

# Measuring E-commerce

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# Overview

- What is e-commerce?
- Core indicators on e-commerce
- Measuring e-commerce value
- Take-aways

# What is e-commerce?

International definition of e-commerce for measurement purposes:

*“An e-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders.*

*The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online.*

*An e-commerce transaction can be between enterprises, households, individuals, Governments, and other public or private organisations”*

- Includes orders via web pages, extranet, EDI (machine-readable/generated) messages, applications
- Excludes orders placed by telephone, fax or manually typed **email** (as these are not “specifically designed for receiving or placing orders”)

# What is e-commerce?

The UNCTAD *Manual for the Production of Statistics on E-commerce and the Digital Economy* also relies on the OECD definition but provides the following guidance for implementing the definition in practice:

*“To take into account the different levels of technological development in countries, the Partnership [on measuring ICT for development] recommends collecting data only on orders received or placed over the **Internet, including by email** (the latter is excluded from the OECD definition)”*

- **Internet only:** the Internet is now the default network for most applications including orders between businesses (e.g., “EDI over Internet”)

→ unlikely to make a big difference in most cases.

- **Orders via email:** significance likely to vary between countries and industries

→ Recommended to measure email ordering separately where possible and always be clear about the scope of statistics published.

Classification of selected economies by features of e-commerce definitions applied in business surveys

	Excludes orders via manually typed email	Includes orders via manually typed email
All “computer networks”	Austria	United States
	China	
	France	
	Hong Kong, China	
	Japan	
	Korea (Rep.)	
	Malta	
	Philippines	
	Singapore	
	Spain	
Internet only	United Kingdom	Australia
	Canada	
	Malaysia	
		Indonesia
		Mexico
		Thailand

Source: UNCTAD based on national sources.

# Core indicators on e-commerce



# Partnership on measuring ICT for development: core indicators on e-commerce

	Businesses	Households
Core indicators <a href="https://www.itu.int/en/ITU-D/Statistics/Documents/core_indicators/Core-List-of-Indicators_March2022.pdf">https://www.itu.int/en/ITU-D/Statistics/Documents/core_indicators/Core-List-of-Indicators_March2022.pdf</a>	B7 Proportion of businesses receiving orders over the Internet B8 Proportion of businesses placing orders over the internet	HH9 Proportion of individuals using the Internet, by type of activity
Key sources	Surveys of ICT usage in business	Surveys of ICT access and usage in households and by individuals
Example survey questions	<p>Did your business receive orders for goods or services (that is, make sales) via the Internet during 20XX? Did your business place orders for goods or services (that is, make purchases) via the Internet during 20XX?</p> <p><input type="checkbox"/> Yes, via websites, Internet marketplaces, EDI, over Internet, apps, etc. <input type="checkbox"/> Yes, via email <input type="checkbox"/> No</p> <p>See <a href="https://unctad.org/webflyer/manual-production-statistics-digital-economy-2020">https://unctad.org/webflyer/manual-production-statistics-digital-economy-2020</a></p>	<p>For which of the following activities did you use the Internet for private purposes in the last three months (from any location)? Please tick all that apply.</p> <p><input type="checkbox"/> ... <input type="checkbox"/> Purchasing or ordering goods or services <input type="checkbox"/> Selling goods or services <input type="checkbox"/> ...</p> <p>See <a href="https://www.itu.int/en/ITU-D/Statistics/Pages/publications/manual.aspx">https://www.itu.int/en/ITU-D/Statistics/Pages/publications/manual.aspx</a></p>



