

Measuring Digital Trade

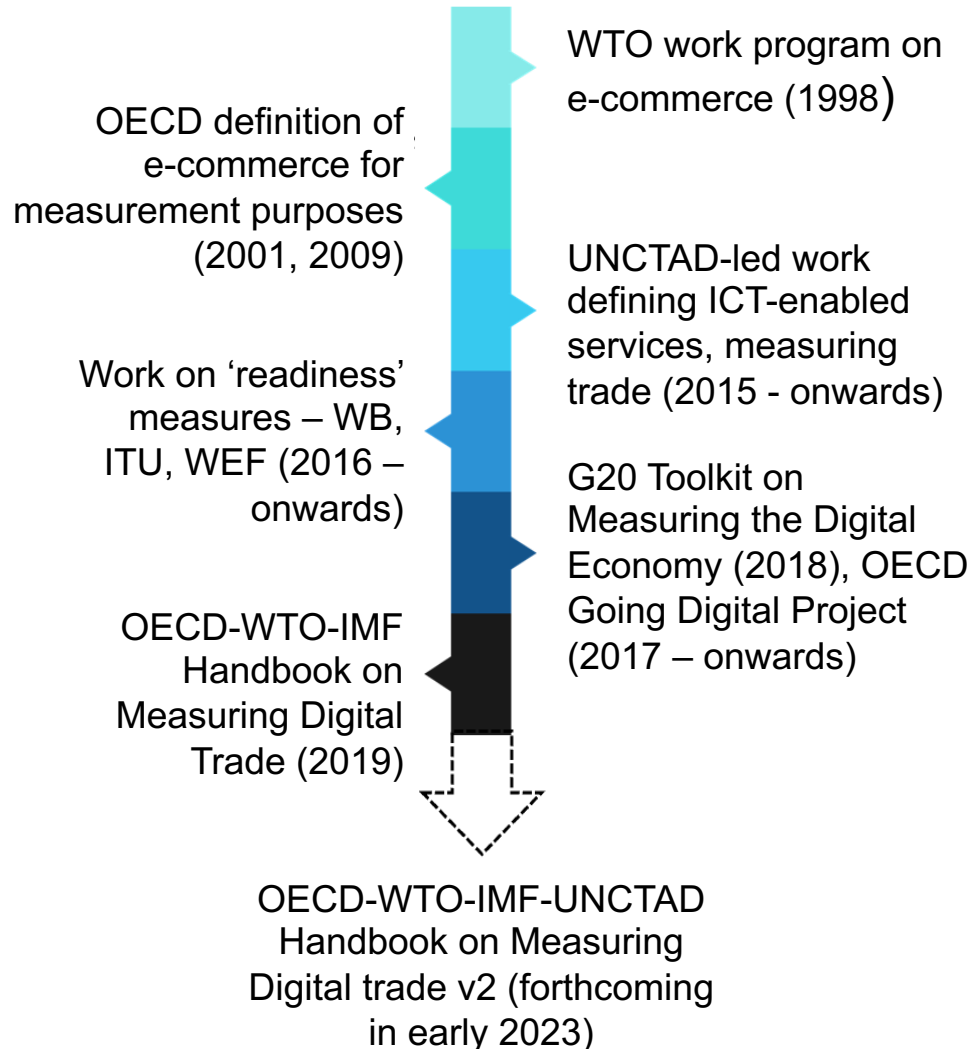
Forthcoming OECD-WTO-IMF-UNCTAD Handbook on Measuring Digital Trade

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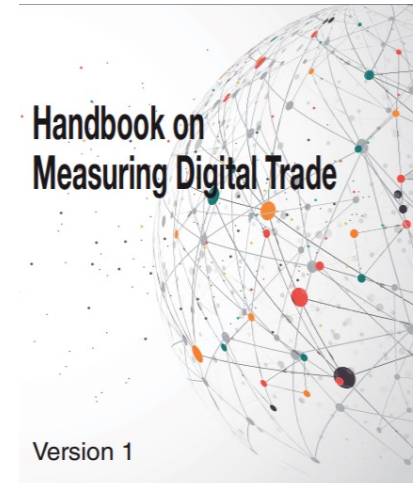
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Background



Handbook v1:

- First *statistical definition* of digital trade based on the nature of the transaction
- Established a *conceptual framework* for measurement
- Provided initial *compilation guidance* on digital trade transactions



Structure

- Ch1. Introduction
- Ch2. Conceptual framework for measuring digital trade
- Ch3. Measuring digitally ordered trade
- Ch4. Measuring digitally delivered trade
- Ch5. Digital intermediation platforms (DIPs)
- Ch6. Country case-studies

