



Measuring Digital Trade and Trade in Services by Mode of Supply

SESRIC online training course
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Ying Yan, WTO

Handbook on Measuring Digital Trade second edition



▶ Author

- ▶ IMF, OECD, UNCTAD and WTO

▶ Background

- ▶ A revision to the first Handbook, published in 2019
 - ▶ First statistical definition of digital trade based on the **nature** of the transaction
 - “digital trade is all international trade that is **digitally ordered** and/or **digitally delivered**”.
 - ▶ Established a conceptual framework for measurement
 - ▶ Provided initial compilation guidance on digital trade transactions

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► Overview

► Unchanged

- Conceptual framework
- Accounting principles

► Clarified

- Definition of digitally delivered trade
- Relationship between digital trade and modes of supply
- Delineation of DIPs, e-tailers, other producers only operating digitally
- Recording of intermediation fees

► Expanded

- Compilation guidance for digitally ordered trade and digitally delivered trade
- Detailed case studies
- A new reporting template with practical recording examples for compilers

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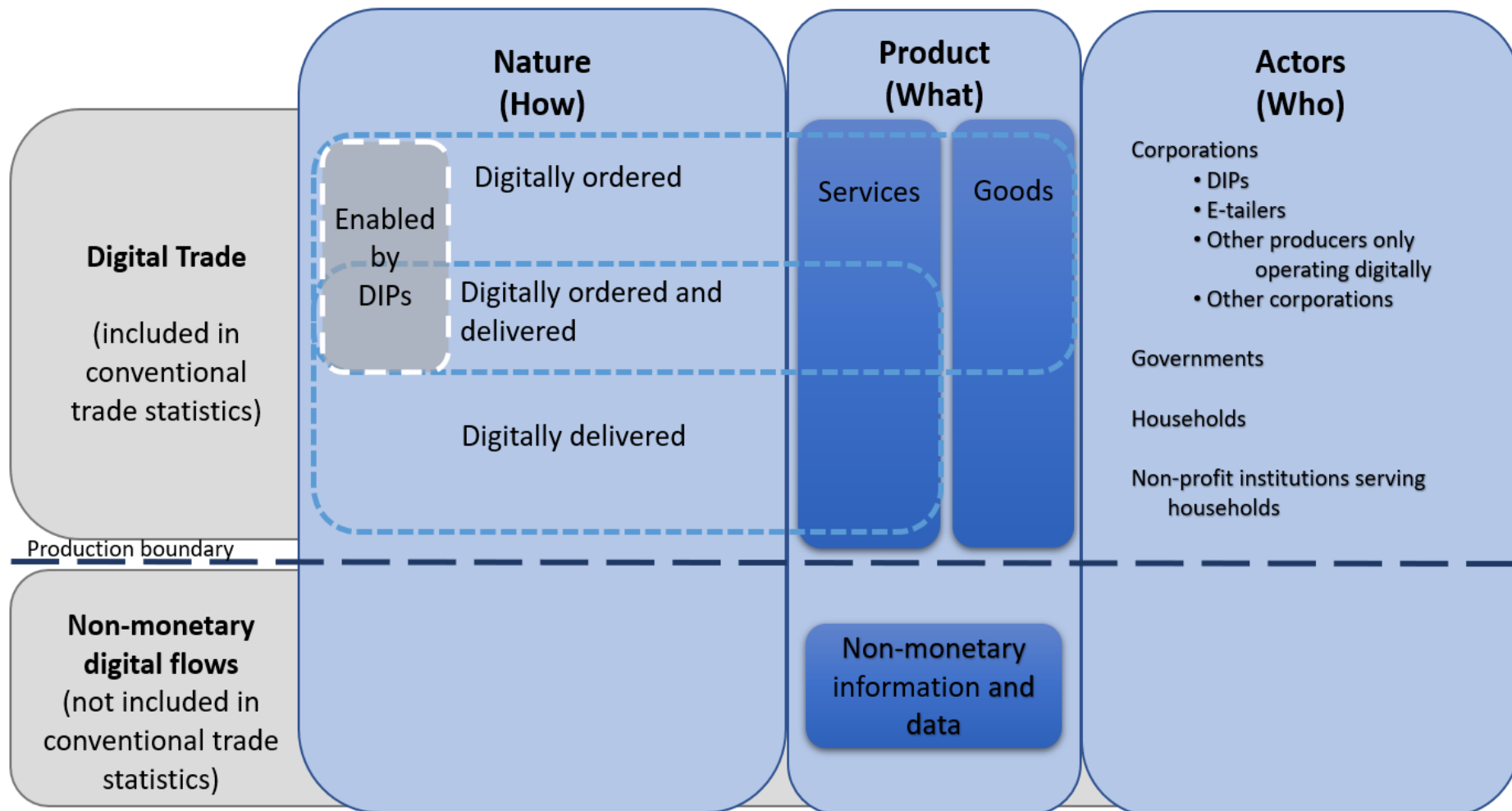
▶ **Structure**