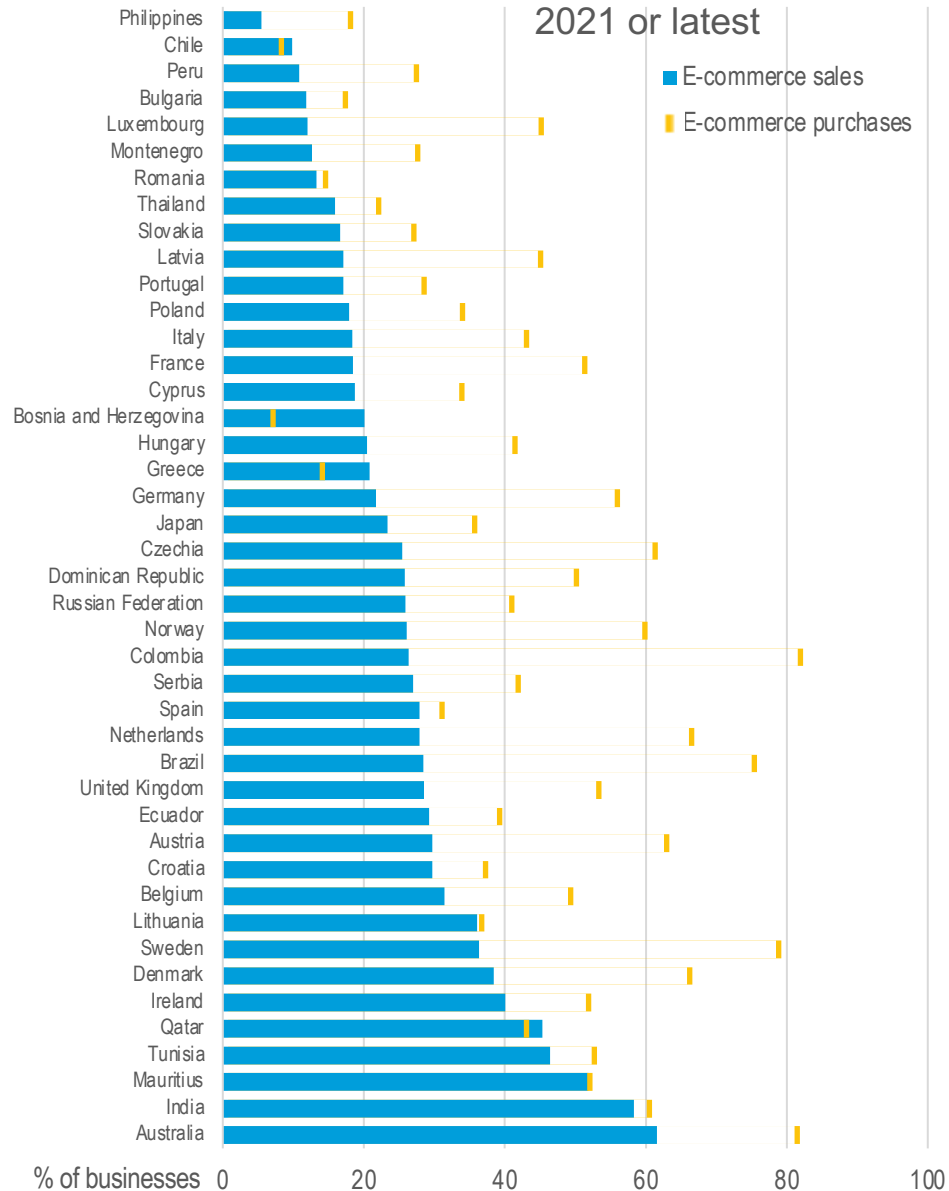
The Partnership on Measuring ICT for Development is led by UNCTAD, the ITU, and UNSD, with participation from the UN regional commissions (incl. UN ECLAC) and various other international organisations and bodies.

The list of Core indicators on measuring ICT for development is developed by the participating organisations with input from member countries and endorsed by countries through the UN Statistical Commission.

See: <https://www.itu.int/en/ITU-D/Statistics/Pages/intlcoop/partnership/default.aspx>.

# Core indicators on e-commerce

## Businesses using e-commerce



## Online shoppers, 2020/21 (% of Internet users)



Source: UNCTAD core indicators on ICT usage in business.  
 Note: businesses with 10+ persons employed. Most common reporting years: sales 2020; purchases 2018.

