

Measuring the value of E-commerce



**United
Nations**

Geneva, 2023

© 2023, United Nations
All rights reserved worldwide

Requests to reproduce excerpts or to photocopy should be addressed to the Copyright Clearance Center at copyright.com.

All other queries on rights and licences, including subsidiary rights, should be addressed to:

United Nations Publications
405 East 42nd Street
New York, New York 10017
United States of America
Email: publications@un.org
Website: <https://shop.un.org/>

The designations employed and the presentation of material on any map in this work do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

This publication has not been formally edited.

United Nations publication issued by the United Nations Conference
on Trade and Development

UNCTAD/DTL/ECDE/2023/3

ISBN: 978-92-1-113093-5
eISBN: 978-92-1-002553-9
Sales No. E.23.II.D.5

Note

In accordance with the mandate given to it by member States, UNCTAD's E-Commerce and Digital Economy (ECDE) Branch in the UNCTAD Division on Technology and Logistics aims to contribute to enhanced inclusive and sustainable development gains from e-commerce and the digital economy for people and businesses in developing countries, particularly least developed countries (LDCs). The ECDE Programme works with government policymakers and development partners, civil society and the private sector to strengthen the readiness of developing countries to harness the opportunities and address the risks presented by digitalization in four main ways, by:

- Providing better evidence on what policy changes are needed at the national, regional and international level to generate more inclusive and sustainable outcomes in the data-driven digital economy, including through the biennial Digital Economy Report;
- Offering tailored assistance to low-income countries to build their capacities to engage in and benefit from e-commerce and the digital economy (eTrade Readiness Assessments, E-commerce Strategies, E-commerce and Law Reform, Measuring the Digital Economy);
- Empowering women digital entrepreneurs in developing countries to become more visible as role models and therefore better heard by policy makers to foster change in the business enabling environment (eTrade for Women);
- Paving the way for more collaborative efforts and effective partnerships to make better use of scarce resources in the area of digital for development and build consensus (eTrade for all, e-commerce Weeks, Intergovernmental Group of Experts).



Preface

BY **SHAMIKA N. SIRIMANNE**
DIRECTOR, DIVISION ON TECHNOLOGY
AND LOGISTICS/UNCTAD

Producing statistics on the digital economy and society is an increasingly important component of the work programme of national statistical organizations. The demand for such statistics continuously rises as more countries seek to design, monitor and review national policies and strategies to take advantage of information and communications technologies (ICTs). Business communities also require information about access to, and use of, ICTs by various consumer groups, as well as about the impact of ICTs. This is a particular challenge for developing countries, many of which are still at an early stage of measuring various aspects of our increasingly digital economies and societies. At the international level, comparable indicators are critical for cross-country comparisons, monitoring of the digital divide and establishing policy-relevant benchmarks.

The United Nations Conference on Trade and Development (UNCTAD) is a founding member of the Partnership on Measuring ICT for Development, which is an international, multi-stakeholder initiative to improve the availability and quality of ICT data and indicators. One of its key achievements is the development of a core list of ICT indicators for the production of internationally comparable statistics. The latest guidelines on compiling core indicators related to the ICT sector and ICT usage by businesses are set out in the UNCTAD Manual for the Production of Statistics on E-commerce and the Digital Economy 2020.

One area in which there is very limited information available concerns the monetary value of e-commerce transactions. Measuring this has become increasingly important, not least as a result of the COVID-19 pandemic during which a shift to making online purchases supported economic resilience. Better statistics on the value of e-commerce are needed to understand its economic role and contributions to GDP, employment and development, as well as for evidence-based policymaking. Because of this, UNCTAD member States have indicated that developing guidance and support on measuring e-commerce is a key priority.

This report provides a foundation for the next step in efforts to measure e-commerce. Its analysis will serve as a basis for the work of a task group of delegates from interested countries and international organizations with the view of developing statistical guidelines for measuring the value of e-commerce sales and purchases. The task group will inform deliberations of the UNCTAD Working Group on Measuring E-commerce and the Digital Economy.

Acknowledgements

This report was prepared by Daniel Ker, UNCTAD under the supervision of Pilar Fajarnes-Garces and Torbjörn Fredriksson.

UNCTAD gratefully acknowledges the support and inputs provided by the Australian Bureau of Statistics; Statistics Canada; National Bureau of Statistics, China; the Census and Statistics Department of Hong Kong, China; the Hungarian Central Statistical Office; the Permanent Mission of Japan to the United Nations Office in Geneva; Statistics Poland; Department of Statistics, Singapore; the Republic of Slovenia Statistical Office; and the United Kingdom Office for National Statistics.

This report benefited from discussion during the third meeting of the UNCTAD Working Group on Measuring E-commerce and the Digital Economy in November 2022.

Financial support from the Governments of Germany, the Netherlands, Sweden, and Switzerland is gratefully acknowledged.

Acronyms and abbreviations

| | |
|-----------------|---|
| ANZSIC | Australia and New Zealand Standard Industrial Classification |
| ASEAN | Association of South-East Asian Nations |
| ASPBI | Annual Survey of Philippine Business and Industry |
| B2B | Business-to-Business e-commerce |
| B2C | Business-to-Consumer e-commerce |
| B2G | Business-to-Government e-commerce |
| C2C | Consumer-to-Consumer e-commerce |
| CA\$ | Canadian Dollar |
| COVID-19 | 2019 novel coronavirus |
| DIP | Digital Intermediary Platform |
| EDI | Electronic Data Interchange |
| EU | European Union |
| GB£ | British pounds sterling |
| GDP | Gross Domestic Product |
| GST | Goods and Services Tax |
| ICT | Information and communication technologies |
| IMF | International Monetary Fund |
| LDCs | Least Developed Countries |
| METI | Ministry of Economy, Trade, and Industry Japan |
| MSIC | Malaysia Standard Industrial Classification |
| NACE | Statistical classification of economic activities in the European Community |
| NAICS | North American Industry Classification System |
| NSO | National Statistics Office |
| OECD | Organisation for Economic Cooperation and Development |
| RM | Malaysian Ringgit |
| SAR | Special Autonomous Region |
| SMEs | Small and Medium Enterprises |
| UK | United Kingdom of Great Britain and Northern Ireland |
| UN | United Nations |
| UNCTAD | United Nations Conference on Trade and Development |
| US | United States of America |
| US\$ | United States Dollar |
| VAT | Value-Added Tax |
| WG-ECDE | Working Group on measuring E-commerce and the Digital Economy |
| WTO | World Trade Organisation |



Contents

| | |
|---|-----------|
| NOTE | III |
| PREFACE | V |
| ACKNOWLEDGEMENTS | VI |
| ACRONYMS AND ABBREVIATIONS | VII |
| <hr/> | |
| Summary | 1 |
| <hr/> | |
| 1. Introduction | 2 |
| <hr/> | |
| 2. Seeking estimates of the value of e-commerce sales | 5 |
| <hr/> | |
| 3. How is e-commerce measured? | 9 |
| 3.1. Definitions | 9 |
| 3.2. Approaches to measuring value | 13 |
| 3.3. Breakdowns of total e-commerce value | 16 |
| 3.4. Cross-border e-commerce | 24 |
| 3.5. Survey types, coverage, and methods | 31 |
| <hr/> | |
| 4. Conclusions | 39 |
| Annex 1. National sources of business e-commerce sales figures | 40 |
| Annex 2. E-commerce definitional text from business survey questionnaire forms | 43 |
| Annex 3. Monetary concepts relevant to measuring the value of business e-commerce transactions in different economies | 48 |
| Annex 4. Business survey questions related to measuring the value of e-commerce ... | 53 |
| Annex 5. UK Digital Economy Survey 2021 – full e-commerce sales module | 73 |
| <hr/> | |
| 5. References | 78 |

Boxes

| | |
|---|----|
| Box 1. E-commerce value questions in the Malaysian Survey on Usage of ICT and E-commerce by Establishment 2020 | 14 |
| Box 2. E-commerce value in the European community survey on ICT usage and e-commerce in enterprises | 16 |
| Box 3. Social media and e-commerce | 21 |
| Box 4. Cross-border e-commerce in the Canadian Survey of Digital Technology and Internet Use 2021 | 28 |
| Box 5. Cross-border e-commerce in the framework for measuring Digital Trade | 29 |
| Box 6. Japan “Market research on e-commerce” | 37 |

Tables

| | |
|---|----|
| Table 1. Classification of economies by features of e-commerce definitions | 12 |
| Table 2. Respondent options for categorising e-commerce revenues according to actors on survey questionnaires in different economies. | 18 |
| Table 3. Respondent options for categorising e-commerce revenues according to sales channels on survey questionnaires in different economies | 19 |

Figures

| | |
|--|----|
| Figure 1. E-commerce sales, US\$ billions, current prices, 2012-2021 | 7 |
| Figure 2. Approaches to measuring the value of e-commerce, by economy. | 15 |
| Figure 3. E-commerce breakdowns, by number of implementing economies. | 17 |
| Figure 4. E-commerce sales, domestic and abroad, 2021 or latest year available | 25 |
| Figure 5. E-commerce exports, 2015-2021 | 26 |
| Figure 6. E-commerce exports by businesses, contribution to change in total goods and services exports, selected countries, 2015-2021 | 27 |
| Figure 7. Sources for measuring business e-commerce | 32 |
| Figure 8. Business coverage of e-commerce value measures | 35 |
| | |
| Box Figure 1. Digital trade and e-commerce: key concepts and definitions | 29 |
| Box Figure 2. Reporting template for digital trade (draft) | 30 |
| Box Figure 3. Cross-border e-commerce market size between Japan, the United States and China | 37 |



Photo: Unsplash



Measuring the value of E-commerce



Summary

Measuring e-commerce is a prerequisite for understanding its economic role and contribution to GDP, employment, and development, as well as for evidence-based policymaking. Beyond total e-commerce, the distinction between domestic and cross-border e-commerce is important to understand to what extent e-commerce contributes to exports and imports. The UNCTAD Secretariat has received various enquiries from countries asking for guidance and support to measure the monetary value of e-commerce and digitally ordered trade.

This analysis describes the current situation regarding measures of the value of e-commerce, including cross-border e-commerce, for various economies for which statistics are available. While the sample may not be exhaustive, it is broadly representative to give an overall view of measurement practices. The focus is on business e-commerce which is the main component of e-commerce.

There is a considerable variety of statistics available from various economies, but they also exhibit considerable variation in terms of definitions, approaches to e-commerce value, survey questions, data sources, methods, and scopes underpinning them. Furthermore, this analysis illustrates that, in most economies, there are simply no national statistics on the value of e-commerce. Moreover, so far, primarily statistics on e-commerce sales are available, which implies that cross-border e-commerce statistics mainly refer to exports and rarely to imports.

There is a need to take action to support the development of robust, exhaustive, and internationally comparable statistics on the value of e-commerce across countries – including both developed and developing countries. A logical next step would be to discuss the advantages and disadvantages of the different approaches described in this analysis and consider the potential for standard measures. This could then lead to developing appropriate statistical guidelines to measure e-commerce.

Such an effort would necessarily rely on the experience and expertise of the economies covered in this analysis, and others interested in contributing to guidelines that are relevant and useful for all. Within its mandate “to advance cooperation on measuring e-commerce and the digital economy and enhance the availability, quality, comparability, usability, and relevance of statistics concerning e-commerce and the digital economy”, the UNCTAD Working Group on Measuring E-commerce and the Digital Economy is particularly well placed to take up this challenge.

Accordingly, at its third meeting held on 28-29 November 2022, the Working Group¹ resolved to recommend that UNCTAD should continue working towards developing statistical guidelines on measuring the value of e-commerce (including cross-border e-commerce); and that a task group of interested Working Group participants should be established to guide, oversee, and contribute to the development of the necessary measurement standards and guidelines.

1. “Working group on measuring e-commerce and the digital economy, third meeting” available at <https://unctad.org/meeting/working-group-measuring-e-commerce-and-digital-economy-third-meeting>

1. Introduction

The UNCTAD Working Group on Measuring E-commerce and the Digital Economy (WGECDE) is an international forum to advance cooperation on measuring electronic commerce (e-commerce) and the digital economy and enhance the availability, quality, comparability, usability, and relevance of related statistics, with a view to supporting evidence-based policymaking, especially in developing countries. Since its inception in 2019, the group has had a strong focus on the need to develop statistics and evidence on the economic value of e-commerce (UNCTAD, 2019). More broadly, UNCTAD has a mandate to support countries in measuring e-commerce and the digital economy through developing statistical guidelines and complementary capacity building and technical assistance activities.

UNCTAD is a founding member of the Partnership on Measuring ICT for Development along with the International Telecommunication Union and UN Department for Economic and Social Affairs as well as various UN Regional Commissions and other international bodies including the OECD and Eurostat.² Together, and with input from countries, the partnership developed the Core ICT Indicators,³ which was adopted by UN member states through the UN Statistical Commission.

This core list includes 12 indicators on ICT access and usage by enterprises. The UNCTAD Manual for the Production of Statistics on the Digital Economy (UNCTAD, 2021a) supports countries in producing these indicators by setting out detailed specifications and model questions. Additionally, the Manual provides guidance on developing and implementing surveys on ICT usage and e-commerce in businesses, which are widely used to gather the data needed for these indicators.

Among these indicators are the share of businesses making sales online, as well as the share of businesses purchasing inputs via e-commerce. More recently, the UNCTAD Secretariat has received various enquiries from countries asking for guidance and support with going beyond this to measure the monetary value of e-commerce. Such measures, and their breakdown into domestic and cross-border transactions, are a prerequisite for analysis linking e-commerce to economic performance. Broad availability of these measures across a wide range of economies is needed to answer questions such as:

- What is the impact of e-commerce uptake by domestic businesses on economic growth, employment, trade, and economic development?
- To what extent does e-commerce contribute to additional economic activity vs. replacing existing ordering channels?

2. Partnership on Measuring ICT for Development available at <https://www.itu.int/en/ITU-D/Statistics/Pages/intlcoop/partnership/default.aspx>

3. Core list of indicators available at <https://www.itu.int/en/ITU-D/Statistics/Pages/coreindicators/default.aspx>

- Does access to e-commerce ordering encourage customers (whether households or organisations) to substitute domestic purchases with alternatives bought from abroad?
- What contextual factors influence the above, such the sizes and industries of firms involved, payment methods used, trade openness of the country, etc.?

Importantly in this context, a lack of evidence on the links between e-commerce, trade and development means that much UNCTAD advice to countries is predicated on the notion that e-commerce has the *potential* to be of economic benefit. The information outlined on the value of e-commerce would allow for empirical analysis that could yield a more robust and nuanced understanding of these relationships.

Simply put, e-commerce refers to transactions in which goods or services are ordered over a computer network (e.g., over the Internet). Any economic entity, whether a business, household, government unit, or non-profit institution, can engage in e-commerce as a buyer or seller. Furthermore, e-commerce transactions often cross international borders, with the seller being in a different economic territory to the buyer.

Since 2017, UNCTAD has gathered figures related to the monetary value of e-commerce sales in different economies as a basis for deriving estimates of global e-commerce sales (UNCTAD 2017, 2020, 2021b). For example, it was estimated that “global e-commerce sales jumped to \$26.7 trillion globally in 2019, up 4 per cent from 2018” (UNCTAD, 2021c).

Such estimates are subject to major limitations. Firstly, because exhaustive and internationally comparable national statistics on the value of e-commerce sales are not widely available, a range of other sources are relied on in their absence. These include business surveys asking about e-commerce sales, household surveys asking about e-commerce purchases (and sometimes sales), official statistics on online retail sales (which represent only a small portion of business-to-consumer (B2C) e-commerce), and analyses of sources such as payment card transactions data or parcel post volumes. Furthermore, the figures gathered vary in provenance, ranging from nationally representative surveys undertaken by official statistical agencies to surveys conducted by business, Internet, or e-commerce association members and figures produced by private market intelligence firms. Thus, the extent to which the measures available are exhaustive and representative of each economy, and can be meaningfully compared to one another in practice, is limited.

Secondly, even when drawing upon such a wide range of sources, it is still the case that there is no information available for most countries. Arriving at a “global” figure necessitates the use of assumptions – notably that the average share of e-commerce sales relative to GDP will be the same across other countries as in those for which data are available. This is a strong assumption given the considerable difference in the degree of digitalization between the large and more advanced economies represented by the data gathered, and other economies including those in Africa, Latin America and the Caribbean, and the least developed countries (LDCs).

Finally, the estimates cover only transactions with businesses as sellers i.e., business-to-business (B2B) and B2C e-commerce. Other economic units can also engage in e-commerce, most notably households are increasingly selling



goods (such as unwanted or handmade items) and services (such as car journeys and stays in spare rooms) online, predominantly through “digital intermediation platforms” (DIPs).

These limitations are a product of the lack of generally available, comparable, and exhaustive official statistics on the value of e-commerce. Despite its limitations, the estimate of the global value of e-commerce gives a useful indication of the *potential* scale and importance of e-commerce globally, as well as a means of highlighting the limitations in source data and the need for concerted international measurement effort. Taking steps to address the limited availability of data on the value of e-commerce will allow for better statistics and analysis at the national and international levels and, thereby, a basis for better policymaking as all countries navigate the digital transformation.

This analysis is a first step toward developing statistical guidance and support to address information gaps and respond to countries’ needs related to measuring the value of e-commerce.

2. Seeking estimates of the value of e-commerce sales

Enterprises are a natural starting point for measuring e-commerce, which is an increasingly important way for them to sell their goods and services. It is reasonable to assert that businesses will usually account for the significant majority of e-commerce sales by value. By extension, they would also be expected to underpin the majority of digitally ordered exports. Even though focussing on businesses will not give a complete picture of e-commerce in a given economy –business sources will not tell of the value of e-commerce sales by households, for instance–measuring businesses' e-commerce sales can be expected to yield the “biggest single piece of the puzzle”.

Businesses also make extensive use of e-commerce to buy goods and services as inputs to their activities. Although this is of great relevance to understanding the impacts of e-commerce, especially in relation to substitution effects, it is not necessary for measuring the *direct* economic contribution of e-commerce (in terms of business sales, which contribute to GDP). Furthermore, it appears that measures of business expenditure on e-commerce purchases are (even) less widely available. For these reasons, *this analysis focuses on business e-commerce sales*.

Given the centrality of businesses, e-commerce measurement is a direct complement to, and can build directly upon, UNCTAD's existing efforts to broaden the implementation of business ICT usage and e-commerce surveys internationally.

As a first step toward understanding the approaches taken to measure e-commerce, it is necessary to identify the relevant estimates available. As noted above, measures related to the value of e-commerce can come from a wide variety of sources. This research focusses on figures produced by national statistical offices and other government statistical sources as these are most likely to produce nationally representative figures according to internationally accepted statistical standards.

Drawing upon the information gathered in producing UNCTAD's estimates of global e-commerce, business e-commerce value figures that were produced by official statistical agencies (“official estimates”) were identified for analysis. In addition, the national statistics websites of all countries participating in the Eurostat collection of data on ICT usage and e-commerce in enterprises were searched for published figures on the value of e-commerce. This is because the European Community survey on ICT usage and e-commerce in enterprises includes questions on business' revenue from e-commerce sales and although statistics on the monetary value of e-commerce are not required to be compiled and submitted to Eurostat, it was found that several countries have used the data gathered to derive and publish their own estimates.

The national statistics websites of other countries taking part in the OECD collection of business ICT usage data were also searched for estimates, as were those of ASEAN countries, as these countries tend to have relatively advanced statistics on business ICT usage that might collect information on the value of e-commerce sales. However, due to the time and resources available, including language resources, it was not possible to exhaustively search the websites and publications of all official statistics bodies worldwide and, as such, relevant statistics may be available for further economies.

