

Handbook on Measuring Digital Trade

IMF, OECD, UNCTAD and WTO

UNCTAD WG-ECDE

30 NOVEMBER 2023



Background

OECD definition of e-commerce
for measurement purposes
(2001, 2009)

Work on 'readiness'
measures – WB, ITU, WEF
(2016 – onwards)

Handbook on Measuring Digital
Trade (2019)

=> **statistical definition &
conceptual framework established**



WTO work program on
e-commerce (1998)

UNCTAD-led work on
defining and measuring ICT-
enabled services trade
(2015 - onwards)

G20 Toolkit on Measuring
the Digital Economy (2018),
OECD Going Digital Project
(2017 – onwards)

**Handbook on Measuring Digital trade
second edition (2023)**

Handbook on Measuring Digital Trade

SECOND EDITION



Key concepts

WTO Work Programme on Electronic Commerce definition (1998)

“The production, distribution, marketing, sale or delivery of goods and services by electronic means”

E-commerce

Definition for measurement purposes (OECD, 2009)

“The sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders”

Digital Trade

Handbook on Measuring Digital Trade
IMF, OECD, UNCTAD and WTO, 2023

“All international trade that is digitally ordered and/or digitally delivered”

Domestic e-commerce

“The **domestic** sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders”

Digitally ordered trade

=
International e-commerce

“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”