Source: <https://unctad.org/news/covid-19-boost-e-commerce-sustained-2021-new-unctad-figures-show>. UNCTAD based on Eurostat Digital Economy and Society Statistics database, OECD ICT Access and Usage by Households and Individuals database, ITU World Telecommunication/ICT Indicators database, Argentina CACE, Australia Post, China Network Information Center, DANE Colombia, IMDA Singapore.  
 Note: For most European/OECD countries, data relate to individuals aged 16-74 years who used the internet/shopped online in the 12 months prior to survey. For other countries, wider age ranges and different recall periods may apply. 2021 figures used when available (y-axis) but for a significant minority of countries (29 of 66 countries presented), and especially for developing countries (17 of 19 countries), the latest data relate to 2020.



# Measuring e-commerce value



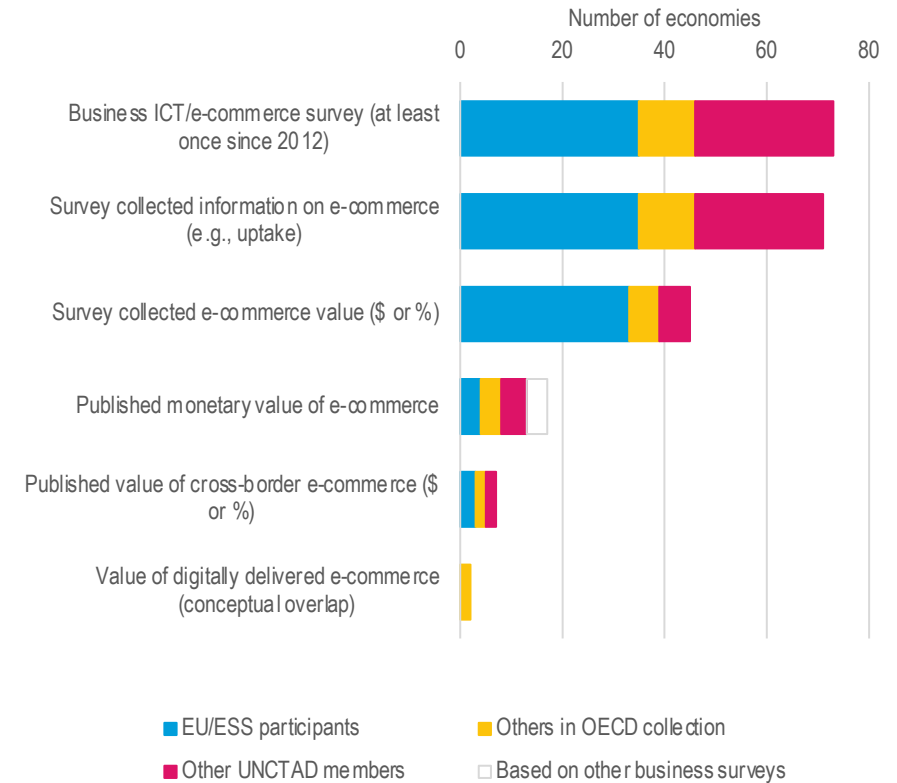


# Extending business ICT surveys

- Increasing role of e-commerce → need for measures of the monetary value of e-commerce transactions
- Although households, government units, and non-profits all engage in e-commerce as buyers and sellers, *businesses account for the vast majority of e-commerce sales and purchases.*
- *recommended to prioritise measuring the value of business e-commerce*
- The surveys already used to measure business e-commerce provide a natural starting point
  - More developed/fewer challenges for measuring e-commerce value than Household Surveys
  - Almost 80 countries have business ICT surveys; *most of these have collected value of e-commerce sales*
- Other business surveys (e.g. surveys of business activity) can also be used, with similar questions.



