Handbook on Measuring Digital Trade

IMF, OECD, UNCTAD and WTO

VOORBURG 2023

Structure: Handbook on Measuring Digital Trade

- 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. Country case studies (China, Jamacia, Spain, Türkiye)

Chapter 1. Introduction

- Digitalisation has enabled the emergence of e-commerce

- Services are increasingly traded at a distance

- Online platforms play a transformative role in many industries

- More international trade in low-value goods and *de minimis* thresholds

- Future work: cross-border data flows; cloud computing; non-liability crypto assets; and digitalisation, investment and intellectual property

1. Introduction

Why is it important to measure digital trade? This chapter outlines the multifaceted impact of digitalization on international trade and examines which policy areas require consistent, comprehensive and feasible measurement approaches.

Chapter 2. Conceptual framework for measuring digital trade

- Nature of transaction is key; Handbook defines digital trade as: *All international trade that is digitally ordered and/or digitally delivered*.

- Framework is consistent with SNA 2008/BPM6 and next versions (SNA2025/BPM7)

- Framework covers goods and services, but only services can be digitally delivered

- All economic actors can engage in digital trade – businesses, households, government, etc.

- Non-monetary digital flows, including data flows, acknowledged but not included in digital trade

2. The conceptual framework for measuring digital trade

Drawing on prior measurement initiatives and focusing on policy needs, this chapter defines digital trade as *"all international trade that is digitally ordered and/or digitally delivered"*. It sets out a conceptual framework that identifies digital trade transactions within the existing measurement frameworks for international trade, specifying *how* digital trade transactions are defined, *what* types of products are included and *who* are the actors involved in digital trade.

From the conceptual framework, the chapter develops a reporting template, setting out the key components of digital trade that are required to inform policy discussions.

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Chapter 2. Definitions

- Digital trade
  - *All international trade that is digitally ordered and/or digitally delivered.*

- 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.*

- Digitally delivered trade
  - *All international trade transactions that are delivered remotely over computer networks.*

- 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).*

2. The conceptual framework for measuring digital trade

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Figure 2.1: The conceptual framework for digital trade
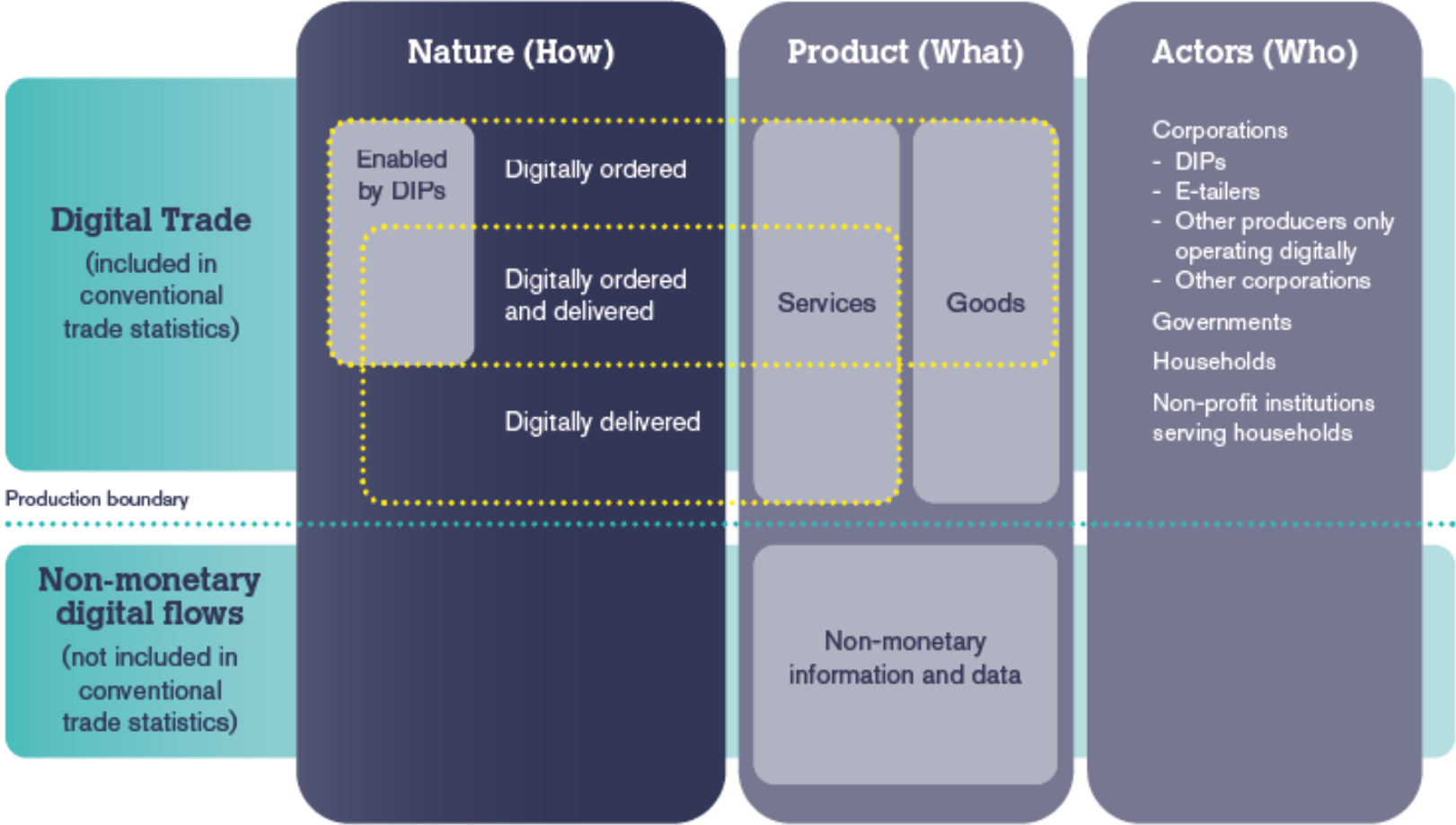
Note: This conceptual framework is in line with that presented in the OECD Handbook on Compiling Digital Supply and Use Tables (OECD, 2023). Digital transactions undertaken by Actors can include transactions that are both digitally ordered and/or digitally delivered (Nature), and can encompass both goods and services (Product).

