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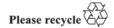**Working Group on Measuring E-commerce**
and the Digital Economy

Chair's summary of the fourth meeting of the Working Group on Measuring E-commerce and the Digital Economy*

Summary

   In this document, prepared by the Chair of the Working Group on Measuring E-commerce and the Digital Economy, a summarized account is given of discussions during the fourth meeting of the Working Group, held at the Palais des Nations in Geneva on 30 November and 1 December 2023.

   The Working Group discussed progress in electronic commerce (e-commerce) and digital economy measurement by international organizations, the measurement of e-commerce value, non-survey–based measurement of e-commerce and the digital economy and building capacities for measurement. Based on the discussions, the present Chair's summary proposes possible topics for future meetings of the Working Group, for the consideration of and decision by the Intergovernmental Group of Experts on E-commerce and the Digital Economy at its seventh session.

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   * This document summarizes the discussions held during the fourth meeting of the Working Group on Measuring E-commerce and the Digital Economy; it does not necessarily reflect the views of the UNCTAD secretariat or its officials or member States. Mention of any firm or licensed process does not imply the endorsement of the United Nations.

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Opening

1. The fourth meeting of the Working Group on Measuring E-commerce and the Digital Economy was held on 30 November and 1 December 2023 in Geneva. Annex I to this summary contains an attendance list, and annex II presents a list of knowledge resources shared during the meeting.

2. At the opening plenary, the Working Group elected the Head of the Regional Centre for Studies on the Development of the Information Society of Brazil[1] as its Chair. The Deputy for Distribution and Service Statistics of Statistics Indonesia [2] was elected Vice-Chair-cum-Rapporteur.

3. After the election of officers, the Chair informed the Working Group that the results of the meeting would be reported to the Intergovernmental Group of Experts on E-commerce and the Digital Economy at its seventh session in May 2024, in the form of a Chair's summary to be finalized after the Working Group's fourth meeting. The Chair reiterated that the meeting aims to enhance the role of information and communications technologies (ICT) in official economic statistics and foster stronger collaboration with data providers for evidence-based policymaking in the digital economy. Emphasizing the importance of experts' active promotion of high-quality statistics, improved data availability and addressing current data gaps, these endeavours will enhance the grasp of the digital economy and underscore the importance of precise measurement.

4. The Working Group adopted an agenda, as follows:

    1.   Election of officers.

    2.   Adoption of the agenda and organization of work.

    3.   Progress in measuring e-commerce and digital economy work by relevant international organizations.

    4.   Measuring the value of e-commerce.

    5.   Non-survey-based measurement of e-commerce and the digital economy.

    6.   Building capacities for measuring e-commerce and the digital economy.

    7.   Topics for future consideration by the Working Group.

    8.   Adoption of the Chair's summary.

5. The Director of the Division on Technology and Logistics of UNCTAD, in her opening remarks, pointed out that policymakers were limited in their discussions about the digital economy without statistical evidence, and that developing countries face a scarcity of official statistics that could help them address the development impacts of e-commerce and the digital economy. Existing data showed continued growth in global exports of digitally deliverable services, as well as a widening gap between countries at different levels of development. A digital divide among Internet users in developed and developing countries also persisted. However, there was a scarcity of accessible statistics on how enterprises in developing countries use the Internet or to what extent they engage in e-commerce. The Director highlighted the ongoing demand for technical assistance and support in measuring e-commerce and the digital economy. Additionally, she encouraged countries to use the Working Group as an opportunity to articulate their capacity-building needs so that adequate support could be sought, including by raising pertinent issues in the Chair's summary to be presented to the Intergovernmental Group of Experts.

6. The Acting Director of the Statistics Service of UNCTAD, in her remarks, noted that the Group was the only opportunity for representatives of national statistical offices to meet at UNCTAD and inform related trade policy debates. The Working Group discussions not only fed into policy debates at UNCTAD, but also into work of the Statistical Commission

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    [1] Mr. Alexandre Barbosa.
    [2] Ms. Pudji Ismartini.

to improve the measurement of digitalization, as part of the update of the System of National Accounts. Neither digital trade nor the role of innovation or technology in economies was being sufficiently measured yet. She noted that digitalization was forcing a revisiting of the international system of economic statistics and identification of new metrics to address inclusivity and sustainable development, while building the statistical capacity of countries. Digitalization offered new tools to compile and analyse trade statistics, such as the trade-in-services information system[3] that helps national statistical offices to collect, process and release international trade in services data. Currently used by eight Western African countries, the trade-in-services information system includes information on modes of supply and could potentially be used to measure digitally delivered and digitally ordered trade in other countries.