## 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.

# Extending business ICT surveys a practical example

6.5 Sila nyatakan jumlah pendapatan yang diterima daripada jualan barangan atau perkhidmatan menggunakan e-dagang  
*Please indicate the total income that receive orders from sales of goods or services via e-commerce*

Jika tuan tidak dapat membekalkan nilai,  
*If you can't provide the value,*

Sila nyatakan anggaran peratusan jumlah pendapatan yang diterima daripada jualan barangan atau perkhidmatan menggunakan e-dagang  
*Please indicate an estimate of the percentage of total income that receive orders from sales of goods or services via e-commerce*

44

45  (%)

**Nota / Notes:**  
Bagi pesanan internet yang diterima bagi pihak organisasi lain, sila lapor hanya yuran atau komisen yang diterima  
*For internet orders received on behalf of other organisations, include only fees or commissions earned*

4.2 Jumlah pendapatan (Merujuk kepada jumlah hasil kendalian / perolehan / jualan dan hasil lain)  
*Total income (Refers to operating revenue / turnover / sales and other revenue)*

2 main approaches to measuring e-commerce value:

1. Ask for e-commerce revenue directly in \$
2. Ask as % of total sales revenue (total collected on same or other survey)

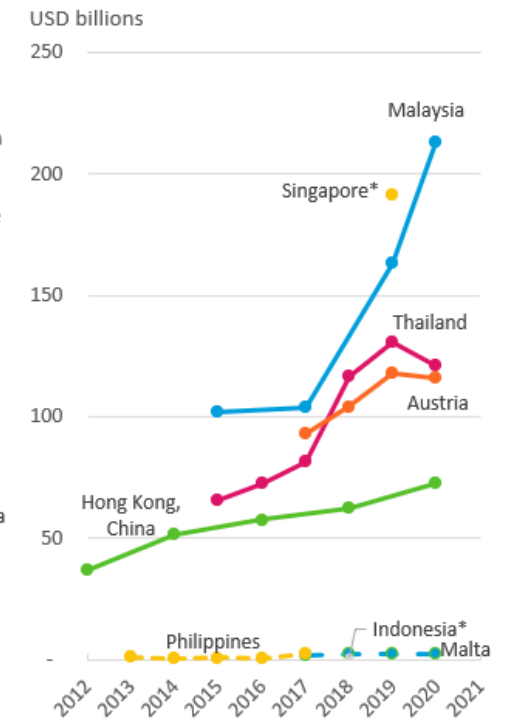
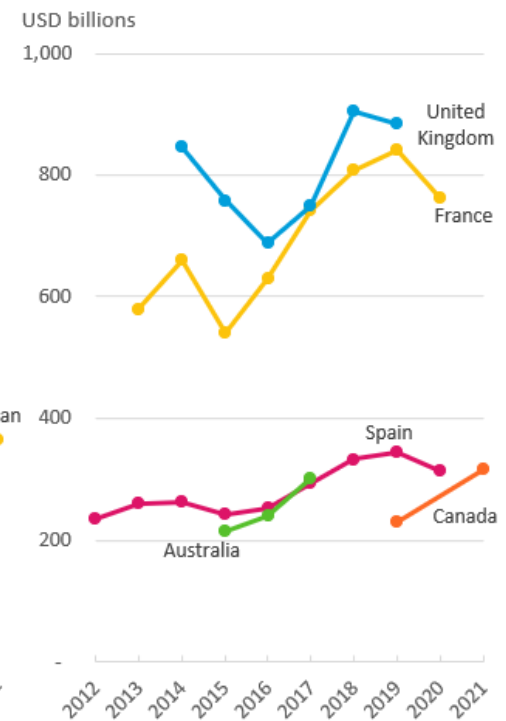
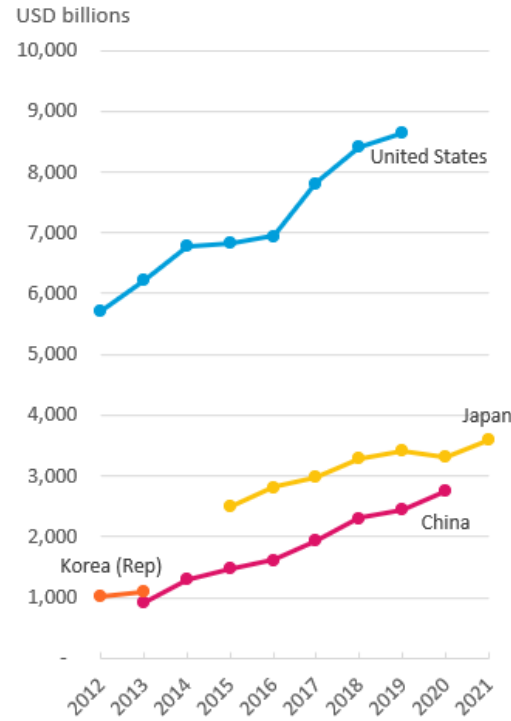
Many surveys offer respondents both options but it is common to prefer response in \$ (as in [this example from DOSM Malaysia](#)).