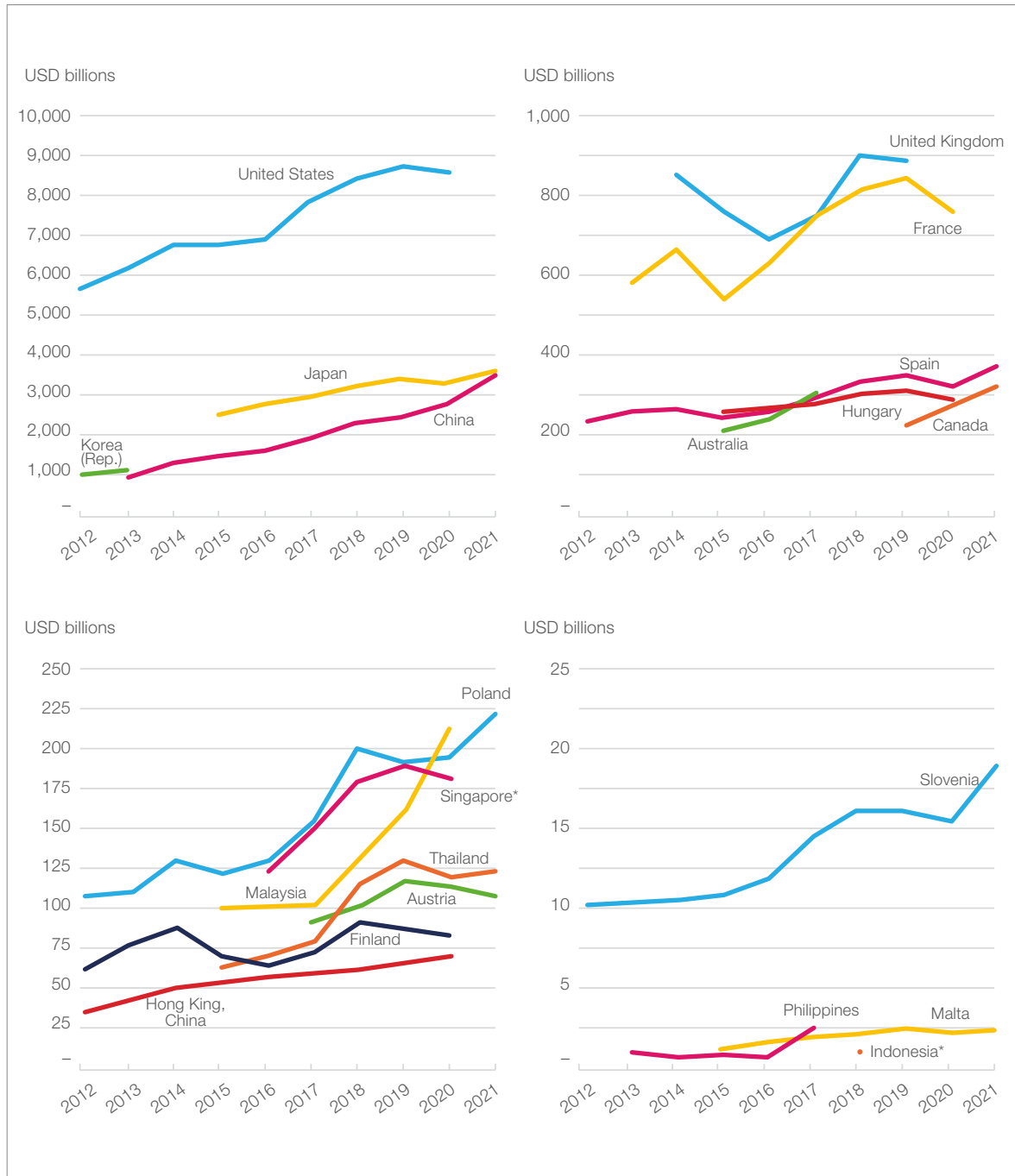
Notwithstanding this, it is notable that no official estimates appear to be available for countries in Africa, nor for any of the LDCs. These countries tend to have limitations both in the availability of statistics and also in their ability to engage with the digital transformation. Nevertheless, the information found is deemed sufficient for the purpose of this analysis: examining the various measurement approaches used to identify similarities and differences, which may offer opportunities for international efforts to develop statistical guidance to support all countries in measuring the value of e-commerce in a standardized and comparable manner.

Figure 1 presents official estimates of the value of e-commerce sales by businesses. The figures available indicate that the United States has the largest e-commerce marketplace. In general, the total value of e-commerce transactions has been increasing over time in all economies shown, reflecting the on-going digitalization of commerce.

The economic disruption associated with the COVID-19 pandemic and, more recently, the war in Ukraine, may have suppressed the overall value of e-commerce sales in some cases. Even so, it is likely that e-commerce sales made up an increasing share of total business' sales in many economies during this time – similar to how digitally deliverable services significantly increased as a share of services exports as the pandemic progressed (UNCTAD, 2021d), (UNCTAD, 2022). For instance, in Spain, e-commerce turnover fell by 10 per cent from 2019 to 2020 (in current prices); but the average annual decline in the monthly business turnover index from 2019 to 2020 was greater, at 14 per cent (Instituto Nacional de Estadística, 2022).

These series are not adjusted for changes in prices, therefore some of the trends seen may result from price changes rather than absolute changes in the volume of e-commerce. It is important to note that movements in the measured value of e-commerce sales can also be influenced by other factors related more to measurement than to “real world” developments. These can include the movement of certain firms into and out of the sample, large variations in the responses received from certain firms between periods, and the varying extent to which the responses of firms with different characteristics are “amplified” when “grossing up” to derive nationally representative figures, among others.

Figure 1. E-commerce sales, US\$ billions, current prices, 2012-2021



Source: UNCTAD based on national sources.

Note: Sales by businesses only. Figures in national currency converted to US\$ using UNCTAD annual exchange rates. The comparability and robustness 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.



Although the series presented are all produced by official statistical agencies, many of them are best regarded as “experimental” and the data sources and compilation methods used vary in ways likely to affect international comparability. Further details and source links for these series are provided in [Annex 1](#).

This analysis examines the different measurement approaches adopted in producing these figures to identify areas of commonality and divergence as a basis for developing statistical guidance on measuring the value of e-commerce. The analysis included looking at the underlying survey questionnaires, which are available online for most of the economies shown. In other cases, the questionnaire form, or relevant excerpts of it, were provided to UNCTAD by the relevant statistical agency. Where necessary, translation into English was performed using Google Translate or DeepL Translator.⁴ The following sections set out findings.

4. Although this may not result in a perfect translation, it allows key aspects of the question structure and approach used to be identified (such as whether the amount is collected directly in currency or as a percentage of revenue). Google Translate available at <https://translate.google.com/>, DeepL Translator available at <https://www.deepl.com/translator>.

3. How is e-commerce measured?

The data underlying the official estimates of the value of e-commerce presented above are, in essence, collected by asking businesses “[how much money did your business earn from e-commerce sales \[in a given reporting period\]?](#)”. Nevertheless, economies differ in the definitions adopted, how they are reflected in survey questions, and the scope and methods of the survey vehicles used.

9

3.1. Definitions

Answering the above question requires definitions for two key concepts “[e-commerce](#)” and “[money earned](#)”. Countries have taken different approaches to each of these.

3.1.1. E-commerce

Internationally accepted definitions of e-commerce were set out by the OECD in the mid-2000s and subsequently streamlined into the following definition adopted in 2009 (OECD, 2011, p. 72):

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 organizations.

As a guideline for interpreting and applying this, the OECD clarifies that the definition includes orders made through web pages, extranet, or electronic data interchange (EDI⁵) but excludes orders placed by telephone, fax, or manually typed email. These are excluded because they are not “specifically designed for the purpose

5. Electronic Data Interchange is the computer-to-computer transmission of (business) data –such as shipping orders, purchase orders, invoices, and requests for quotations– in a standard format using agreed standards. The messages are composed and processed without human intervention, which increases the speed of order processing, and reduces errors. It is used in a wide variety of industries including food, retail, logistics, and manufacturing, to efficiently manage international supply chains (e.g., Just-in-time inventory management), though the adoption of EDI technologies varies greatly between countries.

of receiving or placing orders” and involve the direct interaction of human beings. By logical extension, this would also apply to communication methods that have become widely used since 2009 such as video calls and tools for sending manually typed electronic messages similar to emails, such as messaging apps and social media services (a box in section 3.3.2 considers the relationship between social media and e-commerce in more detail).

This definition is widely used, especially amongst OECD member countries and countries implementing the European model surveys on ICT usage and e-commerce in enterprises.

The UNCTAD *Manual for the Production of Statistics on E-commerce and the Digital Economy* (UNCTAD, 2021a) also relies on the OECD definition but provides the following guidance for countries 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).

This implies an “UNCTAD definition” that is both more restricted and more expansive:

- Focussing only on orders placed through the Internet would lead to the exclusion of any e-commerce orders taking place through private networks such as the “value added networks” for carrying EDI messages between businesses which arose in some countries before the Internet became ubiquitous. However, the Internet is now the default network for most applications including orders between businesses (e.g., “EDI over Internet”) and so this exclusion is unlikely to have material consequences except in countries where private networks are still in use (unlikely in most developing countries).⁶
- Admitting orders made via manually typed emails (and, by logical extension, other forms of manually typed electronic messages such as those sent through messaging apps) leads to a wider scope of e-commerce.

The latter point is likely to have differing implications across industries and economies. In those with a long history of digitalization and relatively high adoption of digital technologies among firms and households, such as most developed countries, orders via manually typed messages are unlikely to be widely used when it is common for companies to sell through online shops or marketplaces.

By contrast, in developing countries where such sales channels, and the skills to use them, may be less common, email/messaging apps provide businesses (especially small, “local” businesses) with a low cost and easily accessible way to use the Internet to make sales. Evidence from Brazil (Brazilian Internet Steering Committee – CGI.br, 2022) showed that the disruption wrought by the COVID-19

6. Including only orders placed through the Internet aligns with the OECD’s 2005 “narrow definition of e-commerce”, which was superseded in 2009 by the consolidated definition presented above covering all orders made through “computer networks”.



pandemic encouraged many companies to begin online sales, with the share of enterprises selling online increasing sharply from 56 per cent in 2019 to 74 per cent in 2021. Regarding the online sales channels used, the greatest increases were in businesses reporting sales via channels excluded under the OECD definition of e-commerce. The share of businesses selling via messaging apps almost doubled from 42 per cent in 2019 to 78 per cent in 2021, while selling by email increased from 39 per cent to 62 per cent and via social networks from 20 per cent to 39 per cent of businesses.

Considering firms that sell online through only one channel, messaging apps were chosen by half of small enterprises (10-49 persons employed) with a further 30 per cent making online sales through email only. Meanwhile, although around one third of large enterprises (250+ persons employed) used websites, apps, online marketplaces, or EDI as a sole channel for online sales, almost two thirds sold only through email (50 per cent) or messaging applications (11 per cent). One-in-four medium-sized enterprises (50-249 persons employed) selling online through only one channel did so via email or messaging apps. Taken together, this suggests that including such channels is likely to give a much more representative picture of how businesses use the Internet to make sales, and the economic value generated, in certain countries.

Further variation can arise at the point of using the international definitions and guidelines as a basis for designing national survey forms and questions. [Table 1](#) presents the economies in terms of whether sales agreed via manually typed emails are included, and whether transactions over all computer networks or the Internet only are covered. This categorisation is based on the definitions and questions set to respondents in survey questionnaires, where available, and otherwise on details from methodological information published online or shared with UNCTAD.

Of the 21 economies presented in Figure 1, plus Mexico –for which a 2013 business questionnaire collecting e-commerce value is available online, but no directly comparable statistics are available⁷– a majority use definitions covering

7. The Mexico 2013 business ICT usage survey measured the value of e-commerce sales. Alongside other sources, the results contributed to annual statistics on “gross value added of e-commerce” in retail trade, wholesale trade, and “other services”. These are not presented in Figure 1 due to conceptual differences between sales revenues and gross value added (see <https://en.www.inegi.org.mx/programas/vabcoel/2018/>).

all “computer networks” but a significant group (around one quarter) address transactions through the Internet specifically. At the same time, almost one-in-four of these economies include orders placed via email when estimating the value of e-commerce.

In most of these surveys, the e-commerce section includes an explicit definition of “e-commerce” to guide respondents. Others list specific inclusions and exclusions. Further detail can be found in [Annex 2](#).

Table 1. Classification of economies by features of e-commerce definitions

| | Excludes orders via manually typed email | Includes orders via manually typed email |
|--------------------------------|---|--|
| All “computer networks” | <ul style="list-style-type: none"> • Austria • China • Finland • France • Hungary • Hong Kong, China • Japan • Korea (Rep.) | <ul style="list-style-type: none"> • Malta • Philippines • Poland • Singapore • Slovenia • Spain • United Kingdom |
| Internet only | <ul style="list-style-type: none"> • Canada • Malaysia | <ul style="list-style-type: none"> • Australia • Indonesia • Mexico • Thailand |

Source: UNCTAD based on national sources.

3.1.2. Money earned

Once e-commerce is defined, it would appear relatively straightforward to ask businesses “how much money did your business earn via e-commerce?”. However, economies adopt various concepts and differences in financial accounting. European countries tend to request measures of “turnover” whereas economies in other regions tend to ask for “sales” / “receipts” / “revenue” / “income”. There are differences which arise in the scope of these depending on the guidance set out on survey forms and in national financial accounting rules.

Most notable are differences in the treatment of sales taxes such as value added tax (VAT) or goods and services tax (GST). Of the economies for which this information is available, only two (Indonesia and Thailand) ask respondents to report figures including amounts collected for sales taxes (i.e., “gross”). China also publishes enterprise e-commerce sales inclusive of VAT. Hong Kong, China does not implement such a sales tax. The treatment of sales taxes is unknown for several further Asian economies. With standard VAT/GST rates of up to 21 per cent in the countries represented, the inclusion or exclusion of taxes from the value of e-commerce could materially affect the ability to make meaningful comparisons across economies.

Other differences also arise, such as whether amounts are to be reported including or excluding discounts given (e.g., for early payment by business customers) or the value of items returned for refund. [Annex 3](#) provides additional detail on the monetary concepts relevant to measuring the value of e-commerce transactions in different economies.

A final aspect of this relates to the guidance given in questionnaires to help respondents in certain types of businesses with correctly reporting their e-commerce income. Several countries include notes making clear to respondents which operate online marketplaces (i.e., “digital intermediary platforms”) that they should report only the fees or commissions earned on those transactions, rather than the full transaction amount (gross merchandise sales value). Examples include Malaysia and Australia, which also includes a note clarifying that for financial services businesses “only the fees earned for providing services as a result of orders received via the Internet” should be reported. In Hungary, the survey form notes that “if your enterprise consists of more than one legal unit, [do not] include turnover from internal trade among the different legal units of your enterprise”.

Definitions questions are just one aspect of differences between practical implementation in survey questions, which is examined in more detail in the next section.

3.2. Approaches to measuring value

Diversity in measurement also arises in how concepts of “e-commerce” and “money earned” are combined and implemented in business survey questionnaires. In general, two main approaches to gathering data on the total value of e-commerce can be identified:

- In the [direct approach](#), businesses are asked to report a monetary value for their e-commerce sales. In most cases, these figures are requested rounded to the nearest whole currency unit (e.g., dollar) but in some questionnaires respondents are asked to round to the nearest thousand currency units.
- The [share approach](#) involves asking respondents to provide a monetary value for a relevant total, such as annual turnover or sales revenue⁸, and also to give the percentage share of that total arising from e-commerce sales. Together, these items can be used to derive an estimate of the responding enterprise’s e-commerce revenues.

8. Although it is most often the case that this total is collected on the same survey (or pre-filled by the NSO for confirmation by the respondent), several countries do not do this and instead use information from other business data sources. One example of this is the approach used by the UK Office for National Statistics until 2019 (<https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/e-commerceandictactivity/2019#measuring-the-data>).

Box 1 presents an illustrative example of both these approaches being applied in a survey form. The questions used in other survey questionnaires are presented in Annex 4.

Box 1. E-commerce value questions in the Malaysian Survey on Usage of ICT and E-commerce by Establishment 2020

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

RM 3100

44

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

45 (%)

Nota / Notes:
 Bagi pesanan internet yang diterima bagi pihak organisasi lain, sila laporkan 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 / perolohan / jualan dan hasil lain)
 Total income (Refers to operating revenue / turnover / sales and other revenue)

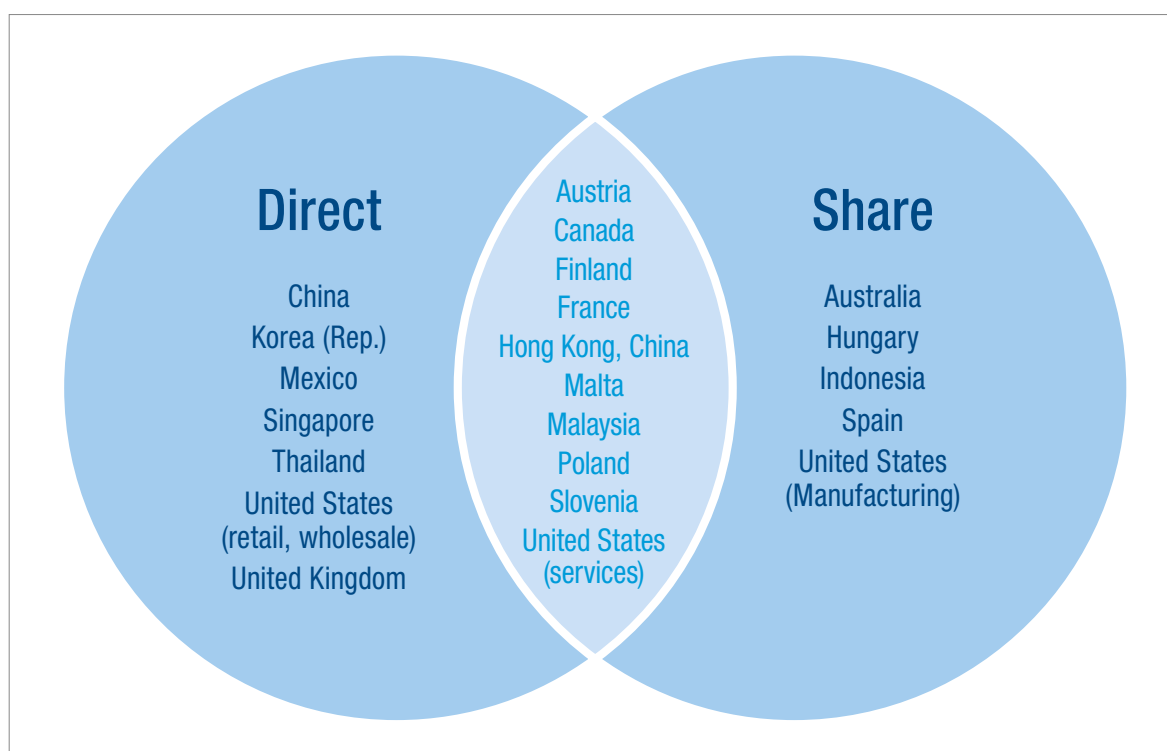
RM 080089

Source: https://www.dosm.gov.my/v1/uploads/files/2_Censuses%26Surveys/Services/ICTeC/2020/Borang-ICTeC-2020.pdf

Note: RM refers to Malaysian Ringgit.

Figure 2 categorises economies based on the approaches adopted in their survey questionnaires. It shows that many offer respondents both options. Nevertheless, the precise framing varies. In Canada and Hong Kong, China both the monetary value and percentage of sales are requested. In Austria, Finland, and the U.S. Services Annual survey respondents are asked to provide either the monetary value or percentage. By contrast, in other cases where both options are offered, the survey questionnaires are explicit in saying estimated percentages should only be entered if providing a monetary value is not possible. More generally, it is quite common for questionnaires to specify that estimates should be provided whenever exact figures (monetary value or percentage) are not available.

Figure 2. Approaches to measuring the value of e-commerce, by economy



Source: UNCTAD based on national survey questionnaires and details provided by statistical agencies.

Only five of the questionnaires analysed adopt the share-based approach alone. Coupled with the tendency of surveys implementing both collection approaches to explicitly favour responses as a monetary value (if not requesting both) this loosely points toward the direct approach being most preferred. Nevertheless, there is currently no clear emerging international “standard approach”.

Indeed, country experiences have varied, with several having changed approach over time. For example, the Australian Bureau of Statistics (2018) notes that a share-based approach was “put in place to address reporting errors previously observed when the actual dollar figure was requested”. By contrast, the new Digital Economy Survey implemented by the UK Office for National Statistics replaced the percentages requested in previous surveys with monetary reporting. One reason for this was that accurately calculating the percentage requires the respondent to have (or estimate) the monetary value and it is therefore less burdensome if they provide that amount directly.

In most of these economies, the main item collected is a value/percentage for total e-commerce sales. By contrast, countries which follow the Eurostat model questionnaire adopt a different approach in which two constituent components of e-commerce sales are collected: “web sales” – sales made via an online store (web shop), via web forms on a website or extranet, or via web applications (“apps”)– and “EDI-type sales”. These components can be added together to derive a total for e-commerce sales, but the approach of collecting two separate items can have implications for the availability of breakdown information, as shown in the next section. [Box 2](#) looks in more detail at the information collected and available in countries participating in the Eurostat statistical collection.

Box 2. E-commerce value in the European community survey on ICT usage and e-commerce in enterprises

Since 2011, the model surveys which form the basis for business ICT usage data collected in the EU and several partner countries have included questions asking respondents for the value (in national currency, excluding VAT) or percentage of total turnover generated through e-commerce sales. This is requested both for “web sales” (those made through websites or apps belonging to the enterprise or to a third-party online marketplace) and “EDI-type sales”. Together these two components represent all e-commerce transactions.

The data collected are used to populate a Eurostat database table entitled “Value of e-commerce sales”. However, these statistics are expressed as a percentage of enterprise turnover not as a monetary value. Additional breakdowns (see section 4) are provided based on the actors involved (B2C, B2B, etc.) and the sales channels used (e.g., own website/apps, 3rd party websites/apps/marketplaces, EDI). The Eurostat model survey also distinguishes the value of sales to domestic vs foreign customers for web sales, though this is not available in the Eurostat database at the time of writing.

While the Eurostat database focusses on turnover shares, statistics published directly by the National Statistical Offices of Austria, Finland, France, Hungary, Malta, Poland, Slovenia, and Spain (as well as the United Kingdom when it was an EU member) show that the data collected through these surveys can be used to derive estimates of the value of e-commerce sales. Importantly, these are not only countries which collect responses in monetary values; Spain collects responses expressed as a percentage of total turnover (as did the UK up to 2019), while other countries offer respondents both monetary and percentage options.