- ▶ Chapter 1. Introduction
- ▶ Chapter 2. Conceptual framework
- ▶ Chapter 3. Measuring digitally ordered trade
- ▶ Chapter 4. Measuring digitally delivered trade
- ▶ Chapter 5. Digital intermediation platforms (DIPs)
- ▶ Chapter 6. Case studies (China, Jamaica, Spain, Türkiye)

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► Conceptual framework



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▶ **Defining digitally ordered trade**

- ▶ “the international sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders”
- ▶ Covers goods and services
- ▶ Ordering methods include
 - ▶ electronic data interchange system (EDI)
 - ▶ own website
 - ▶ third party website or app
 - ▶ digital intermediation platforms (DIPs)
- ▶ **Digitally ordered trade = international e-commerce**

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▶ **Compiling digitally ordered trade**

▶ Survey sources

- ▶ Business surveys
- ▶ Household surveys
- ▶ Government and NPISH surveys

▶ Non-survey sources

- ▶ Card payment data
- ▶ De minimis trade estimates
- ▶ Customs records

▶ Recommendations

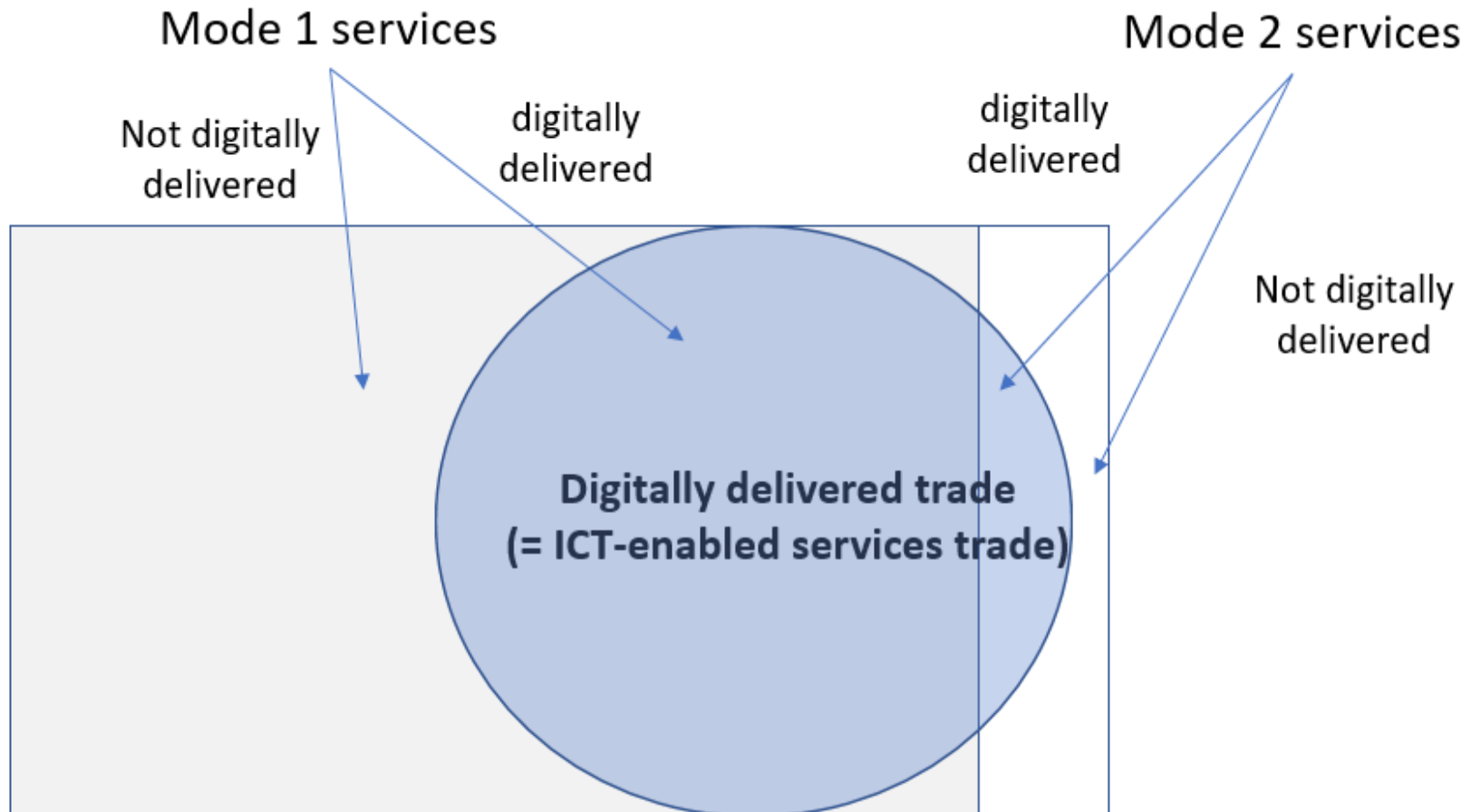
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► Defining digitally delivered trade

- “all international transactions that are delivered remotely over computer networks”



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▶ **Compiling digitally delivered trade**

- ▶ Identify services items which can be delivered remotely through computer networks
 - ▶ Total for (most) digitally deliverable services can be aggregated from existing trade statistics of these items to provide an upper bound estimates for digitally delivered services
- ▶ Focus on Mode 1 (cross-border) supply to yield a reasonable estimate for digitally delivered trade
 - ▶ Recommended to add questions to ITS or ICT surveys to distinguish digital/remote delivery
 - ▶ Add questions on digitally delivered products to Travel/Border (Mode 2) surveys

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Table 4.1 Digitally deliverable services

Digitally deliverable services supplied cross border (Mode 1)

Insurance and pension services

Financial services

Charges for the use of intellectual property n.i.e.

Telecommunications, computer, and information services

Research and development services

Professional and management consulting services

Architectural, engineering, scientific and other technical services

Trade-related services

Other business services n.i.e.

Audio-visual and related services

Health services

Education services

Heritage and recreational services

Digitally deliverable services consumed abroad (Mode 2)