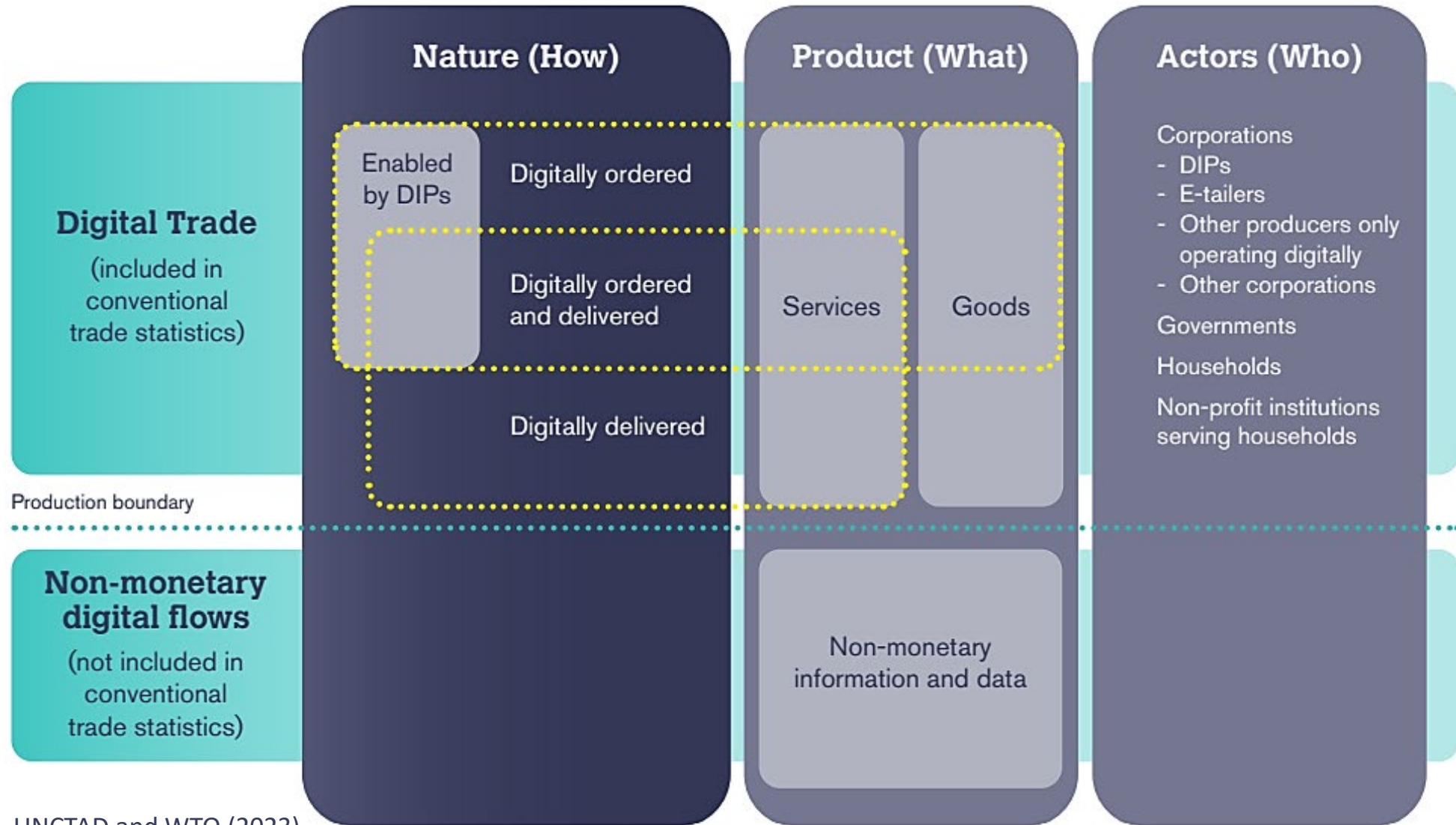
Digitally delivered trade

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

International transactions that are both digitally ordered and digitally delivered

Source: IMF, OECD, UNCTAD and WTO (2023)

The statistical framework



Source: IMF, OECD, UNCTAD and WTO (2023)

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”.

Digital ordering = e-commerce

→ Digitally ordered trade = international e-commerce

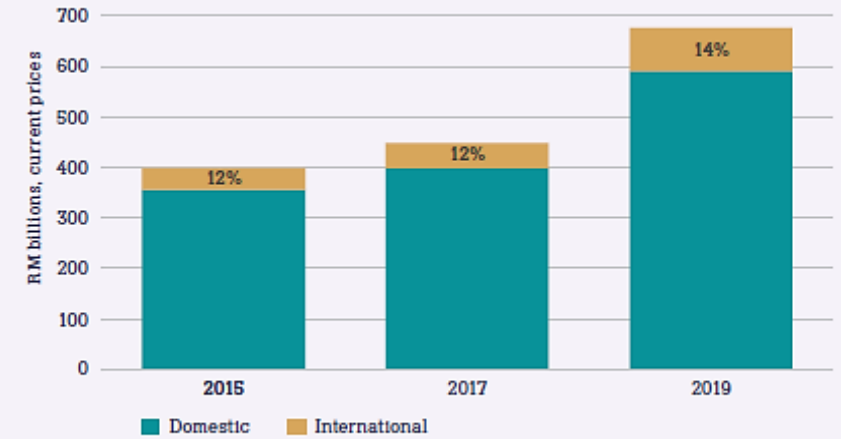
- Goods and services (incl. some digitally delivered services)
- All economic sectors can be buyers and sellers:
 - Businesses
 - Government units
 - Households / individuals
 - Non-profits (NPISH)
- Key starting points:
 - Digitally ordered transactions involving businesses
 - Digitally ordered trade in goods



Digitally ordered trade by businesses

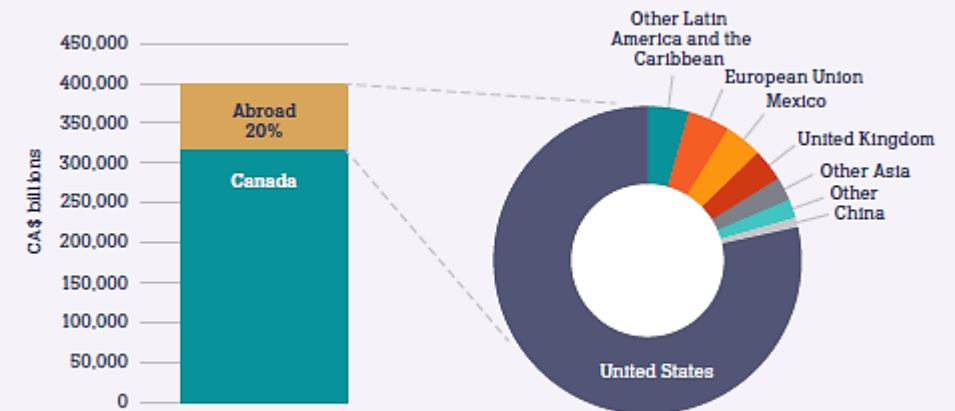
- Businesses main players in e-commerce sales (and purchases)
- Build upon ICT surveys used to measure e-commerce uptake to measure the *value of digitally ordered transactions*
 - Both sales (exports) and purchases (imports)
 - Data can also be collected through “core” business surveys
- Both domestic and international e-commerce transactions are measured together
- Some countries collect more detailed information
 - Partner country/region
 - Product (good, digitally delivered service, other service)

Figure 3.2: Business e-commerce sales by customer location, Malaysia



Source: IMF, OECD, UNCTAD and WTO based on Department of Statistics Malaysia (2019; 2021).