This shows that both types of responses can be used to estimate the monetary value of e-commerce and, as a result, EU and partner countries are especially well placed to develop e-commerce value measures. The development of guidance could support and encourage additional countries to use the data they have gathered to compile experimental estimates.

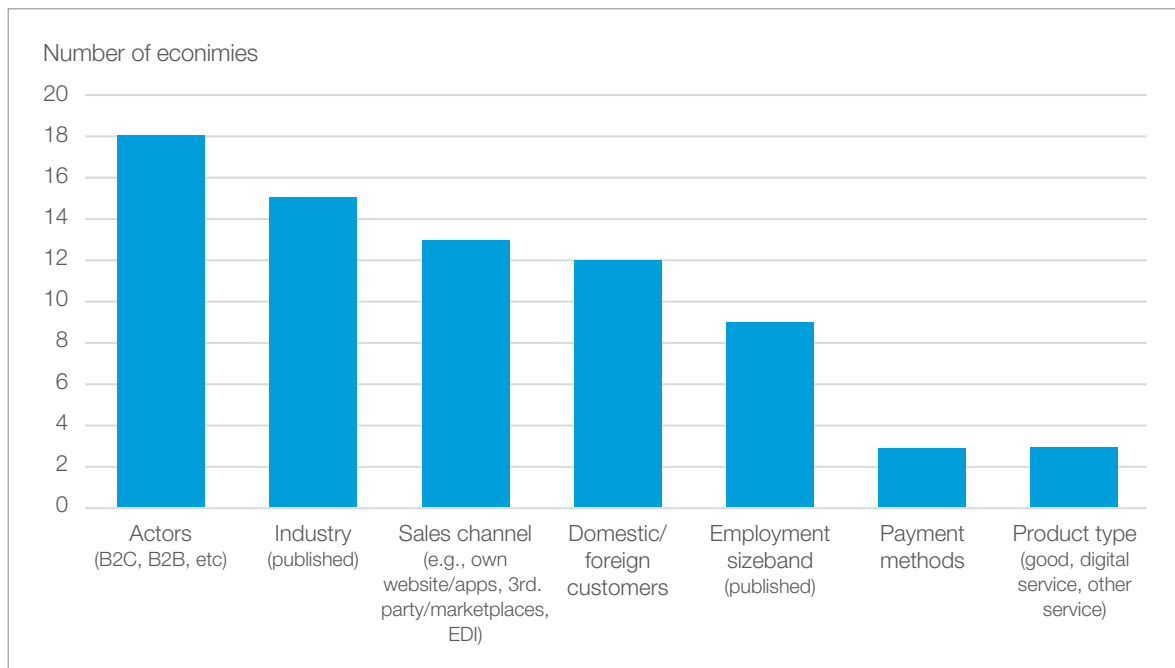
3.3. Breakdowns of total e-commerce value

Of the 22 economies listed in Table 1, all but one have implemented some form of further breakdown of e-commerce sales value. This is assessed by examining the additional details requested in survey questionnaires as well as the details given in published e-commerce value statistics. In some cases, break down questions have been included in the survey questionnaire, but the resulting statistics have not been published. [Figure 3](#) summarises the different breakdowns collected and/or published in these economies.

Almost three quarters have published one or more breakdowns based on firm characteristics (e.g. industry classification, employment size-band, whether the firm is classed as an SME or not). Considering such characteristics are routinely collected on many business surveys it is likely that other economies would have the possibility to compile these details. Beyond that, and given that e-commerce refers to transactions involving (at least) two parties and facilitated by a range of different digital tools, there are several additional breakdowns that are collected.

Figure 3. E-commerce breakdowns, by number of implementing economies

(22 economies in total)



Source: UNCTAD based on national survey questionnaires and published statistics.

Note: For EU countries other than Spain, some breakdowns are implemented for web sales only (and not for EDI-type sales). Republic of Korea: payment methods only available for the sum of B2C + consumer-to-consumer (C2C) e-commerce. United States: sales channel only collected on the annual wholesale trade survey, unavailable for enterprises in other industries.

Most often, these breakdowns are collected by asking respondents to provide percentages allocating the total value of e-commerce sales between different categories (which sum to 100 per cent). By contrast, some countries prioritise collection of monetary values. For example, in designing a new Digital Economy Survey for the 2021 reporting year, the UK Office for National Statistics adopted an approach which not only includes a wide range of breakdowns but also combines many of them (See [Annex 5](#)), with all breakdown items being requested in pounds sterling.

The following sub-sections examine these breakdowns in more detail, while the cross-border dimension is addressed in section 3.4.

3.3.1. Actors

The most widely implemented breakdown of e-commerce value is based on the actors involved in the transaction. In principle, all economic agents – businesses, households/individuals, government bodies, and non-profits – can engage in e-commerce as buyers or sellers. Even so, sellers will most often be businesses, although households are also increasingly engaging in e-commerce sales (often facilitated by online platforms). Different combinations of sellers and buyers have different policy and economic implications, hence the relevance of this breakdown.

Of the 22 economies covered by this analysis, 18 implement a breakdown based on actors. However, there is variation in the actors covered. Table 2 provides an overview of the options respondents are given in different surveys for dividing their e-commerce revenues according to the actors involved.

Table 2. Respondent options for categorising e-commerce revenues according to actors on survey questionnaires in different economies

| B2C, B2B | B2C, B2B, B2G | B2C, B2B/G | B2B/G only | B2C, B2B, B2G+nonprofit |
|--|--|--|--|--|
| <ul style="list-style-type: none"> • Indonesia • Japan | <ul style="list-style-type: none"> • Korea (Rep.) • Malaysia • Mexico • Singapore • Spain • Thailand • United Kingdom | <ul style="list-style-type: none"> • Austria • Finland • France • Hungary • Malta • Poland • Slovenia | <ul style="list-style-type: none"> • Canada • (residual assumed B2C) | <ul style="list-style-type: none"> • Hong Kong, China |

Source: UNCTAD based on national survey questionnaires.

Note: **B2C**: sales from businesses to consumers (i.e., households/individuals)

B2B: sales from businesses to other businesses

Business-to-government (B2G): sales from businesses to government customers

In Canada, only sales businesses and government bodies (B2B/G) are delineated, with the assumption that the remainder of e-commerce sales are B2C.

Only Hong Kong, China explicitly acknowledges that non-profit organisations can be e-commerce customers and are not covered in the other categories of actors. This is relevant because, in most cases, the survey forms used require that the components add up to 100 per cent of total e-commerce. While e-commerce sales to non-profits are unlikely to be economically significant in general, it is unclear what impacts leaving their recording ambiguous might have on the responses received.

3.3.2. Sales channels

Despite being a relatively widely adopted form of breakdown, the categories offered to responding businesses vary widely across economies.

As noted in Box 2, countries following the European community model survey (Austria, Finland, France, Hungary, Malta, Poland, Slovenia, Spain) do not directly collect and break down a value for total e-commerce. Instead, values for “EDI-type sales” and “web sales” are collected. Respondents are then asked to provide an estimated percentage breakdown of web sales between those received via “your enterprise’s websites or apps” and “via e-commerce marketplace websites or apps used by several enterprises for trading goods or services”. Hong Kong, China publishes a similar breakdown. As summarised in Table 3, there is much more variation across other cases.

Table 3. Respondent options for categorising e-commerce revenues according to sales channels on survey questionnaires in different economies

Simplified overview, precise terminology used may vary

| Sales channel | Austria, Finland, France, Hungary, Malta, Poland, Slovenia, Spain, Hong Kong SAR | Korea (Rep.) | Malaysia | Thailand | United Kingdom | United States (wholesale trade only) |
|--|--|-----------------------|-----------------------|-------------------------------------|----------------|--------------------------------------|
| Own websites /apps (incl. extranet*) | ✓ | | ✓ | ✓ (Websites and apps separately) | ✓ | |
| Online market places /intermediary platforms /3rd parties | ✓ | ✓** | ✓ | ✓ | ✓ | |
| EDI-type | ✓ | | | | ✓ | ✓ |
| Private network (e.g., extranet, EDI over closed network) | | ✓ (incl. extranet) | ✓ (incl. extranet) | | | |
| Social media | | | | ✓ | ✓ | |
| Live streaming platforms | | | | ✓ | | |
| Dropship merchant sellers | | | | ✓ | | |
| Foreign websites | | | | ✓ | | |
| “Other platforms” / “others” | | | ✓ (specify) | ✓ (specify) | ✓ | |
| Online system sales (Internet, mobile, extranet, email, instant messaging) | | | | | | ✓ (incl. extranet) |
| Open sales: bidding method or sales to a large number of unspecified companies | | ✓ | | | | |

Source: UNCTAD based on national survey questionnaires and published statistics.

Note: * unknown for Hong Kong, China. ** Measured by surveying marketplace operators directly. “specify” – respondents are asked to name the platforms used and specify the value/share of sales through them.



Photo: Unsplash

In the United States annual wholesale trade survey, EDI sales are split out from other sales (no sales channel breakdown is implemented in the other U.S. surveys). Malaysia and Korea (Rep.) take an approach where orders placed through private/closed networks are separately categorized but adopt a differing categorization for other orders.

The United Kingdom's new Digital Economy Survey implemented for the 2021 joins Thailand's (business) e-commerce survey in separately categorising sales via social media. [Box 3](#) considers the relationship between social media and e-commerce in more detail.

Box 3. Social media and e-commerce

Social media comprises “forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos)” (Merriam-Webster, 2022). Social media can facilitate e-commerce in several ways:

1. **Marketing.** Social media presence can be used to direct potential customers to a business' webstore in order to make a purchase. In this case social media plays only a marketing role, the transaction takes place elsewhere.
2. **Online shop.** Some social media services allow users to purchase products directly from posts made by sellers. For example, with “Checkout on Facebook and Instagram” sellers post about an item for sale and users viewing the post see an “add to cart” or “buy now” button through which they can purchase the item concerned. The transaction is handled within Facebook/Instagram. WeChat offers features where businesses can set up a profile page within the platform and customers can order and pay for goods and services. Purchased digital content, can even be streamed directly within the platform.
3. In such cases, the social media platform could be seen as playing a “hybrid” role in which it provides the infrastructure and interface for businesses to operate their own online shops (similar to Shopify) but also is facilitating a type of online marketplace with multiple sellers and buyers and a unified search function.
4. **Social media marketplace.** Some social media platforms provide an explicit online marketplace. For example, Facebook Marketplace allows individuals and businesses to “buy and sell goods locally and shipped”.
5. **Sales via social media messaging.** Messaging and communication features are a key element of social media. These provide an online means for sellers and buyers to discuss and agree on transactions, often with payment taking place offline (e.g., on collection). Such transactions are most likely to be relevant for small businesses and especially in developing countries where the financial resources and skills needed to set up and manage a web shop can pose a significant barrier.

At the other end of the spectrum, some highly digitalised companies are adopting messenger “bots” through which customers can place orders by responding to automated questions. One example is “Dom” the Dominos Pizza Facebook Messenger bot.

Several issues and questions arise from the multi-faceted role of social media in e-commerce. In cases 2-4 above, the social media platform/service is the channel through which the order is placed/received, but how this is achieved varies.

The case of sales via social media messaging involving humans discussing and agreeing transactions via manually typed messages is identical in substance to agreement via manually typed emails. As shown in Table 1 countries vary in including or excluding such transactions from measures of e-commerce. When a human is communicating with a bot, such that their messages (even when manually typed) are automatically processed, responded to, and the result is an order being placed, there is a strong argument to be made for these orders being included within the scope of e-commerce. None of the surveys analysed (including those addressing social media sales more generally) specifically addresses orders placed via manually typed social media messages, though the US annual wholesale trade survey states that sales by “instant messaging” are included alongside sales by e-mail and other components within “online system sales”.

On a more practical level, businesses making sales on social media platforms may well struggle to place such sales within the most widely used breakdown structure where sales through “online marketplaces” are distinguished from sales made through the business’ “own website or apps”.

Perhaps as a response to this, several countries have implemented separate categories for reporting social media sales. The UK Office for National Statistics specifically asks for “turnover from e-commerce sales via this business’ own social media” alongside turnover from other channels including the respondents’ own website/apps and online marketplaces (Office for National Statistics, 2022).

Thailand (Electronic Transactions Development Agency, 2019) includes two relevant categories among the eight online sales channels offered for breaking down the value of product/service sales “social media” and “live streaming platform (such as Facebook Live or Instagram Story)”. Following from this is the following question:

5.1) What was the percentage share of the value of product/service sales via different social media?

| | | | | | | | |
|--------------------------|------------------|---|---|---|---|---|---|
| <input type="checkbox"/> | Facebook | | | | . | | % |
| <input type="checkbox"/> | Line | | | | . | | % |
| <input type="checkbox"/> | Instagram | | | | . | | % |
| <input type="checkbox"/> | WeChat | | | | . | | % |
| <input type="checkbox"/> | YouTube | | | | . | | % |
| <input type="checkbox"/> | Twitter | | | | . | | % |
| <input type="checkbox"/> | อื่น ๆ เช่น..... | | | | . | | % |
| Total = | | 1 | 0 | 0 | . | 0 | % |

The variety of ways in which social networks can facilitate e-commerce transactions, and the difficulty with which these fit into common categorisations of e-commerce sales channels suggest an area where statistical guidance may be beneficial to support countries in measuring the value of e-commerce in a robust and consistent way.

3.3.3. Payment methods

Three economies publish a breakdown of e-commerce sales by payment methods. Most straightforwardly, Hong Kong, China breaks out the portion of transactions paid online vs other modes of payment (Census and Statistics Department, 2022). Korea (Rep.) publishes a split of the total for B2C+C2C (consumer-to-consumer) e-commerce transactions according to whether payment was made by money transfer, credit cards, emoney, or other means (Statistics Korea, 2014). Finally, Thailand's e-commerce survey collects a percentage split of the responding business' e-commerce sales revenues across 12 different means of payment from cards to cash to cryptocurrency (Electronic Transactions Development Agency, 2019, p. 113).

3.3.4. Product type

The Canadian survey of digital technology and Internet use 2021 and the UK Digital Economy survey ask responding businesses to break down their total e-commerce revenue according to whether the product supplied was:

- A (physical) good
- A digitally delivered service
- A non-digitally delivered service

Finland has also implemented a similar breakdown for web sales only.

For businesses in Canada, 62 per cent of the value of gross sales conducted over the Internet related to physical goods in 2021. The remainder was split fairly evenly between digitally delivered and other services.

This relatively simple categorization offers insights into the functioning of the business, their extent of digitalization, etc. It also provides information that is crucial when using statistics on cross-border e-commerce to measure digital trade, as covered in the following section.

Several countries have published more detail on the products concerned. For example, Kostat (2014) disaggregated the total value of B2C+C2C e-commerce sales across 16 categories of goods and services, with the most spending recorded on "Travel arrangement and reservation services", "Clothes and fashion related goods", and "Household goods, motor vehicle parts and accessories".

This section has demonstrated the considerable variation in both the types of breakdowns collected and the specific categories and details implemented in different surveys. This poses a challenge for countries looking to start measuring the value of e-commerce as there is no clear international set or priorities or model to follow regarding breakdowns for e-commerce value. The development of internationally agreed guidelines would help to address this.

3.4. Cross-border e-commerce

When it comes to assessing the economic role of e-commerce, aside from the overall value of e-commerce sales, one of the most important details is the distinction between domestic transactions and those involving customers abroad. This gives crucial insight into the extent to which firms are using e-commerce to engage with global markets and generate export revenues, which contribute directly to GDP and economic growth. Cross-border e-commerce is one component of digital trade.

Digitalization has the potential to significantly reduce the barriers firms face in pursuing export opportunities. This is especially the case for small and medium enterprises for which the costs and risks of doing so may often be insurmountable if exporting entails travelling abroad to find potential customers and agree orders. The possibility of having a “global shop window” online, fundamentally changes firms’ ability to find customers abroad (as well as domestically). E-commerce provides the means to receive orders from those customers in a straightforward – often automated – way. It therefore has the potential to drive trade in all countries, but it is in developing countries where e-commerce offers the greatest opportunities to surmount entrenched barriers and spur trade participation. E-commerce should thus enable exports and has the potential to contribute a material portion of export earnings.

E-commerce not only fuels exports but also imports. This can offer access to greater choice and lower prices but can also subject domestic producers to increased competition from abroad. Without widely available estimates of the value of cross-border e-commerce, the scope for linking e-commerce to trade, growth, employment, and development, as well as to examine whether e-commerce is promoting additional trade or mainly substituting pre-existing ordering channels in different countries and contexts is severely limited.

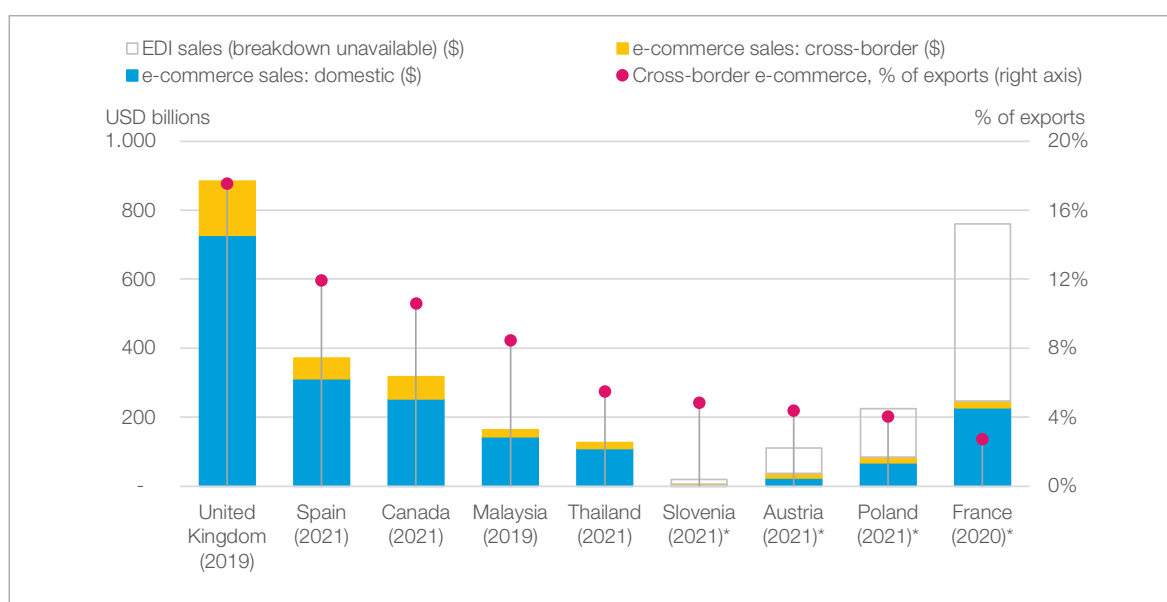
Few countries have published statistics on the value of business’ cross-border e-commerce sales, as shown in [Figure 4](#).

Many more countries have collected relevant information though (see Section 3.5), most notably those following the European community model surveys which included a breakdown of web sales (but not EDI-type sales) into those going to domestic customers, customers in other EU countries, and customers outside the EU as mandatory variables in 2021 (reporting year 2020 for e-commerce questions), having previously featured this as an optional breakdown in 2019 and 2017. The other EU countries shown have not followed Spain in going beyond the provisions of the EU implementing regulation⁹ to break down EDI-type sales. As such their figures reflect web sales only, which comprise only a minority (around one third) of e-commerce sales in those countries.

9. Commission implementing regulation (EU) 2020/1030 available at <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32020R1030&from=EN>

Figure 4. E-commerce sales, domestic and abroad, 2021 or latest year available

\$ billions and percentage of goods and services exports



Source: UNCTAD based on national sources and World Bank “Exports of goods and services (current US\$)” (<https://data.worldbank.org/indicator/NE.EXP.GNFS.CD>).

Note: Sales by businesses only. * for Austria, France, Poland, and Slovenia, EDI sales are not available broken down based on whether the customer is located domestically or abroad; as such the domestic/abroad breakdown reflects the value of “web sales” only. All other countries include both EDI-type and web sales. Business e-commerce export and total export figures are based on different data sources, this presentation relies on the assumption that the resulting statistics can be treated as mutually compatible.

Among countries (shown in Figure 4) which have published either a direct value for cross-border e-commerce sales by businesses, or a percentage share that can be applied to the published total value of e-commerce, cross-border sales comprise 21 per cent of e-commerce revenue on average (web sales for EU countries other than Spain). This reaches 33 per cent (of web sales) in Austria, and almost 50 per cent (of web sales) in Slovenia. France has the lowest international share, at 8 per cent (of web sales) while in Malaysia and Thailand, exports account for 12-13 per cent of e-commerce sales.

For the countries shown (excluding the EU countries other than Spain), e-commerce sales abroad equate to around 10 per cent of total goods and services exports on average. This ranges from 5 per cent in Thailand and 8 per cent in Malaysia to 18 per cent in the United Kingdom.

If exports comprise a similar portion of EDI-type sales in the other EU countries as in Spain – around 17 per cent on average since 2019 – the export share of cross-border e-commerce sales in those countries could be between 5 and 12 percentage points higher than when only web sales are accounted for. For example, in France, cross-border web sales accounted for 3 per cent of exports of goods and services in 2020 but including EDI-type sales could take the share to 15 per cent. That these differences *could be* so large, illustrates the importance of harmonising the measures available across countries.