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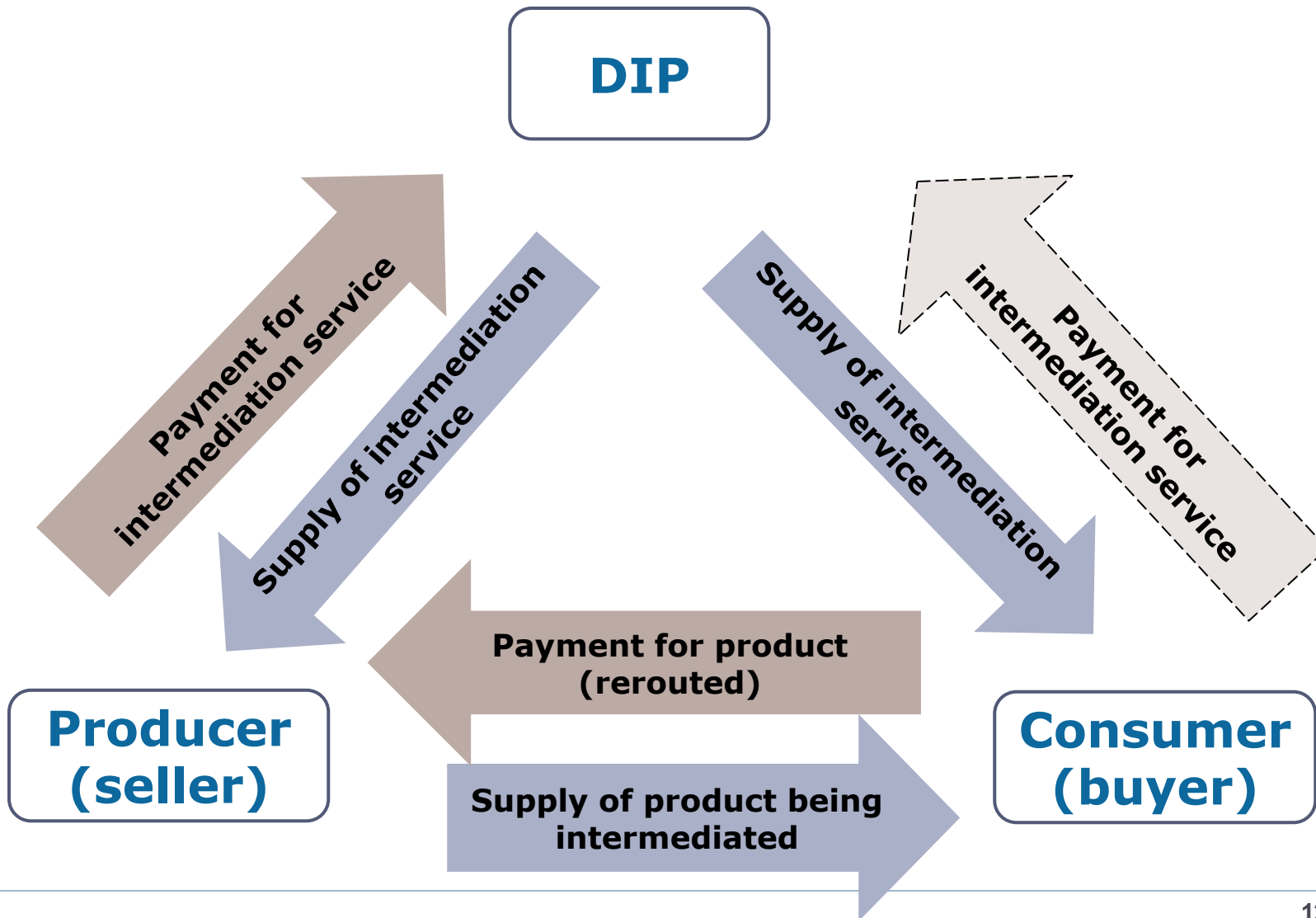


▶ **Digital intermediation platforms (DIPs)**

- ▶ DIPs are defined as 'Online interfaces that facilitate, for a fee, the direct interaction between multiple buyers and multiple sellers, without the platform taking economic ownership of the goods or rendering the services that are being sold (intermediated)
- ▶ A fee charged for digital intermediation services provided by a DIP should be separately recorded from the value of transaction undertaken through the DIP
 - ▶ Fees can be invoiced to the producer, to the consumer or both
 - ▶ if not separately invoiced, it is assumed to be paid by the producer
- ▶ Intermediation services to be classified in EBOPS 2010 trade-related services (for both goods and services)
- ▶ ITS surveys and household surveys as data source

