



**Trade in services by Mode of Supply
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

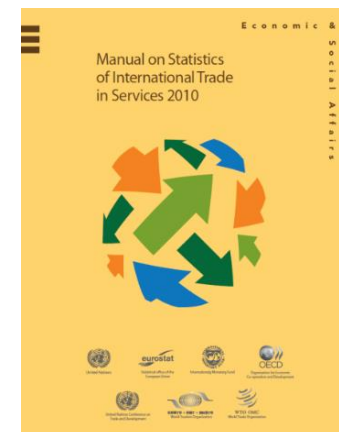
Measuring the international supply of services by GATS Modes



- ▶ 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)

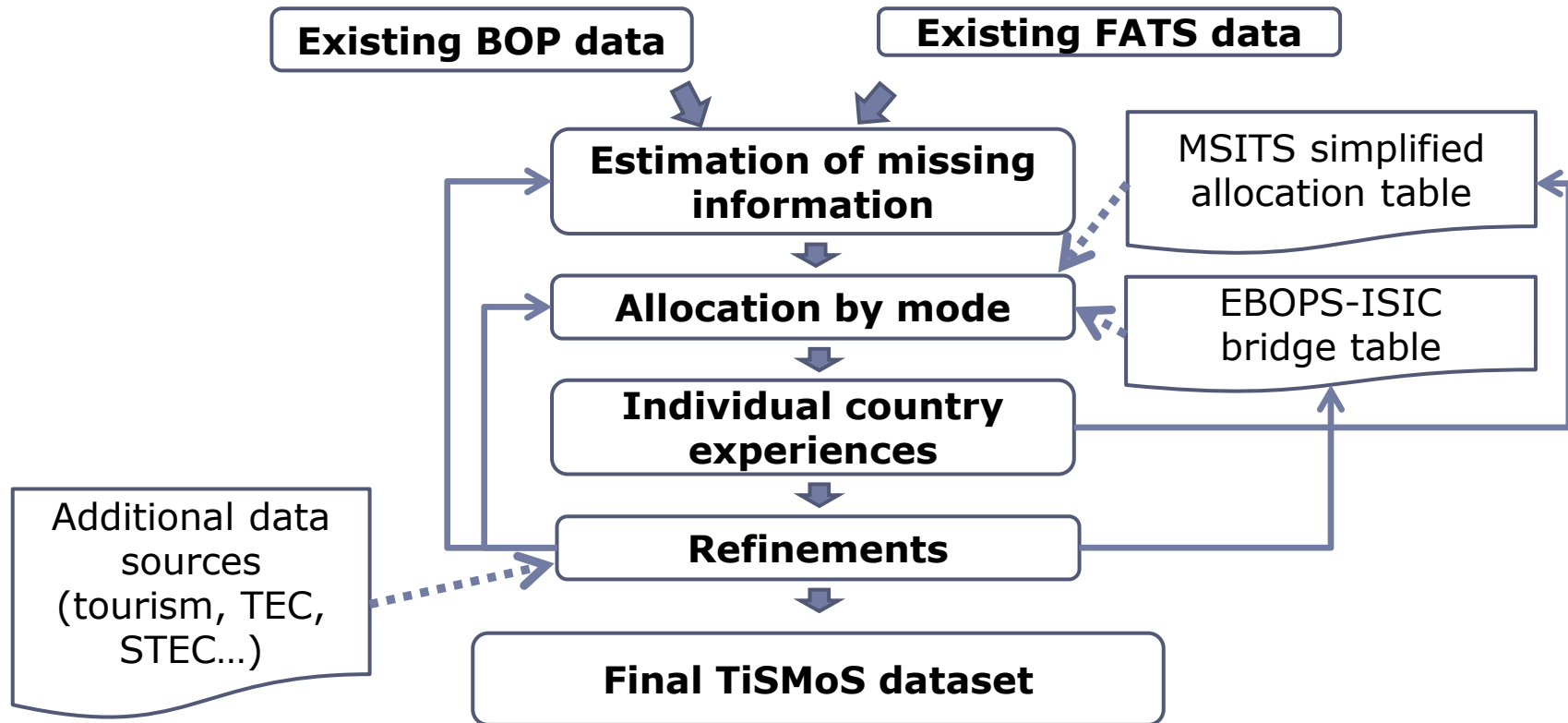
Simplified allocation suggested in MSITS2010