Source: IMF, OECD, UNCTAD and WTO, adapted from OECD, WTO, IMF (2019).

Chapter 3. 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 (including 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

3. Digitally ordered trade

This Handbook defines digitally ordered trade as 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".* This chapter describes how existing enterprise and household surveys targeting e-commerce provide a basis for measuring digitally ordered trade. It highlights the significant challenges that survey respondents, in particular households, can face when identifying and reporting international transactions, especially when these pass through digital intermediation platforms.

This chapter provides concrete country examples, as well as recommendations, in the context of the use of surveys and additional data sources by compilers to estimate the components of digitally ordered trade.

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Chapter 3. Definitions

Supporting clarifications:

The payment and ultimate delivery of the goods or services do not have to also be conducted online;

Digitally ordered transactions cover orders made over the web, extranet or via electronic data interchange (EDI);

Digitally ordered trade includes purchases of applications (apps) and in-app online purchases;

Digitally ordered trade includes transactions via online bidding platforms;

Orders made by phone, fax or manually typed email are excluded from digitally ordered trade;

Offline transactions formalised using digital signatures are excluded from digitally ordered trade;

Each trade transaction should be treated separately. When a transaction is established via offline ordering processes, but subsequent transactions (or follow up orders) are made via digital ordering systems, the follow-up orders should be considered as e-commerce; and