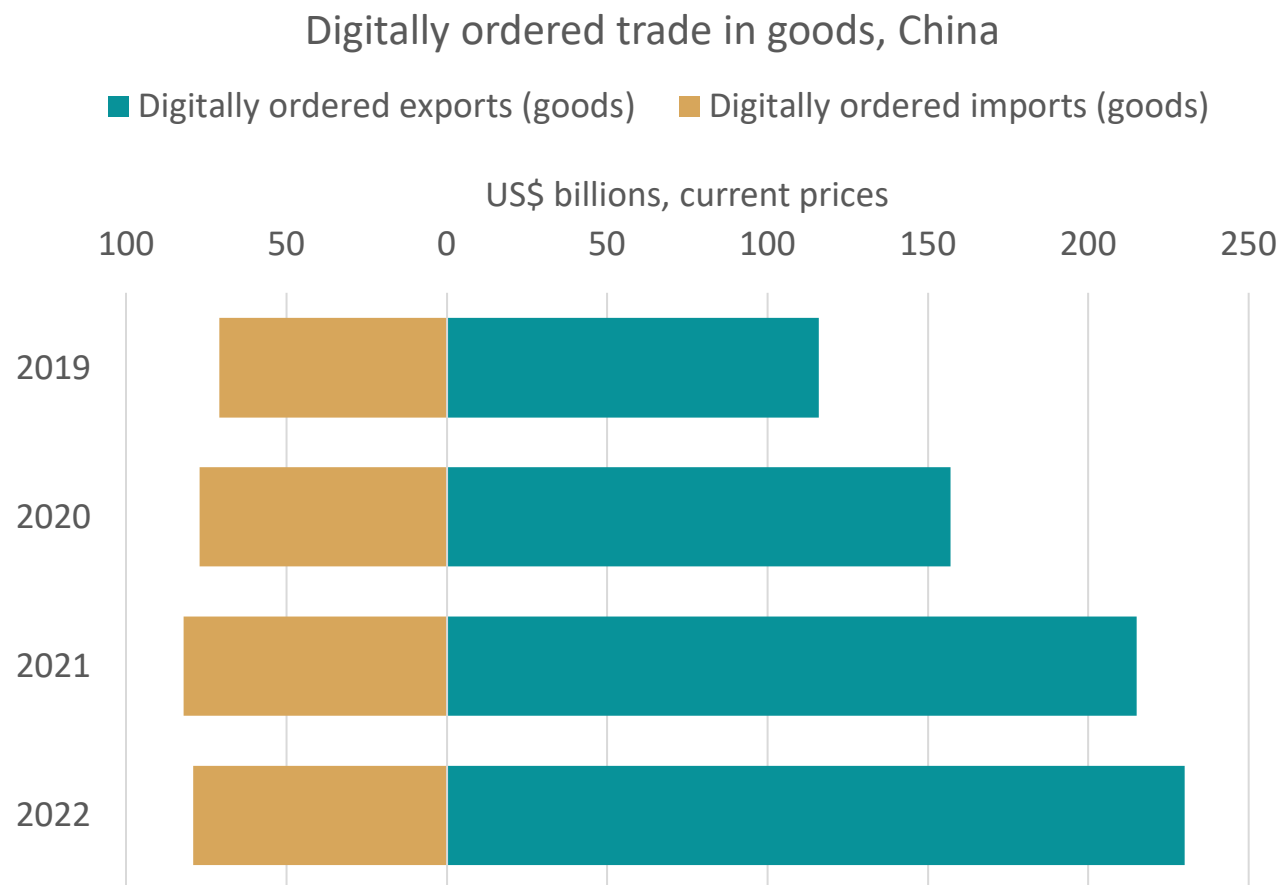
Figure 3.3: Business e-commerce sales by customer location, Canada, 2021



Source: Statistics Canada

Digitally ordered trade in goods

- In many countries, cross-border trade is mainly in goods (rather than services)
- Likely the same for digitally ordered trade
- Several countries have modified customs reporting requirements and processes to identify merchandise shipments that are digitally ordered



Source: IMF, OECD, UNCTAD and WTO, based on China Customs case study (ch6)

Additional sources for a more complete measure

- Digitally ordered trade involving businesses and digitally ordered trade in goods usually the two largest elements of digitally ordered trade
- However:
 - Services can also be digitally ordered
 - Non-businesses also engage in digitally ordered trade
- Handbook presents other sources, looking in detail at coverage of the relevant concepts and flows :
 - Household surveys (e.g., of ICT usage, expenditures)
 - VAT returns data
 - Card payments data
 - Multi-national enterprise surveys