Item 3
Progress in measuring e-commerce and digital economy work by relevant international organizations

7.   Under this standing item, the Working Group reviewed progress in related work of international organizations. The UNCTAD secretariat summarized the latest work on measuring e-commerce and the digital economy, which included two significant publications that had been included as background documents for the Working Group. The first was a study that takes stock of available official statistics and estimates of the value of e-commerce and methodologies and would be serving as the foundation for the work of a newly created task group on measuring e-commerce value (see item 4 and annex III). The second was the *Handbook on Measuring Digital Trade* (second edition), which was the result of a joint effort by four international organizations and would also provide the basis for future capacity-building (see para. 13). UNCTAD had also produced a technical note on the updates to the Harmonized System of classifying traded products (HS22) and its implications for the definition of ICT goods. Finally, UNCTAD launched its biennial data collection in 2023, implementing a new online data collection tool that significantly facilitates the compilation and verification of data for both national statistical offices and UNCTAD. The secretariat encouraged countries to reply to an online survey if they had official statistics on e-commerce and the digital economy that were not yet included in the digital economy tables of the UNCTAD statistical portal.[4]

8.   The Organisation for Economic Co-operation and Development (OECD) updated the meeting on how the OECD Going Digital integrated policy framework[5] had been used for national digital strategies and to develop the national digital strategy comprehensiveness indicator.[6] He noted that the Going Digital integrated policy framework and the OECD Going Digital measurement road map[7] would be revised in 2024/2025 to address fast-evolving technologies, such as generative artificial intelligence and quantum computing. Experts were invited to explore the OECD Going Digital Toolkit, which features key indicators on e-commerce and the digital economy.[8] In November 2023, the OECD Working Party on Measuring the Digital Economy had highlighted two areas of priority for future work: the updating of its statistical definition of e-commerce and the revision of the taxonomy and principles for measuring digital intensity across sectors. The OECD was pleased to engage UNCTAD members as appropriate in those discussions.

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[3] See https://unctad.org/programme/trade-services-statistics-information-system-tisstat.

[4] See https://unctadstat.unctad.org/datacentre/.

[5] See https://www.oecd-ilibrary.org/science-and-technology/going-digital-integrated-policy-framework_dc930adc-en.

[6] See https://www.oecd.org/publications/assessing-national-digital-strategies-and-their-governance-baffceca-en.htm.

[7] See https://www.oecd.org/digital/the-oecd-going-digital-measurement-roadmap-bd10100f-en.htm.

[8] See https://goingdigital.oecd.org/. The Toolkit is currently available in Arabic, English, French and Hebrew.

9.   The International Telecommunication Union (ITU) presented a brief update on behalf of the Partnership on Measuring ICT for Development,[9] which had held a thematic session on ICT indicators for monitoring international goals and targets during the World Summit on the Information Society Forum in March 2023.[10] At that session, the Envoy of the Secretary-General on Technology emphasized capacity development as a priority for assisting developing countries in measuring progress, particularly within the framework of the Sustainable Development Goals. Additionally, there was an emphasis on fostering collaboration between the statistical community and the holders of new data sources, such as big data and artificial intelligence. Furthermore, the Partnership provided an input to the online consultation of the global digital compact, highlighting the need to consider statistical measures and the means for their production. It also provided an input to the high-level political forum on sustainable development,[11] noting the lack of ICT-related indicators in the Sustainable Development Goal monitoring framework and the disconnect between policies for digital development and the availability and quality of official statistics essential for establishing a baseline, tracking progress and assessing impact. The Partnership will report on progress in ICT statistics at the fifty-fifth session of the Statistical Commission in February–March 2024.

10.   ITU also presented progress in its own measurement work on digital economy-related indicators that are collected through household surveys, in particular regarding the use of the Internet for purchasing or selling goods or services that can complement the data collected through business surveys. ITU had proposed indicators on purchases by type of goods and services, payment channel, method of delivery and barriers to purchasing. Unfortunately, the availability of such demand-side data, particularly on the breakdown of e-commerce, remained very low for developing countries. Recent efforts on measuring mobile money had resulted in the ITU expert groups on household and telecommunication/ICT indicators agreeing on 11 indicators that could be collected through household surveys and administrative data. ITU intended to align its data collection with that of the World Bank Findex survey and the Financial Access Survey of the International Monetary Fund, as those surveys already gathered similar indicators.

