



# Economic and Social Council

Distr.: General  
20 December 2017

Original: English

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## Statistical Commission

### Forty-ninth session

6–9 March 2018

Item 4 (h) of the provisional agenda\*

**Items for information: digital trade and e-commerce statistics**

## Report of the Inter-Agency Task Force on International Trade Statistics

### Note by the Secretary-General

In accordance with Economic and Social Council decision 2017/228 and past practices, the Secretary-General has the honour to transmit the report of Inter-Agency Task Force on International Trade Statistics on the topic of measuring digital trade. At recent meetings of the Committee on Statistics and Statistical Policy of the Organization for Economic Cooperation and Development, the Balance of Payments Committee of the International Monetary Fund and the Working Group on E-Commerce of the World Customs Organization, the topic of measuring digital trade was high on the agenda. Digital trade can be defined as all cross-border transactions that are either digitally ordered (i.e., cross-border e-commerce), digitally facilitated (by platforms) or digitally delivered. It has been growing in importance, together with demand for detailed statistics in a number of policy areas, including market access, trade facilitation, opportunities for small and medium-sized enterprises, regulation, competition, cross-border data flows and privacy. In response to that demand, and as explicitly requested by the Group of 20 in its ministerial declaration entitled “Shaping digitalization for an interconnected world”, adopted in April 2017, the Task Force has prioritized and strengthened efforts to confront potential data gaps, biases and conceptual challenges with respect to measuring digital trade, by developing a conceptual framework and an inventory of current measurement practices and pilot studies in more than 70 countries. Building on those inputs, the Task Force is developing, together with experts from developed and developing countries, a handbook on measuring digital trade. Given the significance of and rapid developments relating to digital trade, and its potential implications for and applications in both developed and developing economies, the Task Force will develop the handbook expediently and plans to report on it to the Commission at its next session, in 2019.

The Statistical Commission is invited to take note of the report.

\* [E/CN.3/2018/1](#).



# Report of the Inter-Agency Task Force on International Trade Statistics

## I. Introduction

1. The Internet and digitalization are fundamentally changing the way in which people, businesses and Governments interact. This has led to a new phase of globalization underpinned by the movement of data across national borders, changing the nature and patterns of and the actors in the international trade in goods and services. While digitally related transactions in either goods or services have existed for many years, the current scale of transactions and the emergence of new and disruptive players (online platforms) are transforming production processes and industries, including many that were previously little affected by globalization.

2. However, despite the growing importance of what is commonly referred to as digital trade, little empirical and internationally comparable information currently exists. This has inhibited a full understanding of the scale and policy challenges of digital trade, which in turn has raised concerns about the capacity of current statistics to fully capture and identify this phenomenon. Moreover, the growing importance of enterprises with new business models such as Uber, Airbnb, Facebook and Spotify gives rise to a number of additional complications, including in relation to the nature of their activities, for services trade policy.

3. All of these phenomena explain the strong demand from policymakers and researchers for more information on the nature, size and direction of digital trade, as shown in, for example, the high priority given to this topic on the agendas of the Trade and Investment Working Group of the Group of 20 and other international forums. To address these policy questions, several initiatives and inter-agency collaborative efforts have been carried out in recent years by international organizations, including Eurostat, the International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD), the United Nations Conference on Trade and Development (UNCTAD), the World Trade Organization (WTO), the World Customs Organization (WCO) and others.

4. However, an important impediment to the availability of data on digital trade — and certainly of statistics that are coherent with the current accounting frameworks (the 2008 System of National Accounts (2008 SNA) and the Balance of Payments and International Investment Position Manual, sixth edition (BPM6)) and are comparable across countries — is the lack of a common understanding of digital trade and of a comprehensive conceptual measurement framework. Therefore, as part of the collective efforts to address the broader measurement challenges, OECD has developed a draft conceptual and measurement framework for digital trade,<sup>1</sup> which provides a proposed typology of all cross-border trade flows that are considered “digital”.

5. The framework builds, as far as possible, on the various existing statistical frameworks, in particular the System of National Accounts, and has also served as the starting point for discussions in the broader context of “Measuring the Digital Economy” (an initiative led jointly by OECD and IMF), given the importance of all statistical developments and efforts in this field moving in parallel. As a basis for further work, the framework has been reviewed by and received support from the

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<sup>1</sup> See OECD (2017), “Measuring digital trade: towards a conceptual framework” (STD/CSSP/WPTGS(2017)3).

OECD Working Party on International Trade in Goods and Trade in Services Statistics, the IMF Committee on Balance of Payments Statistics, and the Task Force's informal expert meeting on measuring digital trade (with representatives from 18 developed and developing economies and international agencies). The framework was used to develop a first inventory<sup>2</sup> of current measurement practices and pilot studies in more than 70 countries on digital trade.