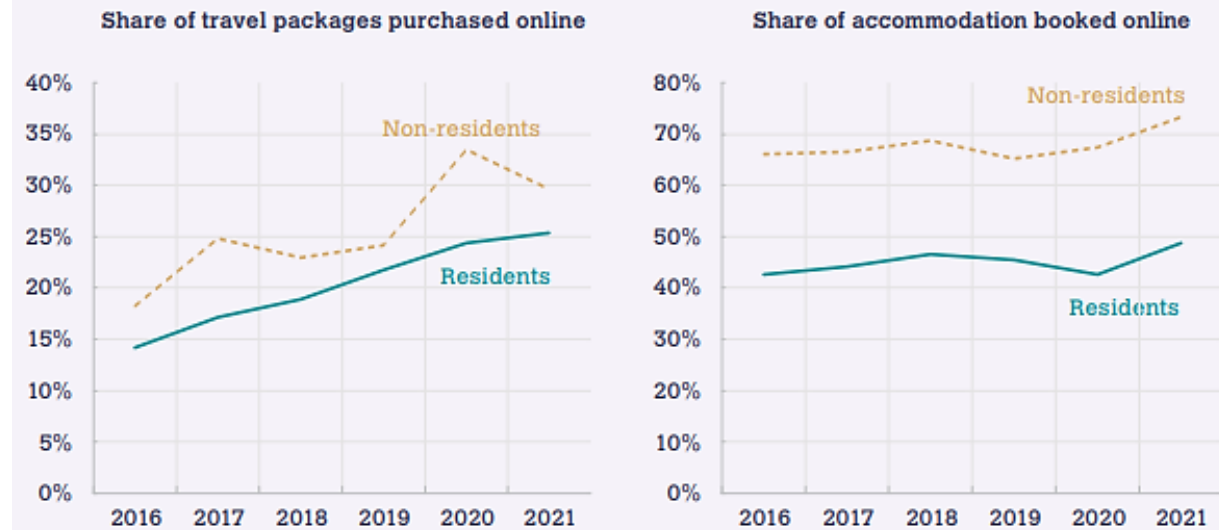
Figure 3.6: Average online shopping expenditure by product type, Canada, 2020



Note: Peer-to-peer accommodation are services that connect travellers and hosts through a mobile application or website that acts as an intermediary and processes the payment from the traveller to the host. Examples of peer-to-peer accommodation intermediaries are Airbnb and Flipkey.

Source: Statistics Canada (2022b).

Figure 3.7: Share of travel packages and accommodation booked online in Italy (%)



Source: Bank of Italy.

Digitally delivered trade

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

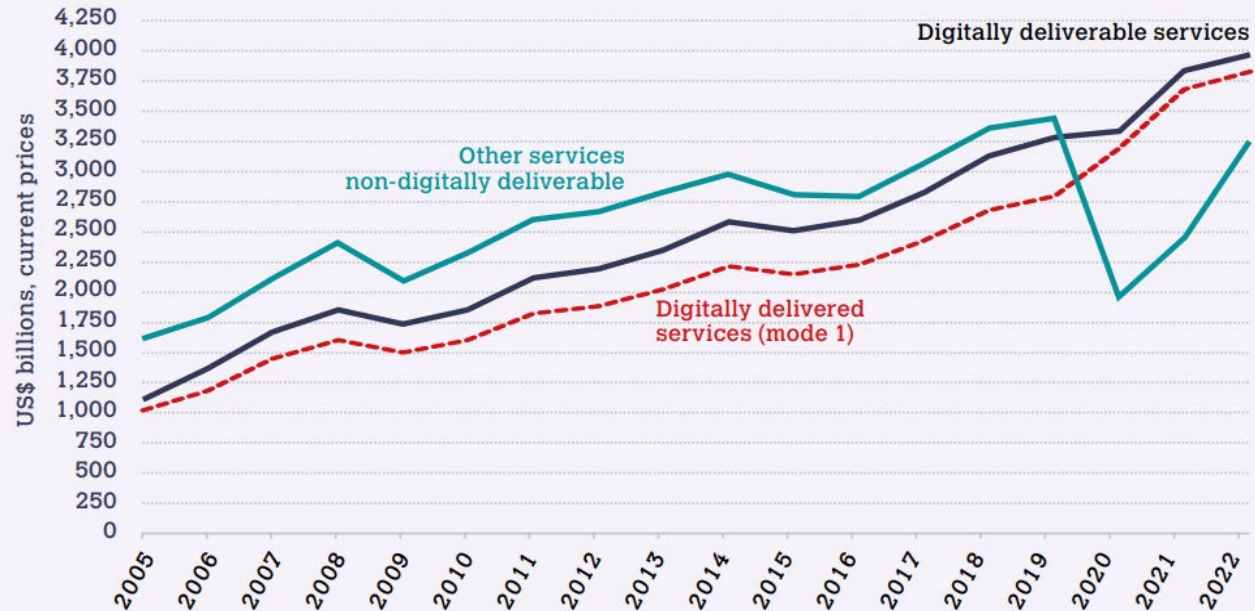
- **Only services can be digitally delivered**
- Delivery also by phone, fax, video call, emails, apps and DIPs
- Digitally delivered trade is equivalent to Mode 1 cross-border supply for digitally deliverable services
- Often also digitally ordered
- First step: Identify digitally deliverable services in the BOP
- Then, carve out services *actually* digitally delivered