11.   A Statistical Officer from the Statistical Office of the European Commission (Eurostat) informed the meeting about the latest European Union survey on ICT usage and e-commerce in enterprises, which covered e-commerce and digitally ordered trade. The Eurostat survey was recognized as good practice in terms of comprehensiveness, metadata transparency and timeliness of statistics publication (yearly). In addition, it can serve as a valuable reference for developing countries in articulating the link between the production of e-commerce and digital economy statistics and the requirements of policymaking. She invited Working Group experts to visit the Eurostat webpage with main findings and methodological information on the survey.[12]

12.   A Senior Statistician at the International Monetary Fund updated the meeting on its Balance of Payments and International Investment Position Manual (BPM7). The Balance of Payments Manual will include a new joint chapter on digitalization (chapter 22), resulting from the update process of the System of National Accounts.[13] The chapter will aim to give visibility to the impact of digitalization on several aspects of the economy, including trade, and relevant cross-border transactions. It will also provide guidelines on measuring digital products in accordance with the broad conceptual framework of the System of National Accounts/Balance of Payments Manual, explaining the measurement of products and assets that have emerged as part of digitalization and provide a consolidated view of measuring and reporting on key aspects of digitalization. The International Monetary Fund was also a co-author of the *Handbook on Measuring Digital Trade* (see below) and jointly delivered workshops associated with the *Handbook*.

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[9] See https://www.itu.int/en/ITU-D/Statistics/Pages/intlcoop/partnership/default.aspx.

[10] See https://www.itu.int/net4/wsis/forum/2023/Agenda/Session/216.

[11]   See https://hlpf.un.org/sites/default/files/vnrs/2023/HLPF%202023%20Inputs%20Partnership%20Measuring%20ICT%20%20for%20Development.pdf.

[12] See https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Digital_economy_and_society_statistics_-_enterprises.

[13] See https://www.imf.org/en/Data/Statistics/BPM/BPM7-chapters.

13.   The second edition of the *Handbook on Measuring Digital Trade* was presented by three of the co-authoring agencies.[14] Published in July 2023, it had left the fundamental measurement framework unchanged, with the following updates: (a) clarifications on the concepts and definitions related to digital trade and to the guidelines on how to operationalize them; (b) extensive compilation guidance based on recent efforts in both developed and developing economies, covering a variety of relevant survey and non-survey sources; and (c) a simplified reporting template. Although further research and empirical testing will be needed to improve and refine the compilation approaches, the well-established conceptual framework constitutes the basis for compiling statistics on digital trade. These statistics aim to be internationally comparable and consistent with the broader economic accounts. The *Handbook* is also the basis of an active programme of technical assistance and statistical capacity-building, by which the four partner organizations can support statistical compilers as they seek to measure, monitor and respond to the challenges of measuring digital trade.[15]

14.   During the interactive debate, one expert suggested that UNCTAD should set up an online repository of statistical resources shared in the Working Group and present a stocktaking of the current availability of e-commerce and digital economy statistics. Another expert noted that producers of statistics often face a lack an understanding on the part of respondents; enterprises are not necessarily aware of what is covered by the definition of e-commerce, nor can they quantify business-to-business e-commerce if conducted through enterprise resource planning systems. A study on how to quantify or disentangle the different steps of e-commerce could be useful. The UNCTAD secretariat acknowledged that business-to-business estimates at UNCTAD were affected by the lack of official statistics. UNCTAD also noted that the core indicators of the ICT sector could be further developed in the future based on the discussions concerning the System of National Accounts framework.

15.   Multiple sources and methods are essential to achieve a comprehensive and cohesive measurement of digital trade. Key priorities encompass measuring digitally ordered transactions involving businesses (e.g. through business ICT usage surveys), measure digitally ordered trade in goods through adjustments to customs reporting requirements, ensure the availability in services trade statistics of full product detail for digitally deliverable services and include questions on digital delivery in international trade in services surveys. International organizations offer complementary knowledge resources that should all be taken into account when aiming to capture the evolving digital economy through official statistics.