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





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



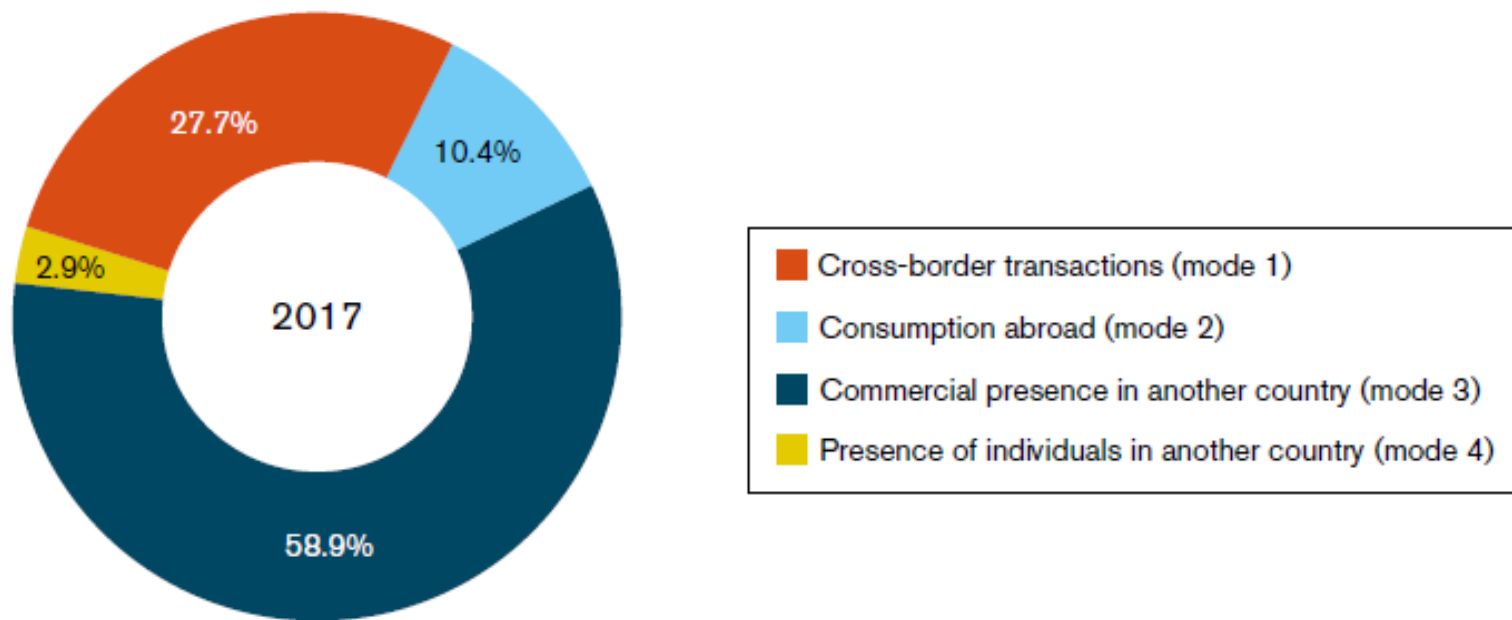
- ▶ **GATS refers to all foreign-controlled enterprises**
 - ▶ FATS does not include minority-owned affiliates (ownership 10-50%)
- ▶ **Product Vs activities**
 - ▶ FATS classifies companies by primary activity and not by product
 - ▶ **Solution**: national data compilation (TiSMoS: bridge table)
- ▶ **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.