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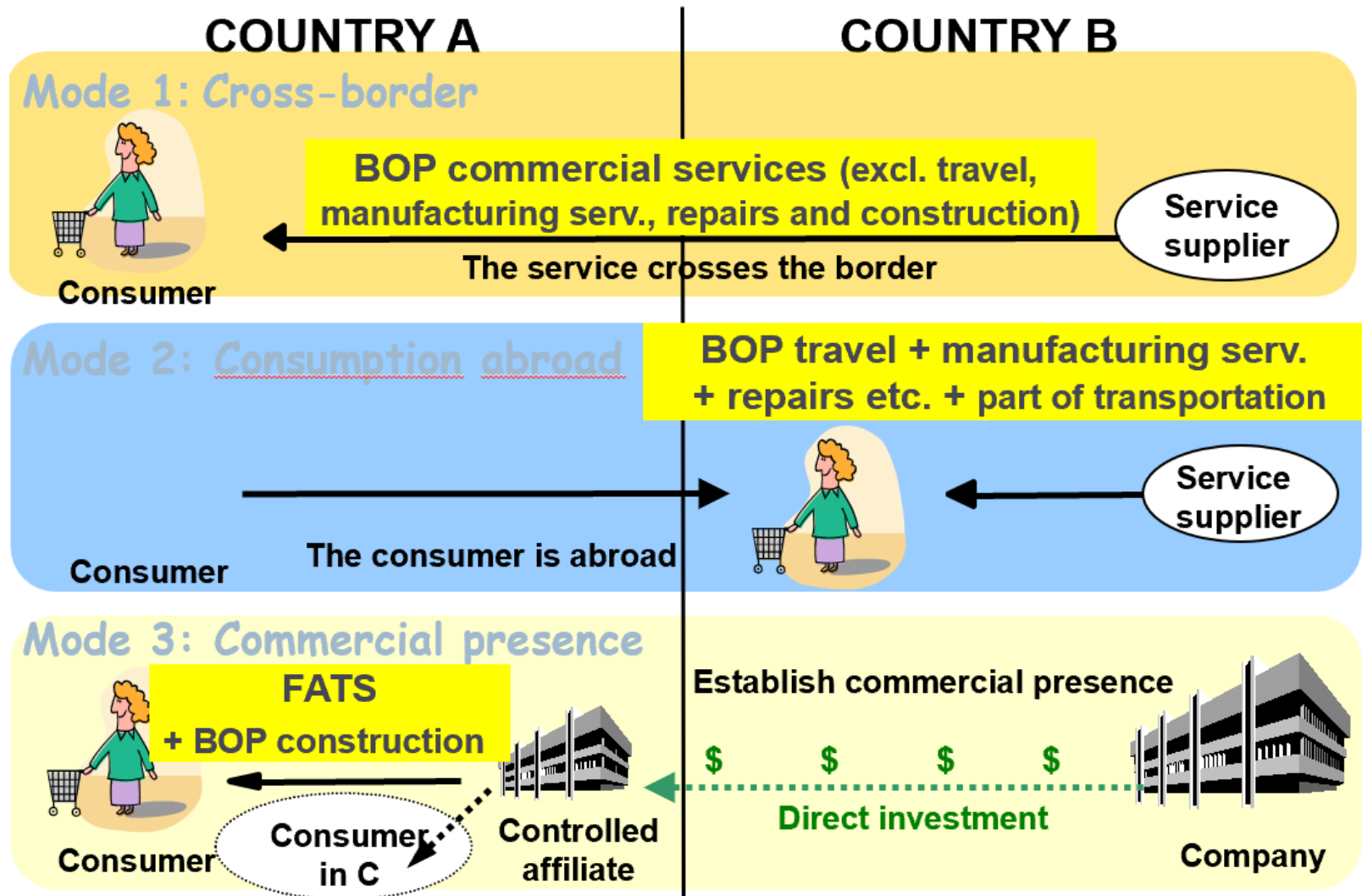