Digitally delivered services are a growing subset of digitally deliverable services

Figure 4.4: Global exports of digitally deliverable services and digitally delivered services (Mode 1 – cross-border supply), 2005-22

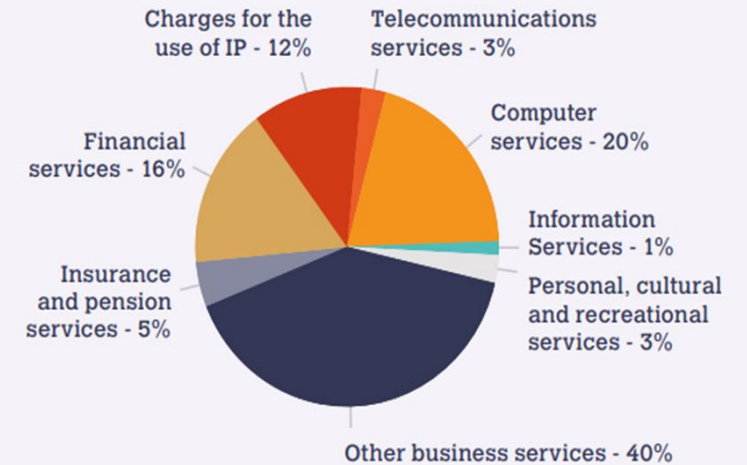
Exports in US\$ billions, current prices



Source: WTO (2023).

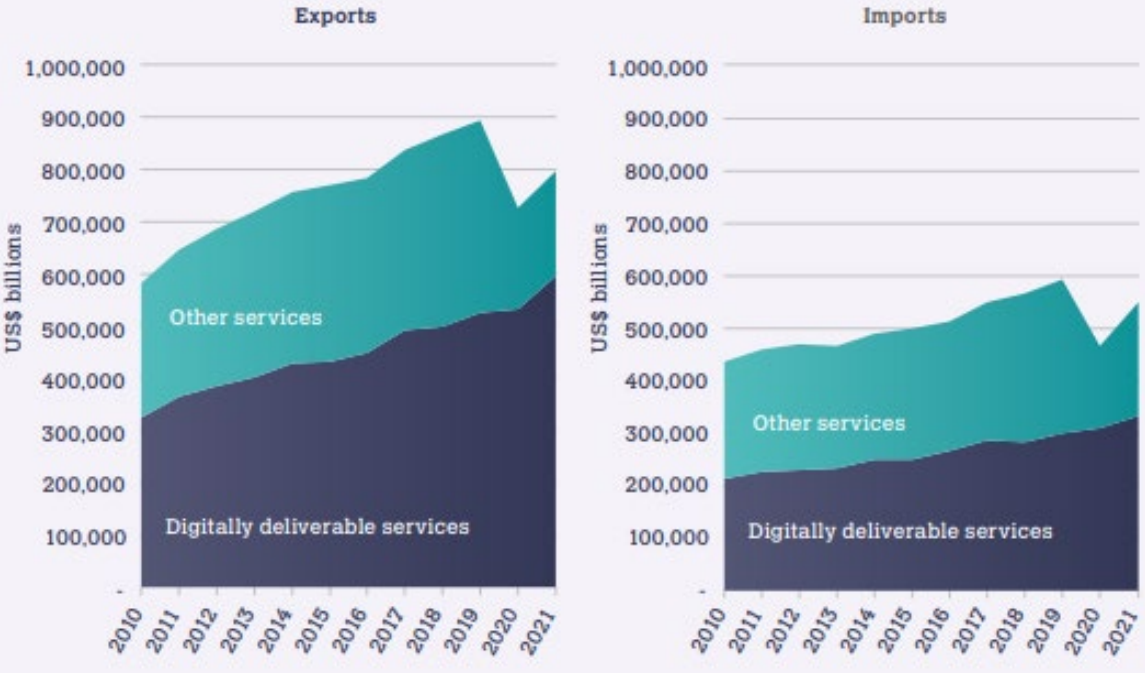
Figure 4.5: Global exports of digitally delivered services (Mode 1 – cross-border supply) by broad EBOPS 2010 sector

2022, share in total exports of digitally delivered services through Mode 1



Source: WTO (2023).

