Trade in services by GATS mode of supply: The WTO TiSMoS dataset

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Why TISMOS?

▸ **To create and maintain an experimental dataset on international trade in services by mode of supply:**

  ▸ Based on reported data by national authorities to the extent possible
  ▸ Complemented with estimations, as close as possible to MSITS2010 recommendations

▸ **Possible applications:**

  ▸ Orient trade negotiating strategies => commitments under most trade agreements specified according to the four modes of supply
  ▸ Monitoring: Better understand world trade developments
  ▸ Respond to analytical questions => looking for economic mechanisms, estimating impacts (e.g. effects of RTAs, regulatory heterogeneity, etc.)
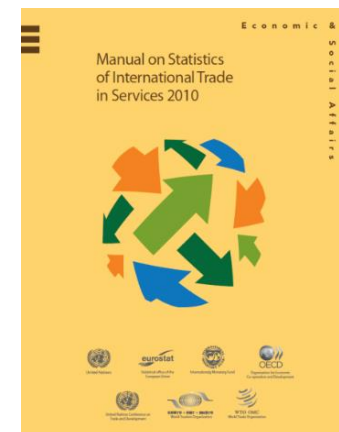 ▸ Mode 1 as an upper-bound of mode 1 digitally-delivered trade

Measuring the international supply of services by GATS Modes

▸ Mode 1: Cross-border supply (e.g. online architectural plans from abroad)

▸ Mode 2: Consumption abroad (e.g. international tourists)

▸ Mode 3: Commercial presence (e.g. foreign bank)

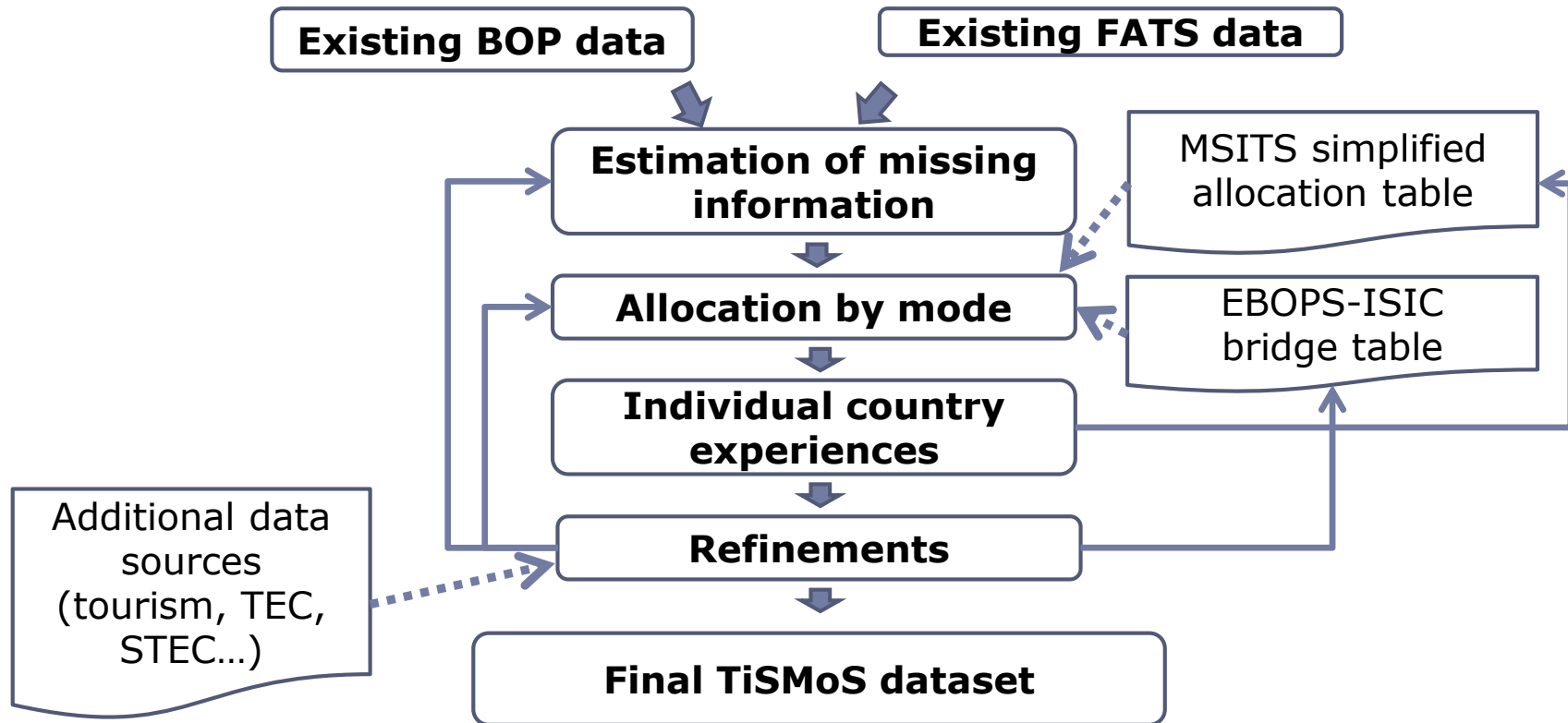▸ Mode 4: Movement of natural persons (e.g. international music band)