► Reporting Template

			Total exports	Total imports
1	Total Digital Trade	2+3 minus 4		
2	Digitally ordered trade	2.1+2.2		
2.1	Goods			
2.1.a	<i>of which: via DIPs</i>			
2.2	Services			
2.2.a	<i>of which: via DIPs</i>			
3	Digitally delivered trade			
3.a	<i>of which: via DIPs</i>			
4	Digitally ordered <u>and</u> digitally delivered trade			
4.a	<i>of which: digital intermediation services</i>			
	Addendum items			
A.1	Digital trade in services	2.2+3 minus 4		
A.2	Digitally deliverable services	>3		

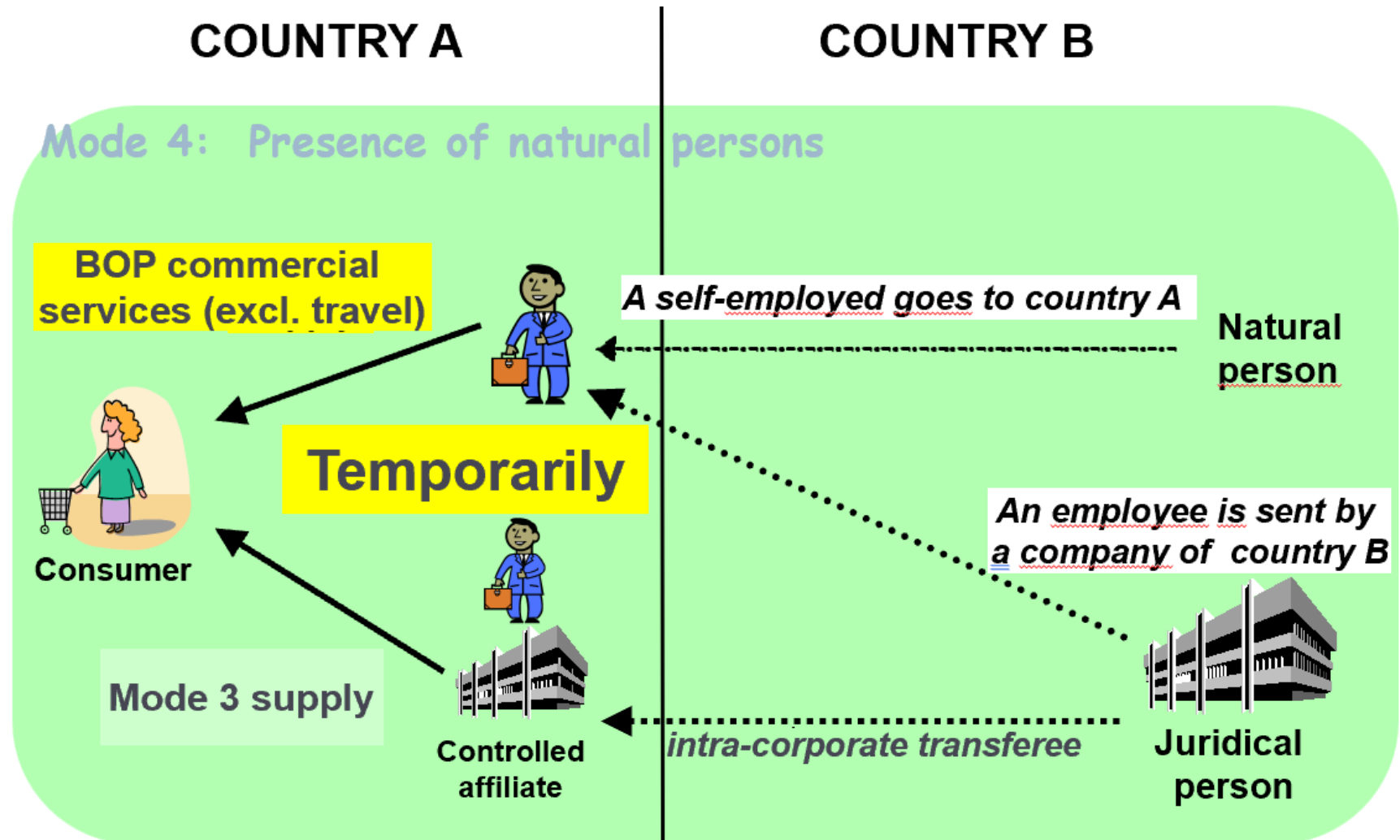


Trade in Services by Mode of Supply





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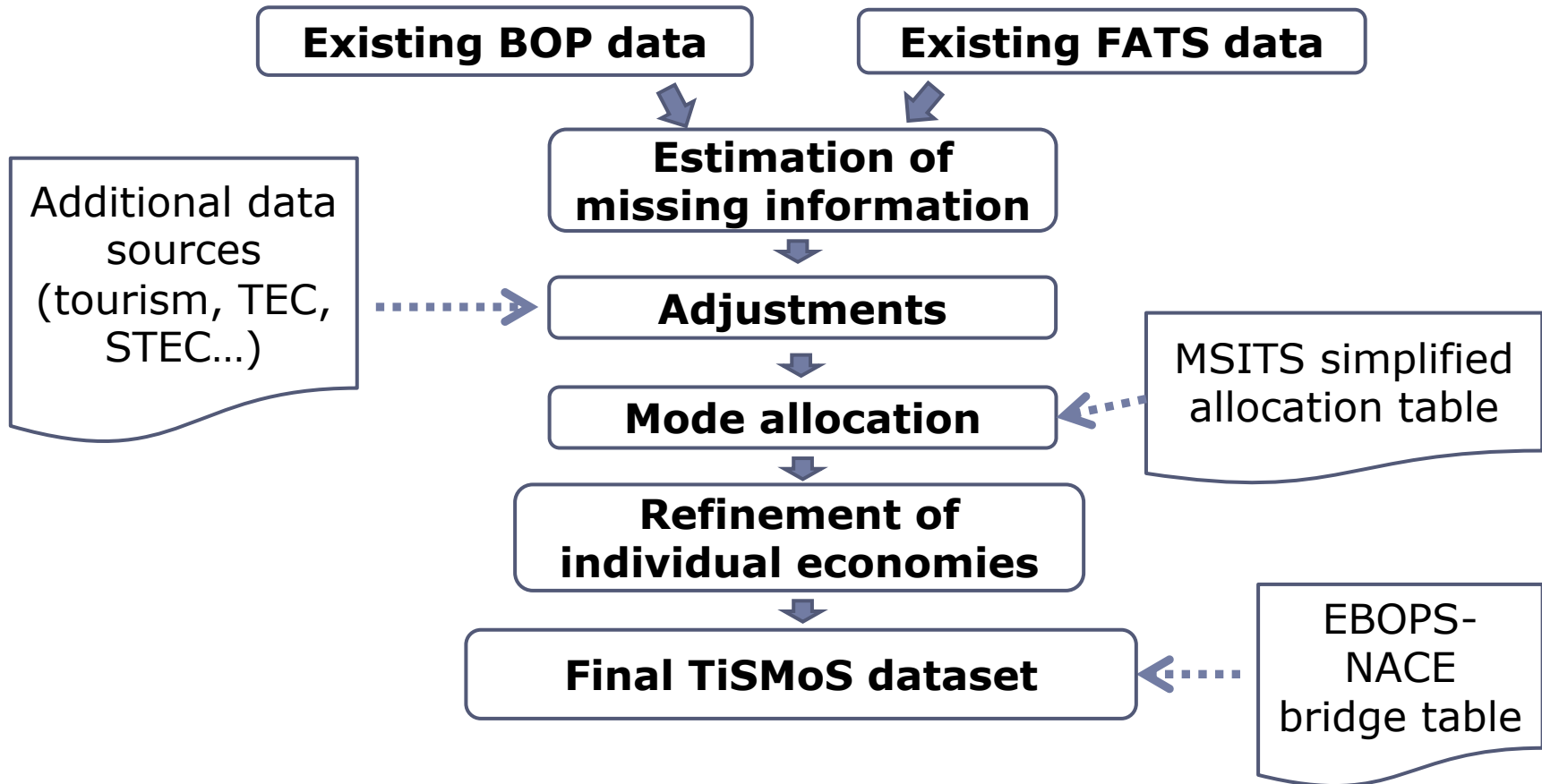
MANUALS
AND GUIDELINES