Item 4
Measuring the value of e-commerce

16.   The session set out progress in the area of e-commerce measurement. A representative of the UNCTAD secretariat gave an overview of the stocktaking report "Measuring the value of e-commerce". He highlighted the scarcity of statistics concerning the value of business revenues from e-commerce produced by relevant national statistical authorities. Furthermore, variations in the underlying sources, measurement approaches and breakdown information were also highlighted. The importance of distinguishing between domestic and international e-commerce sales was also noted as a key component of the measurement of digitally ordered trade as set out in the *Handbook on Measuring Digital Trade*.

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[14] The *Handbook on Measuring Digital Trade* was co-authored by the International Monetary Fund, OECD, UNCTAD and World Trade Organization (WTO). See https://unctad.org/system/files/official-document/dtlecdc2023d8_en.pdf.

[15] Capacity-building activities will include in-person, online and blended training. The first workshop took place in Nov 2023 for Arab countries, funded by the Arab Monetary Fund and WTO, delivered with partners the Economic and Social Commission for Western Asia, Arab Institute for Training and Research in Statistics and the Statistics Division of the United Nations. Workshops are organized based on demand.

17.   Building upon this, the UNCTAD secretariat reported on the establishment of the task group on measuring e-commerce as recommended by the Working Group at its third meeting in November 2022 and endorsement by the International Group of Experts on E-commerce and the Digital Economy in May 2023. Its central objective was to develop internationally agreed guidelines and recommendations on measuring the value of e-commerce transactions involving businesses (both sales and purchases) and, thereby, to support the development of internationally comparable statistics on e-commerce value (and the related concept of digitally ordered trade). To that end, the task group on measuring e-commerce would serve as a platform for in-depth discussion among experts with hands-on experience of measuring e-commerce value, as well as those actively working to develop measurement in this area. The task group on measuring e-commerce had held its first meetings in November (remotely) and would meet in person in December 2023, with the participation of representatives from around 25 member States and international organizations (see annex 3). Going forward, meetings would mainly be conducted online with in-person meetings up to twice per year and as appropriate to deliver progress towards the group's objectives. The progress of the task group on measuring e-commerce will be reported to the Working Group on Measuring E-commerce and the Digital Economy.

18.   To support the discussion, various national and regional efforts to measure e-commerce value were presented. A representative from the Malaysia Department of Statistics presented results showcasing the strong growth of e-commerce in the country since 2015 as well as the breadth of information available including on both e-commerce sales and expenditures as well as sectoral and regional breakdowns. Notably, the development of quarterly e-commerce by expenditure statistics was also highlighted.

19.   A representative from Statistics Canada presented results from both household and business surveys highlighting the strong growth of business e-commerce earnings and household e-commerce expenditure in Canada. It was also mentioned that the estimation results from the business survey were greater than the household survey because of the inclusion of business-to-business transactions. However, it was noted that results from these two sources cannot be integrated as that would result in double-counting of e-commerce sales by businesses in Canada to households in Canada. Furthermore, the collection and dissemination of cross-border e-commerce sales broken down by trading partners was highlighted.

20.   A representative from the World Bank presented an ongoing initiative aimed at supporting the development of e-commerce value statistics in Central Asian economies. Main messages were that low and lower-middle-income countries lack the capacity to conduct business surveys on e-commerce value. Furthermore, as many e-commerce actors are not formal businesses, household surveys could offer a vehicle to cover an important part of the e-commerce landscape in these countries. Additionally, they often do not use the "formal" e-commerce channels set out in the OECD definition, instead preferring "informal" online sales through messaging and social media services.

21.   During the ensuing discussion, the UNCTAD secretariat noted several key messages as shown by the Canadian and Malaysian results. Firstly, business-to-business transactions predominate in the value of e-commerce overall. Additionally, the strong majority of e-commerce occurs domestically (between buyers and sellers within the same country) and so, although international ecommerce is a component of digital trade, it was important not to lose sight of the domestic element when conceptualizing and measuring e-commerce. The relevance of domestic e-commerce sales being made by foreign-controlled affiliates in the WTO context was also raised.

22.   Three experts supported the importance of ordering through manually typed messages in the online sales landscape, also noting that those selling via these channels are not always formally registered businesses. The phenomenon in Indonesia also recorded that small-scale and informal businesses predominated those selling via these channels. The need to maintain comparability across countries was underscored. It was highlighted that while the importance of these transactions does not automatically imply a need to change the definition of e-commerce itself; establishing a distinct yet complementary definition covering these "other online sales" might also support their acknowledgement and measurement.