Simplified allocation suggested in MSITS2010

1. Using Balance of Payments services statistics to estimate Mode 1,2 and 4

2. Using Foreign Affiliate Statistics (FATS) to estimate Mode 3

3. Surveys

   • Determine mode 4

   • Percentage of mode 1

   • Percentage of modes 1, 2 and 4

   • Ask for figures

Building TISMOS: the approach

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┌──────────────────────┐        ┌──────────────────────┐
│  Existing BOP data   │        │  Existing FATS data  │
└──────────────────────┘        └──────────────────────┘
            │                           │
            ▼                           ▼
        ┌────────────────────────────────────┐        ┌──────────────────────┐
        │   Estimation of missing            │        │  MSITS simplified    │
        │   information                      │        │  allocation table    │
        └────────────────────────────────────┘        └──────────────────────┘
            │
            ▼
        ┌────────────────────────────────────┐        ┌──────────────────────┐
        │        Allocation by mode          │        │  EBOPS-ISIC          │
        └────────────────────────────────────┘        │  bridge table        │
            │                                          └──────────────────────┘
            ▼
        ┌────────────────────────────────────┐
        │   Individual country               │
        │   experiences                      │
        └────────────────────────────────────┘
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┌──────────────┐    ▼
│ Additional   │  ┌────────────────────────────────────┐
│ data         │  │          Refinements               │
│ sources      │  └────────────────────────────────────┘
│ (tourism,    │      │
│ TEC,         │      ▼
│ STEC…)       │  ┌────────────────────────────────────┐
└──────────────┘  │       Final TiSMoS dataset         │
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Allocation by mode (1)

Indicator code	Item EBOPS 2010	M1	M2	M3	M4
01 SOXSW	Services (including Distribution services)				
02 ¦--SOX	Commercial services				
03 ¦ ¦--SA	Manufacturing services on physical inputs owned by others		100		
04 ¦ ¦--SB	Maintenance and repair services not included elsewhere		90		10
05 ¦ ¦--SC	Transport				
06 ¦ ¦ ¦--SC1	Sea transport				
07 ¦ ¦ ¦ ¦--SC11	Passenger (Sea)	100			
08 ¦ ¦ ¦ ¦--SC12	Freight (Sea)	100			
09 ¦ ¦ ¦ °--SC13	Other (Sea)		100		
10 ¦ ¦ ¦--SC2	Air transport				
11 ¦ ¦ ¦ ¦--SC21	Passenger (Air)	100			
12 ¦ ¦ ¦ ¦--SC22	Freight (Air)	100			
13 ¦ ¦ ¦ °--SC23	Other (Air)		100		
14 ¦ ¦ ¦--SC3	Other transport				
15 ¦ ¦ ¦ ¦--SC31	Passenger (Other)	100			
16 ¦ ¦ ¦ ¦--SC32	Freight (Other)	100			
17 ¦ ¦ ¦ °--SC33	Other (Other)		100		
18 ¦ ¦ °--SC4	Postal and courier services	100			
19 ¦ ¦--SD	Travel				
¦ ¦ ¦--SD1	Goods, alternative measurement		100		
¦ ¦ ¦--SD2	Local transportation services, alternative measurement		100		
¦ ¦ ¦--SD3	Accommodation services, alternative measurement		100		
¦ ¦ ¦--SD4	Food-serving services, alternative measurement		100		
¦ ¦ ¦--SD5	Other services, alternative measurement		100		
20 ¦ ¦ ¦--SDA	Business travel		100		
21 ¦ ¦ °--SDB	Personal travel		100		
22 ¦ ¦ ¦--SDB1	Health-related travel		100		
23 ¦ ¦ ¦--SDB2	Education-related travel		100		
24 ¦ ¦ °--SDB3	Other personal travel		100		