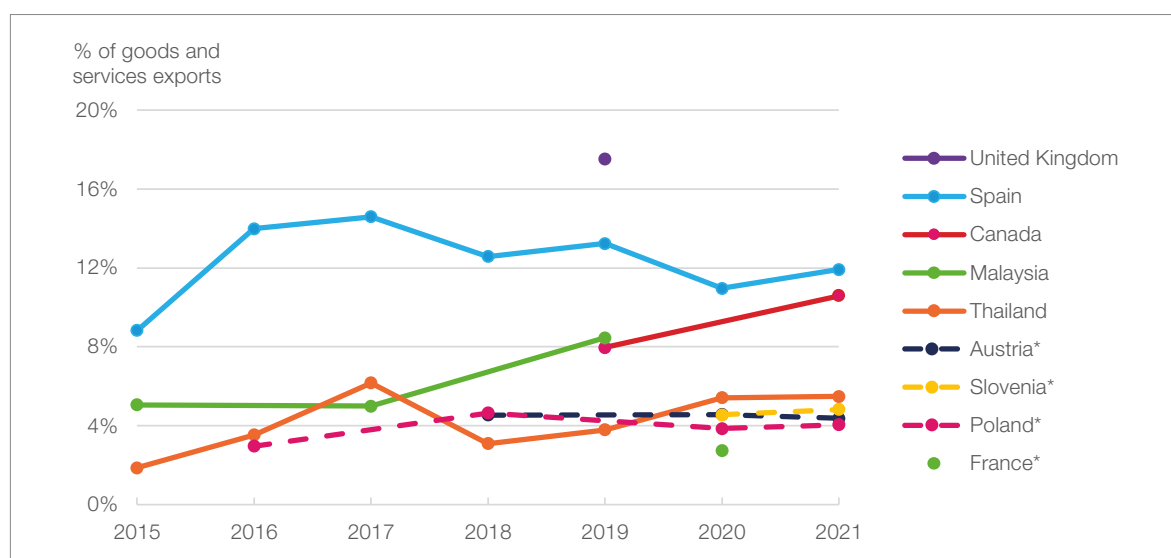
Figure 5 presents the evolution of e-commerce sales abroad (web sales abroad for EU countries other than Spain), as a percentage of total goods and services exports. In the countries for which time-series are available, the e-commerce share of exports was not uniformly increasing over time, even prior to the pandemic disruption of 2020 onward. Both Spain and Thailand experienced a marked decline in the share from 2017 to 2018 for example, in both cases the monetary value of e-commerce exports fell while total goods and services exports continued to grow (in current prices).

In Thailand, although the overall value of e-commerce sales increased throughout the period, the cross-border share declined from 23 per cent in 2017 to around 9 per cent in 2018 and 2019. Reasons given for this include “partly because more payment gateway businesses from other countries such as Alipay and WeChat Pay entered Thai market” and “the continual increase of foreign tourists especially Chinese tourists that come to visit Thailand also contributes to the cutback of international trade. In addition, the availability of ePayment systems at tourist destinations also encourages e-commerce operators to focus on domestic sales rather than international sales” (Electronic Transactions Development Agency, 2019).

It is, however, important to recall from Section 2 that changes between periods can be driven by factors related to measurement as well as “real-world” movements. This is especially the case for sub-items such as e-commerce exports which often involve only a minority of the businesses sampled, and for which value estimates can be particularly impacted by changes in the sample or responses received. Identifying ways to manage these challenges would be beneficial in helping to broaden the availability of statistics on e-commerce exports.

Figure 5. E-commerce exports, 2015-2021

Percentage of total goods and services exports

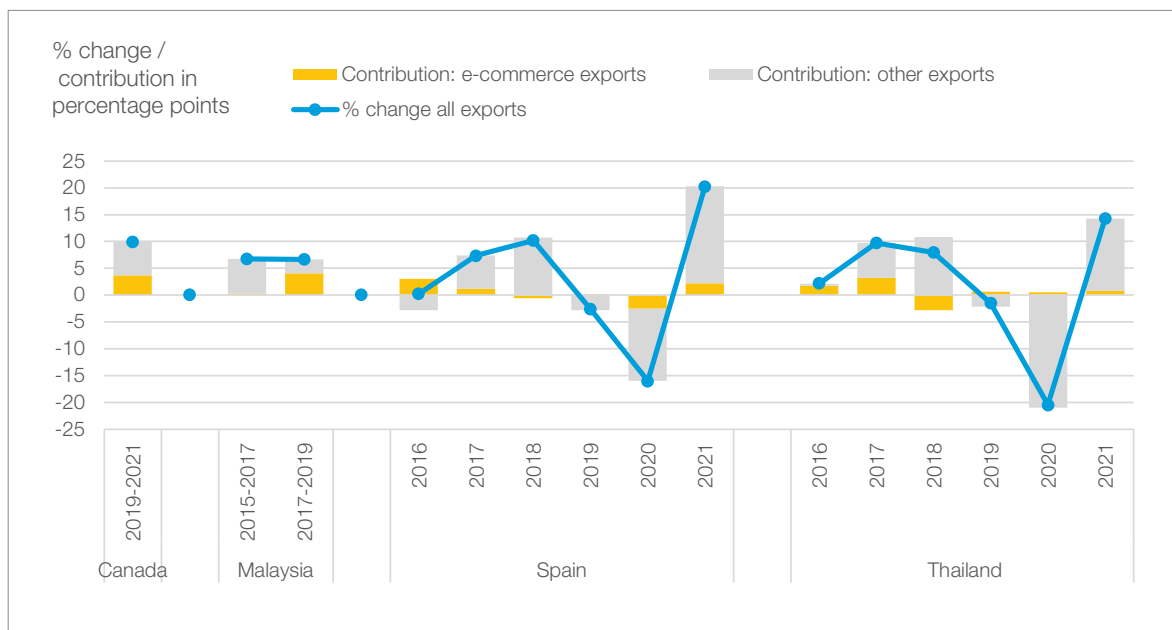


Source: UNCTAD based on national sources and World Bank “Exports of goods and services (current US\$)” (<https://data.worldbank.org/indicator/NE.EXP.GNFS.CD>).

Note: Exports by businesses only. * “web services” only, excludes EDI-type export sales. Business e-commerce export and total export figures are based on different data sources, this presentation relies on the assumption that the resulting statistics can be treated as mutually compatible.

Business' cross border e-commerce sales have tended to contribute positively to export growth in Canada, Malaysia, Spain, and Thailand (Figure 6), with various examples of strong positive contributions (e.g., contributing over a third of total export growth) and of e-commerce exports growing despite an overall downturn in exports. Nevertheless, there is considerable variation in the contribution of e-commerce exports between countries and especially between periods. More widely available, and statistically harmonised, figures are needed to allow analysis of the relationship between e-commerce and exports to draw general conclusions.

Figure 6. E-commerce exports by businesses, contribution to change in total goods and services exports, selected countries, 2015-2021



Source: UNCTAD based on national sources and World Bank “Exports of goods and services (current US\$)” (<https://data.worldbank.org/indicator/NE.EXP.GNFS.CD>).

Note: Exports by businesses only. Contributions, in percentage points, of business e-commerce exports and other exports to the percentage change in total exports of goods and services. Figures represent annual changes except for Canada and Malaysia, where the change is calculated over the interval shown. Business e-commerce export and total export figures are based on different data sources, this presentation relies on the assumption that the resulting statistics can be treated as mutually compatible.

The delineation between sales to domestic customers and those abroad is collected in much the same way as other breakdowns highlighted in Section 3.3. Responding businesses are asked to report a total value for their e-commerce sales (as a monetary value or a percentage of turnover), and most commonly to provide percentage shares for the domestic and abroad components – with these two summing to 100 per cent. The Value of E-commerce Survey in Thailand (Electronic Transactions Development Agency, 2019) offers an instructive example of this approach:

4.8) In 2018, what were the domestic and international percentage shares of the value of product/service sales made via the internet?

Domestic _____% International _____%

Several countries, including Canada and the United Kingdom (see Annex 4), go further by asking respondents about the value of e-commerce sales to customers in different countries or regions. In the Canadian Survey of Digital Technology and Internet Use, sales to customers abroad can be calculated by aggregating responses to items b-i, representing sales to various individual countries and regions (Box 4). Further examples of collecting more detail on customer locations are presented in Annexes 4 and 5.

Box 4. Cross-border e-commerce in the Canadian Survey of Digital Technology and Internet Use 2021

26 What percentage of this business's gross sales conducted over the Internet were obtained from each of these regions in 2021?

If precise figures are not available or the year is not yet complete, please provide your best estimate.

Enter "0" if this business did not make any sales to a particular region.

- a: Canada
- b: United States
- c: Mexico
- d: Other Latin America and the Caribbean
- e: China
- f: Other Asia
- g: The European Union
- h: The United Kingdom
- i: Other regions

Source: Survey of Digital Technology And Internet Use – 2021 questionnaire available at https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&Item_Id=1317562&TET=0

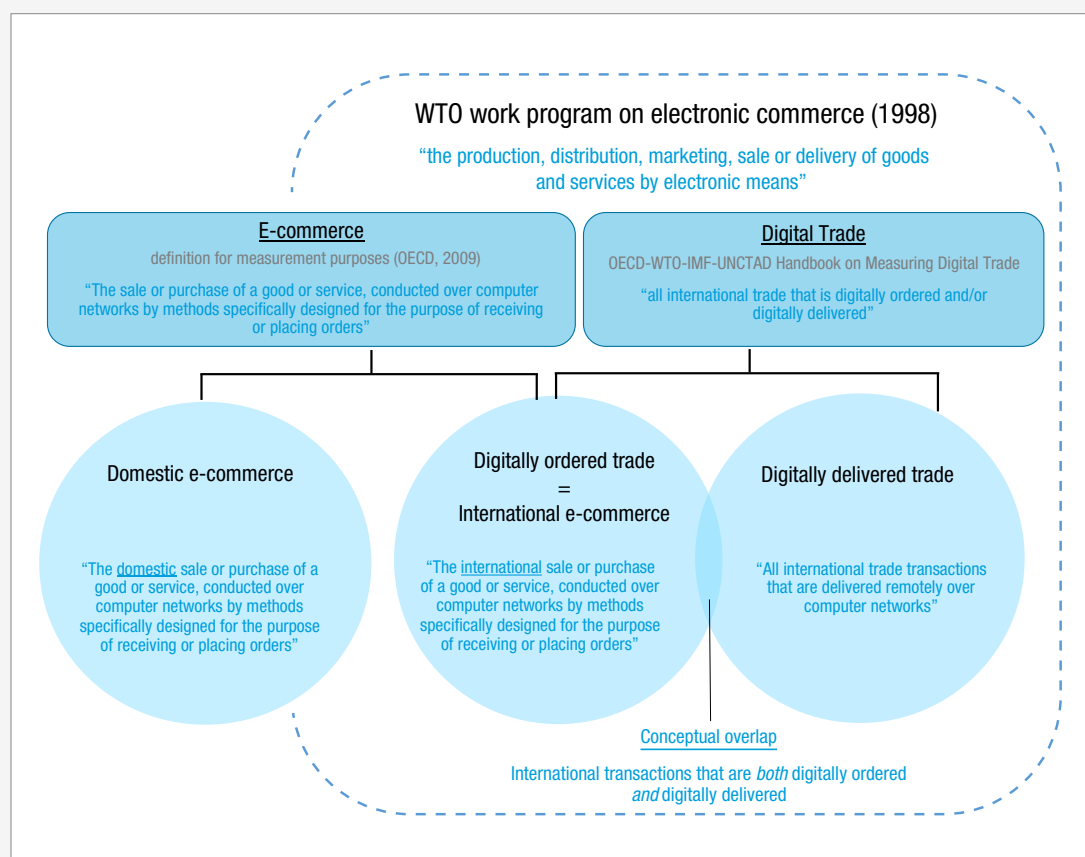
Respondents may face difficulties in identifying where their customers are located. Indeed, results from the aforementioned survey by Statistics Canada show that 5.5 per cent of businesses did not know whether their customers were located in Canada or outside. This issue is related to firm size, with 9 per cent of medium-sized enterprises (by employment) and 12 per cent of large enterprises being unable to identify customer locations, whereas only 4 per cent of small enterprises reported this issue – perhaps because smaller enterprises are more likely to have personal relationships with their customers. The extent of this difficulty may also depend on what products the company sells via e-commerce. Shipping goods to a location abroad is likely to provide a reasonably reliable indication of cross-border e-commerce. For services, especially digitally deliverable services (i.e., those that can be delivered via computer networks), identifying customer location may be more difficult. Box 5 sets out the relationship between e-commerce (digital ordering) and digital delivery within the framework for measuring digital trade.

Nevertheless, the Canadian findings suggest that the strong majority of firms are able to provide the relevant information. Furthermore, the same challenges are encountered more generally in measuring trade. The approaches and mitigation measures used in trade sources might therefore provide a useful foundation for developing statistical guidelines on measuring cross-border e-commerce.

Box 5. Cross-border e-commerce in the framework for measuring Digital Trade

The *Handbook on Measuring Digital Trade* (OECD-WTO-IMF-UNCTAD, forthcoming) sets out definitions and a conceptual framework for measuring digital trade, along with a wide range of related country experiences using various data sources. Digital trade is comprised of two constituent concepts: digitally ordered trade, and digitally delivered trade (Box Figure 1).

Box Figure 1. Digital trade and e-commerce: measurement concepts and definitions



Source: OECD-WTO-IMF-UNCTAD Handbook on Measuring Digital Trade (forthcoming).

Note: The statistical definitions of e-commerce and digital trade are fully compatible with the WTO definition of the Work Program on electronic commerce. In addition to cross-border e-commerce, the WTO work program also covers the domestic e-commerce activities of foreign owned or controlled service suppliers. The definition of digital trade given in this Handbook is also compatible with the description of e-commerce in BPM6 ("e-commerce is a method of ordering or delivering products at least partly by electronic means, such as through the Internet or other computer mediated networks") (IMF, 2009).

The definition of digitally ordered trade is aligned with the 2009 definition of e-commerce transactions for statistical measurement purposes (OECD, 2011), though with the focus being on international transactions. For this reason, efforts to measure the value of e-commerce sales, and to further distinguish cross-border e-commerce, are a direct input to measuring digital trade. Various items in the reporting template for digital trade (Box Figure 2) can be measured using ICT usage/e-commerce surveys, with business cross-border e-commerce sales and purchases typically being the biggest components of digitally ordered trade.

Given the conceptual overlap illustrated above, total digital trade cannot simply be calculated by summing digitally ordered trade and digitally delivered trade; it is necessary to subtract the value of transactions that were *both digitally ordered and digitally delivered* to avoid double counting. Canada, Finland, and the United Kingdom have demonstrated that business ICT/e-commerce surveys can be used to collect information on the products being sold (goods, digitally delivered services, or other services) and this has the potential to be used to derive the relevant adjustment. In Canada, digitally delivered services comprise just under 20 per cent of total e-commerce sales by businesses (Statistics Canada, 2022). Where other sources are used to estimate the monetary value of e-commerce transactions, these can be similarly adapted to identify cross-border sales.

Box Figure 2. Reporting template for digital trade

| | | | Total exports | Total imports |
|-------|--|---------------|---------------|---------------|
| 1 | Total Digital Trade | 2+3 minus 4 | | |
| 2 | Digitally ordered trade | 2.1+2.2 | | |
| 2.1 | Goods | | | |
| 2.1.a | <i>of which: via DIPs</i> | | | |
| 2.2 | Services | | | |
| 2.2.a | <i>of which: via DIPs</i> | | | |
| 3 | Digitally delivered trade | | | |
| 3.a | <i>of which: via DIPs</i> | | | |
| 4 | Digitally ordered and digitally delivered trade | | | |
| 4.a | <i>of which: digital intermediation services</i> | | | |
| | | | | |
| | <i>Addendum items</i> | | | |
| A.1 | Digital trade in services | 2.2+3 minus 4 | | |
| A.2 | Digitally deliverable services | >3 | | |

Source: OECD-WTO-IMF-UNCTAD Handbook on Measuring Digital Trade (forthcoming).

Note: Transactions should be broken down by relevant product groupings (EBOPS 2010 for services and, for example, HS or CPC for goods).



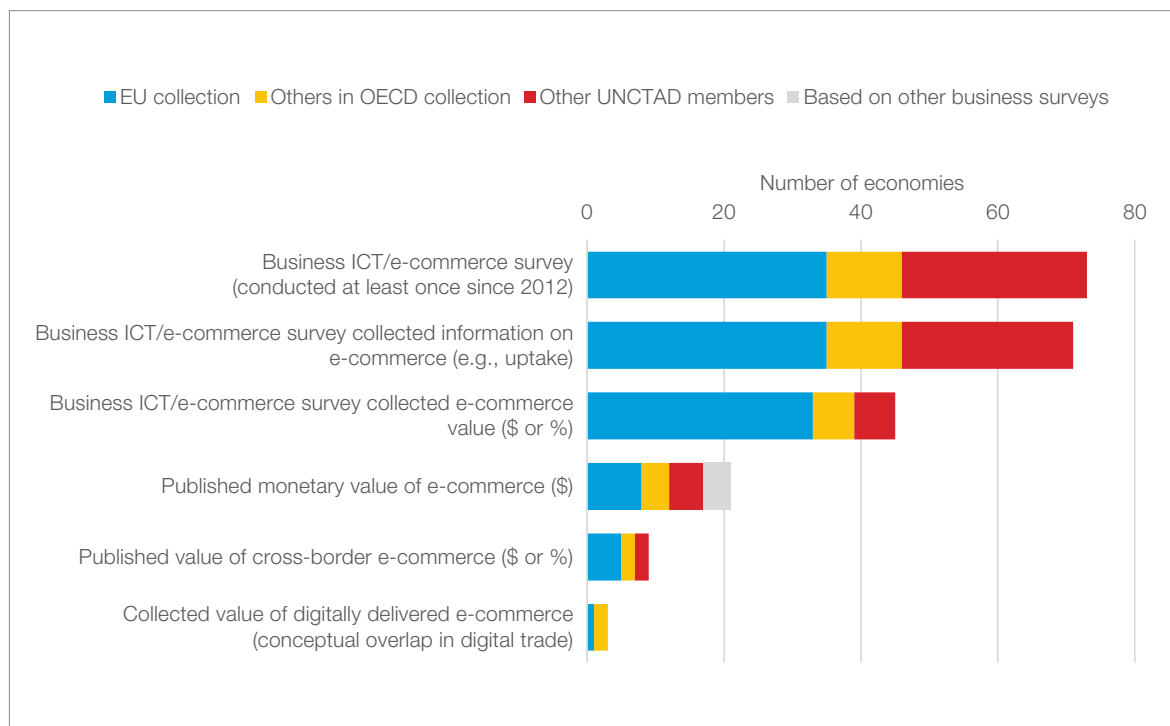
In sum, this subsection has set out the analytical and policy relevance of measuring crossborder e-commerce to understand the extent to which e-commerce is facilitating exports and economic growth, and thereby has the potential to contribute to economic development. Crossborder e-commerce is also an important component of measures of digital trade. This is both in terms of exports and imports. Although the main focus in this analysis is on measuring exports it should not be forgotten that measures of e-commerce imports are also needed to understand the relationship between digital trade, economic growth, and development. Few countries have published statistics on the value of crossborder e-commerce (or details allowing it to be derived). Furthermore, although the general approach used is to collect this as a breakdown of the total value of e-commerce sales, there are differences in implementation across countries. This suggests the need for international discussion and agreement over how crossborder e-commerce should be measured and how compilation issues can be managed. This could provide a basis for statistical guidelines to support countries in delineating cross-border sales from total e-commerce and thereby contribute to the wider availability of statistics on digitally ordered trade.

3.5. Survey types, coverage, and methods

There is also variation in the survey vehicles and methods used to collect information on e-commerce in different economies. Among the 21 economies that have published estimates of the value of e-commerce sales (Figure 1), 17 collected this information using surveys of e-commerce and/or ICT usage in business, or similarly specific surveys (for example, Australia's figures come from a "business characteristics survey" focused on innovation activities and ICT usage).

In EU countries, annual business ICT surveys are mandated by law, and many of the other EU partner and OECD countries conduct surveys either annually or biennially. Additionally, business ICT usage surveys are the stated source in 27 of the roughly 50 economies that have submitted statistics for inclusion in the UNCTAD core indicators on ICT use in business database since 2012. In total, it is estimated that nearly 80 economies have conducted such a survey in the period since 2012 (Figure 7), with the majority of these recurring on an annual basis.

Figure 7. Sources for measuring business e-commerce



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.

Note: The EU collection covers EU countries as well as Albania, Bosnia and Herzegovina, Iceland, Montenegro, North Macedonia, Norway, Serbia, and Türkiye (35 countries in total); 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 collection. “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 statistics for inclusion in the database of core indicators on ICT usage in business or otherwise from national publications. Several countries have published e-commerce value figures based on other business surveys: Japan, Singapore, Philippines, and the United States.