A similar approach can be used to investigate the responding enterprise's e-commerce purchases.

# Business e-commerce sales

USD billions, current prices, 2012-2021

- Various National Statistics organisations have published estimates of the value of business e-commerce sales.
- In South America, estimates tend to come from industry associations
  - survey methods and questions used can be unclear and results often represent only members
- Mexico publishes value added from e-commerce (different concept)
- We welcome any “official estimates” from LAC countries to include in the analysis



Source: UNCTAD (2022), “Measuring the value of e-commerce” ([https://unctad.org/system/files/information-document/Progress\\_in\\_measuring\\_e-commerce\\_and\\_digital\\_economy\\_work\\_by\\_relevant\\_organizations.pdf](https://unctad.org/system/files/information-document/Progress_in_measuring_e-commerce_and_digital_economy_work_by_relevant_organizations.pdf)), based on national sources.

Note: Sales by businesses only. Figures in national currency converted to USD using UNCTAD annual exchange rates (<https://unctadstat.unctad.org/>). **The comparability of the series presented is limited.** For most economies, the underlying source is a business ICT usage/e-commerce survey or other business survey (e.g., business activity survey). The series for Japan is based on a somewhat different approach, see box in section 3.5. \* Singapore: services only, Indonesia: based on a “profiling survey” sampling businesses in 3,504 of over 800,000 census blocks across 34 of 37 provinces; as such these figures are not representative of all business e-commerce. For Australia, the reporting year ends in June of the year shown.

# Breakdowns provide additional insights

Top-down approach: collect total e-commerce \$, break down to provide additional insights

