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**ESTIMATED PATTERNS OF TRADE IN SERVICES FLOWS BETWEEN OECD COUNTRIES AND REST OF THE WORLD**

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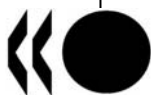
*Item 5 i)*

*This document is for information and comments from WPTGS delegates.*

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## ESTIMATED PATTERNS OF TRADE IN SERVICES FLOWS BETWEEN OECD COUNTRIES AND REST OF THE WORLD

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Agenda Item 5.i*

### INTRODUCTION

1. The aim of this paper is to present, step by step, the methodology used to compile Table 1 below, which is published in *OECD Statistics on International Trade in Services: Volume II, Detailed tables by Partner Country*, 2009 edition.

**Table 1** Estimated patterns of trade in services flows, % of total world exports, 2007

Exporting region	World	OECD				Africa	America	Asia and Oceania	Europe	Int Orgs	
	Total	NAFTA	OECD Asia and Oceania	OECD Europe							
				EU19	Other						
World	100.0	70.7	16.5	7.8	42.5	3.9	2.6	20.4	26.4	50.3	0.3
OECD	73.4	56.3	12.2	5.2	35.3	3.6	1.8	15.8	14.3	41.3	0.3
NAFTA	16.7	11.2	3.8	2.5	4.7	0.2	0.4	5.9	5.2	5.1	0.0
OECD Asia & Oceania	7.1	4.3	1.9	0.9	1.5	0.1	0.1	2.1	3.3	1.6	0.0
EU19	45.6	37.0	6.1	1.6	26.0	3.2	1.3	7.3	5.5	31.2	0.3
Other OECD Europe	4.0	3.8	0.4	0.2	3.1	0.1	0.0	0.5	0.2	3.3	0.0
Africa	2.3	1.5	0.2	0.1	1.2	0.0	0.4	0.2	0.4	1.3	0.0
America	19.6	13.8	5.1	2.8	5.7	0.2	0.4	7.4	5.5	6.2	0.0
Asia & Oceania	24.7	12.4	4.4	3.1	4.6	0.2	0.5	4.7	14.4	5.2	0.0
Europe	53.3	43.0	6.8	1.9	30.9	3.5	1.3	8.1	6.2	37.5	0.3
International Orgs	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0

2. Table 1 is a matrix of estimated broad aggregate patterns of trade in services flows between OECD countries and the rest of the world, and it is built on the basis of information available at the OECD at the time of publication.

### BUILDING THE TABLE

3. Four steps were needed to fill the matrix. They correspond to the four corners in which ideally the worldwide matrix can be thought as being made using December 2009 OECD membership as a geographical breakdown<sup>1</sup>:

	<i>Importing region</i>	
	OECD	non OECD
<i>Exporting region</i>		
OECD	1	2
non OECD	3	4

4. The first and second steps consist in filling the top of the matrix. This corresponds to exports of services from OECD countries, using reported data by partner country available in the dataset *OECD International trade in services by partner country* (TISP database)<sup>2</sup>. In addition, in the top-left corner, which represents services trade from OECD to OECD countries, where export data are not available the corresponding partner countries' imports figures ("mirror" exports statistics from the same dataset) have been used as estimates.

#### Structure of the table and source of data used 1<sup>st</sup> and 2<sup>nd</sup> step

	<i>Importing region</i>	
	OECD	non OECD
<i>Exporting region</i>		
OECD	OECD data OECD mirror statistics	OECD data
non OECD	UNSD Eurostat data National source Guestimates  Mirror statistics: Eurostat OECD National source	UNSD data Eurostat data National source Guestimates  Mirror statistics: Eurostat UNSD National source

<sup>1</sup> As a consequence, the OECD zone presented in Table 1 includes all member countries of the OECD except Chile, Israel and Slovenia *i.e.* Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

<sup>2</sup> This dataset covers bilateral trade in services data for all member countries of the OECD except Iceland and Switzerland, plus Hong Kong, Estonia and Russian Federation, starting from 1999, according to the EBOPS international standard classification.