23.   It was noted that the OECD Working Party on Measuring and Analysing the Digital Economy agreed to engage in discussions surrounding the definition of e-commerce and guidance. The OECD expressed its commitment to an open and inclusive multi-stakeholder process, ensuring effective engagement and interaction with this Working Group.

24.   One expert echoed the challenge, raised by Canada, of integrating results from different sources while the Chair also noted the enduring relevance of ordering via electronic data interchange as a component of e-commerce and the difficulties that respondents, especially individuals being asked about their online spending, can face in knowing whether they are buying from a seller domestically or internationally.

25.   In response to the focus on household surveys in the context of the World Bank support to Central Asian countries the concerns raised by the Chair, ITU highlighted existing significant challenges related to data availability for the core indicators on ICT usage by households, including those on e-commerce uptake. ITU was therefore not actively working to extend the framework and guidelines to include the value of household ecommerce spending.

26.   Finally, the Chair, Eurostat and the OECD noted the potential for using non-survey data sources such as administrative data held by tax authorities, as a complement to survey data, while recognizing that the magnitude of data concerned, as well as the limitations of the data available, can pose challenges.

27.   The Chair concluded by emphasizing the pivotal role of enhancing statistics on e-commerce to empower policymakers to identify trends, vulnerabilities and areas requiring attention to foster digital economic growth. With the establishment of the task group on measuring e-commerce, the Working Group is well-positioned to advance methodological work in this area, particularly in developing countries, thus effectively addressing existing data gaps.

Item 5
Non-survey-based measurement of e-commerce and the digital economy

28.   The Working Group discussed non-survey sources of data to measure e-commerce and the digital economy, and participants were encouraged to share national experiences. Several experts provided valuable insights into the measurement of the digital economy within national accounts and statistical frameworks, highlighting country efforts to integrate digital economy measurements and addressing challenges related to data sources, methodologies and data quality. Experts emphasized the importance of ongoing refinement and adaptation to capture the evolving nature of the digital economy. Both the *Handbook on Measuring Digital Trade* and the *Handbook on Compiling Digital Supply and Use Tables* were seen as very useful documents in this area.

29.   A representative from the UNCTAD secretariat introduced digital supply-use tables to make digitalization more visible in national accounts. digital supply-use tables can help satisfy different policy demands, such as those related to tax, supply-demand services forecast, changing marketplaces, evolving skills and general move to digitally delivered services. He outlined the framework, showcasing its flexibility with examples from various countries and stressed the importance of finding relevant indicators like digital household consumption and digitally delivered international trade. He urged countries to integrate digitalization into national accounts using available data while refining methodologies for accurate measurement.

30.   A representative from the national statistical office of Mexico (INEGI), presented the country's strategy for incorporating digital economy data into national accounts, specially focusing on e-commerce. The primary goal was to calculate the contribution of e-commerce to GDP by using various data sources, such as economic censuses and business surveys, and discussed methodological aspects. Integrating data sources for accurate statistics was a challenge, addressed through a combination of survey data and

administrative databases. Current initiatives at INEGI are directed towards further improving measurement techniques.

31. A representative from the Central Agency for Public Mobilization and Statistics of Egypt detailed the country's efforts to measure e-commerce and the digital economy. She underscored the challenges associated with ensuring data quality, especially when integrating survey data with business register data. She outlined initiatives of Egypt to incorporate e-commerce data into surveys encompassing both the formal and informal economic sectors. Measuring e-commerce activities in the informal economy (outside establishment) involved innovative survey approaches in the informal sector, spanning various sectors and focusing on qualitative and quantitative dimensions. The commitment of Egypt to refining survey methodologies was highlighted.

32. A representative from the national statistical office of Georgia (Geostat), shared how the country, with assistance from the Asian Development Bank, is constructing digital supply use tables. The project was exploring innovative ways to combine data sources to produce disaggregated statistics on digital industries and digital products. This included accessing the financial statements of digital intermediary platforms operating in the Georgian economy. The limited availability of detailed data sources and the need to reclassify to newly identified digital industries had presented significant challenges. Georgia was also transitioning to the European system of national and regional accounts [16] methodology. Nonetheless, the project produced preliminary estimates of the digital GDP of Georgia for reference years 2018, 2020 and 2021 that were presented to the Working Group.