2. Conceptual framework for measuring digital trade



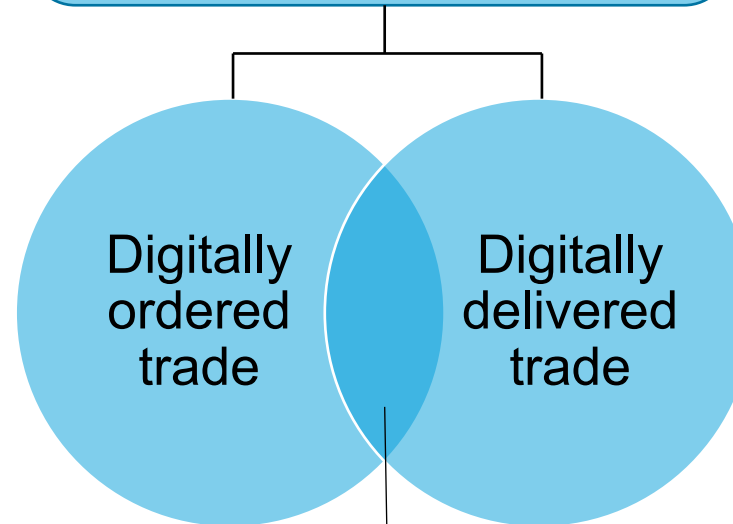
What is digital trade?



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”

- Aligned with definition of e-commerce
- Ordering is online (via web pages, apps, machine-readable messages), payment and delivery do not have to be.
- *Excludes* orders made by phone, fax, manually typed email



Conceptual overlap

Transactions that are *both* digitally ordered and digitally delivered

Need to measure to avoid double-counting

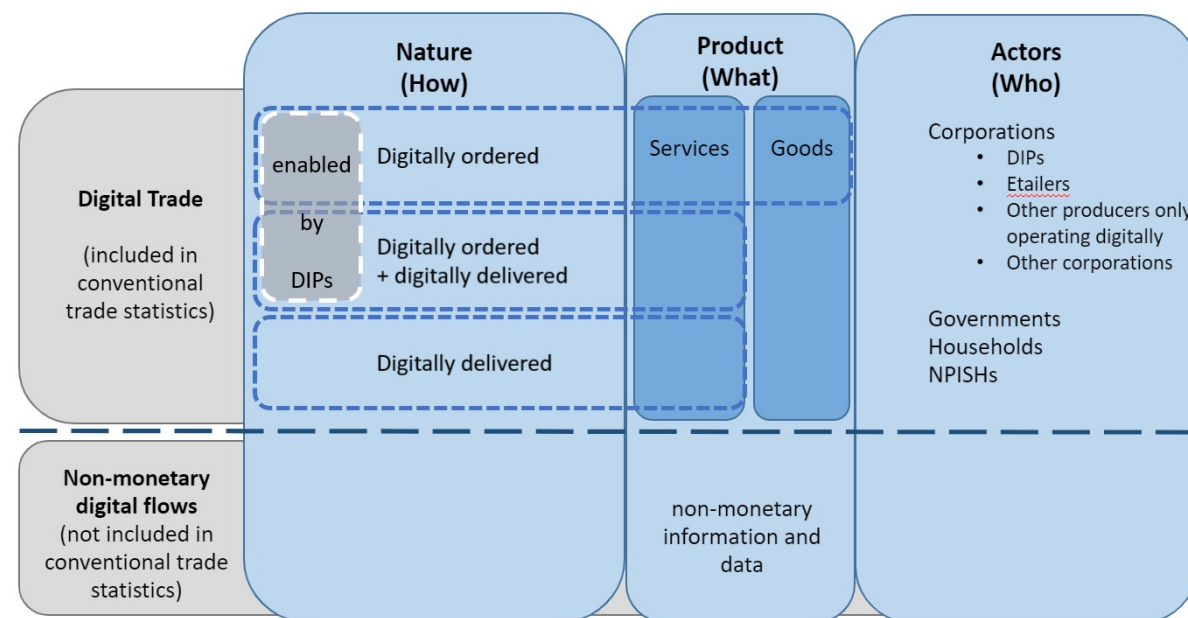
Digitally Delivered Trade

“All international transactions that are delivered remotely over computer networks”

- Only services can be digitally delivered
- *Includes* delivery by phone or video call, fax, emails