eurostat 



Trade in Services by Mode of Supply

Building TiSMoS dataset





Trade in Services by Mode of Supply

BOP – Mode 1, 2, 4

- ▶ **Starting point: WTO-UNCTAD annual services dataset**
 - ▶ Imports and exports for 200+ reporter countries, with partner world
 - ▶ From the year 2005 and 66 services sectors
- ▶ **Complete dataset by imputing missing data**
 - ▶ Estimate partially missing breakdowns
 - ▶ Estimate completely missing breakdowns
- ▶ **Remove goods in the travel item**
 - ▶ Goods component estimated using tourism consumption statistics
- ▶ **Adjust the construction item**
 - ▶ Identifying goods is not yet possible
 - ▶ Keep only cross-border transactions
- ▶ **Estimate distribution services**
 - ▶ Estimate value of goods traded with Trade by Enterprise characteristics (TEC) statistics
 - ▶ Estimate trade margin with Structural Business Statistics (SBS) statistics



Trade in Services by Mode of Supply

Compilers guide table 6.2:

Recommended default allocation by mode of supply

Level	EBOPS 2010		Mode type (%)			
	Category	Category description	M1	M2	M3	M4
0	ISS	International supply of services (including distribution services)				
1	S	Services				
2	SA	Manufacturing services on physical inputs owned by others		100		
2	SB	Maintenance and repair services n.i.e.		90		10
3	SC	Transport	90	10		
2	SD	Travel		100		
		Travel – Alternative 1: By product (preferred option)				
3	SD1	Goods (to be removed from travel)				
3	SD2	Local transport services		100		
3	SD3	Accommodation services		100		
3	SD4	Food-serving services		100		
3	SD5	Other services		100		
2	SI	Telecommunications, computer, and information services	80			20
3	SI1	Telecommunications services	100			
3	SI2	Computer services	75			25



Trade in Services by Mode of Supply

FATS - Mode 3

- ▶ Mode 3 can be approximated by FATS
- ▶ Foreign-controlled enterprises & majority-owned affiliates of resident enterprises
- ▶ Classification according to primary activity (not product)
- ▶ Output / production value vs sales / turnover
- ▶ Double-counting of trade flows on services supplied to non-residents
- ▶ Goods vs services



Trade in Services by Mode of Supply

FATS - Mode 3

- ▶ **Assess data availability & derive all possible values**
 - ▶ Merge existing FATS data: Eurostat, OECD, national sources
 - ▶ Exploit mirror data
 - ▶ Impute zeroes when FDI stocks are null
- ▶ **Develop a complete dataset for countries with partial data**
 - ▶ Back/forecasting and interpolation
 - ▶ Gravity models to estimate missing sectors
- ▶ **Develop a complete dataset for countries without data**
 - ▶ Gravity models to predict bilateral sales
 - ▶ Derive partner world by summing up the values for all partners
- ▶ **Isolate output sold locally**
- ▶ **Balancing of inward and outward flows**



Trade in Services by Mode of Supply

Merging the data sets using a bridge table

EBOPS-like code	Description	NACE CODE	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 vehicle and motorcycle.