Business ICT usage surveys have long provided a platform for investigating e-commerce; responses confirming whether (or not) businesses make sales via e-commerce are used widely to compute the “proportion of businesses receiving orders over the Internet”, one of the core indicators of the Partnership on Measuring ICT for Development (UNCTAD, 2021a). Because of this, and because such surveys often collect the business’ total revenue, they can provide a natural basis for further questions investigating the value of e-commerce sales.

Nevertheless, four of the series presented in [Figure 1](#) are derived from other survey sources. Japan takes a unique approach, conducting “Market research on e-commerce” (see [Box 6](#)). Meanwhile, the figures for Singapore are collected through the Annual (services) Industry Survey (and for this reason are only representative of services industries). In the United States, the Services Annual Survey is one of four annual sectoral surveys – the others covering manufacturing, retail trades, and wholesale trades – which collectively give a figure for e-commerce sales across most businesses.

The Philippines conducted a biennial “Survey on Information and Communication Technology” up until 2017 and this included questions on both the value of e-commerce sales and the split between sales to domestic and overseas customers. The survey form is available online and key details from it are included in this report.¹⁰ However, the results arising from those specific questions do not appear to have been published and the series in [Figure 1](#) instead comes from the “Annual Survey of Philippine Business and Industry”, a general business activity survey (for which the survey form does not appear to be available online).

More generally, a significant minority of the economies which have submitted the indicator “Proportion of businesses receiving orders over the Internet” for inclusion the UNCTAD core indicators on ICT use in business database have measured this using other business surveys, with general surveys of business activity being the most common alternative survey vehicle. Such surveys typically collect a wide range of information about businesses’ activities and, in particular, a wider range of financial information, of which the value of e-commerce sales is one example. Often these surveys have the largest sample size of all business surveys in a given economy. This suggests that other surveys might also offer a viable platform to measure the value of cross-border e-commerce and any statistical guidance developed should consider this alongside surveys of business ICT usage/e-commerce.

Regardless of the precise surveys and methods used, there are differences in survey coverage that are likely to impact comparability across economies. Most notably, this relates to the industries and firm sizes covered, as shown in [Figure 8](#).

There is considerable variation in the industries covered by these measures of the value of business e-commerce. In Malaysia, the Survey on Usage of ICT and e-commerce by Establishment “encompasses all economic sectors in Malaysia classified under the Malaysia Standard Industrial Classification (MSIC)”.¹¹ At the other end of the scale, the United Kingdom and Thailand, which have among the most extensive surveys in terms of details collected, are more narrowly focused in terms of the industries targeted. The figures published by Singapore cover only service industries. Meanwhile, EU countries adopt a relatively limited scope of coverage, excluding Arts, entertainment, and recreation, Financial and Insurance services, Health and Education Services. Spain further excludes food and beverage service activities from statistics published on e-commerce.

10. Survey on Information and Communication Technology available at <https://psa.gov.ph/content/survey-information-and-communication-technology-sict>

11. Survey on Usage of ICT and e-Commerce by Establishment available at www.dosm.gov.my/v1/index.php?r=column/cone&menu_id=ZmpBKzc4T2pFTXVNUW1NcHRFMHhGQT09

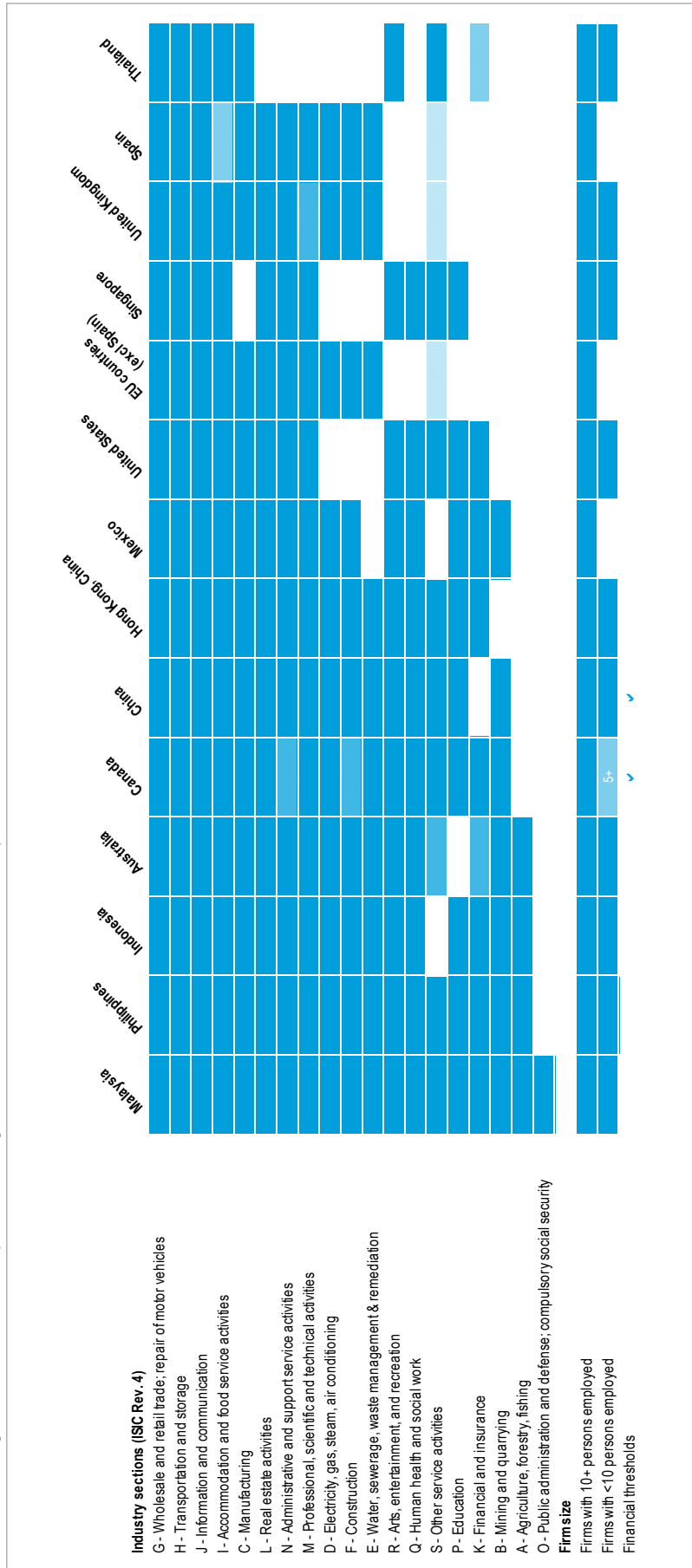


The extent to which more limited coverage of industries will reduce the exhaustiveness of estimates of e-commerce by businesses is not clear. The industry sections covered by the EU and United Kingdom surveys comprised 98 per cent of total e-commerce sales by businesses in China (2020) and the Philippines (2017). However, the total for China does not include section K finance and insurance, and the series for the Philippines only shows e-commerce sales as having been recorded in industry sections A (agriculture, forestry and fishing), P (education), and R (arts, entertainment and recreation), not in other industry sections not covered in the EU and United Kingdom surveys.

In considering industry coverage it should be noted that COVID-19 pandemic is likely to have vastly increased the uptake of e-commerce across industries in many economies. For example, the latest statistics available from Canada show that the share of businesses receiving orders over the Internet increased from a quarter in 2019 (before the pandemic), to one third in 2021. By 2021, over half of educational services firms in Canada were receiving orders online, while the share for Arts, entertainment and recreation reached nearly 60 per cent. In Finance and insurance, the share of firms making sales online increased from 22 per cent in 2019 to 26 per cent in 2021 and the share in Healthcare and social assistance increased slightly, to 10 per cent. Most strikingly, the portion of firms in Mining, quarrying, and oil and gas extraction which sell online almost doubled, to 15 per cent in 2021. Overall, these additional industries covered in the Canadian survey, compared to those in the EU countries and United Kingdom, account for around 15 per cent of total gross sales conducted over the Internet by businesses, or CA\$ 50 billion (US\$ 40 billion) (Statistics Canada, 2022).

Figure 8. Business coverage of e-commerce value measures

Darker shading indicates more complete coverage of classes within each industry section



Source: UNCTAD based on national sources.

Notes: Countries may vary in the inclusion or exclusion of non-employer firms (i.e. firms with zero persons employed).

Australia: Excludes employing businesses with <50 employees that did not remit under the pay-as-you-go withholding scheme.

Philippines: coverage refers to the Annual Survey of Philippine Business and Industry (ASPBI), which is the source for the series presented in Figure 1. The ASPBI covers all establishments except those with a total employment of less than 10 and only one single proprietorships are only included if they have branches and/or >10 employment).

Singapore: individual self-employed persons who are not registered with the Accounting & Corporate Regulatory Authority (ACRA), such as taxi drivers, hawkers and stall-holders, independent artistes are excluded.



With respect to firm size, the main point of variation relates to the coverage of enterprises with fewer than 10 persons employed (commonly referred to as “microenterprises”). In one third of the economies shown these are not covered at all, while in Canada coverage starts at five persons employed. Although e-commerce tends to be more widely adopted among larger businesses, it is increasingly important as a basis on which individuals can create small businesses (e.g., selling handmade items online). In the United Kingdom, e-commerce by firms with 0-9 employees was worth GB£24 billion (US\$31 billion) in 2019, around 3.5 per cent of the total. Microenterprises accounted for 6.4 per cent of sales made via websites and apps (i.e., excluding EDI sales) and 8 per cent of B2C sales.

Most of the economies examined in this analysis use industry and firm employment as variables for a stratified sample design, though several complement these with other variables. For example, in France, strata are determined by industry, employment, and turnover.¹² There is variation also in other aspects of survey methodology including:

- Whether the sample is drawn from a business register or other list (such as a list of known e-commerce operators)
- Sample size
- Legislative framework, including whether response is mandatory
- Survey modes used (online or postal surveys, telephone or face-to-face interviews, etc.)
- Processing including follow-up of unusual responses, treatment of non-response, etc.

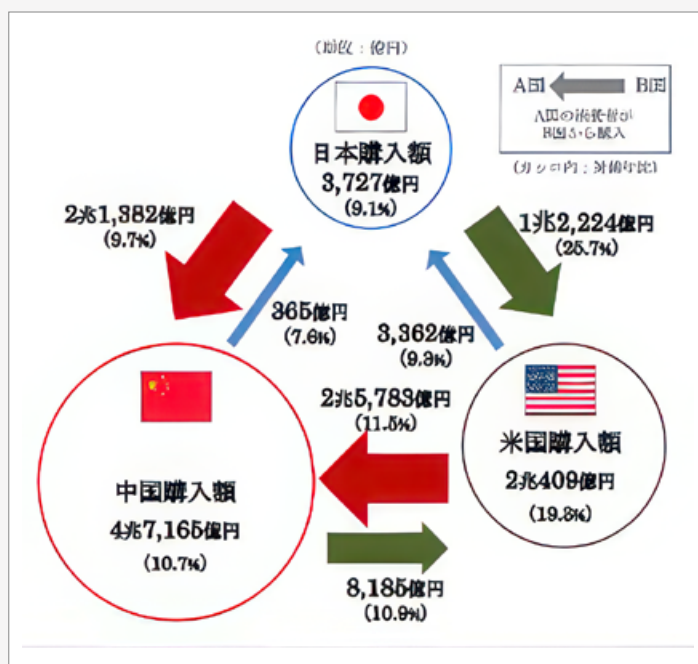
Variation in business survey methods and design is not uncommon, and certainly not limited to e-commerce measurement. Nevertheless, it has to be acknowledged that these differences may impact the results found and therefore the ability to make international comparisons. In particular, Japan takes a markedly different approach to others presented here, relying primarily on an analysis of publicly available information from various sources, alongside limited interviews with businesses and industry bodies (see [Box 6](#)).

12. Methodology of the survey on information and communication technologies in business (ICT) available (in English and French) at <https://www.insee.fr/en/metadonnees/source/operation/s1555/documentation-methodologique>

Box 6. Japan “Market research on e-commerce”

Box Figure 3. Cross-border e-commerce market size between Japan, the United States and China

Arrows indicate cross-border e-commerce flows



Source: reproduced from (METI, 2021).

Importantly, these statistics are not based solely on a business ICT usage / e-commerce survey. The first part of the approach consists of a “public information survey” that collects and analyses “newspapers, magazines, industry journals, government statistics and reports, various papers, research company reports, commercial database information, business and media website information, etc. in Japan, the U.S. and China”¹³. The second element informing the estimation is “business surveys and interviews” with operators and industry associations “developing” domestic and cross-border e-commerce”. It should be noted that these are at a “general” level and do not comprise detailed questions requiring specific responses.

In China and the United States, the targets are “Businesses developing cross-border e-commerce” which include “Japanese businesses that have established local subsidiaries in the US or China and are conducting e-commerce targeting consumers in those countries” and “US or Chinese businesses that are conducting e-commerce targeting consumers outside their own country”¹⁴.

As subsidiaries of Japanese firms located in the US and China are included, this implies a broader scope of export flows than if only domestic firms were covered. At the same time, though, clearly this only gives a partial view of Japan’s cross-border e-commerce. For this reason, Japan is not included in the analysis in Section 5.

13. https://www.meti.go.jp/english/press/2022/0812_002.html (in English)

14. <https://www.meti.go.jp/press/2022/08/20220812005/20220812005-h.pdf> (in Japanese, translated using Google Translate and DeepL).

This section has shown that business ICT and/or e-commerce surveys are the most common source for the e-commerce value estimates that have been published by National Statistical Organisations. Furthermore, a considerable portion of those countries with such surveys have collected information on the monetary value of e-commerce sales, even if they have not taken the steps of deriving and publishing experimental estimates.

Nevertheless, other business surveys can also be used to gather information on the value of e-commerce, and these represent a significant minority of the cases presented. Any statistical guidance developed to support countries in measuring e-commerce must account for these differences while also looking to encourage international comparability.

Beyond the data sources used, differences in the industries and sizes of the firms covered by these sources may also affect the comprehensiveness of e-commerce statistics, impacting their usefulness as a basis for policymaking as well as the ability to make comparisons across countries. Statistical guidelines could assess the need for harmonisation as well as seeking to establish criteria for prioritising industries and firm size bands for coverage in measures of the value of e-commerce.



4. Conclusions

This analysis provides a description of the current situation regarding measures of the value of e-commerce, including cross-border e-commerce, for a number of economies for which statistics are available. While the sample may not be exhaustive, it is broadly representative to give an overall view of measurement practices. The focus is on business e-commerce which is the main component of e-commerce.

There is a considerable variety of statistics available from various economies, but they also exhibit considerable variation in terms of definitions, approaches to e-commerce value, survey questions, data sources, methods, and scopes underpinning them. Furthermore, this analysis illustrates that, in the vast majority of economies, there are simply no national statistics on the value of e-commerce. Moreover, so far, primarily statistics on e-commerce sales are available, which implies that cross-border e-commerce statistics mainly refer to exports and rarely to imports.

Measuring e-commerce is a prerequisite for truly understanding its economic role and contribution to GDP, employment, and development, as well as for evidence-based policymaking. For development purposes, it is important to know whether e-commerce complements or just replaces offline-commerce. Beyond estimating total e-commerce, the distinction between domestic and cross-border e-commerce would allow the contribution of e-commerce to international trade to be understood. In this context, it is important to understand to what extent e-commerce contributes to exports and imports, essentially whether the cross-border (trade) balance is positive. When e-commerce drives a greater increase in imports than of exports, it may not contribute positively to economic development.

There is a need to take action to support the development of robust, exhaustive, and internationally comparable statistics on the value of e-commerce across countries – including both developed and developing countries. A logical next step would be to discuss the advantages and disadvantages of the different approaches described in this analysis and consider the potential for standard measures. This could then lead to developing appropriate statistical guidelines to measure e-commerce.

Such an effort would necessarily rely on the experience and expertise of the economies covered in this analysis, and others interested in contributing to guidelines that are relevant and useful for all. Within its mandate “to advance cooperation on measuring e-commerce and the digital economy and enhance the availability, quality, comparability, usability, and relevance of statistics concerning e-commerce and the digital economy” the WG-ECDE is well placed to take up this challenge.

To that end, at its third meeting held on 28-29 November 2022, the Working Group resolved to recommend that UNCTAD should continue working towards developing statistical guidelines on measuring the value of e-commerce (including cross-border e-commerce); and that a task group of interested Working Group participants should be established to guide, oversee, and contribute to the development of the necessary measurement standards and guidelines.

The information and analysis contained in this report are intended to serve as an input to the work of this task group.

Annex 1. National sources of business e-commerce sales figures

| Economy | Source name | Link(s) |
|------------------|---|--|
| Australia | "Summary of IT Use and Innovation in Australian Business" | https://www.abs.gov.au/statistics/industry/technology-and-innovation/summary-it-use-and-innovation-australian-business/latest-release |
| Austria | "ICT usage in enterprises" | https://www.statistik.at/en/statistics/research-innovation-digitalisation/digital-economy-and-society/ict-usage-in-enterprises |
| Canada | "Digital technology and Internet use, 2021" | https://www150.statcan.gc.ca/n1/daily-quotidien/220913/dq220913b-eng.htm |
| China | "E-commerce sales by industry" | Available from https://data.stats.gov.cn/easyquery.htm?cn=C01 In Mandarin. Browsing with Google translate, select: index > shipping and post > enterprise informatization and e-commerce situation > E-commerce sales by industry |
| Finland | "Use of information technology in companies" | 2020: https://www.stat.fi/til/ict/2021/ict_2021_2021-12-03_kat_007_fi.html 2012-2018: https://www.stat.fi/til/ict/2019/ict_2019_2019-12-03_kat_004_fi.html [see Table 1] |
| France | "Les TIC et le-commerce électronique dans les entreprises" | 2021: https://www.insee.fr/fr/statistiques/6327317?sommaire=6327324 2020: https://www.insee.fr/fr/statistiques/5349831?sommaire=5349833 2019: https://www.insee.fr/fr/statistiques/4464229?sommaire=4464231 2018: https://www.insee.fr/fr/statistiques/3856105?sommaire=3856444 2017: https://www.insee.fr/fr/statistiques/3535964?sommaire=3535969 2016: https://www.insee.fr/fr/statistiques/2646317?sommaire=2646324 2015: https://www.insee.fr/fr/statistiques/2045114?sommaire=2045120 2014: https://www.insee.fr/fr/statistiques/1492711?sommaire=1492717 |
| Hungary | "Statistical Yearbook of Hungary" | https://www.ksh.hu/apps/shop.kiadvany?p_kiadvany_id=1077256&p_temakor_kod=KSH&p_lang=EN The Statistical Yearbook of Hungary is a paid publication. The Hungarian Central Statistical Office kindly provided the relevant table for use in this study. |
| Hong Kong, China | "Report on the Survey on Information Technology Usage and Penetration in the Business Sector" | https://www.censtatd.gov.hk/en/EIndexbySubject.html?scode=590&pcode=B1110005 |

| Economy | Source name | Link(s) |
|--------------|---|--|
| Korea (Rep.) | “E-commerce and Cyber Shopping Survey in 2013 and in the Fourth Quarter 2013” | https://kostat.go.kr/portal/eng/pressReleases/1/index.board?bmode=read&aSeq=313310 |
| Malaysia | “Income of E-Commerce Transactions Surged 30.0 per cent in The First Quarter 2021” “Income of e-commerce transactions by establishments in year 2017 recorded an annual growth rate of 6.0 per cent as compared to 2015” | https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=489&bul_id=c1FiaHRCQnIRdkxzUUFkNFJncWtEQTO9&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09 https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=462&bul_id=U3FYOHJ3cE90UnNWMWdUaVMzREIKdz09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09 |
| Malta | “ICT Usage and e-commerce in Enterprises” | 2018-2021: https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_C2/Labour_Market_Statistics/Pages/ICT-Usage-and-e-commerce-in-Enterprises.aspx 2017: https://nso.gov.mt/en/News_Releases/Documents/2020/01/News2020_010.pdf 2016: https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_C4/Education_and_Information_Society_Statistics/Documents/2019/News2019_011.pdf 2015: https://nso.gov.mt/en/News_Releases/Archived_News_Releases/Documents/2018/News2018_011.pdf Note: in accordance with the EU community survey on ICT usage and e-commerce in enterprises, which Malta implements, the reporting period for e-commerce sales is the calendar year <i>prior</i> to the year the collection took place. As a result, the “2022” figure for “Total e-commerces sales” reflects to reporting year 2021, the figure labelled “2021” reflects reporting year 2020, etc. |
| Philippines | “Annual Survey of Philippine Business and Industry” | See “Table 1” in the following - 2016, 2017: https://psa.gov.ph/content/2017-annual-survey-philippine-business-and-industry-aspbi-economy-wide-all-establishments [see Table 1] 2014, 2015: https://psa.gov.ph/content/2015-annual-survey-philippine-business-and-industry-aspbi-economy-wide-all-establishments 2013: https://psa.gov.ph/content/2014-annual-survey-philippine-business-and-industry-economy-wide-all-establishments-final |
| Poland | “Use of information and communication technologies in public administration units, enterprises and households” | https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/wykorzystanie-technologie-informacyjno-komunikacyjnych-w-jednostkach-administracji-publicznej-przedsiębiorstwach-i-gospodarstwach-domowych-w-2022-roku,3,21.html |
| Singapore | “E-Commerce Revenue By Industry Group In All Services Industries” | https://tablebuilder.singstat.gov.sg Select: Industry > Services > Annual Services Statistics – All Services Industries > E-commerce Revenue By Industry Group In All Services Industries |

| Economy | Source name | Link(s) |
|----------------|---|---|
| Slovenia | “Value (million EUR) in enterprises with 10 or more employees and self-employed by type of e-commerce sales in the previous year” | 2020 onward: https://pxweb.stat.si/SiStatData/pxweb/en/Data/-/2965425S.px/ 2012-2019: https://pxweb.stat.si/SiStatData/pxweb/en/Data/-/2965405S.px |
| Spain | “Survey on ICT and Electronic Commerce use in Companies” | https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176743&menu=resultados&idp=1254735576692 |
| Thailand | “Value of e-Commerce survey in Thailand” | 2021 edition, in Thai (covers years 2017-2021): https://www.etda.or.th/Useful-Resource/publications/ValueThailand2021.aspx 2019 edition, in English (covers years 2016-2019): https://www.etda.or.th/Useful-Resource/publications/Value-of-e-Commerce-Survey-in-Thailand-2019_EN.aspx 2015 available in Thai at: https://www.etda.or.th/getattachment/6520cb1d-9f53-4135-9fba-6213bf9c2c11/etda-ecs-61_1-%E0%B8%A1%E0%B8%A5%E0%B8%84%E0%B8%B2-e-Commerce-%E0%B8%9B-2558-2561-%E0%B9%81%E0%B8%A5%E0%B8%B0%E0%B8%84-%E0%B8%B2%E0%B8%94%E0%B8%81%E0%B8%B2.aspx |
| United Kingdom | “E-commerce and ICT activity” | https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/datasets/ictactivityofukbusinessese-commerceandictactivity |
| United States | “E-Commerce Statistics (E-STATS)” | https://www.census.gov/programs-surveys/e-stats.html |

Annex 2. E-commerce definitional text from business survey questionnaire forms

Australia

An [order via the internet](#) is a transaction where the commitment to purchase goods or services is made via the internet regardless of how it was commenced.