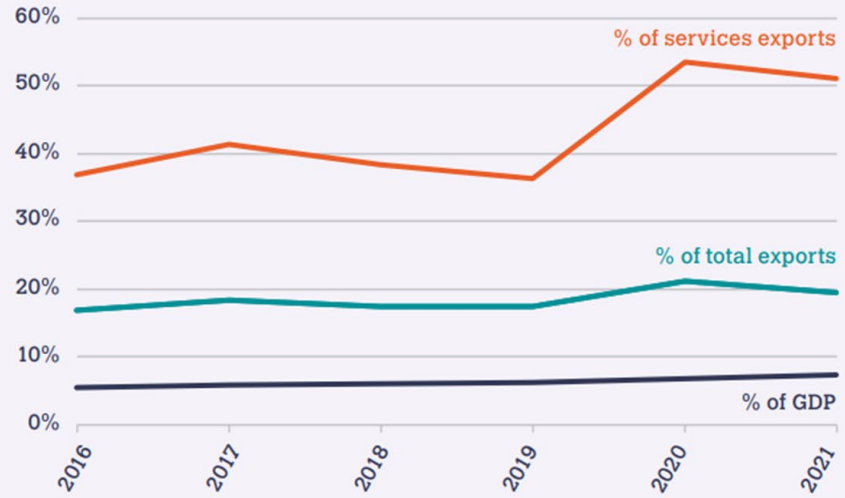
Figure 4.2: Trade in digitally deliverable and other services, United States, 2010-21



Source: United States Bureau of Economic Analysis.

Recommended to measure digitally delivered trade through ITS surveys

Figure 4.7: Digitally delivered services exports, Costa Rica, 2016-21

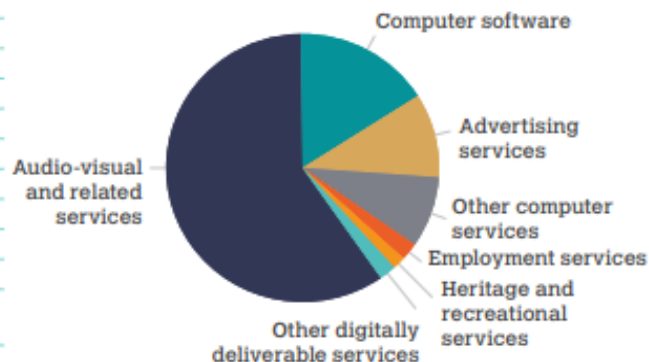


Note: Excludes health services, education services, heritage and recreational services, and trade-related services.
 Source: Central Bank of Costa Rica.

Argentina

TABLE 4.5: IMPORTS OF DIGITALLY DELIVERED SERVICES PAID BY HOUSEHOLDS IN THE THIRD QUARTER OF 2022

EBOPS 2010 Component	Amount US\$
Audio-visual and related services (11.1.1)	123,865,939
Computer software (9.2.1)	33,660,666
Advertising services (10.2.2)	21,090,180
Other computer services (9.2.2)	17,836,474
Employment services (10.3.3.1)	4,341,608
Heritage and recreational services (11.2.3)	3,169,463
Telecommunication services (9.1)	979,120
Education services (11.2.2)	946,995
Other business services n.i.e. (10.3.5)	839,533
Other personal services (11.2.4)	726,280
Business and management consulting (10.2.1.3)	305,883
Financial services (7.1)	161,627
Information services (9.3.2)	118,069
Accounting services (10.2.1.2)	4,288
TOTAL	208,046,125



Source: Argentina National Institute of Statistics and Censuses (INDEC).

Other data sources can be used to capture imports

TABLE 4.6: EXPENDITURE ON DIGITAL SERVICES BY HOUSEHOLDS IN IRELAND

By product and region/country of the seller, 2020, millions of euros

Region/Country	Music and video streaming	Online gaming	Online gambling	Publishing/well-being/social media	Other digital services
Ireland	25		2		111
Europe (excluding Ireland)	263	118	128	42	60
North America	11	3			44
Rest of the world	0	0			6
Not allocated	25	16			41

Source: Ireland Central Statistics Office (2022).