Measurement framework

- **Nature of transaction** (digitally ordered/digitally delivered) is key in identifying digital trade.
- Both **goods and services can be digitally ordered**; **only services can be digitally delivered** (no “digital goods”).
- **All economic actors** can engage in digital trade.
- **Digital intermediation platforms** (DIPs) play a major role in facilitating digital trade. They also complicate the flows involved. (See Handbook Ch5).
- Measurement focus is on **monetary transactions** between buyers and sellers (just like other trade statistics).
 - Cases where a service is provided free of charge to users, such as those cross-subsidised by advertising (e.g., social media) are outside scope.
- Although they may be linked to trade, **data flows are not trade** in and of themselves. From a trade measurement perspective:
 1. Where there is a requiring payment directly associated with a cross-border data flow, this monetary amount would be counted (e.g., datasets sold as products, Netflix subscriptions, telehealth services, etc.)
 2. If there is no requiring payment, there is no direct economic quantity to measure (trade is measured in \$\$\$)



“Cross-border data flows are a new kind of international economic flow which lead to a new form of global interdependence”.

This calls for “a new global institutional framework” for global data governance that is “multilateral, multi-stakeholder, and multidisciplinary”, with “a new UN coordinating body for global data governance”.



Reporting template for digital trade

			Total exports	Total imports
1	Total Digital Trade	2 + 3.2		
		or 2 + 3 minus 2.2.a		
		or 2 + 3 minus 3.1		
2	Digitally Ordered Trade	2.1+2.2		
2.1	Goods			
2.1.a	of which: via DIPs			
2.2	Services			
2.2.a	of which: digitally delivered	=3.1		
2.2.b	of which: via DIPs			
3	Digitally Delivered Trade	3.1+3.2		
3.1	Of which: Digitally ordered services	=2.2.a		
3.1.a	of which: via DIPs			
3.1.b	of which: digital intermediation services			
3.2	Of which: not digitally ordered services			
	<i>Addendum items</i>			
A.1	Digital trade in services	2.2+3 minus 2.2.a		
		or 2.2+3.2		
A.2	Digitally deliverable services	>3		

3. Measuring digitally ordered trade



Measuring digitally ordered trade

“Digitally ordered trade” = “international e-commerce”

→ use surveys covering e-commerce to measure digitally ordered trade notably *business and household ICT usage surveys*

Recommended to **prioritise business**

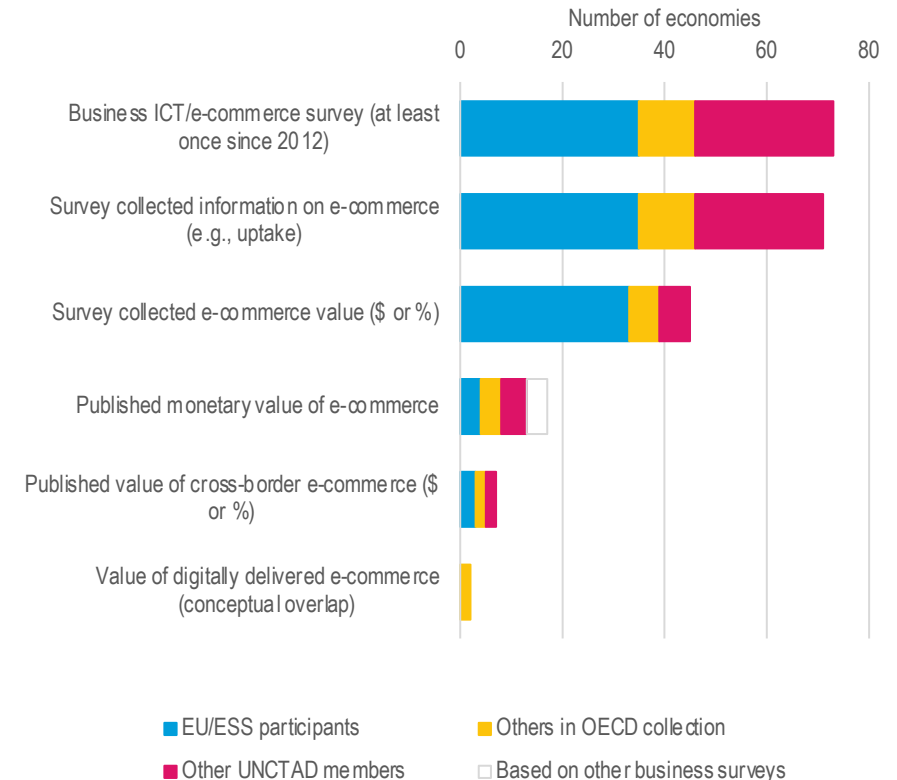
- Biggest “piece of the puzzle” for both sales (exports) and purchases (imports)
- More developed/fewer challenges for measuring e-commerce value than Household Surveys
- Almost 80 countries have business ICT surveys, **most have collected value of e-commerce sales**
- Top-down approach: collect total e-commerce \$, break down into domestic/international
- Further breakdown by product type (good, digitally delivered service, other service) to **measure the overlap** between digitally ordered and digitally delivered transactions

Practical examples (incl. survey questions) from countries at various stages of development.