Allocation by mode (2)

	Indicator code	Item EBOPS 2010	M1	M2	M3	M4
25	¦--SE	Construction				
26	¦ ¦--SE1	Construction abroad			50	50
27	¦ °--SE2	Construction in the reporting economy			50	50
28	¦--SF	Insurance and pension services	100			
29	¦--SG	Financial services	100			
30	¦--SH	Charges for the use of intellectual property n.i.e.	100			
31	¦--SI	Telecommunications, computer, and information services				
32	¦ ¦--SI1	Telecommunications services	100			
33	¦ ¦--SI2	Computer services	75			25
34	¦ °--SI3	Information services	100			
35	¦--SJ	Other business services				
36	¦ ¦--SJ1	Research and development services	75			25
37	¦ ¦--SJ2	Professional and management consulting services				
38	¦ ¦ ¦--SJ21	Legal, accounting, management, consulting and public relations	75			25
39	¦ ¦ °--SJ22	Advertising, market research, public opinion polling	75			25
40	¦ °--SJ3	Technical, trade-related, and other business services				
41	¦ ¦--SJ31	Architectural, engineering, scientific and other technical				
42	¦ ¦ ¦--SJ311	Architectural services	75			25
43	¦ ¦ ¦--SJ312	Engineering services	75			25
44	¦ ¦ °--SJ313	Scientific and other technical services	75			25
45	¦ ¦--SJ32	Waste treatment and de-pollution, agricultural & mining		50		50
46	¦ ¦--SJ33	Operating leasing services	100			
47	¦ ¦--SJ34	Trade-related services	100			
48	¦ °--SJ35	Other business services n.i.e.	75			25
49	°--SK	Personal, cultural, and recreational services				
50	¦--SK1	Audio-visual and related services	70	10		20
51	°--SK2	Other personal, cultural, and recreational services				
52	¦--SK21	Health services	75			25
53	¦--SK22	Education services	75			25
54	¦--SK23	Heritage and recreational services	75			25
55	°--SK24	Other personal services	75			25
57	°-----SW	Distribution services	100			

Include "all services" as covered by GATS in BOP

- **Disentangling the goods from travel item**
  - Alternative breakdown (SD1) for 15 economies
  - Estimation using Internal Tourism Consumption data (OECD)
  - **Results:** Total commercial services is reduced by around 6.5%
- **Construction item is adjusted**
  - Identification of the part of goods is not possible
  - Only cross-border transactions are kept – total construction recalculated
  - **Results:** This correction reduces total construction by around 25%
- **Distribution services (separately estimated and added in)**
  - Trade-related services (SJ34)
  - Separately estimated and added in
  - Estimated using OECD Trade by Enterprise characteristics (TEC)
  - Estimated using Eurostat Structural Business Statistics (SBS)
  - Distribution services added to total commercial services & allocated to M1
  - **Results:** This correction increases M1 by 25% in value terms

