number of employees), weighted average of six countries, 2011.

Size class by number of employees	Exports, weighted average of six countries, %	Imports, weighted average of six countries, %
small: 0-49	15	14
medium: 50-249	12	10
large: 250-…	31	31
confidential	0	0
non-linkable	42	44
total	100	100

Source: STEC data received from EU countries by the pilot exercise in 2013.

By country level, Chech Republic has registered the smallest share of small enterprises in total services trade, accounting only for 7%, while Estonia accounts for 43% of total services. Among large enterprises, Denmark has declared the largest share or 58% in total services exports.

Table3. Services exports distributed by the enterprise's size class (number of employees), by countries, in percentage, 2011

Country	small	medium	large	Non-linkable	Total services
Poland	18	16	33	33	100
Estonia	43	21	14	21	100
Denmark	17	10	58	16	100
Czech Republic	7	15	33	44	100
Luxembourg	14	5	7	73	100
Austria	14	16	29	41	100

Source: STEC data received from EU countries by the pilot exercise in 2013.

Additional information

STEC uses the following aggregations for services categories by EBOPS 2002 (BPM5):

205 Transport
246 Postal & courier services,
247 Telecommunication services,

249 Construction services
253 Insurance services
260 Financial services
263 Computer services
264 Information services
266 Royalties and license fees
269 Merchanting and other trade-related services
272 Operational leasing services
274 Legal, accounting, management and public relations services
278 Advertising, market research and public opinion polling
279 Research and development services
280 Architectural, engineering and other technical consultancy
281 Agricultural, mining and on-site processing +
284 Other miscellaneous business, professional and technical services + 285 Services between affiliated enterprises, n.i.e.
287 Personal, cultural and recreational services
Other (Branding, Quasi-transit adjustment, Travel, Government services n.i.e)

By activities, STEC uses the following NACE aggregations: A-B, C, D-E, F, G, H, J-58-60, J-61, J-62-63, K-64-66, M-69-71, M-72, M-73-75, N-77-82 , Other, Non-linkable (secondary data sources: travel, transport adjustment, special purpose entities, financial services, estimations) .

3. Further development of STEC

The results of the pilot project were presented in a working group meeting on trade in services in June 2014. Eurostat will disseminate those results in Statistics Explained article in 2014 or the first half of 2015.

The results were welcomed by the EU Member States and the continuation of the project was agreed. For this purpose, Eurostat will draft a new mandate for the STEC Task Force that should take into account the findings of the first pilot exercise and, in particular:

- Study the need to improve the methodology used in the first STEC pilot exercise.

- Assess the need to develop a tool for applying secondary confidentiality, to ensure a more optimal method for disclosing cells.

- Define a framework for a potential regular data collection of STEC data.

The participation of more Member States in this new project was strongly encouraged.