- Can also provide a basis for questions on other surveys (e.g. surveys of business activity).



Measuring the value of business e-commerce sales using surveys of business ICT usage/e-commerce [and other business surveys]



Notes: EU = European Union, ESS = European Statistical System. The ESS includes EU countries as well as Iceland, Norway, Turkey, and the non-EU Balkan states. These countries generally follow the Eurostat model survey on e-commerce and ICT usage in business. “Others in OECD collection” comprises non-EU OECD members Australia, Canada, Colombia, Israel, Japan, Korea, Mexico, New Zealand, Switzerland, and the United Kingdom, as well as Brazil, which participates in the annual OECD data collection. Although it is an OECD member, the United States does not conduct business ICT usage surveys. “Other UNCTAD members” refers to all other economies; these have been identified as performing business ICT usage surveys based on source information provided to UNCTAD when submitting data for inclusion in the database of core indicators on ICT usage in business. Several countries have published e-commerce value figures based on other surveys: Japan, Singapore, Philippines, and the United States.
Source: UNCTAD based on national sources, Eurostat Digital Economy and Society Indicators Database, OECD ICT Access and Usage by Businesses database, UNCTAD core indicators on ICT use in business database.

Measuring business' digitally ordered exports in practice

Top-down approach:

1. Collect business' total e-commerce sales value
2. Request % split into revenues from domestic vs international customers

48. Indique el número de transacciones y el monto aproximado de ventas de mercancías ó prestación de servicios vía internet durante el año 2012.

48.1 Número de transacciones de ventas vía internet

Número de transacciones

48.2 Monto de las ventas vía internet.....

Miles de pesos

50. Del monto de las ventas vía internet reportado en el punto 2 de la pregunta 48, indique el porcentaje que representó el mercado de destino de los productos vendidos durante el año 2012.

Porcentaje

50.1 Nacional

50.2 Extranjero

50.0 TOTAL

100%

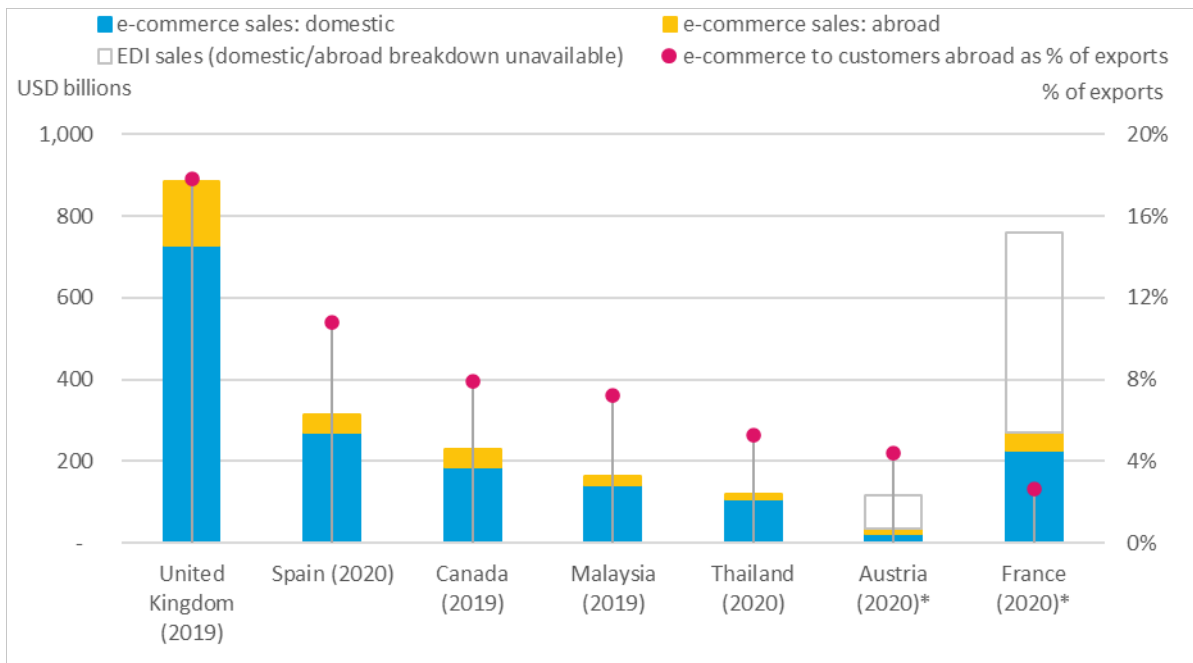
Source: INEGI, CONACYT, « Encuesta sobre Tecnologías de la Información y las Comunicaciones ENTIC 2013»:

https://inegi.org.mx/contenidos/programas/entic/2013/doc/cuestionario_entic_2013.pdf

Business E-commerce sales

Domestic and abroad

- Sales to customers abroad account for a minority of business e-commerce transactions (16% on average).
- E-commerce transactions comprise up to 18% of total goods and services exports (UK)
- Some countries (notably those following the EU model surveys) only collect partial information (website and app sales only)
- Only a small number of countries have figures!



Notes: * France and Austria: "web sales" only (i.e., excluding EDI sales).
Source: UNCTAD based on statistics published by national statistical agencies, UNCTAD goods and services trade databases, and UNCTAD currency exchange rates (<https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>)

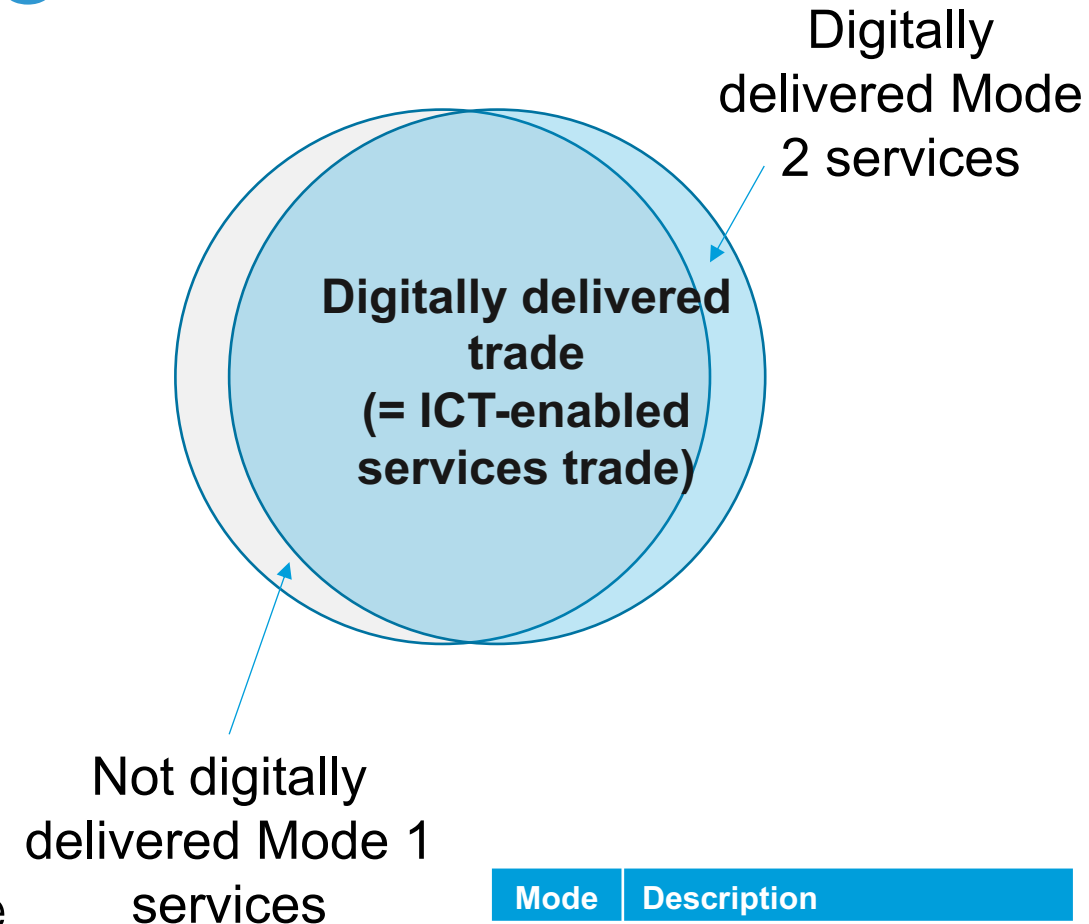
4. Measuring digitally delivered trade



Digitally delivered trade

Digitally delivered trade consists of
“all international transactions that are delivered remotely over computer networks”