Commitment is the agreement to purchase, whether or not payment is made via the internet.

Including

- Orders received via the internet with or without online payment
- Orders received via email

Excluding

- Orders covered by a pre-existing contractual arrangement where the commitment was not made via the internet
- Orders completed via telephone, facsimile or personal contact
- Orders received over any computer network other than the internet
- Cancelled internet orders

Source: [survey questionnaire provided by Australian Bureau of Statistics.](#)

Austria

E-commerce sales are [sales, orders or bookings](#) of goods or services via

- websites, apps or online marketplaces;
- EDI-based systems.

Sales, orders or bookings made with e-mails are excluded unless they are created automatically.

Payment and delivery do not necessarily have to be carried out electronically.

Source (in German, translated with Google Translate): https://www.statistik.at/stddoku/subdokumente/b_ikt-einsatz_in_unternehmen_ab_2005_fragebogen_2021.pdf

Canada

Include:

- all sales of this business's goods or services where the order was received, and the commitment to purchase was made, over the Internet, including through web pages, extranet or Electronic Data Interchange (EDI). Payment can be made by other means.
- sales made on company and third-party websites and apps.

Exclude:

- the delivery of digital products and services for which orders were not made online.
- orders received or commitments to purchase made by telephone, facsimile or email.

Source: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&lang=en&Item_Id=1317562.

Finland

- Electronic commerce refers to orders for products and services made via a computer network.
- In the definition of electronic commerce, the payment method is irrelevant. Payment can e.g. be made online during the purchase or later with an invoice.
- Electronic trade is carried out via websites or separate applications (online trade) or as electronic data transfer between companies (automatic data transfer, e.g. EDI).
- Answer in such a way that in questions about the value of e-commerce there is no double counting between e-commerce and orders made with automatic data transfer.

Source (in Finnish, translated with Google Translate): https://stat.fi/keruu/tsky/files/lomake_fi.pdf

| | |
|--------------------------------|--|
| <p>France</p> | <p>Une transaction de-commerce électronique est la vente ou l'achat de biens ou de services effectués sur des réseaux informatiques par des procédés spécialement conçus pour recevoir ou passer des commandes. Le paiement et la livraison des biens ou des services ne doivent pas nécessairement être effectués en ligne. Une transaction de-commerce électronique exclut les commandes passées par téléphone, fax ou par courriels tapés manuellement.</p> <p><i>[An e-commerce transaction is the sale or purchase of goods or services effected over computer networks by methods specifically designed to receive or place orders. The payment and delivery of the goods or services does not necessarily have to be effected online. An e-commerce transaction excludes orders made by telephone, fax, or manually typed emails].</i></p> <p>Source: https://www.insee.fr/en/metadonnees/source/operation/s2040</p> |
| <p>Hungary</p> | <p>E-commerce 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 payment and the delivery of the goods or services do not have to be conducted online. E-commerce transactions exclude orders made by manually typed e-mail messages.</p> <p>Source: provided by Hungarian Central Statistical Office.</p> |
| <p>Hong Kong, China</p> | <p>E-commerce sales is the sale of goods or services [to] customers, 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 organisations. Orders made in webpages or through electronic data transmission are regarded as e-commerce transactions, but these made by manually typed email, telephone calls or facsimile are not included. The type of e-commerce transaction (e.g. Web e-commerce or electronic data transmission e-commerce) is defined by the method of making the order.</p> <p>Source: provided by Census and Statistics Department, Government of the Hong Kong Special Administrative Region.</p> |
| <p>Korea (Rep.)</p> | <p>E-commerce transaction refers to "a transaction in which goods or services are made through an electronic commerce system on a computer network."</p> <p>At least one of bidding/contracting/ordering is done in the e-commerce system.</p> <p>Source (in Korean, translated with Google Translate): survey questionnaire available at https://www.narastat.kr/metascv/index.do.</p> |
| <p>Malaysia</p> | <p>Includes:</p> <ul style="list-style-type: none"> (1) Via websites, specialised internet marketplaces, extranets, EDI over the internet, Internet-enabled mobile phones (2) Orders received on behalf of other organisations (3) Orders received by other organisations on behalf of your business <p>Exclude: Orders submitted via email</p> <p>Source: https://www.dosm.gov.my/v1/uploads/files/2_Censuses%26Surveys/Services/ICTeC/2020/Borang-ICTEC-2020.pdf</p> |
| <p>Malta</p> | <p>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. E-Commerce comprises orders made in Web pages or apps, extranet or EDI and excludes orders made by telephone calls, facsimile, or manually typed e-mail. The type is defined by the method of making the order.</p> <p>Source: OECD, DSTI/ICCP/IIS(2009)5/FINAL</p> <p>Source: https://nso.gov.mt/en/nso/Sources_and_Methods/Unit_C2/Labour_Market_Statistics/Documents/2021/ICT%20ENT%20Questionnaire%202021.xlsx</p> |

| | |
|---------------------------|--|
| <p>Mexico</p> | <p>Comercio electrónico. Compra-venta de bienes y servicios a través de internet entre negocios, hogares, individuos, gobierno y otras organizaciones públicas o privadas, independientemente de que los pagos y las entregas no sean en línea. Incluye: las órdenes recibidas o colocadas en el correo electrónico y en cualquier aplicación montada sobre la internet, como Intercambio Electrónico de Datos (EDI) sobre internet o teléfonos celulares habilitados para conexiones a internet. Excluye: las órdenes recibidas o colocadas de manera telefónica o por fax.</p> <p>Ventas vía internet. Se refiere a la recepción de pedidos por internet de productos o servicios en el periodo señalado y desde cualquier lugar, independientemente de que los pagos de los pedidos recibidos se hicieron en línea o no. Incluye: los pedidos recibidos a través de sitios web, mercados especializados de internet, extranets, intercambio electrónico de datos por internet, teléfonos móviles habilitados para internet y correo electrónico. También incluye: los recibidos por este medio en nombre de otras organizaciones y los pedidos recibidos por otras organizaciones en nombre de la empresa. Excluye: los pedidos que fueron cancelados y los que no se concretaron.</p> <p><i>[Electronic commerce. Purchase and sale of goods and services through the Internet between businesses, households, individuals, government and other organizations public or private, regardless of whether payments and deliveries are not online. Includes: orders received or placed by e-mail and in any application mounted over the internet, such as Electronic Data Interchange (EDI) over the internet or cell phones enabled for internet connections. Excludes: orders received or placed by telephone or by fax.</i></p> <p><i>Sales via internet. Refers to the reception of online orders for products or services in the indicated period and from any place, regardless of whether the payments for the received orders were made online or not. Includes: orders received through websites, specialized online marketplaces, extranets, Internet electronic data interchange, internet-enabled mobile phones and e-mail. It also includes: those received by this means on behalf of other organizations and the orders received by other organizations in company name. Excludes: orders that were cancelled and those that did not materialise.]</i></p> <p>Source: https://inegi.org.mx/contenidos/programas/entic/2013/doc/cuestionario_entic_2013.pdf.</p> |
| <p>Philippines</p> | <p>An e-commerce transaction is the sale or purchase of goods or services conducted over computer networks by methods 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. (includes: orders made in web pages, extranet or EDI. Excludes: orders made by telephone calls, facsimile, or manually typed email).</p> <p>Source: https://psa.gov.ph/sites/default/files/2017%20SICT%20Publication_signed.pdf</p> |
| <p>Poland</p> | <p>E-commerce transactions are the sale and purchase of products (goods and services), goods and materials made online via networks where payments and deliveries can be made in the traditional way. Orders placed via handwritten emails are not counted as e-commerce transactions.</p> <p>Source (in Polish, translated with Google Translate): https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/zeszyt-metodologiczny-wskazniki-spoleczenstwa-informacyjnego-badania-wykorzystania-technologiej-informacyjno-komunikacyjnych,8,1.html [see appendix 4].</p> |
| <p>Singapore</p> | <p>E-commerce revenue refers to the revenue earned from the sale of goods and services whereby your company receives orders or agrees on the price on terms of sale via online means. This includes transactions through your company's / third-party websites, mobile applications, extranet or Electronic Data Interchange such as GeBIZ. This excludes agreement through telephone calls, facsimile and emails. Payment and delivery may or may not be made online.</p> <p>Source: SingStat (https://www.biz-esurvey.singstat.gov.sg/IBSS/explanatoryNotes/ais/AIS21.pdf).</p> |

| | |
|---|--|
| <p>Slovenia</p> | <p>Sale via websites Online sales include selling products or services, receiving reservations, orders via websites or e-markets (e.g. with preprepared order forms or via an online store, mobile applications 'apps') or via an extranet. In this case, it is not necessary that payment or delivery be made via websites. Disregard orders or reservations received by regular email. Sales via computerized data interchange (RIP) Sales via computer data exchange RIP or (EDI - Electronic Data Interchange) involves receiving orders in an agreed standardized format (e.g. XML, EDIFACT, UBL), which enables their automated processing. Sales take place between computer systems of companies or within a group of companies (e.g. between branches). Individual messages are not entered manually. Source (in Slovenian, translated with Google Translate): https://www.stat.si/statweb/File/DocSysFile/11821/IKT-PODJ_2022.pdf</p> |
| <p>Spain</p> | <p>En las ventas por comercio electrónico de bienes o servicios, el pedido se realiza a través de páginas web, aplicaciones o mensajes de tipo EDI mediante métodos diseñados específicamente para la recepción de pedidos. El pago se puede realizar tanto en línea como offline. Los pedidos realizados por correo electrónico escrito de forma manual NO se consideran comercio electrónico. <i>[In electronic commerce sales of goods or services, the order is placed through web pages, applications or EDI-type messages using methods specifically designed for the reception of orders. Payment can be made both online and offline. Orders placed by manually typed email are NOT considered e-commerce.]</i> Source: https://www.ine.es/metodologia/t09/eticce1_20.pdf.</p> |
| <p>Thailand</p> | <p>Electronic Commerce (e-Commerce) means a business that sells a product or a service to a customer via the internet or allows a customer to send a purchase order and reserve a product or a service via the internet (either through website or by email), while payment and delivery can be made via any channels. E-Commerce includes purchase orders received from websites or other internet applications such as extranets and other programs that operate through the internet (e.g., EDI19 and Mintel), regardless of the access channels. For example, users may choose to enter a website via mobile phone or television. However, e-commerce does not include purchase orders received by phone, fax, or from email interaction without an explicit purchase order. Source: https://www.eta.or.th/th/Useful-Resource/publications/Value-of-e-Commerce-Survey-in-Thailand-2019_EN.aspx (p.104).</p> |
| <p>United Kingdom</p> | <p>E-commerce 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 payment and the delivery of the goods or services do not have to be conducted online. E-commerce transactions exclude orders made by manually typed emails. Source: provided by the Office for National Statistics.</p> |
| <p>United States – manufacturing</p> | <p>E-shipments are online orders accepted for manufactured products from customers. These include shipments to other domestic plants of your own company for further manufacture, assembly, or fabrication. The price and terms of sale for these shipments are negotiated over an online system. Payment may or may not be made online. Include: Electronic Data Interchange (EDI); E-mail; Internet; Extranet; Other online systems. Source: https://www2.census.gov/programs-surveys/asm/technical-documentation/questionnaire/2019/questionnaires/2019_ma_10000_mu.pdf (p. 8).</p> |

**United States –
retail / wholesale
trade**

E-commerce is the sale of goods and services where the buyer places an order, or the price and terms of the sale are negotiated, over an Internet, mobile device (MCommerce), extranet, EDI network, electronic mail, or other comparable online system. Payment may or may not be made online.

Source: <https://www2.census.gov/programs-surveys/arts/technical-documentation/questionnaires/2021/sa-44d-21.pdf> (p. 3).

<https://www2.census.gov/programs-surveys/awts/technical-documentation/questionnaires/2021/sa-42a.pdf> (p.3).

**United States –
services**

“Revenues from electronic sources”. Questions in this section of the survey make clear that “electronic sources” comprise orders placed directly on the firm’s websites or mobile applications; orders placed on third-party websites or mobile applications; or orders entered “via any other electronic systems such as private networks, dedicated lines, etc.”. Responses may, therefore, include orders placed via automated phone systems or manually typed emails.

Source: <https://www2.census.gov/programs-surveys/sas/technical-documentation/questionnaires/2021/sa-22010.pdf> (p. 4).

Source: UNCTAD based on national sources.



Annex 3. Monetary concepts relevant to measuring the value of business e-commerce transactions in different economies

| Economy | Concept | Definition (if available) | Gross or net of tax | Other |
|-----------|---|---|---------------------|-------------------------|
| Australia | "Income from sales of goods and services" | <p>As stated on the questionnaire form, the information reported should comply with the Australian equivalents to International Financial Reporting Standards (AIFRS).</p> <p>The AIFRS state that Income encompasses both revenue and gains. Revenue is income that arises in the course of ordinary activities of an entity and is referred to by a variety of different names including sales, fees, interest, dividends and royalties.</p> <p>Revenue includes only the gross inflows of economic benefits received and receivable by the entity on its own account. Amounts collected on behalf of third parties such as sales taxes, goods and services taxes and value added taxes are not economic benefits which flow to the entity and do not result in increases in equity. Therefore, they are excluded from revenue. Similarly, in an agency relationship, the gross inflows of economic benefits include amounts collected on behalf of the principal and which do not result in increases in equity for the entity.</p> <p>The amounts collected on behalf of the principal are not revenue. Instead, revenue is the amount of commission.</p> <p>Source: https://www.aasb.gov.au/admin/file/content105/c9/AASB118_07-04_%20COMPapr07_07-07.pdf</p> | Net of GST | Net of discounts given. |
| Austria | "Sales" | <p>"Sales include the sum of the amounts invoiced in the company for ordinary business activities (excluding sales tax), which correspond to the sale or the transfer of use of products and goods or services rendered to third parties. All taxes and duties (except sales tax) and other expenses charged to the customer (e.g. transport) must be included. Sales deductions (e.g. cash discounts) are to be deducted."</p> <p>Source: https://www.statistik.at/stdoku/subdokumente/b_ikt-einsatz_in_unternehmen_ab_2005_fragebogen_2021.pdf (translated)</p> | Net of sales tax | Net of discounts. |
| Canada | "Gross sales" | <p>"The grand total of all sale transactions reported in a period, without any deductions from the figure".</p> <p>This "gross sales" figure would normally be reported by businesses excluding amounts collected for sales taxes.</p> <p>Source: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&Item_Id=1317562&TET=1</p> | Net of GST | |

| Economy | Concept | Definition (if available) | Gross or net of tax | Other |
|------------------|---|---|--|---------------------------------------|
| China | “Enterprise sales” | sales of goods and services [...] made by enterprises above designated size Source: information provided by National Bureau of Statistics, China. | Gross of VAT | |
| Finland | “Turnover” | “Turnover is as reported in the financial statement.” “Turnover is deemed to comprise sales profits from the actual activity of a party with a legal obligation to keep books, after deduction of granted discounts, value added tax and other taxes based direct on sales volume. In addition to the sales adjustment items, income transfer and passage through items are deducted from sales. These are items belonging to another party with a legal obligation to keep books, which only technically go through the books of this other party obliged to keep books. Paid sales freight, commissions and credit losses are not deducted from turnover.” Source: https://www.stat.fi/meta/kas/lvaihto_en.html#:~:text=Turnover%20refers%20to%20the%20information,enterprises%20within%20their%20respective%20industries. | Net of VAT | Net of discounts. |
| France | “Chiffre d'affaires (hors taxes)” [Turnover (excluding taxes)] | Turnover represents the amount of business (excluding taxes) done by a statistical unit (legal unit, enterprise) with third parties when exercising its normal and routine professional activity. It corresponds to the sum of sales of goods, manufactured products, service provisions and products from related activities. https://www.insee.fr/en/metadonnees/definition/c1703 Available in French: https://www.insee.fr/fr/metadonnees/definition/c1703 | Net of VAT | Gross of discounts for early payment. |
| Hungary | “Turnover” | “It is very important, if your enterprise consist of more than one legal unit, not to include turnover from internal trade among the different legal units of your enterprise.” Source: survey questionnaire provided by Hungarian Central Statistical Office | Net of VAT | |
| Hong Kong, China | “Business receipts” | “Business receipts refer to service receipts, receipts from sales of goods, commissions, rental, interest and other income of an establishment”. Source: https://www.censtatd.gov.hk/en/data/stat_report/product/B1080006/att/B10800062022QQ01B0100.pdf | HK does not have a VAT, GST, or sales tax. | |
| Indonesia | “Operating income” | “total operating income [is] the value obtained from the sale of goods/services and is different from the profit” Source: BPS Indonesia | Gross of sales taxes | |

| Economy | Concept | Definition (if available) | Gross or net of tax | Other |
|--------------|---|---|--|---|
| Korea (Rep.) | "Sales" | Source: survey questionnaire available at https://www.narastat.kr/metascv/index.do . Translated with Google Translate. | ? | |
| Malaysia | "Total income" | "refers to operating revenue/turnover/sales and other revenue" | ? | |
| Malta | "Value of turnover" | Source: https://nso.gov.mt/en/nso/Sources_and_Methods/Unit_C2/Labour_Market_Statistics/Documents/2021/ICT%20ENT%20Questionnaire%202021.xlsx | Net of VAT | |
| Mexico | "Monto de las ventas" [Sales amount] | "Ingresos derivados de la actividad. Es el monto que obtuvo la empresa por todas aquellas actividades de producción de bienes y servicios durante el periodo de referencia. Incluye: el valor de los bienes y servicios transferidos a otras unidades económicas, valorados a precio de venta. Excluye: IVA, IEPS, etcétera; los ingresos financieros, subsidios, cuotas, aportaciones y venta de activos fijos." [Income derived from the activity. It is the amount that the company obtained for all those activities of production of goods and services during the reference period. Includes: the value of goods and services transferred to other economic units, valued at sale price. Excludes: VAT, IEPS, etc.; financial income, subsidies, fees, contributions and sale of fixed assets] Source: survey questionnaire (https://inegi.org.mx/contenidos/programas/entic/2013/doc/cuestionario_entic_2013.pdf) | Net of VAT, IEPS (special tax on certain products) | Gross of discounts given for early payment. |
| Philippines | "Sales income" | Income or Revenue refers to cash received and receivables for goods/products and by-products sold and services rendered. Source: https://psa.gov.ph/content/2017-annual-survey-philippine-business-and-industry-aspbi-economy-wide-all-establishments . | ? | |
| Poland | "Net value of sales revenue" | "Net revenues from the sale (domestic and export) of products (goods and services) produced by the unit, as well as external services, if they are invoiced to recipients together with the products, and net revenues from the sale of goods and materials –regardless of whether they have been paid– adjusted for due payments, discounts and rebates granted, etc. The value of net sales revenue should be consistent [with the relevant financial reporting standards]" Source (in Polish, translated with Google Translate): https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/zeszyt-metodologiczny-wskazniki-spoleczenstwa-informacyjnego-badania-wykorzystania-technologie-informacyjno-komunikacyjnych,8,1.html [see appendix 4]. | Net of VAT | Net of discounts |