5. The third and fourth steps deal with the bottom side of the matrix, representing exports of services from non-OECD countries. Different sources of data have been used, mainly Eurostat Newcronos, UNSD Services Trade and national sources, supplemented by mirror statistics, to gather as much information as possible. The remaining trade flows are estimated using broad assumptions, where location, distance, language and culture play a part in determining trade flows. For example, after having exploited every potential information provided by mirror statistics, half of the unallocated export from Africa have been allocated to Gulf Arabia with the other half going to Africa. The unallocated Middle East exports have been equally divided between Africa and the Middle East. On the other hand, Taiwan's estimated partner country distribution replicates the breakdown provided by Hong Kong, while for Thailand's breakdown the Singapore has been replicated. In these steps OECD data have been used only for Hong Kong and Russian Federation.

**Structure of the table and source of data used 3<sup>rd</sup> and 4<sup>th</sup> step**

		<i>Importing region</i>	
		OECD	non OECD
<i>Exporting region</i>			
OECD		OECD data OECD mirror statistics	OECD data
non OECD		UNSD Eurostat data National source Guestimates  Mirror statistics: Eurostat OECD National source	UNSD data Eurostat data National source Guestimates  Mirror statistics: Eurostat UNSD National source

6. After completion, the line totals have been scaled up to the total exports available in *OECD International trade in services by category of services* (TIS dataset)<sup>3</sup> for the top side of the matrix (OECD exporting countries), and to the IMF BOP totals for the bottom side (non-OECD exporting countries). Finally, in the standard table presentation, the five continents shown (Africa, America, Asia and Oceania and Europe) have been created reallocating OECD and non-OECD country data.

7. A number of estimated trade flows are presented in italics in Table 1 (*Other OECD Europe, Africa, Asia and Oceania*). This is where insufficient data was reported directly, or where the proportion of mirror data is high. The OECD Secretariat judged that these figures were subject to greater uncertainty. The coverage of data reported directly and supplementary mirror data is illustrated in Table 2. About 74% of world exports are allocated geographically using data available in TISP OECD, Eurostat, UNSD and using national sources, as in the case of China and the Russian Federation. When mirror import statistics

<sup>3</sup> This dataset provides detailed data on international trade in services between residents and non-residents of the 33 OECD member countries plus other non-OECD major economies (Brazil, China, Estonia, India, Indonesia, Russian Federation, South Africa) broken down by type of service according to a common classification and framework (EBOPS).

are added, the coverage of world exports, which are geographically allocated, grows to about 91% of the total. However users need to be aware that “mirror” imports may not always reflect the corresponding export actually declared by the reporting country. These asymmetries in bilateral flows can mainly be attributed to a number of different factors, such as:

- Different data collection systems leading to different coverage
- Differences in the classification of items within the accounts
- Discrepancies in the time of recording transactions
- Incorrect geographical identification of the counterpart
- Different treatment of complex transactions (brokers in London, for instance) even where a resident may be the ultimate beneficiary<sup>4</sup>.

**Table 2 Coverage of reported exports in partner country data and estimates based on mirror statistics**

Exporting Region	Total exports 2007 billion USD	Total available exports of partner country data - % of total exports		
		OECD TISP database	OECD TISP + other sources (1)	Reported data supplemented by mirror import data
World	3,386.2	68.2	74.4	91.4
OECD	2,520.0	88.4	88.4	95.8
NAFTA (2)	573.5	72.0	72.0	90.2
OECD Asia and Oceania (3)	241.9	88.5	88.5	94.8
OECD EU19	1,567.2	97.9	97.9	97.9
OECD Europe Other (4)(5)	137.4	47.6	47.6	96.4
Africa (6)	77.8	0.0	2.1	72.7
America	661.4	62.5	62.5	94.2
Asia and Oceania (6)	839.0	35.1	48.3	75.5
Europe	1,805.6	88.6	94.2	98.6
International Organisations	2.5	0.0	0.0	86.7

(1) Other sources: Eurostat, UNSD, National sources (China, Russian Federation)

(2) Mexico is estimated using mirror statistics, because of sparse availability of partner country data for *Travel*.