6. Building on those inputs, and in response to the policy demand, the Task Force has prioritized and strengthened efforts to confront potential data gaps, biases and conceptual challenges with respect to measuring digital trade and, at its most recent meeting, held in October 2017, agreed to propose the development of a handbook on measuring digital trade. Given the significance of and rapid developments related to the topic, and its potential implications for and applications in both developed and developing economies, the Task Force will develop the handbook expediently and intends to report on it to the Commission at its next session, in 2019.

7. An overview of the proposed content of the Task Force handbook is provided in section IV below. Section II presents an overview of the conceptual measurement framework for digital trade, while section III provides a summary of ongoing efforts at the national and international levels to compile statistics on digital trade. The report concludes with next steps in section V.

## II. Conceptual framework for measuring digital trade

8. International trade transactions can be defined in terms of a variety of dimensions. The distinction between goods and services is the most traditional classification, together with, in the area of trade in services, the breakdown by mode of supply. The focus on digital trade, however, brings to the fore new dimensions related to important characteristics of digitization, namely: the ordering and delivery processes (both of which can be digital), the nature of products (which products should be considered digital?) and the new actors involved, including not only digital intermediaries, but also households, given the increasing role played by consumers as unincorporated enterprises through the “sharing economy”.

9. The conceptual framework (see the figure below) identifies those three key characteristics, or dimensions, as the nature of the transaction (“how”), the product (“what”) and the partners involved (“who”). Central to the framework is the nature of the transaction, which builds on the common understanding that digital trade should encompass cross-border trade transactions that are either digitally ordered, digitally facilitated (referred to as “platform-enabled”) or digitally delivered (note that these are not necessarily mutually exclusive categories):

- **Digitally ordered transactions.** These are seen as synonymous with e-commerce transactions (i.e., the sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders).
- **Digitally facilitated transactions.** These refer to cross-border trade flows facilitated by online platforms such as Amazon, Uber, Alibaba or Airbnb. Those intermediaries raise a number of complex measurement challenges. For

<sup>2</sup> See OECD-IMF (2017), “Measuring digital trade: results of OECD/IMF stocktaking survey”, paper presented at the meeting of the Committee on Balance of Payments Statistics held in Paris from 24 to 26 October 2017.

example, it is not always clear where the intermediary resides, nor is information always present within conventional national statistics to identify it. This can give rise to uncertainties about whether underlying transactions are recorded as cross-border trade or as income flows. In addition, even if there is clarity regarding “residence”, it is not always clear whether cross-border transactions should be recorded as “gross” (including the value of underlying services provided between residents) or as “net” (i.e., including only the value of the intermediation fee as cross-border).

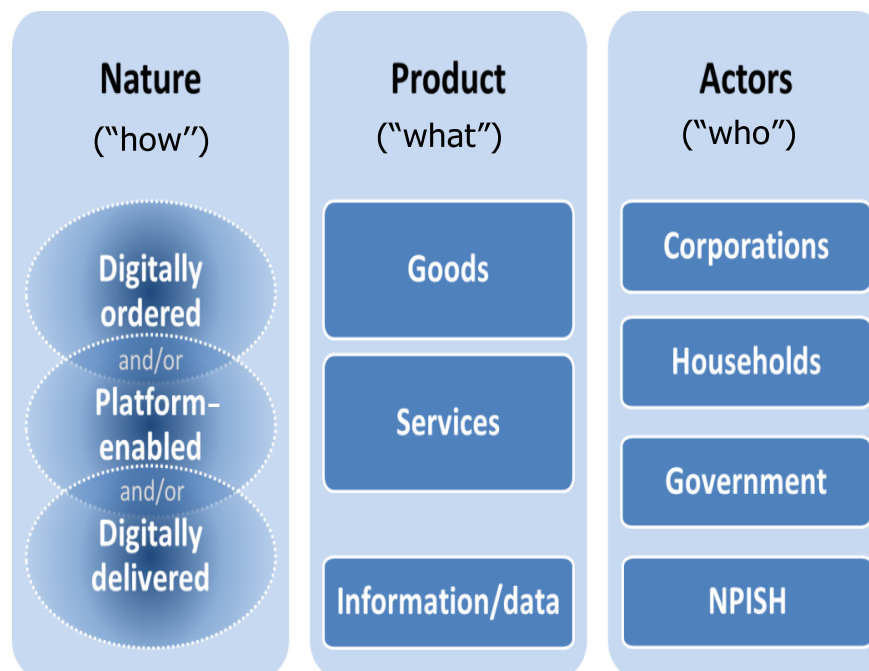
- **Digitally delivered transactions.** These involve services and data flows that are delivered digitally as downloadable products. Examples include software, e-books and data and database services. Goods, as physical items, cannot be delivered digitally, although three-dimensional (3-D) printing may result in a future category of transactions that could possibly be classified as trade in goods, and therefore as digitally delivered goods, if those transactions are deemed fundamentally different from trade-in-services transactions (e.g., 3-D blueprints). The concept of digital delivery is consistent with what is described by the Task Group on Measuring Trade in ICT Services<sup>3</sup> and ICT-enabled Services as ICT-enabled services, namely, service products delivered remotely over information and communications technology (ICT) networks.