| Economy | Concept | Definition (if available) | Gross or net of tax | Other |
|-----------|--|---|-----------------------------|--|
| Singapore | Revenue | <p>“the amount received and receivable from the various business activities during 2021 [exclusive of GST]. The amount collected with respect to previous year’s receivables should be excluded.”</p> <p>Source: https://www.biz-esurvey.singstat.gov.sg/IBSS/explanatoryNotes/ais/AIS21.pdf</p> | Net of GST | |
| Slovenia | “Revenue” | Consider the total value of revenue generated through your own website, extranet and e-marketplace. If you do not have this information, ask the appropriate person who does. | Net of VAT | |
| Spain | “Cifra de negocios” [Turnover] | <p>“Includes the total amounts invoiced by the observation unit, during the reference period, for the sales of goods and services supplied to third parties, considering both those carried out directly by the observation unit itself, and those from temporary outsourcing.</p> <p>These sales of goods or services are accounted for in net terms, that is, including the charges to the client (transport, packages, etc.), though invoiced separately, but deducting the discount on sales for early payment, returns of sales or the value of returned packages, as well as taxes on sales. This includes taxes and fees on goods or services invoiced by the unit, but excludes the VAT paid by the client.</p> <p>From an administrative point of view, the General Accounting Plan (PGC) (RD 1514/2007, of 16 November) defines the Total net value of turnover, using the following accounting items: C700+C701+C702+C703+C704+C705-C706-C708-C709 with:</p> <p>C700. Sales of merchandise C701. Sales of finished products C702. Sales of semi-finished products C703. Sales of sub-products and waste C704. Sales of packages and packaging C705. Provision of services C706. Discount on sales for early payment C708. Returns of sales and similar transactions C709. “Taxes” on sales</p> <p>Therefore, turnover includes neither subsidies nor other operating income. It also excludes financial and extraordinary income, and other income that affects the results of the fiscal year.”</p> <p>Source: https://www.ine.es/DEFIne/en/concepto.htm?c=4797&op=30061&p=1&n=20</p> <p>Available in Spanish: https://www.ine.es/DEFIne/es/concepto.htm?c=4797&op=30061&p=1&n=20</p> | Net of taxes on sales (VAT) | Net of returns and discounts for early payment |
| Thailand | “Total sales of products / services (including VAT)” | <p>Source: https://www.etda.or.th/Useful-Resource/publications/Value-of-e-Commerce-Survey-in-Thailand-2019_EN.aspx</p> | Gross of VAT. | |

| Economy | Concept | Definition (if available) | Gross or net of tax | Other |
|------------------------------|--|---|---|---|
| United Kingdom | "Turnover" | Defined in the Companies Act 2006: "Turnover, in relation to a company, means the amounts derived from the provision of goods and services after deduction of – trade discounts, value added tax, and any other taxes based on the amounts so derived". Source: https://www.legislation.gov.uk/ukpga/2006/46/section/474/2009-01-01#:~:text=%E2%80%9Cturnover%E2%80%9D%2C%20in%20relation%20to,(b) | Net of VAT (and any other sales taxes). | |
| United States: Manufacturing | "Sales, shipments, receipts, or revenue" | Include: All products physically shipped from this establishment during 2019. Exclude: Freight charges, Excise taxes Source: https://www2.census.gov/programs-surveys/asm/technical-documentation/questionnaire/2019/questionnaires/2019_ma_10000_mu.pdf | Net of excise taxes | |
| United States: Services | "Sales, receipts, or revenue" | Respondents are asked to "Report gross billings", which refers to "the full amount billed on an invoice prior to applying any discounts". For more precisions see: https://www2.census.gov/programs-surveys/sas/technical-documentation/questionnaires/2021/sa-51790.pdf | Net of sales taxes | |
| United States: Retail | "Sales, receipts, or revenue" | Credit and cash net sales of merchandise For more precisions see: https://www2.census.gov/programs-surveys/arts/technical-documentation/questionnaires/2021/sa-44t-21.pdf | Net of sales taxes | Net of rebates and discounts granted to customers |
| United States: Wholesale | "Sales, receipts, or revenue" | Include: Sales of products that are shipped on this firm's orders directly to customers. Retail sales made by wholesale establishments covered by this survey. Gross value of sales made on a commission basis (not your actual commissions). Receipts from freight, installations, rentals, maintenance, repairs, alterations, storage, and other such services. Excise taxes (such as those on gasoline, liquor, and tobacco) that are levied on the manufacturer and included in the cost of products purchased by this firm. Source: https://www.census.gov/programs-surveys/awts/technical-documentation/questionnaires.html | Gross of excise taxes | |

Source: UNCTAD based on national sources

Austria

2.2 How much do you estimate the value of all your company's sales or orders received made through websites, apps or online marketplaces in 2020?

a. In 1.000 Euro

or

b. In % of sales 2020

Sales include the sum of the amounts invoiced in the company for ordinary business activities (excluding sales tax), which correspond to the sale or the transfer of use of products and goods or services rendered to third parties. All taxes and duties (except sales tax) and other expenses charged to the customer (e.g. transport) must be included. Sales deductions (e.g. cash discounts) are to be deducted.

54

2.7 Please break down the revenue of all sales or orders received through your company's websites, apps or online marketplaces in 2020 by origin of customers:

a. Austria

b. Other EU member countries

c. Countries outside the EU (worldwide)

In total

100 %

2.10 What is your estimate of the value of all sales or orders received by your company made via EDI-based systems or other forms of electronic data transmission (e.g. XML, EDIFACT) in 2020?

a. In 1.000 Euro

or

b. In % of sales 2020

Sales include the sum of the amounts invoiced in the company for ordinary business activities (excluding sales tax), which correspond to the sale or the transfer of use of products and goods or services rendered to third parties. All taxes and duties (except sales tax) and other expenses charged to the customer (e.g. transport) must be included. Sales deductions (e.g. cash discounts) are to be deducted.

Source: https://www.statistik.at/stddoku/subdokumente/b_ikt-einsatz_in_unternehmen_ab_2005_fragebogen_2021. pdf translated from German to English using Google Translate.

Canada

- 21** What were this business's total gross sales conducted over the Internet in 2021?
- If precise figures are not available or the year is not yet complete, please provide your best estimate in Canadian dollars.
- : Rounded to the nearest CAN\$
: OR
1: Don't know
- 22** In 2021, what percentage of the value of this business's gross sales was made over the Internet?
- If precise figures are not available or the year is not yet complete, please provide your best estimate.
- : Percentage
: OR
1: Don't know
- 23** In 2021, what percentage of the value of this business's gross sales conducted over the Internet were for the following goods and services?
- If precise figures are not available or the year is not yet complete, please provide your best estimate. Only enter "0" if this business did not have any sales in a particular category.
- a: Digitally delivered goods and services
b: Other Services
c: Physical goods

- 26** What percentage of this business's gross sales conducted over the Internet were obtained from each of these regions in 2021?
- If precise figures are not available or the year is not yet complete, please provide your best estimate.
- Enter "0" if this business did not make any sales to a particular region.
- a: Canada
b: United States
c: Mexico
d: Other Latin America and the Caribbean
e: China
f: Other Asia
g: The European Union
h: The United Kingdom
i: Other regions

Source: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&lang=en&Item_Id=1317562

Finland

The company's turnover in 2021

 €

Orders for products or services made here are counted as online shopping:

- On the company's own website:
 - in the online store
 - with applications for mobile devices
 - to the electronic form on the website
 - in the extranet (online store or electronic form) with service
 - booking applications
- In the electronic marketplace

Orders made as a standard e-mail message are not an online store.

3.2 How big was the share of your online store's turnover in 2021?

(From own websites or applications and electronic marketplaces in total.)

Note the definition of online shopping above.

Answer only one of a OR b

a. Value of online store sales in 2021, €

OR

b. Estimated proportion of turnover, %

3.5 Estimate the distribution of the value of your company's online store to the sale of the following products or services in 2021:

Fill in all fields, including null values

a. Goods, material goods (ordered online, delivered later), %

b. Electronic products (download, save or use on the internet you), %

c. Services (ordered on the internet, used later, e.g. accommodation, trips, tickets for various events), %

3.7 Estimate the distribution of the value of your company's e-commerce in orders for products or services received from the following areas in 2021:

Fill in all fields, including null values

a. Finland, %

b. Others EU countries, %

c. Other countries, %

3-B Electronic trade in your company's sales via automatic data transmission

Selling via automatic data transfer here refers to orders placed by your customers: with EDI (Electronic Data

- Interchange).
 - EDI is a procedure in which a quantitative data flow is produced from the information located in the company's information system, which is transmitted electronically to the receiving organization and can be automatically further processed there.
 - In Finland, the term EDI/OVT is often used. Examples of EDI: EDIFACT, ODETTE, XML/EDI.
 - EDIFACT is the UN message standard. XML/EDI refers to the use of the XML standard in the transfer of business-related data of companies to another organization, e.g. xCBL, RosettaNet, PapiNet, ebXML.
- Including automatic demand driven orders generated by the system.
- Including orders that are received directly into your ERP system.

Answer in such a way that in questions about the value of e-commerce there is no double counting between e-commerce and orders made with automatic data transfer.

3.10 How large was the share of the 2021 turnover from the orders you received via automatic data transmission?

(The sum of online shopping (question 3.2) and section 3.10 must not exceed the company's turnover)

Answer only one of a OR b

a. Automatic
 value of the transaction
 made in 2021, €

OR

b. Estimated proportion
 of turnover, %

Source: https://stat.fi/keruu/tsky/files/lomake_fi.pdf translated from German to English using Google Translate.

France

→ 2. En 2021, quel a été le montant consolidé de vos ventes web * ?
 (ventes web réalisées par des unités implantées en France, y compris volume d'affaires sur les places de marché (marketplaces), hors taxes, en milliers d'euros)

 k€

Si vous pouvez fournir ce nombre, passez à la question 4 de ce module.

→ 3. Si vous ne pouvez pas indiquer ce montant, veuillez en donner une estimation en pourcentage du chiffre d'affaires total consolidé hors taxes de votre entreprise/groupe (indiqué aux questions 4 ou 5 des données de cadrage) :

 %

→ 4. Selon nos informations, le dernier chiffre d'affaires consolidé* hors taxes de votre entreprise/groupe est le suivant (en milliers d'euros) : xxx k€. Ce chiffre d'affaires était-il au même niveau en 2021 ?
 (à plus ou moins 5 %)

Oui
 Non

Si OUI, passez à la question 6 de ce module.

→ 5. Veuillez indiquer le montant du chiffre d'affaires consolidé hors taxes de votre entreprise/groupe en 2021 (en milliers d'euros) :

 k€

→ 10. En 2020, quelle était la répartition du montant de vos ventes web par origine de la clientèle ? ✓

Se référer au montant ou à la part des ventes web indiqués aux questions III.2 ou III.3.
(le total doit être égal à 100%)

| Part du montant des ventes web réalisées | |
|--|-------|
| France | % |
| Autres pays de l'Union européenne | % |
| Hors Union européenne | % |
| Total | 100 % |

→ 12. En 2021, quel a été le montant consolidé de vos ventes de type EDI* ?

(ventes EDI réalisées par des unités implantées en France, hors taxes, en milliers d'euros)

k€



Si vous pouvez fournir ce nombre, passez au module suivant.

→ 13. Si vous ne pouvez pas indiquer ce montant, veuillez en donner une estimation en pourcentage du chiffre d'affaires total consolidé hors taxes de votre entreprise/groupe (indiqué aux questions 4 ou 5 des données de cadrage) :

%

Source: https://www.insee.fr/fr/metadonnees/source/fichier/TIC2021_questionnaire.pdf

Hong Kong, China

D6. Please provide the value of e-commerce sales in 2020:

E-commerce sales include transactions made on behalf of other businesses (e.g. by provision of e-commerce platform for use by other businesses), and transactions made by other businesses on behalf of your firm (e.g. sales through e-commerce platforms of other businesses). In the case where your firm provides an e-commerce platform for use by other organisations, the value of e-commerce sales refers to the commissions and service charges only. Only the value of e-commerce sales (excluding commissions and service charges) should be reported if the e-commerce sales are made by other organisations on behalf of your firm.
For financial services, include commissions, premiums and fees earned in respect of online services.

(a) Of the value in total business receipts (D2), value of e-commerce sales was:

HK\$

(b) Proportion of e-commerce sales (D6(a)) to total business receipts (D2) was:

%

Source: questionnaire extract provided by Census and Statistics Department

Hungary

2. e-Commerce

E-commerce 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 payment and the delivery of the goods or services do not have to be conducted online.

E-commerce transactions **exclude** orders made by manually typed e-mail messages.

e-Commerce Sales

In the following questions please report separately for web sales and EDI-type sales.

Web sales of goods or services

Web sales covers orders, bookings and reservations placed by your customers via

- your enterprise's **websites or apps** :
 - online store (webshop)
 - web forms
 - extranet (webshop or web forms)
 - booking/reservation applications for services
 - apps for mobile devices or computers
- **e-commerce marketplace websites or apps** (used by several enterprises for trading goods or services).

Orders written in e-mail are **not** counted as web sales.

2.2. Please state the value of the turnover resulting from orders received, that were placed via a website or "apps" (in monetary terms, excluding VAT), in 2021.

It is very important, if your enterprise consist of more than one legal unit, not to include turnover from internal trade among the different legal units of your enterprise.

(Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a website or apps, in 2021.

 %

2.6. What was the percentage breakdown of the turnover from orders received via a website or "apps" in 2021 for the following:

It is very important, if your enterprise consist of more than one legal unit, not to include turnover from internal trade among the different legal units of your enterprise.

- 2.6.1. From Hungary
 2.6.2. Other EU countries
 2.6.3. Rest of the world

| | |
|------------|---|
| | % |
| | % |
| | % |
| 100 | % |

EDI-type sales

EDI-type sales cover orders placed by your customers via EDI-type messages (EDI: Electronic Data interchange) meanin

- in an **agreed or standard format** suitable for automated processing
- EDI-type order message created from the **business system** of the customer
- including orders transmitted via EDI-service provider
- including automatic system generated **demand driven orders**
- including orders received directly into your ERP system

Examples of EDI : EDIFACT, XML/EDI (e.g. UBL, Rosettanet,

2.8. During 2021, did your enterprise place orders for goods or services via a website, "apps", or EDI-type messages?

Yes No

2.9. What percentage of total turnover was generated by EDI-type sales of goods or services, in 2021?

(please refer to the provided definition of EDI-type sales)

It is very important, if your enterprise consist of more than one legal unit, not to include turnover from internal trade among the different legal units of your enterprise.

If you cannot provide the exact percentage an approximation will suffice

 %

Indonesia

| | |
|--|--|
| Berapa nilai seluruh pendapatan dari hasil penjualan barang/jasa selama tahun 2018? | Dari seluruh pendapatan usaha tahun 2018, berapa persen pendapatan yang berasal dari penjualan melalui internet? (persen) |
| Isikan dalam rupiah | |

What is the total value of income from the sale of goods/services during 2018? *Fill in rupiah [left column]*

Of all operating revenues in 2018, what percentage of revenue comes from sales via the internet? (percent) [right column]

Source: <https://www.bps.go.id/publication/2019/12/18/fd1e96b05342e479a83917c6/statistik-e-commerce-2019.html>, translated with Google Translate.

Korea (Rep.)

II. Sales through own e-commerce sales system (including the use of overseas sales systems)

| Sales system name (url) | Transaction type | Sales amount | Proportion of sales by sales target (%) | | |
|-------------------------|----------------------------|--------------|---|--------|-------|
| | | | Domestic | Abroad | Total |
| | Open sales ¹⁾ | | | | |
| | Closed sales ²⁾ | | | | 100 |
| | Open sales | | | | 100 |
| | Closed sales | | | | 100 |
| Total e-commerce sales | | | | | 100 |

1. Open sales: bidding method or sales to a large number of unspecified companies
2. Closed sales: Sales using a closed network with fixed customers (targets for fixed delivery of materials and products)

IV. Transaction amount using an e-commerce system owned by other companies in Korea

| Field | System name (url) | Transaction amount |
|---------------------|-------------------|--------------------|
| Sales (domestic) | | |
| Purchase (Domestic) | | |

Source: replicated from survey questionnaire available at <https://www.narastat.kr/metasvc/index.do>. Translated with Google Translate.

Malaysia

| | |
|--|---|
| <p>4.2 Jumlah pendapatan (Merujuk kepada jumlah hasil kendalian / perolehan / jualan dan hasil lain) <i>Total income (Refers to operating revenue / turnover / sales and other revenue)</i></p> | <p>RM 080089</p> <input style="width: 100%; height: 20px;" type="text"/> |
|--|---|

| | |
|---|---|
| <p>6.5 Sila nyatakan jumlah pendapatan yang diterima daripada jualan barangan atau perkhidmatan menggunakan e-dagang <i>Please indicate the total income that receive orders from sales of goods or services via e-commerce</i></p> <p>Jika tuan tidak dapat membekalkan nilai, <i>If you can't provide the value,</i></p> <p>Sila nyatakan anggaran peratusan jumlah pendapatan yang diterima daripada jualan barangan atau perkhidmatan menggunakan e-dagang <i>Please indicate an estimate of the percentage of total income that receive orders from sales of goods or services via e-commerce</i></p> | <p>RM 3100</p> <p>44 <input style="width: 100%; height: 20px;" type="text"/></p> <p>45 <input style="width: 30px; height: 20px;" type="text"/> (%)</p> |
| <p>Nota / Notes: Bagi pesanan internet yang diterima bagi pihak organisasi lain, sila laporkan hanya yuran atau komisen yang diterima <i>For internet orders received on behalf of other organisations, include only fees or commissions earned</i></p> | |

| | |
|--|---|
| <p>6.8 Sila nyatakan peratusan pendapatan e-dagang mengikut jenis pasaran <i>Please indicate the percentage of e-commerce income by types of market</i></p> <p>(a) Tempatan <i>Domestic</i></p> <p>(b) Antarabangsa <i>International</i></p> <p>JUMLAH TOTAL</p> | <p>3100</p> <p>54 <input style="width: 30px; height: 20px;" type="text"/> (%)</p> <p>55 <input style="width: 30px; height: 20px;" type="text"/> (%)</p> <p>100 (%)</p> |
| <p>Nota / Notes: Jika peratusan pendapatan antarabangsa e-dagang diisi, sila ke Soalan 6.9 <i>If the percentage of e-commerce international income is filled, please go to Question 6.9</i></p> | |

Source: https://www.dosm.gov.my/v1/uploads/files/2_Censuses%26Surveys/Services/ICTeC/2020/Borang-ICTeC-2020.pdf

Mexico

| | |
|---|--|
| <p>48. Indique el número de transacciones y el monto aproximado de ventas de mercancías ó prestación de servicios vía internet durante el año 2012.</p> | |
| <p>48.1 Número de transacciones de ventas vía internet</p> | <p>Número de transacciones</p> <input style="width: 100%; height: 20px;" type="text"/> |
| <p>48.2 Monto de las ventas vía internet.....</p> | <p>Miles de pesos</p> <input style="width: 100%; height: 20px;" type="text"/> |

| | |
|--|--|
| <p>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.</p> | |
| <p>Porcentaje</p> <p>50.1 Nacional</p> <p>50.2 Extranjero</p> <p>50.0 TOTAL</p> | <p><input style="width: 100%; height: 20px;" type="text"/></p> <p><input style="width: 100%; height: 20px;" type="text"/></p> <p>100%</p> |

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

Malta

| | | |
|-----------|---|---|
| B2 | Please state the value of the turnover resulting from orders received that were placed via a website or apps (in monetary terms, excluding VAT) in 2020. | |
| | If you can't provide this value, please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a website or apps in 2020. | % |

| | | |
|-----------|---|---|
| B9 | Please state the value of the turnover resulting from orders received that were placed via EDI-type messages (in monetary terms (in euros), excluding VAT) in 2020. | |
| | If you can't provide this value, please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a EDI-type messages in 2020. | % |

| | | |
|-----------|---|--|
| X3 | Total turnover (in monetary terms, excluding VAT), for 2020 | |
|-----------|---|--|

Source: https://nso.gov.mt/en/nso/Sources_and_Methods/Unit_C2/Labour_Market_Statistics/Pages/ICT-Usage-by-Enterprises.aspx

Poland

| | | |
|-----------|--|---|
| X3 | Net value of revenues from the sale of products (goods and services), goods and materials in 2018 <i>Data should be provided on the basis of available records.</i> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <i>in thousands of zlotys without a decimal point</i> |
|-----------|--|---|

Department J. E-COMMERCE (e-commerce)

E-commerce transactions are the sale and purchase of products (goods and services), goods and materials made online via computer networks, while payments and deliveries can be made in a traditional way.

Orders placed via handwritten emails are not counted as e-commerce transactions.

E-SALES

Please complete separately the part regarding sales via websites or mobile applications and the part regarding sales via EDI systems.

SALE THROUGH WEBSITES OR MOBILE APPLICATIONS

Sales via websites include both orders placed by customers via the company's website (online store, extranet, mobile application), as well as orders received from customers via online trading platforms, auction sites (e.g. Allegro) and related to them mobile applications.

C. What percent of total revenue of this establishment was generated from e-commerce via network channels other than Internet in 2017?