- Services only
- Definition simplified compared to HB v1
 - Full alignment with definition of ICT-enabled services (TGServ)
 - Broad alignment with services supplied via Mode 1: for services that are digitally deliverable “remote delivery” will usually take place over computer networks



Mode	Description
1	Cross-border supply
2	Consumption abroad
3	Commercial presence
4	Presence of natural persons

Step 1: identify services that are *digitally deliverable*

- Most are readily available from trade by product data
 - (Digital intermediation services and digitally deliverable services consumed while travelling likely to take further efforts to measure)
- Aggregating gives an upper-bound estimate for (most) digitally delivered trade.
- However, the product detail available from many countries lacks granularity, reducing ability to accurately delineate digitally deliverable services.
- It is recommended that **countries make efforts to collect and disseminate services trade data with sufficient product detail** to allow digitally deliverable services trade to be compiled and/or publish internally compiled series for digitally deliverable trade.

Digitally deliverable services

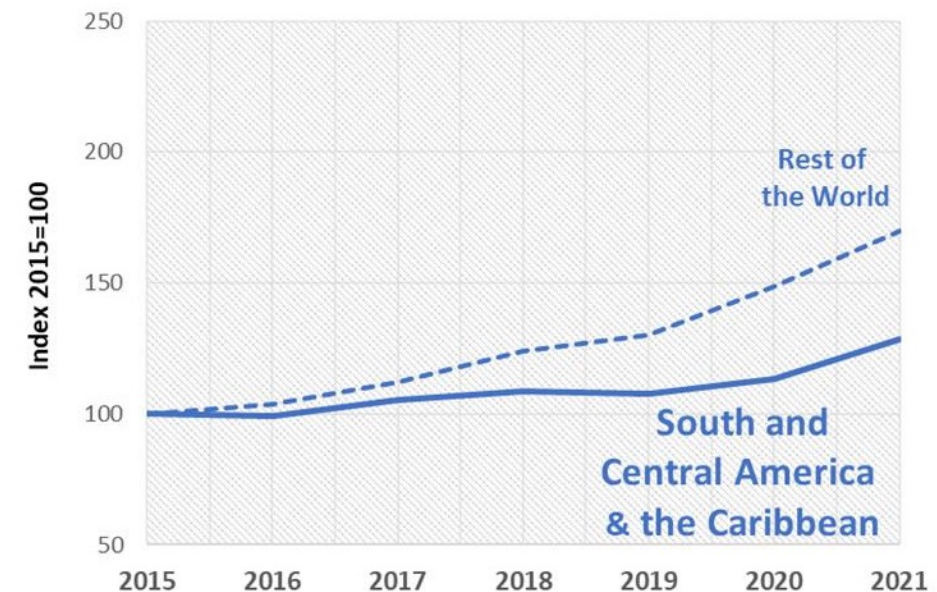
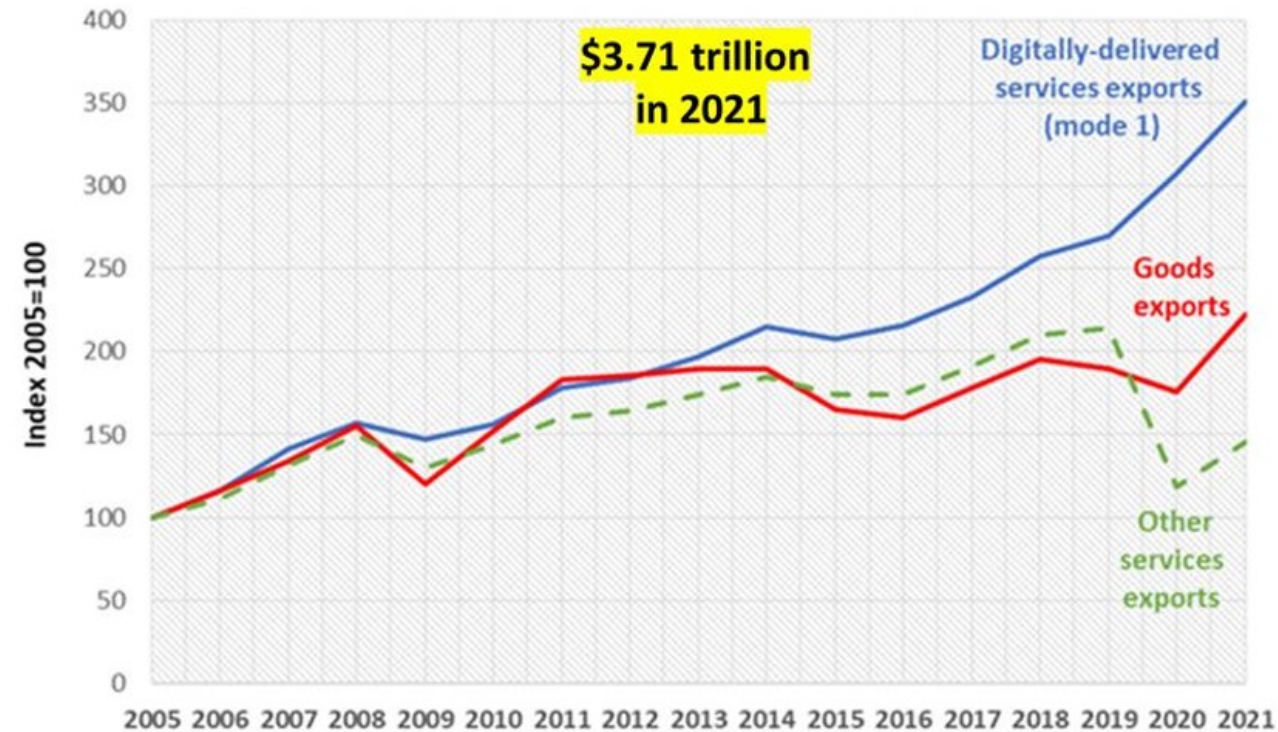
Title	SDMX BOP DSD	EBOPS 2010
Insurance and pension services	SF	6
Financial services	SG	7
Charges for the use of intellectual property n.i.e.	SH	8
Telecommunications, computer, and information services	SI	9
Research and development services	SJ1	10.1
Professional and management consulting services	SJ2	10.2
Architectural, engineering, scientific and other technical services	SJ31	10.3.1
Other business services n.i.e.	SJ35	10.3.5
Audio-visual and related services	SK1	11.1
Health services	SK21	11.2.1
Education services	SK22	11.2.2
Heritage and recreational services	SK23	11.2.3
Digital intermediation services provided by DIPs	Recorded within various products	
Digitally deliverable services consumed abroad (Mode 2)	Recorded <u>within</u> item SD (Travel)	Recorded <u>within</u> item 4 (Travel)