(3) New Zealand provides bilateral data only for the item *Other commercial services*, and its components.

Total services exports have been allocated across partner countries following the allocation of this available item.

(4) Turkey provides bilateral data only for the item *Travel*. Total services exports have been allocated across partner countries following the allocation of this available item.

(5) Iceland, Norway and Switzerland are estimated using mirror statistics, because trade in services bilateral data are not available.

(6) Estimates mainly based on reported mirror data, therefore subject to greater uncertainty.

8. As mentioned previously, the services export share for *Asia and Oceania* and *OECD Other Europe* have been estimated using a high proportion of “mirror” statistics. *Africa*’s export shares are mostly based on mirror statistics. Indeed there is almost no direct information on intra-African trade in services where only Tunisia and Swaziland provide data by main partner. Morocco provides partner country data only for the item *Travel*. Consequently, the estimates for Africa are the least definite. Indeed, as a general rule, the higher the proportion of mirror statistics, the less reliable trade flows estimated from these. However it is also judged that these kind of broad estimates based on existing reported data are a useful starting point to understand services trade flows and on which to base more refined estimates as more information becomes available in future years.

<sup>4</sup> *Asymmetries in EU current account data*, (2006), Maria-Helena Figueira and Mushtaq Hussain.

## READING THE TABLE

9. It is estimated from this harmonised world flow matrix that OECD countries accounted for approximately 71% of the world service imports in 2007, while intra-OECD exports actually accounted for 77% of the total OECD exports. An estimated 53% of OECD exports goes to *OECD Europe* countries, while a majority of *OECD Europe's* exports (65.3%) are destined for other *OECD Europe* countries.

10. The *OECD Asia and Oceania* countries mainly trade with Asia and Oceania (3.3% of world exports) and American (2.1% of world exports) countries. An estimated 4.3% of world service exports were exported by *OECD Asia and Oceania* countries to OECD countries, with the largest share (1.9% of world service exports) going to NAFTA countries.

11. Very little direct information on African exports by partner country is available to the OECD Secretariat but mirror import data (which may be less reliable) clearly suggest that Africa's main region of destination for service exports is Europe, with the largest part going to the European Union. About 2.6% of total world service exports go to Africa, while an estimated 1.3% of world service exports were exported by Africa to Europe.

## DATA QUALITY

12. Although the quality of partner country data mirror statistics (e.g. reported exports as compared to mirror imports) for total trade in services is rather variable between two countries, at the level of regional groupings and major players for total services the quality was judged to be acceptable overall. However the following examples are illustrative of the kind of discrepancies that can exist. United States service exports to EU27 in 2007 were 182.5 billion USD while EU27 imports of services from the US were 174.8 billion USD. Japan's service exports to the EU27 were 33 billion USD while EU27 imports from Japan were 18.9 billion USD. United States exports to Japan were 41.2 billion USD while Japan's imports from the United States were reported as 43 billion USD. Such comparisons and discrepancies should be borne in mind when considering the estimates of trade flows and the country tables. In general terms, the more detailed the breakdowns, the greater the discrepancies in the mirror data can be.

13. With the aim of improving data quality and international comparability, the bilateral mirror data is to be monitored for trends over time, between countries, and for particular types of service in order to identify priority areas for further work.

**QUESTIONS TO DELEGATES:**

1. Are you aware of any other existing trade in services world matrix?
2. Are you aware of any other possible database from which bilateral data can be sourced?
3. Any suggestions to improve the methodology?