Include "all services" as covered by GATS in FATS

- **GATS refers to all foreign-controlled enterprises**
  - FATS does not include minority-owned affiliates (ownership 10-50%)
- **Product Vs activities**
  - FATS classifies companies by primary activity and not by product
  - **Solution**: national data compilation (TiSMoS: bridge table)
- **Goods Vs. Services**
  - The output, which contain only the trade margin realized on goods purchased for resale, is used for two services activities
  - **Solution**: output variable for:
    - ☐ Financial and insurance activities
    - ☐ Wholesale and retail trade; repair of motor vehicl. and motorcycl.
- **Double-counting of trade flows**
  - There exists the possibility of double counting because some affiliates' exports may be captures by international trade in BOP
  - **Solution**: Exclude exports from total output/sales
    - ☐ National level + OECD FATS + Services Trade by Enterprise Characteristics
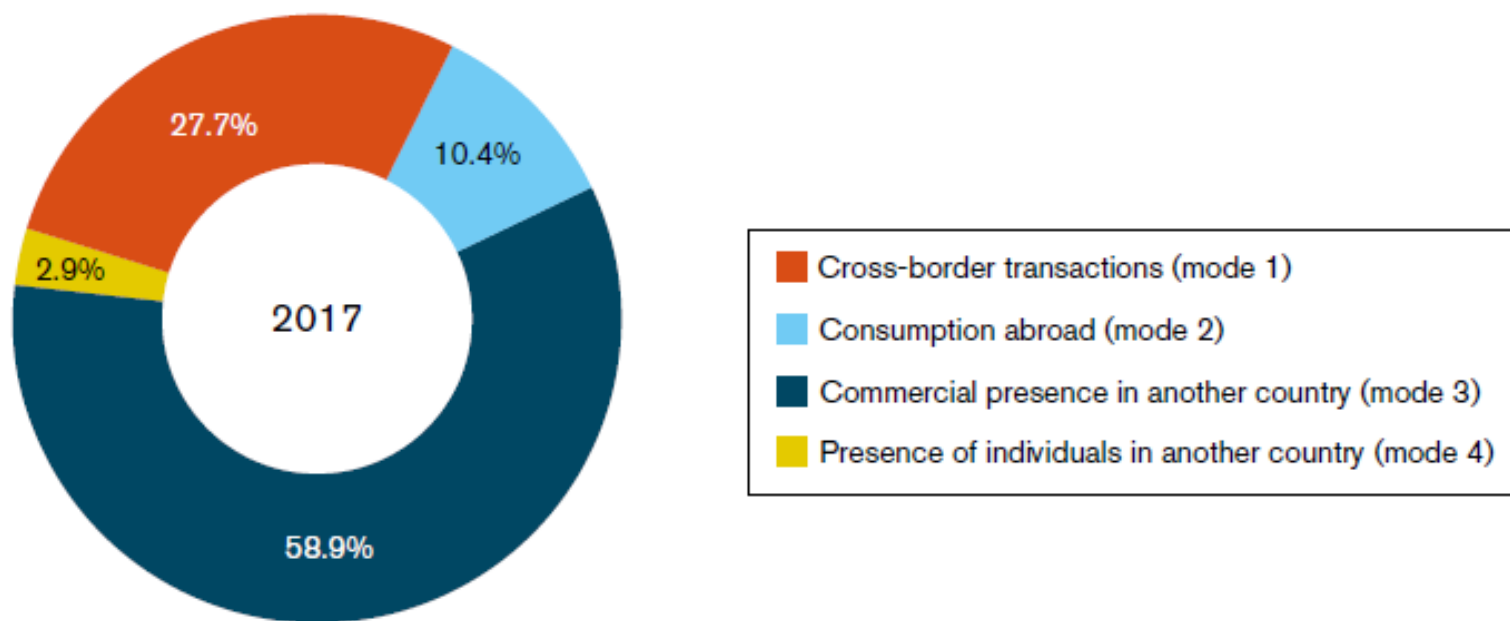
Bridge table – transformed EBOPS

Ebops-like code	Description	ISIC CODE	Isic description
SA	Manufacturing services on physical inputs owned by others		
SB	Maintenance and repair services not included elsewhere		
SC	Transport	H	Transport and Storage
SDB1SK21	Health services	Q	Human health and social work activities
SDB2SK22	Education services	P	Education
SDASDB3	Tourism and business travel	I	Accommodation and food service activities
SE	Construction	F	Construction
SFSG	Insurance and financial services	K	Financial and insurance activities
SH	Charges for the use of intellectual property n.i.e.		
SISK1	Telecommunications, computer, information and audiovisual services	J	Information and Communication
SJXSJ34	Other business services (excluding trade-related)	L+M+N	Real estate, Professional, scientific and technical activities, Administrative and support service activities.
SK23	Heritage and recreational services	R	Arts, entertainment and recreation
SK24	Other personal services	S	Other service activities
SWSJ34	Trade-related services (Distribution)	G	Wholesale and retail trade; repair of motor vehicl. and motorcycl.