Note: Items included under SDMX DSD (Statistical Data and Metadata eXchange Data Structure Definitions) refer to the codes used for EBOPS 2010 items (see also https://sdmx.org/?page_id=1747).

Step 2: delineate services delivered remotely

- Additionally, most trade data do not currently distinguish between GATS Modes of supply. **Mode 1 (cross-border supply) implies physical distance between parties – and therefore remote/digital delivery, other modes less clear cut.**
- Recommended to add questions on Trade in Services surveys to delineate services delivered remotely.
- For services that are *digitally deliverable*, this provides a measure of *digitally delivered trade*.
- Initial *estimates* possible by estimating the GATS modal shares for different services products
(e.g. the “enhanced simplified approach” used in the WTO TISMOS dataset; https://www.wto.org/english/res_e/statistics_e/trade_datasets_e.htm)
- Digitally-delivered (mode 1) exports totalled US\$3.71trn in 2021.
 - Comprises the majority (but significantly less than all) of total digitally deliverable services exports.

Digitally-delivered (mode 1) services exports



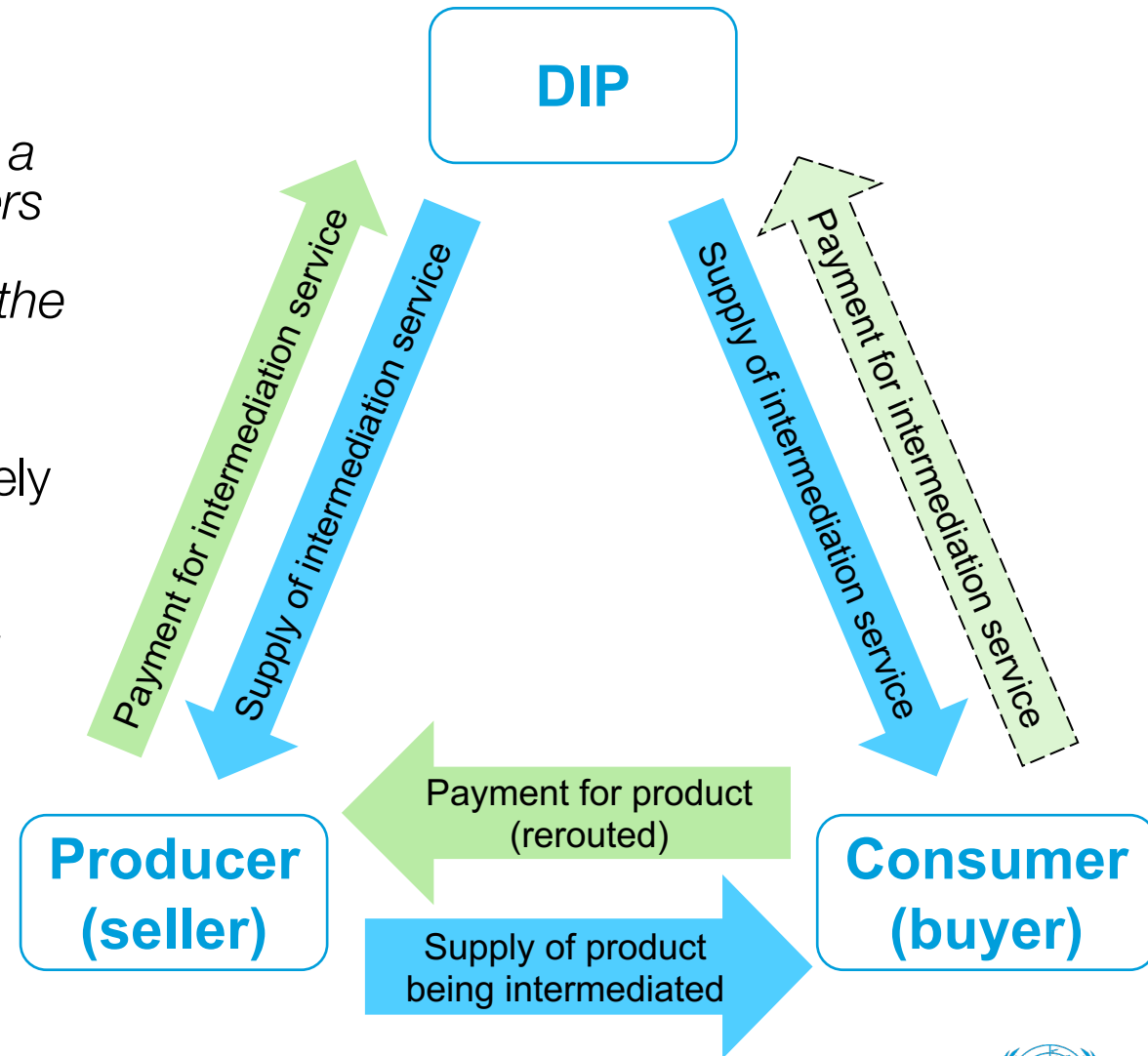
Source: WTO estimates.
Note: main series depicts digitally deliverable services supplied via GATS mode 1 (cross-border supply)

4. Digital intermediation platforms (DIPs)



DIPs

- DIPs are defined as *‘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)’*
- DIPs provide a *digital intermediation service* between sellers and buyers that should separately recorded in the accounts. The fee:
 - can be invoiced to the seller, to the buyer or both