Digital intermediation platforms (DIPs)

“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)”

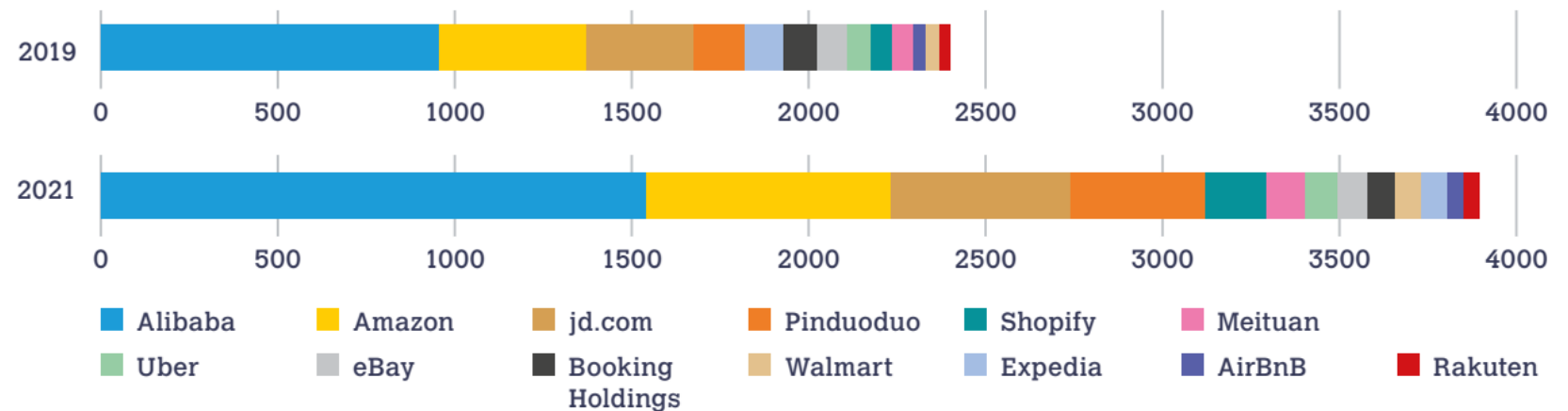


DIPs are key drivers in the digital transformation

Their impact is significant and growing

- DIPs facilitate access to the global marketplace (especially for smaller businesses).
- Give buyers access to wider product variety and ability to compare prices easily.
- Also enable new activities and business models such as peer-to-peer transactions, resource sharing between households.