Trade transactions do not necessarily coincide with contracts. For a contract spanning several statistical periods and potentially involving multiple transactions, each transaction should be classified as digitally ordered or not digitally ordered, reflecting the mode(s) of ordering initiated in the current period.
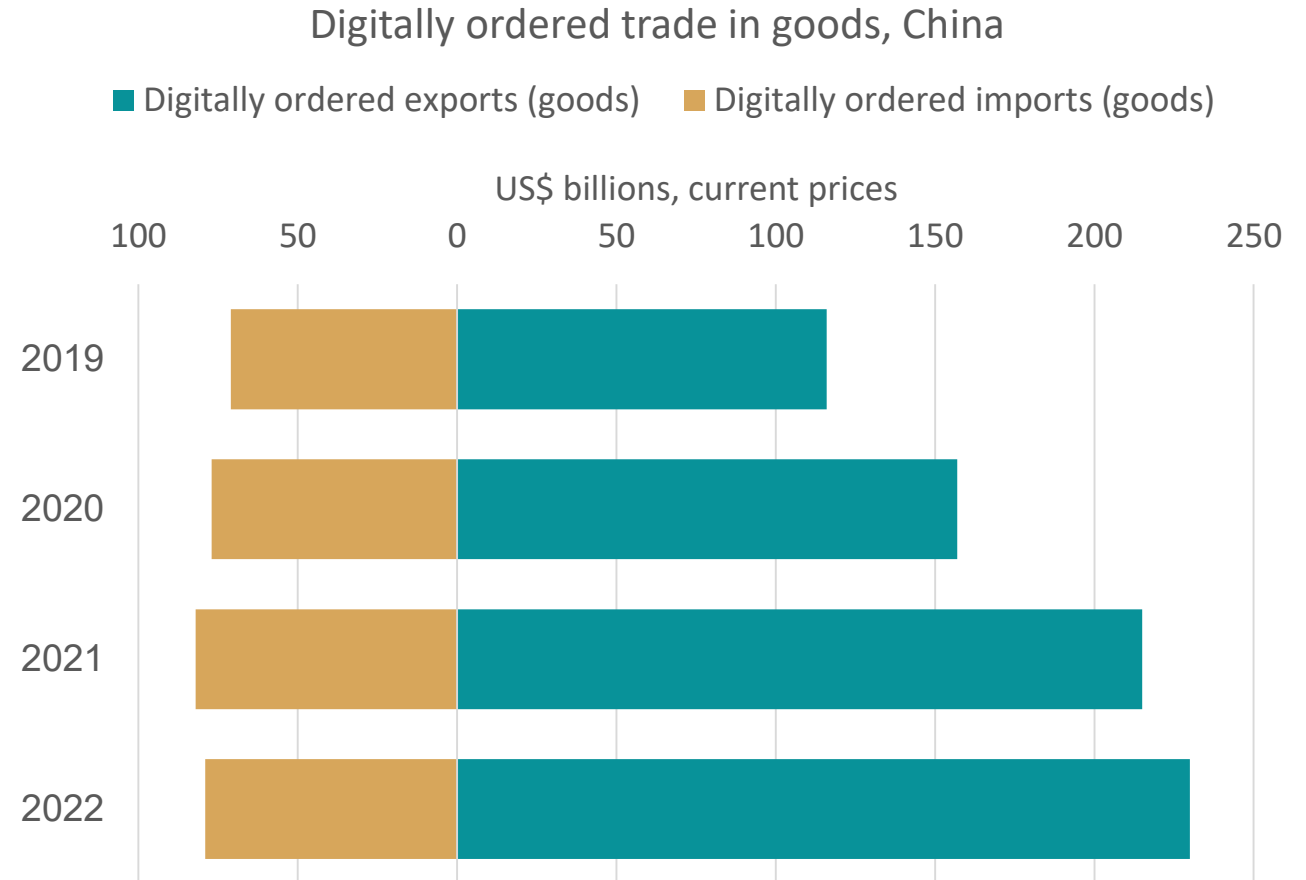
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Digitally ordered trade in goods

- 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

Digitally ordered trade in goods, China

■ Digitally ordered exports (goods)   ■ Digitally ordered imports (goods)

US$ billions, current prices

| 100 | 50 | 0 | 50 | 100 | 150 | 200 | 250 |

2019

2020

2021

2022

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

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Chapter 4. Digitally delivered trade

Only services can be digitally delivered

- **Digitally delivered trade is a <u>subset</u> of balance of payments international trade in services transactions between residents and nonresidents**

- **Full alignment with definition of ICT-enabled services**

- **The payment for digitally delivered services can be online or offline**

4. Digitally delivered trade

This Handbook defines digitally delivered trade as *"all international trade transactions that are delivered remotely over computer networks"*. This chapter identifies data sources that can be used to collect information on digitally delivered trade, with the collection of data through business surveys being especially recommended.

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Chapter 4. Definitions

"All international trade transactions that are delivered remotely over computer networks"

For digitally delivered transactions, the payment for and ordering of the services do not have to be conducted online;

Services delivered by phone, fax, video call or email are included in digitally delivered trade;

Digitally delivered trade includes services provided through apps;

Each trade transaction should be treated separately. When a trade transaction is delivered via offline processes, but subsequent follow-up transactions are delivered digitally, the follow-up transactions should be considered as digitally delivered; and

A trade transaction can be delivered via multiple (digital and non-digital) modes.

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Chapter 4. Compilation

Identify services which can be delivered remotely through computer networks

Total for (most) digitally deliverable services can be aggregated from existing trade by product statistics

Focus on cross-border supply to yield a reasonable estimate for digitally delivered trade

Recommended to add questions to balance of payments trade in services surveys and ICT surveys asking about digital/remote delivery

Note: Only certain services can be digitally delivered!

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TABLE 4.1: DIGITALLY DELIVERABLE SERVICES IN THE EXTENDED BALANCE OF PAYMENTS SERVICES CLASSIFICATION (EBOPS 2010)

	SDMX-BOP DSD [4] components	EBOPS 2010 components
Digitally deliverable services supplied cross-border (Mode 1)		
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
Trade-related services	SJ34	10.3.4
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
Digitally deliverable services consumed abroad (Mode 2)	*Recorded within* item SD (Travel)	*Recorded within* item 4 (Travel)

Notes:

Items included under "SDMX BOP DSD" refer to the data structure definition codes used for EBOPS 2010 items (see also https://sdmx.org/?page_id=1747).

"n.i.e." = not included elsewhere.

For easier identification of digitally deliverable services consumed abroad (Mode 2) and recorded in Travel (SD), it is recommended that countries use the alternative breakdown of "Travel" by product rather than by purpose (see Box 4.3).

An expanded version of Table 4.1 is available in Annex C.

