Background

- OECD definition of e-commerce for measurement purposes (2001, 2009)
- WTO work program on e-commerce (1998)
- UNCTAD-led work on defining and measuring ICT-enabled services trade (2015 - onwards)

Handbook on Measuring Digital trade second edition (2023)
Key concepts

“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”

Source: IMF, OECD, UNCTAD and WTO (2023)
The statistical framework

Digital Trade
(included in conventional trade statistics)

Nature (How)
- Enabled by DIPs
- Digitally ordered
- Digitally ordered and delivered
- Digitally delivered

Product (What)
- Services
- Goods

Actors (Who)
- Corporations
  - DIPs
  - E-tailers
- Other producers only operating digitally
- Other corporations
- Governments
- Households
- Non-profit institutions serving households

Non-monetary digital flows
(not included in conventional trade statistics)

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
  • Households / individuals
  • Government units
  • 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)
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
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

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

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

- Charges for the use of IP - 12%
- Telecommunications services - 3%
- Computer services - 20%
- Information Services - 1%
- Personal, cultural and recreational services - 3%
- Other business services - 40%
- Financial services - 16%
- Insurance and pension services - 5%

**Source:** WTO (2023).
Recommended to measure digitally delivered trade through ITS surveys.
Other data sources can be used to capture imports.

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

<table>
<thead>
<tr>
<th>EBOPS 2010 Component</th>
<th>Amount (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio-visual and related services (11.1.1)</td>
<td>123,965,929</td>
</tr>
<tr>
<td>Computer software (9.2.1)</td>
<td>33,660,056</td>
</tr>
<tr>
<td>Advertising services (10.2.2)</td>
<td>21,090,180</td>
</tr>
<tr>
<td>Other computer services (9.2.2)</td>
<td>17,036,474</td>
</tr>
<tr>
<td>Employment services (10.3.3)</td>
<td>4,341,808</td>
</tr>
<tr>
<td>Heritage and recreational services (11.2.3)</td>
<td>3,169,453</td>
</tr>
<tr>
<td>Telecommunication services (9.1)</td>
<td>979,130</td>
</tr>
<tr>
<td>Education services (11.2.2)</td>
<td>946,995</td>
</tr>
<tr>
<td>Other business services n.i.e. (10.3.5)</td>
<td>339,533</td>
</tr>
<tr>
<td>Other personal services (11.2.4)</td>
<td>736,290</td>
</tr>
<tr>
<td>Business and management consulting (10.2.1)</td>
<td>305,003</td>
</tr>
<tr>
<td>Financial services (7.1)</td>
<td>161,827</td>
</tr>
<tr>
<td>Information services (9.3.2)</td>
<td>118,059</td>
</tr>
<tr>
<td>Accounting services (10.2.1.2)</td>
<td>4,998</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>208,046,125</strong></td>
</tr>
</tbody>
</table>

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

### TABLE 4.6: EXPENDITURE ON DIGITAL SERVICES BY HOUSEHOLDS IN IRELAND

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

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Music and video streaming</th>
<th>Online gaming</th>
<th>Online gambling</th>
<th>Publishing/well-being/social media</th>
<th>Other digital services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ireland</strong></td>
<td>25</td>
<td>118</td>
<td>2</td>
<td>42</td>
<td>111</td>
</tr>
<tr>
<td><strong>Europe (excluding Ireland)</strong></td>
<td>253</td>
<td>118</td>
<td>128</td>
<td>42</td>
<td>60</td>
</tr>
<tr>
<td><strong>North America</strong></td>
<td>11</td>
<td>3</td>
<td></td>
<td></td>
<td>44</td>
</tr>
<tr>
<td><strong>Rest of the world</strong></td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Not allocated</strong></td>
<td>25</td>
<td>16</td>
<td></td>
<td></td>
<td>41</td>
</tr>
</tbody>
</table>

*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

- 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.

Their impact is significant and growing.

**Figure 1.3: Sales through online platforms are booming**

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>500</td>
<td>1000</td>
</tr>
<tr>
<td>1000</td>
<td>1500</td>
<td>2000</td>
</tr>
<tr>
<td>2500</td>
<td>3000</td>
<td>3500</td>
</tr>
<tr>
<td>4000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Alibaba
- Amazon
- jd.com
- Pinduoduo
- Shopify
- Meituan
- Uber
- eBay
- Booking Holdings
- Walmart
- Expedia
- AirBnB
- Rakuten

**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