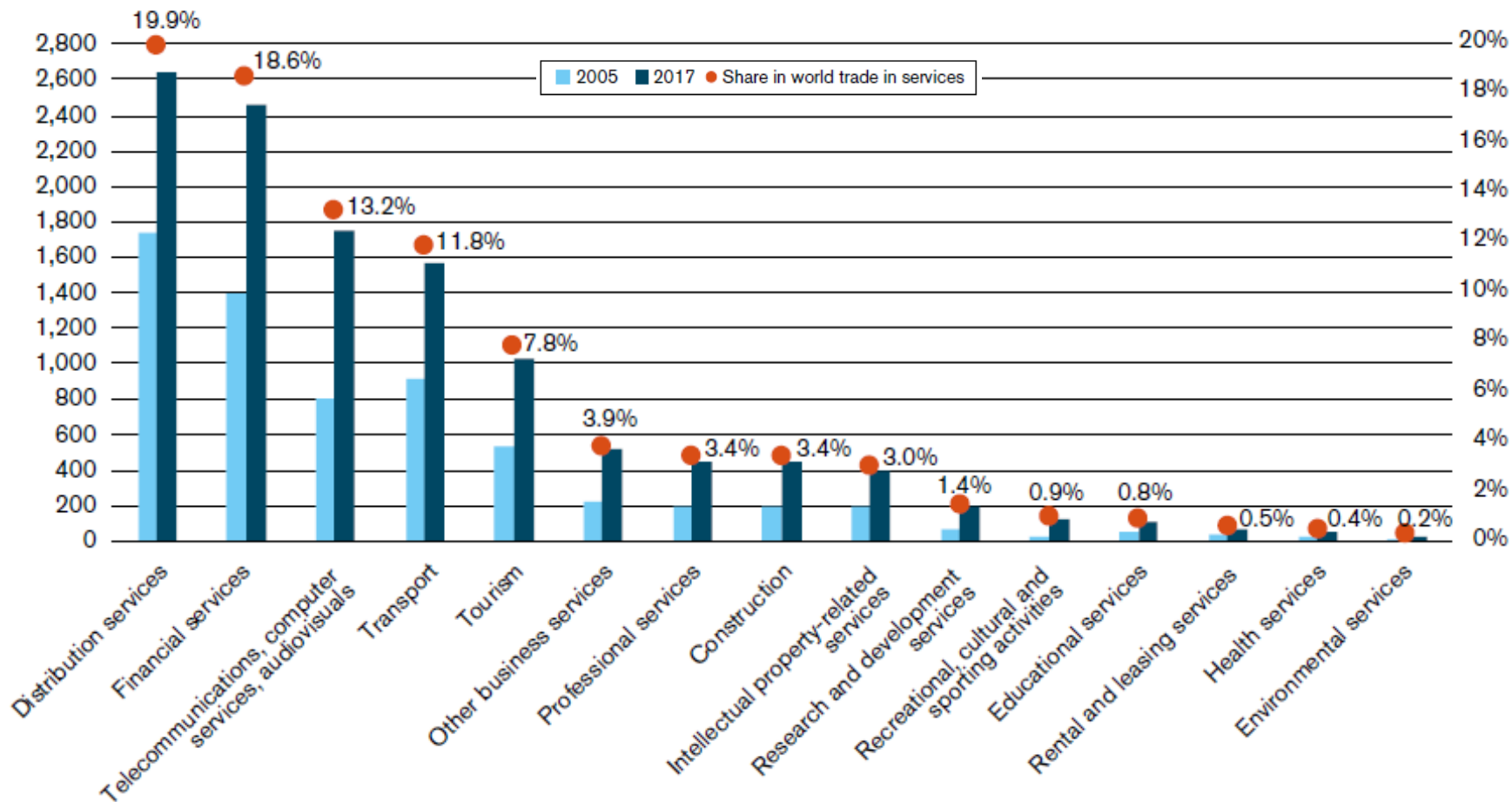# World trade in commercial services by modes of supply, 2017

Source: WTO estimates (2019).

Note: World trade is calculated as the average of world exports and world imports.

World trade in commercial services by sector, 2005 and 2017

Source: WTO estimates (2019).

Note: World trade is calculated as the average of world exports and world imports.

TISMOS data set

▸ Imports and exports for 200+ reporter countries, with partner world, 2005 to 2017, by mode

Where to find TISMOS

https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm

▸ Data files, containing the reported and estimated trade values, for imports and exports according to the four modes of supply.

▸ A codes file, which explains the codes used in the data file for the different variables.

▸ The methodological paper, which describes how TISMOS was built.

▸ Addendum: a worldwide FATS output dataset, covering 200 economies, 13 service sectors and the period 2005-2017.

Road ahead…

▸ Update of the data set scheduled in 2021

▸ Publication of the WTO-OECD balanced trade in services (Batis) data set

▸ "Bilateralise" TISMOS