Source: IMF, OECD, UNCTAD and WTO.

Chapter 5. Digital intermediation platforms (DIPs)

Marketplace platforms that bring together buyers and sellers to trade goods and services, e.g., platforms facilitating short-term accommodation;

Platforms facilitating ride hailing, similar to taxi services;

Platforms facilitating sharing of household assets, such as car-sharing; and

Platforms that intermediate electronic content (without taking economic ownership of the intellectual property products they distribute), such as app stores.

5. Digital intermediation platforms (DIPs)

This Handbook includes this separate chapter on digital intermediation platforms (DIPs) because of their importance in facilitating digital trade, the scope they offer for targeted measurement, and their particular compilation challenges. This chapter describes the accounting principles for recording transactions facilitated by DIPs and provides examples of existing initiatives, surveys and big data sources used to measure DIP transactions.

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Chapter 5. Definitions

Digital intermediation platforms:

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).

Digital intermediation services:

Online intermediation services that facilitate transactions between multiple buyers and multiple sellers in exchange for a fee, without the online intermediation unit taking economic ownership of the goods or rendering the services that are being sold (intermediated).
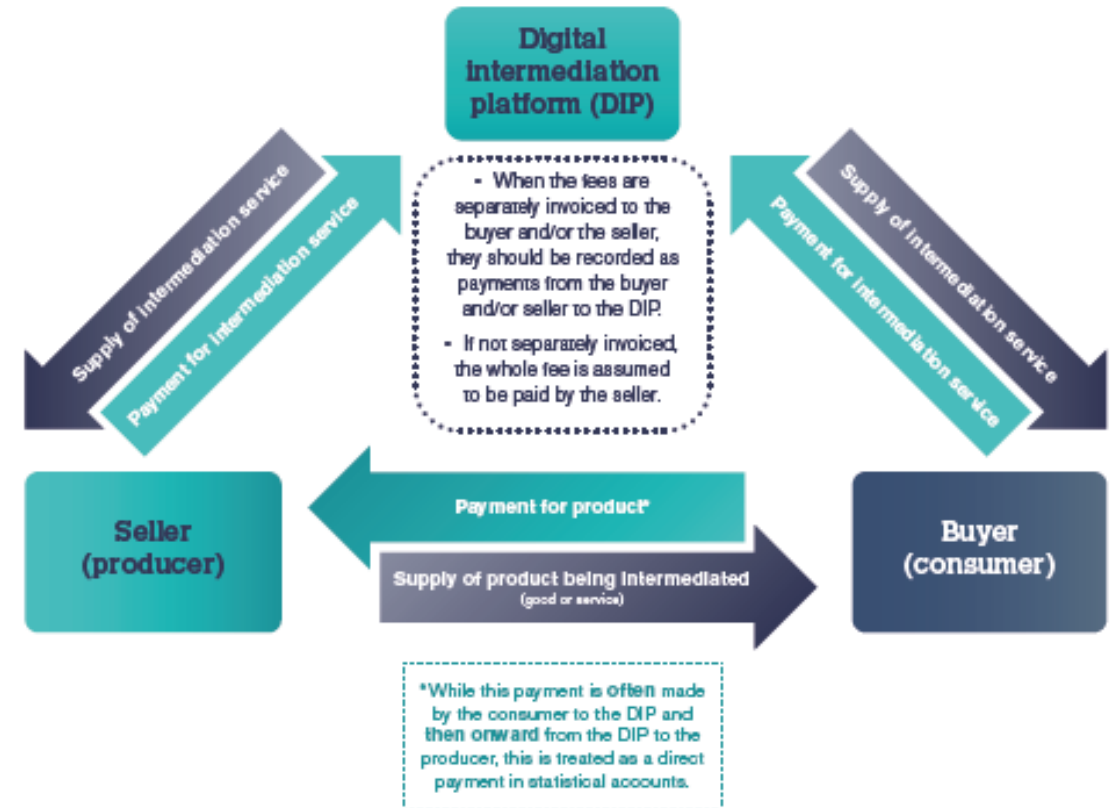

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Transactions intermediated by DIPs

- 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 = international 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

Figure 5.1: A DIP transaction

Digital intermediation platform (DIP)

- When the fees are separately invoiced to the buyer and/or the seller, they should be recorded as payments from the buyer and/or seller to the DIP.
- If not separately invoiced, the whole fee is assumed to be paid by the seller.

Supply of intermediation service

Payment for intermediation service

Supply of intermediation service

Payment for intermediation service

Seller (producer)

Payment for product*

Supply of product being intermediated (good or service)

Buyer (consumer)

*While this payment is often made by the consumer to the DIP and then onward from the DIP to the producer, this is treated as a direct payment in statistical accounts.

Source: IMF, OECD, UNCTAD and WTO.

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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 Handbook into action