_____ %

03

Source: https://psa.gov.ph/sites/default/files/2017%20SICT%20Publication_signed.pdf

Singapore

E-Commerce (Exclusive Of GST)

E-commerce revenue refers to the revenue earned from the sale of goods and services whereby your company receives orders or agrees on the price on terms of sale via online means.

This includes transactions through your company's / third-party websites, mobile applications, extranet or Electronic Data Interchange such as GeBIZ.

This excludes agreement through telephone calls, facsimile and emails.

Payment and delivery may or may not be made online.

Total E-commerce Revenue forms part of the "TOTAL RECEIPTS" reported in SECTION 3 : GROSS INCOME/RECEIPTS. If actual figures are not available, please provide your best estimate.

SGD

Total E-Commerce Revenue (if applicable)

This field is a required field.

Source: survey extract provided by SingStat

Slovenia

Lot K Selling via websites

Online sales involve selling products or services, receiving bookings, orders via websites or e-marketplaces (e.g. with pre-made order forms or via an **online shop, mobile 'apps'**) or via an **extranet**. Payment or delivery does not necessarily have to be made via websites. **Do not take into account orders or bookings made by regular email.**

K 2

What was the value of revenue generated by website sales in 2021 (excluding VAT)?

Take into account the total value of revenue generated through your own website, extranet and e-marketplace. If you do not have this information, ask the relevant person who does.

a) Value of revenue generated in 2021 through websites:

EUR → Continue to K 3

b) Then please estimate the proportion of the value of the revenue generated in 2021 through the website, compared to the value of the total revenue generated in 2021:

%

K 5 What proportion of the value of the revenue generated in 2021 by online sales was generated by online sales in Slovenia, by sales to other EU Member States and by sales to other countries?

Example: if the value of sales via websites in 2021 was e.g. EUR 8 000, of which EUR 4 000 in Slovenia, EUR 2 000 to other EU Member States and EUR 2 000 to other countries, then enter 50 for a), 25 for b) and 25 for c).

a) Slovenia: %

b) To other EU countries: %

c) To other countries: %

TOTAL %

Assembl Sales via computerised data interchange (RIP)

RIP or EDI (Electronic Data Interchange) sales involve receiving orders in an **agreed standardised format (e.g. XML, EDIFACT, UBL)** that allows automated processing. Sales are made between companies' computer systems or within a group of companies (e.g. between branches). Individual messages are not entered manually.

L 1 Did your company sell products/services or receive orders via RIP (EDI) in an agreed format (e.g. XML, EDIFACT, UBL) in 2021?

Please note:

- Receipt of orders in an agreed format suitable for automated processing, e.g. XML, EDIFACT, UBL, Rosettanet,
- RIP (EDI) orders created by the business partner's IT system,
- orders received directly into your ERP system, e.g. Microsoft Dynamics NAV, SAP ERP, Pantheon,
- Receipt of an ePrescription order from pharmacies.

1 Yes → Continue to **L 2**

2 No → Continue to **M1** **Block M**

L 2 What was the value of sales (excluding VAT) via RIP (EDI) in 2021?

If you do not have this information, ask the person who does.

a) Value of RIP sales in 2021: EUR → Continue to **L 3**

b) Then please estimate the share of the value of sales through RIPs compared to the value of total sales in 2021: %

Source: https://www.stat.si/statweb/File/DocSysFile/11821/IKT-PODJ_2022.pdf, translated with DeepL Translator.

A.2 Cifra de negocio en 2020

Consigne el total de ventas comerciales de bienes y servicios, excluidos impuestos. Incluye las siguientes partidas del actual Plan General de Contabilidad (700+701+702+703+704+705+706-708-709).

Importe (€ sin decimales)

Cifra de negocio (excluido el IVA) _____

K.1.2 Durante 2020, ¿qué porcentaje aproximado de la cifra de negocios fue generado por las ventas web de bienes o servicios? (excluido el IVA)

Por favor, ver definición de ventas web de bienes o servicios más arriba

Porcentaje (con 1 decimal)

, %

K.1.7 Desglose, en porcentaje estimado, el importe de las ventas web en 2020 por área geográfica (excluido el IVA)

Porcentaje (sin decimal)

| | |
|---|---|
| a) A España _____ | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> % |
| b) A otros países de la UE ¹ _____ | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> % |
| c) Al resto de países _____ | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> % |
| | 1 0 0 % |

K.1.10 Indique, en porcentaje estimado, el importe total de las ventas correspondientes a pedidos/reservas de bienes o servicios realizados mediante mensajes tipo EDI o similar en 2020 (excluido el IVA) sobre el importe total de las ventas efectuadas

Porcentaje (con 1 decimal)

, %

K.1.12 Desglose, en porcentaje estimado, el importe de las ventas realizadas mediante mensajes tipo EDI o similar en 2020 por área geográfica (excluido el IVA)

Porcentaje (sin decimal)

| | |
|---|---|
| a) A España _____ | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> % |
| b) A otros países de la UE ¹ _____ | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> % |
| c) Al resto de países _____ | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> % |
| | 1 0 0 % |

1. Otros países de la UE: Alemania, Austria, Bélgica, Bulgaria, Chipre, Croacia, Dinamarca, Eslovaquia, Eslovenia, Estonia, Finlandia, Francia, Grecia, Hungría, Irlanda, Italia, Letonia, Lituania, Luxemburgo, Malta, Países Bajos, Polonia, Portugal, República Checa, Rumania, Suecia.

Thailand

Part 2: Sales Value (Total Sales)

4) Total sales of goods and services in 2018 and sales forecast for 2019-2020

4.1) In 2018, what was the total sales of products/services (including VAT) made via both the internet and off-line channels?

THB

4.2) In 2018, what was the total sales of products/services (including VAT) made via the internet channels²³ only?

THB

4.3) In 2019, what was the total sales of products/services (including VAT) made via both the internet channels and off-line channels?

THB

4.4) In 2019, what was the total sales of products/services (including VAT) made via the internet channels only?

THB

4.5) Considering the forecast for 2020, how much will the total sales of products/services (including VAT) made via both the internet channels and off-line channels be?

THB

4.6) Considering the forecast for 2020, what will the total sales of products/services (including VAT) made via the internet channel only be?

THB

4.8) In 2018, what were the domestic and international percentage shares of the value of product/service sales made via the internet?

Domestic _____ % International _____ %

Source: https://www.eta.or.th/th/Useful-Resource/publications/Value-of-e-Commerce-Survey-in-Thailand-2019_EN.aspx

United Kingdom

During 2021, what was your business's turnover from e-commerce sales?

During 2021, what was your business's turnover from e-commerce sales to customers located outside the UK?

How much of the value of the turnover from e-commerce sales to customers located outside the UK came from the following areas?

- European Union countries
- Other European countries (excluding UK countries)
- Africa
- Australasia and Oceania
- Asia
- The Americas and the Caribbean

Responses requested in £.

Source: <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/2021digitaleconomysurveysurveyquestions#e-commerce-sales>

United States

Manufacturing

ITEM 5: SALES, SHIPMENTS, RECEIPTS, OR REVENUE

A. What was the total value of products shipped and other receipts for this establishment?
(Report detail in **Item 22.**)

Include:

- All products physically shipped from this establishment during 2019

Exclude:

- Freight charges
- Excise taxes

Check if None

| | 2019 | 2018 |
|--|---------------------------------|---------------------------------|
| | \$ <input type="text"/> ,000.00 | \$ <input type="text"/> ,000.00 |

C. What percent of the \$,000.00 reported in **Item 5**, line A was for goods that were ordered or whose movement was controlled or coordinated over electronic networks? (Report whole percent.)

E-shipments are online orders accepted for manufactured products from customers. These include shipments to other domestic plants of your own company for further manufacture, assembly, or fabrication. The price and terms of sale for these shipments are negotiated over an online system. Payment may or may not be made online.

Include:

- Electronic Data Interchange (EDI)
- E-mail
- Internet
- Extranet
- Other online systems

% %

Source: https://www2.census.gov/programs-surveys/asm/technical-documentation/questionnaire/2019/questionnaires/2019_ma_10000_mu.pdf

Services

6 SALES, RECEIPTS, OR REVENUE

What were the revenues for this firm in 2021?

Include:

- Report gross billings, **except** where noted elsewhere on the form.
- Dues and assessments from members and affiliates.
- Amounts received for work subcontracted to others.
- For locations that were sold or acquired during a year, only report for the periods that this firm operated the locations.
- Revenue from services performed by domestic locations of foreign parent firms, subsidiaries, branches, etc.
- Revenues from electronic sources.

Exclude:

- Transfers made within the company.
- Taxes collected directly from customers or clients and paid directly to a local, state, or federal tax agency.
- Rents from and revenue of separately operated departments, concessions, etc., which are leased to others.
- Commissions from vending machine operators.
- Revenue of foreign subsidiaries (those located outside the U.S., i.e., outside the 50 states or the District of Columbia).

| | Mark "X" if None | 2021 | | | |
|---|--------------------------|---------|------|-------|------|
| | | \$ Bil. | Mil. | Thou. | Dol. |
| 1. Publishing and broadcasting of content on the Internet - Publishing and broadcasting audio, video, text and graphics content on the Internet. Include Internet content paid for by subscriptions, pay-per-view, membership fees, fees for downloads, and fees for other forms for licensed access 6271 | <input type="checkbox"/> | | | | |
| 2. Online advertising space - Provision of space for electronic advertising distributed over the Internet (e.g., banner ads, buttons, text links, interstitials, rich media ads, streaming audio and video ads) 6014 | <input type="checkbox"/> | | | | |
| 3. Licensing of rights to use intellectual property - Granting permission to others to use (e.g., broadcast, publish, reproduce, record, modify, incorporate, distribute) intellectual property (e.g., software, books, films, plays, music, graphics, photography, inventions, processes, trademarks) for an agreed period of time. Exclude the outright sale of rights in perpetuity; report these in line 4 6272 | <input type="checkbox"/> | | | | |
| 4. All other operating revenue - Revenue not reported in lines 1 through 3. If this item is greater than 20% of the total operating revenue, specify the primary source of the revenue below ∇ | <input type="checkbox"/> | | | | |
| 5. TOTAL OPERATING REVENUE Sum of lines 1 through 4 1800 | <input type="checkbox"/> | | | | |

8 REVENUES FROM ELECTRONIC SOURCES

A. Did this firm have any revenues from customers entering orders directly on the firm's websites or mobile applications in 2021?

0040 Yes
 No

B. Did this firm have any revenues from customers entering orders directly on third-party websites or mobile applications in 2021?

0041 Yes
 No

C. Did this firm have any revenues from customers entering orders via any other electronic systems (such as private networks, dedicated lines, etc.) in 2021?

0042 Yes
 No

D. Of the total 2021 revenues reported in 8, what was the dollar amount (or percentage) that was from the revenues identified in A-C above? Please provide an estimate if exact figures are not available. 2500

| 2021 | | | |
|---------|------|-------|------|
| \$ Bil. | Mil. | Thou. | Dol. |
| | | | |

OR 2501

| 2021 | |
|---------|---|
| Percent | % |
| | |

Source: <https://www2.census.gov/programs-surveys/sas/technical-documentation/questionnaires/2021/sa-51913.pdf>

Retail trade

5 E-COMMERCE

E-commerce is the sale of goods and services where the buyer places an order, or the price and terms of the sale are negotiated, over an Internet, mobile device (M-Commerce), extranet, EDI network, electronic mail, or other comparable online system. Payment may or may not be made online.

A. Did this firm have any e-commerce sales in 2021?

Yes
 No - Go to 6

B. What were the total e-commerce sales in 2021?

| 2021 | | | |
|---------|------|-------|------|
| \$ Bil. | Mil. | Thou. | Dol. |
| | | | |

Source: <https://www2.census.gov/programs-surveys/arts/technical-documentation/questionnaires/2021/sa-44t-21.pdf>

Wholesale trade

5 E-COMMERCE, INCLUDING EDI
 E-commerce is the sale of goods and services where the buyer places an order, or the price and terms of the sale are negotiated, over an Electronic Data Interchange (EDI), the Internet, mobile device (M-Commerce), or any other online system. Payment may or may not be made online.

A. Did this firm have any e-commerce sales in 2021?

Yes

No - Go to **6** on the next page

B. What were the total e-commerce sales in 2021?
 This amount should equal the sum of **5B1** and **5B2** shown below.

1. What were the EDI network sales in 2021, if any?

- EDI is the exchange of documents in standardized electronic form between organizations in an automated manner directly from a computer application in one organization to an application in another.

2. What were the online system sales in 2021, if any?

- Online systems include the Internet, mobile device (M-commerce), extranets, e-mail, and instant messaging.

| 2021 | | | |
|---------|------|-------|------|
| \$ Bil. | Mil. | Thou. | Dol. |
| | | | |
| | | | |
| | | | |

Mark "X" if None

72

Source: <https://www2.census.gov/programs-surveys/awts/technical-documentation/questionnaires/2021/sa-42a.pdf>

Annex 5. UK Digital Economy Survey 2021 – full e-commerce sales module

Quantities requested in £.

During 2021, did this business make any e-commerce sales?

During 2021, what was your business's turnover from e-commerce sales?

Of the value of turnover from e-commerce sales, what was the value of each of the following?

- Turnover from e-commerce sales via business's own website, app, or EDI
- Turnover from e-commerce sales via a digital intermediary platform

During 2021, did your business make any e-commerce sales to customers located in the UK?

During 2021, what was your business's turnover from e-commerce sales to customers located in the UK?

During 2021, to which customers located in the UK did your business make e-commerce sales?

- private consumers (business to consumer [B2C])
- public authorities (business to government [B2G])
- other businesses (business to business [B2B])

How much of the value of the turnover from e-commerce sales to customers located in the UK came from the following?

- Turnover from e-commerce sales to private consumers (business to consumer [B2C])
- Turnover from e-commerce sales to public authorities (business to government [B2G])
- Turnover from e-commerce sales to other businesses (business to business [B2B])

During 2021, what type of e-commerce sales did your business make to customers located in the UK?

- Sales of goods
- Sales of digitally delivered services
- Sales of non-digitally delivered services

How much of the value of the turnover from e-commerce sales to customers located in the UK came from the following?

- Turnover from e-commerce sales of goods
- Turnover from e-commerce sales of digitally delivered services
- Turnover from e-commerce sales of non-digitally delivered services

During 2021, what platforms did your business use to make e-commerce sales to customers located in the UK?

- Sales via this business' own website or app
- Sales via this business' own social media
- Sales via an online marketplace
- Sales via EDI
- Other

How much of the value of the turnover from e-commerce sales to customers located in the UK came from each platform?

- Turnover from e-commerce sales via this business' own website or app
- Turnover from e-commerce sales via this business' own social media
- Turnover from e-commerce sales via an online marketplace
- Turnover from e-commerce sales via EDI
- Turnover from e-commerce sales via other platforms

During 2021, which areas did your business make e-commerce sales to?

- European Union countries
- Other European countries (excluding UK countries)
- Africa
- Australasia and Oceania
- Asia
- The Americas and the Caribbean
- Did not make e-commerce sales to customers outside the UK

During 2021, what was your business's turnover from e-commerce sales to customers located outside the UK?

How much of the value of the turnover from e-commerce sales to customers located outside the UK came from the following areas?

- European Union countries
- Other European countries (excluding UK countries)
- Africa
- Australasia and Oceania
- Asia
- The Americas and the Caribbean

During 2021, to which customers located outside the UK did your business make e-commerce sales?

- private consumers (business to consumer [B2C])
- public authorities (business to government [B2G])
- other businesses (business to business [B2B])

How much of the value of the turnover from e-commerce sales to customers located outside the UK came from the following?

- Turnover from e-commerce sales to private consumers (business to consumer [B2C])
- Turnover from e-commerce sales to public authorities (business to government [B2G])
- Turnover from e-commerce sales to other businesses (business to business [B2B])

During 2021, what type of e-commerce sales did your business make to customers located outside the UK?

- Sales of goods
- Sales of digitally delivered services
- Sales of non-digitally delivered services

How much of the value of turnover from e-commerce sales to customers located outside the UK came from the following?

- Turnover from e-commerce sales of goods
- Turnover from e-commerce sales of digitally delivered services
- Turnover from e-commerce sales of non-digitally delivered services

During 2021, what platforms did your business use to make e-commerce sales to customers located outside the UK?

- Sales via this business' own website or 'app'
- Sales via this business's own social media
- Sales via an online marketplace
- Sales via EDI
- Other

How much of the value of turnover from e-commerce sales to customers located outside the UK came from each platform?

- Turnover from e-commerce sales via your business's own website or app
- Turnover from e-commerce sales via your business's own social media
- Turnover from e-commerce sales via an online marketplace
- Turnover from e-commerce sales via EDI
- Turnover from e-commerce sales via other platforms

During 2021, did your business experience any of the following difficulties when selling to customers located in European Union countries via a website or app?

- Adapting product labelling for sales
- Difficulties resolving complaints and disputes
- Language barriers when communicating with customers
- High costs of delivering or returning products
- Restrictions from business partners to sell to certain EU countries
- We did not have any of these difficulties

During 2021, did your business experience any of the following difficulties when selling via an online marketplace?

- Changes to your account or product listings by the platform
- Fees and commission charged by the platform
- Pricing of products on the platform
- Communication difficulties
- Difficulties with information exchange
- The sale of similar products by the platform itself
- Issues relating to the terms and conditions between the platform and the business
- The processing of payments and refunds
- We did not have any of these difficulties

5. References

Australian Bureau of Statistics 2018. *8167.0 – Selected Characteristics of Australian Business, 2016-17, explanatory notes*. Available at: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/8167.0Explanatory%20Notes12016-17?OpenDocument>

Census and Statistics Department 2022. *Report on the Survey on Information Technology Usage and Penetration in the Business Sector for 2021*. Available at: https://www.censtatd.gov.hk/en/data/stat_report/product/B1110005/att/B11100052021BE21B100.pdf

Department of Statistics, Malaysia 2020. *Survey on usage of ICT and e-commerce by establishment 2020*. Available at: https://www.dosm.gov.my/v1/uploads/files/2_Censuses%26Surveys/Services/ICTeC/2020/Borang-ICTEC-2020.pdf

Electronic Transactions Development Agency 2019. *Value of e-commerce survey in Thailand 2019*. Available at: https://www.eta.or.th/th/Useful-Resource/publications/Value-of-e-Commerce-Survey-in-Thailand-2019_EN.aspx

Instituto Nacional de Estadística 2022. *Business Turnover Index (BTI)*. Available at: https://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176958&menu=ultiDatos&idp=1254735576550

Merriam-Webster 2022. *Social Media*. Available at: <https://www.merriam-webster.com/dictionary/social%20media>

Ministry of Economy, Trade, and Industry (METI) 2021. *Market research on e-commerce*. Available at: <https://www.meti.go.jp/press/2022/08/20220812005/20220812005-h.pdf>

OECD 2011. *Guide to Measuring the Information Society*. Paris: OECD Publishing. Available at: <http://www.oecd.org/sti/measuring-infoeconomy/guide>

OECD 2021. *Trade in Employment*. Available at: https://stats.oecd.org/Index.aspx?DataSetCode=TIM_2021

Office for National Statistics 2022. *2021 Digital Economy Survey: survey questions*. Available at: <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/2021digitaleconomysurveysurveyquestions#e-commerce-sales>

Statistics Canada 2021. *Survey of Digital Technology and Internet Use - 2021*. Available at: https://www23.statcan.gc.ca/imdb/p3Instr.pl?Function=assembleInstr&Item_Id=1317562&TET=0

Statistics Canada 2022. *Digital technology and Internet use - 2021*. Available at: <https://www150.statcan.gc.ca/n1/daily-quotidien/220913/dq220913b-eng.htm>

Statistics Korea 2014. *E-commerce and Cyber Shopping Survey in 2013 and in the Fourth Quarter 2013*. Available at: <https://kostat.go.kr/portal/eng/pressReleases/1/index.board?bmode=read&aSeq=313310>

UNCTAD 2013. *The impact of trade on employment and poverty reduction*. Available at: https://unctad.org/system/files/official-document/cid29_en.pdf.

UNCTAD 2017. The growing role of e-commerce. In *Information economy report 2017: digitalisation, trade, and development*. Available at: https://unctad.org/system/files/official-document/ier2017_en.pdf

UNCTAD 2019. *Review of progress and pending challenges in measuring domestic and cross-border e-commerce 2016-2019*. Available at: https://unctad.org/system/files/official-document/tdb_edc_WorkingGroup2019_BN01_en.pdf

UNCTAD 2020. *Estimates of global e-commerce 2018*. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d15_en.pdf

UNCTAD. (2021a). *Manual for the production of statistics on e-commerce and the digital economy 2020*. Retrieved from <https://unctad.org/webflyer/manual-production-statistics-digital-economy-2020>

UNCTAD 2021b. *Estimates of global e-commerce 2019 and preliminary assessment of covid-19 impact on online retail 2020*. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d18_en.pdf

UNCTAD 2021c. *Global E-Commerce Jumps to \$26.7 Trillion, Covid-19 Boosts Online Retail Sales*. Available at: <https://unctad.org/press-material/global-e-commerce-jumps-267-trillion-covid-19-boosts-online-retail-sales>

UNCTAD 2021d. *Impacts of the COVID-19 pandemic on trade in the digital economy*. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d19_en.pdf



ISBN 978-92-1-113093-5