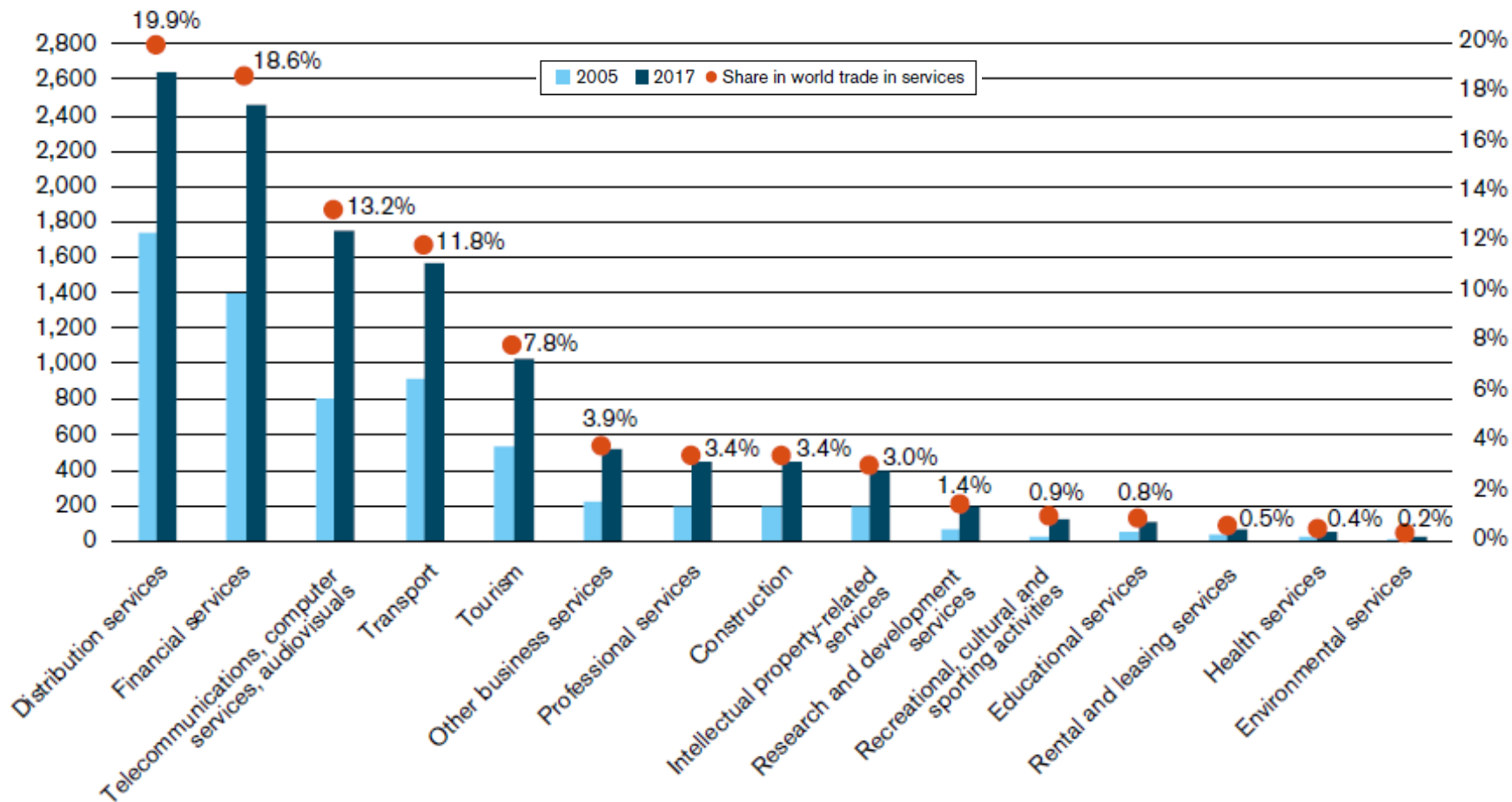
World trade in commercial services by modes of supply, 2017



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