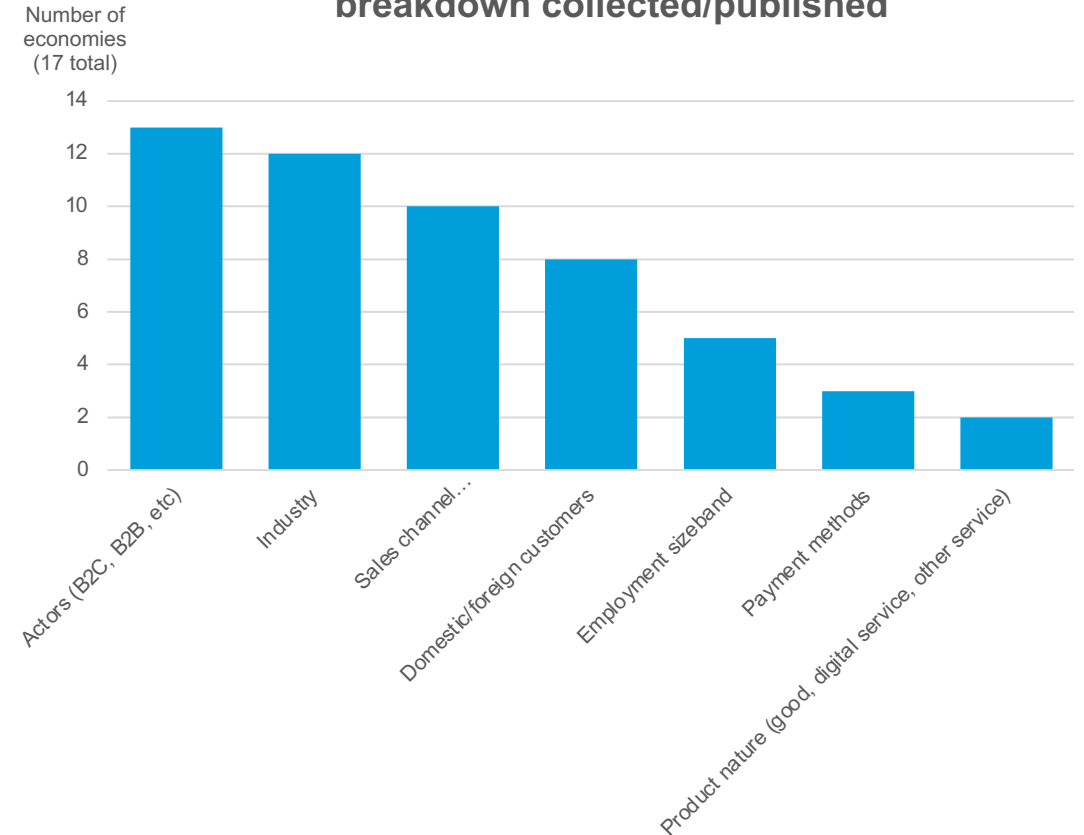
An example of a survey question requesting the responding enterprise to provide the percentage of the value of e-commerce sales to other enterprises (B2B e-commerce), government units (B2G), or consumers (B2C).

49. Del monto de ventas vía internet reportados en el punto 2 de la pregunta 48, indique el porcentaje de acuerdo al tipo de cliente.

	Porcentaje
49.1 Empresas privadas	<input type="text"/>
49.2 Gobierno	<input type="text"/>
49.3 Consumidores finales	<input type="text"/>
<b>49.0 TOTAL</b>	<b>100%</b>

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

Number of economies by type of e-commerce breakdown collected/published



Source: UNCTAD (2022), "Measuring the value of e-commerce" ([https://unctad.org/system/files/information-document/Progress\\_in\\_measuring\\_e-commerce\\_and\\_digital\\_economy\\_work\\_by\\_relevant\\_organizations.pdf](https://unctad.org/system/files/information-document/Progress_in_measuring_e-commerce_and_digital_economy_work_by_relevant_organizations.pdf)). based on national sources. Note: Austria, France: sales to domestic vs foreign customers only distinguished for web sales (not EDI-type sales). Republic of Korea: payment methods only available for the sum of B2C+C2C (consumer-to-consumer) e-commerce. United States: sales channel only collected on the annual wholesale trade survey, unavailable for enterprises in other industries.

# Take-aways

- E-commerce is increasingly important in facilitating economic activity  
→ increasing need for [indicators on e-commerce uptake and value](#)
- The [core indicators on e-commerce](#) tell us how many individuals and businesses use e-commerce to buy and sell
- Supplementary survey questions can be used to [measure the value of e-commerce sales](#) and purchases
- At its meeting on 28-29 November, the UNCTAD Working Group on Measuring E-commerce and the Digital Economy (WG-ECDE) will discuss [measuring the value of e-commerce](#). All countries are encouraged to participate. Register to participate remotely or in-person at: <https://unctad.org/meeting/working-group-measuring-e-commerce-and-digital-economy-third-meeting>
- Any “official estimates” of the value of business e-commerce sales in LAC countries would be greatly appreciated to include in the analysis.