33. In the ensuing discussion, one delegate raised a concern regarding the prevalence of survey data in the methodologies discussed, which contrasted with the expected use of non-survey data. It was explained that one strategy is to start with available high-quality national accounts statistics (which are usually predominantly survey based) but then focus on the digital economy using various non-survey methods, such as administrative data, business registers and modelling. However, survey sources can also play an important role where available. The secretariat acknowledged the diversity of practices among countries and the evolving nature of data compilation methods in the digital economy measurement field.

34. The representative of Brazil shared an innovative approach to measure the total amount of online sales, which involved developing a dashboard to aggregate digital transaction volumes. This dashboard provides relevant statistics on online transactions and serves as a model for utilizing non-survey data. In this context, the delegate from Mexico encouraged the integration of digitalization into national accounts frameworks, advocating for a blend of survey and non-survey data sources. The representative of Egypt emphasized the importance of data quality, particularly when comparing survey data with business register data, underscoring the need for accuracy in measurement. The expert from Georgia shared challenges related to integrating business register and administrative sources to identify digital services and products activities within the digital economy. The Vice-Chair shared Indonesia's method of collecting e-commerce using administrative data in the form of marketplace business activity reports, in collaboration with the Trade Ministry and Ministry of Communications and Information, demonstrating diverse data submission methods in practice.

35. A representative from the General Administration of Customs in China, showcased the country's comprehensive framework for measuring the digital economy. A detailed explanation was given on how to leverage administrative Customs data and combining it with survey data and other sources for a comprehensive measurement approach. She also discussed the integration of e-commerce data into national accounts, emphasizing the impact on traditional industries and challenges posed by rapid technological evolution. She stressed the importance of inter-departmental collaboration and international cooperation. The presentation included case studies showcasing practical use in policymaking. She concluded by emphasizing the commitment of China to refining digital economy

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[16] See European Union, 2013, *European System of Accounts 2010*, Luxembourg.

measurement techniques, expanding big data applications and enhancing international cooperation for methodological development.

36. A team of experts from the Ministry of Trade of Türkiye provided insights into their efforts to measure cross-border digital trade using the *Handbook on Measuring Digital Trade* and to integrate digital economy measurements into their national statistical frameworks. The first presenter emphasized the use of digital supply-use tables and initiatives to incorporate e-commerce data into national accounts, addressing challenges in data collection. The second presenter detailed the methodology of Türkiye, highlighting the use of various data sources, including surveys and administrative data, and discussed the challenges in ensuring data quality and integrating these diverse sources. The third presenter focused on the practical applications of the digital economy measurement efforts of Türkiye, particularly the use of digital supply-use tables in policymaking and economic analysis, with examples across sectors. Going forward, the Ministry of Trade of Türkiye intends to emphasize the refinement of methodologies and data collection strategies.

37. Following the presentations, delegates engaged in a discussion on the complexities of measuring the digital economy. One primary focus of the discussion was on integrating administrative data to enhance e-commerce understanding, with specific attention for the challenges of identifying appropriate survey respondents within companies. One expert detailed the challenge of finding the right respondent with the enterprises for diverse survey modules like cybersecurity and e-commerce. Responding to these concerns, the panellists shared their respective approaches. In Türkiye, the customs declaration system allows for using data mining tools and direct contact methods like email and phone calls to identify and communicate with relevant respondents. The expert from China highlighted similar strategies, focusing on cooperation between customs, commerce ministries, and other stakeholders to gather data from e-platforms and vendors. The representative from China also addressed a query about business-to-business transactions in e-commerce data, clarifying that current Chinese statistics mainly cover consumer goods. While transactions through enterprise resource planning systems were not included this might be considered in the future.

38. A representative from the Bank of Namibia and a representative from the Central Bank of El Salvador presented their countries' experiences leveraging non-survey-based data sources, namely debit and credit card payments, to measure e-commerce in their respective countries. In both cases, the measurement approach had been guided by the *Handbook on Measuring Digital Trade*.