10. The second dimension identified in the framework ties into the first by identifying whether the products being traded relate to goods or to services, and also introduces a separate category referred to as information, or data. Although monetary transactions related to data will arise under service categories, many data-related transactions do not have a monetary flow, including not only intra-firm transactions, but also transactions related to data collected by firms such as digital intermediaries, which are then able to generate revenue streams through their use. The explicit reference here to data and information is designed to ensure that this category of products is also captured within the measurement framework. It is important to note that this broadens the scope of measurement beyond the traditional statistical notion of cross-border trade in goods and services, in order to recognize the significant economic benefits that accrue from international flows of data, which often fall under the radar of conventional trade statistics but are increasingly important conduits and determinants of related trade flows.

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<sup>3</sup> See UNCTAD (2015), “International trade in ICT services and ICT-enabled services: proposed indicators from the Partnership on Measuring ICT for Development”.

## Dimensions of digital trade



*Abbreviation:* NPISH, non-profit institutions serving households.

11. The last dimension concerns the actors involved. Building on the work in the area of e-commerce, where businesses, consumers and Governments are distinguished as key actors in, for example, business-to-business or business-to-consumer transactions, the framework aligns the terminology with that used in the SNA. Additional breakdowns that are possible and that are being considered by the national accounts community under the broader work programme could include, within satellite accounts, the size and sector of corporations (for example, by providing information on the role and utilization of digitalized tools by small and medium-sized enterprises, or by distinguishing between financial and non-financial corporations).

### III. Addressing measurement challenges

12. As indicated above, the systematic collection of data on what part of international trade can be considered "digital" and on the breakdown of digital trade by the products or services, partner countries and institutional sectors (business, consumer, government) involved has yet to be developed. However, many countries have already begun to measure at least some parts of the various components that characterize digital trade, as evident from the OECD-IMF inventory conducted in 2017, to which more than 70 countries responded (see OECD-IMF (2017)), as well as from the informal expert meeting on measuring digital trade that the Task Force convened for the first time in October 2017.

13. From that work, some facts are emerging, as well as avenues for the development of further insights. These are summarized below.

## **A. Digital ordering**

14. Statistics on the digital nature of the ordering process (e-commerce) have been developed for a number of years in many countries, mostly through ICT and e-commerce enterprise surveys (covering business-to-business and business-to-consumer transactions), as well as through household surveys on Internet use (covering business-to-consumer and, partly, consumer-to-consumer transactions). It is important to note, however, that such surveys do not yet provide a detailed breakdown of the value of cross-border transactions.

15. A variety of possible avenues for obtaining this additional information exist. Clearly, an intuitively straightforward option would be to add questions to surveys regarding the breakdown of online purchases and sales into domestic and international transactions. Such an approach would, however, necessarily entail a not insignificant increase in reporting burdens, and could in practice be difficult to administer. For example, respondents may not always know whether orders placed through a locally operated website involve a non-resident enterprise that operates the site. Similarly, the scale of business-to-business transactions may be overstated if the counterpart, from the exporter's perspective, is an online intermediary rather than the final consumer (in particular, this may occur in the case of services).

16. Another possibility is to explore microdata linking, for example, by integrating merchandise trade statistics with e-commerce enterprise surveys, albeit coupled with assumptions relating to foreign/domestic e-commerce breakdowns. Further refinements could also be made in combination with Broad Economic Categories (BEC) classifications to provide estimates of the share of cross-border sales that can be classified as business-to-business and business-to-consumer.

17. The possibility of identifying trade flows that are the result of a digital ordering process, as opposed to a non-digital process, can also be explored from the perspective of merchandise trade statistics. In that respect, initiatives developed by WCO to begin exploring the possibility of identifying and monitoring e-commerce transactions in customs records, for example, through improved, electronic identification of origin/destination and content of packages (e.g., through the S10 bar code or special, simplified declaration forms for e-commerce) can provide an important future data source. In addition, postal data, such as those collected by the Universal Postal Union (UPU), can provide insights into the increase in small value transactions that are facilitated by digitalization and help to improve estimates for trade below the de minimis threshold.