 - if not separately invoiced, is assumed to be paid by the seller
- Treatment in line with v1 of the Handbook and now *endorsed in BPM revision* and in OECD Handbook on Digital SUTs (forthcoming)
- Intermediation services to be classified in *trade-related services* (for both goods and services)



Take-aways

- The Handbook on Measuring Digital Trade provides a conceptual framework for measuring digital trade.
- As noted in the Handbook, [business ICT surveys can be a key source](#) for measuring a major component of digitally ordered trade (that involving businesses).
- Although [many countries conduct these surveys](#), relatively few have gathered and published data on the value of e-commerce; fewer still on the value of cross-border e-commerce.
- [UNCTAD is developing statistical guidance](#) to promote harmonisation and support countries in measuring e-commerce sales; this includes cross-border e-commerce - thereby supporting the measurement of digitally ordered trade.
- Countries should make [efforts to collect and disseminate trade data with sufficient detail to identify and aggregate the digitally deliverable services products](#) needed to derive initial estimates of digitally delivered trade.
- Furthermore, countries are [encouraged to add questions to trade in services surveys to delineate digitally / remotely delivered services](#).
- Digital intermediation platforms underpin many digital trade transactions; but they also complicate them. The Handbook provides detailed guidance and examples on recording transactions involving DIPs as well as collating country experiences.
- [OECD-WTO-IMF-UNCTAD Handbook on Measuring Digital Trade will be published in early 2023.](#)