39. Namibia leveraged the dataset of individual payments with Namibian-issued credit/debit cards to non-resident merchants collected by its Cross-Border Foreign Exchange Transaction Reporting System, which was initiated for exchange control purposes. The aim of the exercise had been to enhance balance of payments data by including cross-border transactions of digital goods and services by households and businesses (i.e. digitally ordered trade). Digital services were aggregated into 10 market segments, including through digital intermediary platforms, and data on online purchases from the top online retailers provided a proxy for digitally ordered goods. The Bank of Namibia was able to show growth in cross-border digital purchases and that foreign card transactions are significant and should be included in the compilation of official balance-of-payment statistics for Namibia and gained insights into the types of services purchased by the population and from whom. Further challenges encompassed accurately categorizing multi-service merchants, distinguishing between residents and non-residents, handling purchases of goods or services made through online chat functions (such as WeChat or WhatsApp) and addressing the absence of some merchant names and codes. Going forward, data from the International Transaction Reporting System (i.e. payments through Swift) could be tapped to give additional information. Namibia would like to compile the template on digital trade next year.

40. El Salvador had accessed data from financial institutions operating in the country concerning transactions and/or online purchases (a) made abroad using a card issued in El Salvador and (b) made in El Salvador using a card issued abroad. Collecting up to 19 variables, the dataset (reference year 2021) was rich with information but still required a significant effort of due diligence and further data cleaning and standardization work by the

Bank. In order to streamline these tasks, the Bank had used an innovative approach, utilizing a Python script. This script was aimed to merge the various datasets into a single database, perform data cleaning operations (for example, removing duplicates of the same transaction), and standardize the names of businesses.[17] Following this process, the Bank used data visualization software to build an interactive dashboard that showed the data as statistics on cross-border digital trade. For instance, the Bank could display the volume and value of transactions of digitally ordered trade, disaggregate the transactions by sex of the purchaser or geographical department, track monthly shopping trends, identify the leading online sellers and determine the countries in which these sellers were based. The exercise provided valuable insights into the landscape of e-commerce in El Salvador and highlighted significant lessons concerning the limitations of relying solely on credit and debit card information for measuring cross-border digital trade. For example, when dealing with digital intermediaries platforms, the Bank found difficulties in determining whether purchases were of goods or services, how much of the purchase value was retained by the platforms as commission and the residency of sellers involved in transactions.

41.   Both Namibia and El Salvador indicated during the question-and-answer session that they plan to publish the outcomes and findings of these experimental statistics in the upcoming year. The Bank of Namibia works closely with the Namibia Statistics Agency on balance-of-payments and national accounts data within the framework of a memorandum of understanding, which was very helpful in facilitating the collaboration to measure digital trade. WTO welcomed the sharing of these experiences and lessons learned, recognizing their value not just within the Working Group but also as contributions to capacity-building workshops. These insights are expected to contribute, for instance, to resources such as the *Handbook on Measuring Digital Trade*. The UNCTAD secretariat hoped that other countries would take inspiration from the work of El Salvador and Namibia and try similar exercises, since they provide rich insights. The Chair extended congratulated to both countries and emphasized the importance of transparent methodologies and the disclosure of encountered limitations. The Chair underscored that this transparency holds immense value, being just as important as the qualitative insights and quantitative outcomes presented. Transparent methodologies not only bolster the credibility of the findings but also contribute significantly to the collective learning process within the context of statistical data production.

Item 6
Building capacities for measuring e-commerce and the digital economy

42.   The session showcased efforts by countries to develop capacities to measure e-commerce and the digital economy, discussed technical assistance and capacity-building support offered by UNCTAD and other international organizations, and what the capacity-building priorities are for countries.

43.   In commencing the discussion of the session, a representative from the UNCTAD secretariat revisited pertinent topics previously addressed in the Working Group, emphasizing their ongoing relevance. There is a continued and increased need for more capacity-building support from international organizations. Likewise, fostering a greater exchange of good practices among countries and expanding the availability of knowledge resources in multiple languages. In addition, countries have requested guidance on producing gender-disaggregated data related to the digital economy, on the use of innovative methodologies (non-survey based) and data sources (big data, administrative records), on measuring the value of e-commerce, and on measuring digital trade. The latter two had started to be addressed through the task group on measuring e-commerce and workshops linked to the *Handbook*, but more capacity-building initiatives and tools could be developed. UNCTAD methodological publications and technical notes are freely

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[17] Python is a general-purpose programming language that is commonly used in artificial intelligence and machine learning projects. A Python script contains commands to be executed like a program; it can automate tasks and conduct data analysis.

available online, but other technical assistance and capacity-building activities are based on country demand. Therefore, the secretariat encouraged experts to make formal requests for capacity-building, which will also serve to justify the funding of such technical assistance to the donor community.