## **B. Digitally facilitated transactions**

18. An important characteristic of digitalization is the advent of digital intermediaries such as Airbnb, Uber, Amazon, eBay and Alibaba, which facilitate cross-border digital trade in goods and services. As noted above, these online platforms can present significant measurement challenges, in particular with respect to domestic transactions facilitated by a foreign (or foreign-owned) digital intermediary. Furthermore, in theory, transactions related to payments for intermediation services should be recorded as trade in services or payments for services within current statistics, but in practice it may be difficult to separate the intermediation fees from the value of the services provided. Surveys (at either the supply or the demand side), credit card data and new data sources (e.g., web-scraping) are possible channels for data collection.

### **C. Digitally delivered transactions**

19. While not all services can be delivered remotely over ICT networks (because many services require physical proximity for delivery and consumption), ideally, from a data collection point of view, all international trade-in-services transactions should be divided into those that are “digitally delivered” and those that are “not digitally delivered”. Several countries have begun to collect data to better identify these breakdowns, often in line with statistical work on measuring trade by mode of supply, taking advantage of the fact that, by definition, all digitally delivered cross-border services transactions involve the delivery of services through mode 1.

20. Alternatively, linking trade-in-services surveys with data from ICT enterprise surveys at the micro (enterprise) level, can also, in combination with certain assumptions, provide insights into the share of international services transactions that are delivered and/or ordered digitally. Services digitally delivered to consumers, whether by enterprises or through the “sharing economy”, can be measured using household surveys in combination with credit card data.

## **IV. Draft table of contents of the Inter-Agency Task Force on International Trade Statistics handbook on measuring digital trade**

21. Currently, the Inter-Agency Task Force on International Trade Statistics handbook on measuring digital trade comprises eight chapters, covering both conceptual challenges and compilation practices. In addition to the introductory and concluding chapters, it is proposed that the handbook consist of the chapters set out below.

### **A. Chapter 2. Policy questions on digital trade**

22. This chapter provides an overview of the current policy questions on digital trade, related to, for example, market access (including the new opportunities that digital trade may present for small and medium-sized enterprises and developing countries), trade facilitation, regulation, competition, cross-border data flows and privacy, as well as the potential blurring of various modes of the supply of services.

### **B. Chapter 3. Conceptual framework for digital trade**

23. This chapter presents in detail the conceptual framework outlined in section II above, building on OECD (2017) and OECD-IMF (2017). Digital trade covers all cross-border trade transactions that are digitally ordered, digitally facilitated or digitally delivered.

### **C. Chapter 4. Compiling digitally ordered goods and services**

24. This chapter presents current approaches and possible extensions necessary to measure digitally ordered goods and services, highlighting, inter alia, the uses of enterprise and household expenditure surveys, as well as ongoing work among customs authorities, led by WCO, and postal authorities, led by UPU, to better

measure cross-border merchandise transactions that were ordered online. Methodologies for better identifying the institutional sectors involved (as well as the various types of enterprises) are also presented.

#### **D. Chapter 5. Compiling transactions facilitated by digital platforms**

25. This chapter describes experiences with respect to compiling transactions facilitated by digital platforms, providing guidance on ways to identify such platforms and insights into the ways in which the cross-border flows may be recorded. Particular emphasis is placed on transactions facilitated by non-resident platforms, which may pose particular measurement challenges. In addition, guidance is provided on the necessity of, and possible methodologies for, breaking down these gross flows between the intermediation fee and the goods or services provided (gross versus net recording). The chapter also provides suggestions for overcoming the compilation challenges related to consumer-to-consumer transactions through platforms (as part of the “sharing economy”).

#### **E. Chapter 6. Compiling digitally delivered transactions**

26. Digitally delivered transactions typically cover services, although the rise of 3-D printing may also lead to goods being considered to be digitally delivered. This chapter will review ongoing work by countries to better identify services that are actually digitally delivered (as opposed to a wider selection of potentially digitally delivered services), emphasizing the relationship with the provision of services through mode 1.

#### **F. Chapter 7. Compiling digitally ordered goods and services**

27. This chapter reviews existing and proposed classifications of goods and services aimed at identifying “digital” products (e.g., ICT goods and services, ICT-enabled services and trade in ideas), highlighting the importance of properly distinguishing between the digital nature of the transactions and the digital nature of the product; for example, while the nature of a transaction may be digital, the product may not be (as in the case of clothes ordered online). The chapter also provides an overview of national efforts aimed at measuring cross-border data flows.

### **V. Next steps**

28. The Co-Chairs of the Inter-Agency Task Force on International Trade Statistics, OECD and WTO, will guide the overall drafting process, including alignment with parallel work addressing the measurement challenges of the digital economy in the national accounts. The Task Force will seek to complete the first full draft by September 2018 for consultation with developed and developing countries, among others, through the existing bodies of Task Force members. The results of the consultation will be summarized and presented in the report to be submitted to the Commission at its next session, in 2019.