Figure 1.3: Sales through online platforms are booming

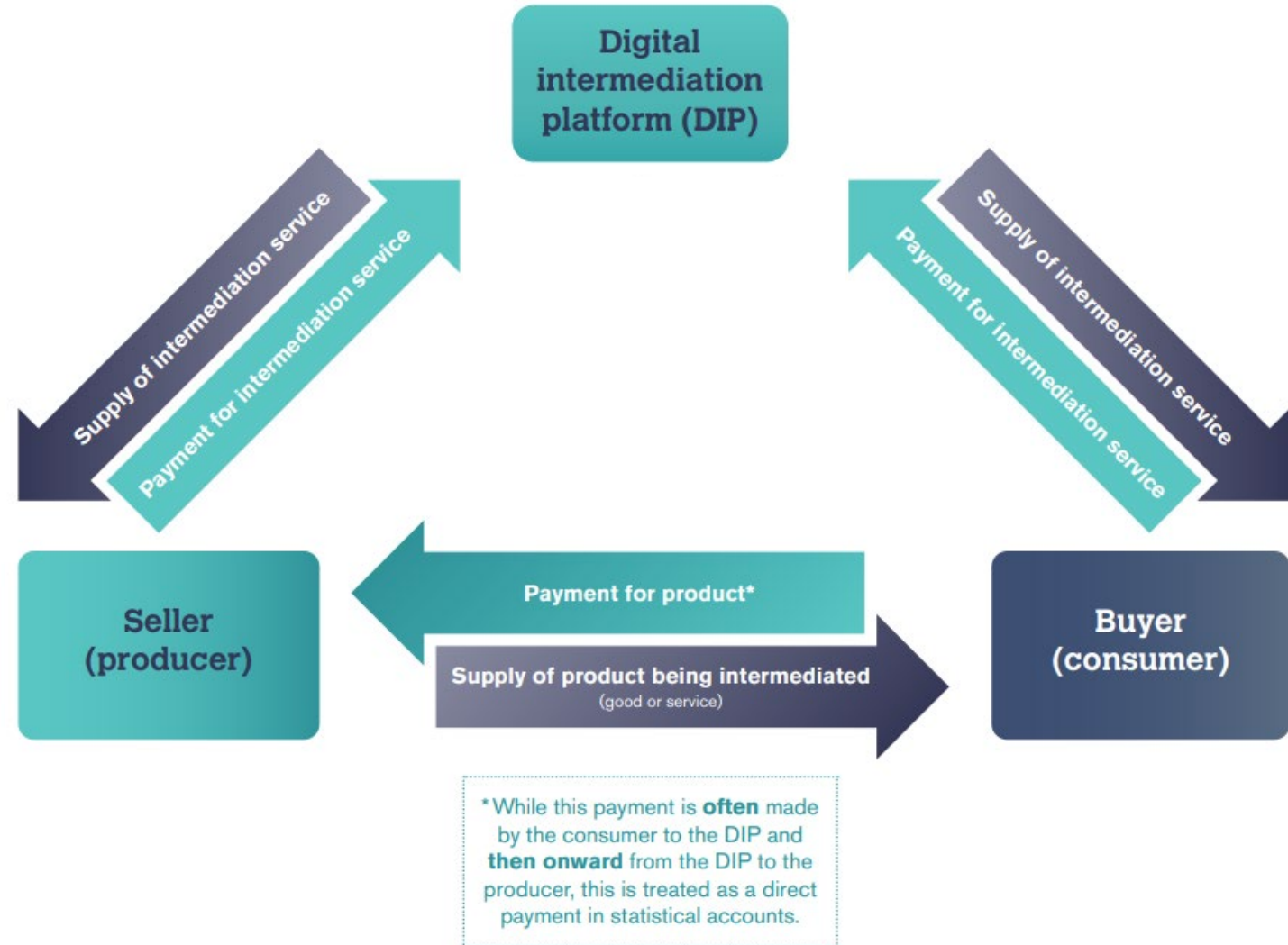


Note: The chart covers digital intermediation platforms as defined in this Handbook (e.g., Uber), as well as e-tailers. In some cases, both business models may co-exist on the same platform (e.g., Amazon, Alibaba). The figures reflect the gross value of goods and services sold by/through these companies.

Source: UNCTAD (2022a), based on company reports.

DIPs intermediate transactions

- Buyer purchases from seller via DIP
 - Often:
 - Buyer pays DIP
 - DIP subtracts fees
 - DIP pays remainder to seller
 - Economic reality:
 - Payment from buyer to seller for good/service
 - Payment(s) from seller and/or buyer to DIP for the digital intermediation service it provided
- Buyer/seller/DIP resident in different economies = trade transactions
- Limited country measurement experience, Handbook recommends:
 - collecting information from resident DIPs using enterprise surveys
 - collecting information on transactions made via DIPS using ICT Usage surveys
 - using other sources (e.g. card payment data) to focus on major DIPs



Key take-aways

- The Handbook on Measuring Digital Trade sets out key definitions, a measurement framework, and reporting template for Digital Trade statistics
 - The second edition is a significant development, adding important clarifications and explanations, and presenting extensive new compilation guidance reflecting the rapid progress being made by countries
 - It has been endorsed by countries through global consultation
- Multiple sources and methods needed for complete and coherent measure of digital trade
 - Key priorities:
 - Measuring digitally ordered transactions involving businesses (e.g. through business ICT usage surveys)
 - Measuring digitally ordered trade in goods through adjustments to customs reporting requirements
 - Ensuring the availability in services trade statistics of full product detail for digitally deliverable services
 - Including questions on digital delivery in international trade in services surveys
- Coordinated statistical capacity building to support countries in putting the Handbook into action!

Turning the Handbook into action

- The IMF, OECD, UNCTAD, and WTO are working to develop in-person, online, and blended training to support Handbook implementation
- In-person workshops of 4-5 days
- First workshop took place in Nov 2023
 - For Arab countries
 - Funded by the Arab Monetary Fund and the WTO
 - Delivered with partners UN-ESCWA, the Arab Institute for Training and Research in Statistics, and UNSD
 - Strongly positive feedback
- Workshop provision is demand-led. To express interest contact emeasurement@unctad.org and barbara.dandrea@wto.org



Regional Workshop on Measuring Digital Trade
20-23 November 2023
Abu Dhabi, UAE