44. Representatives from the Palestine Central Bureau of Statistics presented remotely on their country's experience in implementing a business ICT survey in 2021.[18] The survey justification was to provide a factual basis for digital policies, allow comparisons with other countries in the region and provide context to investment opportunities in technology. The survey had received expert assistance from the European Free Trade Association and relied upon the UNCTAD manual (and incorporated UNCTAD feedback on the questionnaire), as well as participated in regional consultations with the Economic and Social Commission for Western Asia, to develop the survey methodology and tools. The Palestine Central Bureau of Statistics was able to produce internationally comparable indicators on ICT use by businesses and learned valuable lessons for future survey implementation. A national needs assessment was crucial when planning to conduct such a survey, as well as a road map for development and implementation of the survey and a training toolkit for implementers.

45. A representative from the Cameroon National Institute for Statistics shared his country's experience in conducting a 2022 national survey on the access and use of ICT. The policy justification for the survey came from a prospective program to enhance ICT development in Central Africa funded by the European Union and coordinated by the National Advanced School of Engineering of Yaoundé. The survey was unusual in that it aimed to cover three distinct types of users: households (and individuals), enterprises (formal sector) and Government. The initiative drew guidance from capacity-building material and resources provided by members of the Partnership on Measuring ICT for Development, particularly referring to the manuals produced by ITU, UNCTAD and the Economic Commission for Africa. The survey yielded a baseline of values for core indicators on ICT access and use, including by businesses, and the National Institute for Statistics concluded that it should develop a regular statistical programme on ICT data collection to enhance the measurement of the digital economy going forward. The exercise should be replicated in other countries in the region (Central African Republic, Chad, Democratic Republic of the Congo, Gabon).

46. During the discussion, the WTO representative noted that the joint capacity-building workshops focused on the *Handbook on Measuring Digital Trade* with its launch in July 2023. There were workshops (one Caribbean and one African) in the pipeline, in collaboration with regional organizations. More workshops could be organized on demand. The WTO Institute on Training and Cooperation surveyed beneficiary countries, that indicated e-commerce was a main interest for technical assistance across all regions, and interagency collaboration is essential. Experts from Brazil noted the relevance of the availability of methodological material in various languages.

47. Experts emphasized the need for establishing a roadmap for the production of e-commerce and digital economy statistics, incorporating methodological guidance from international organizations. Others highlighted the importance of creating a training toolkit or organize training (maybe in the form of webinars) on specific methodological issues, such as how to deal with low response rates, making standardized assumptions, e-commerce definitions, tactics to integrate data from different sources, or on issues specific to statistics produced by Central Banks. Another delegate reminded about the suggestion to set up an online knowledge sharing portal. More regional training on the core digital economy indicators in various languages were also requested.

48. The UNCTAD secretariat welcomed the fact that member states are using its methodological resources. However, it emphasized the importance of international organizations complementing these resources with practical training sessions. Eurostat also highlighted that its Manuals for compilers, model questionnaires, and validation rules, can be useful for non-European countries and are freely available online. Statistics Canada was

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[18] Methodology, https://www.pcbs.gov.ps/PCBS-Metadata-en-v5.2/index.php/catalog/720, and main findings, https://www.pcbs.gov.ps/Downloads/book2632.pdf.

also very open to share their expertise and methodology and invited experts to reach out if interested.

49. The experiences of Cameroon and the State of Palestine showed that the successful implementation of ICT business surveys require a team effort to build that implementation capacity. Regional organizations can be leveraged to facilitate contact between the international organizations and national statistical offices.

Item 7
Topics for future consideration by the Working Group

50. As per its terms of reference, the Working Group discussed possible topics that could be examined in future meetings and that will be proposed to the seventh session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy. The Intergovernmental Group of Experts will decide on the provisional agenda items to be discussed at the fifth meeting of the Working Group in late 2024.

51. Throughout the Working Group meeting, it became clear that all the agenda items merit further discussion, but the time available is limited. Therefore, it is suggested that the Working Group keep the same overarching agenda items for its next meeting: (a) progress in measuring e-commerce and the digital economy work by relevant international organizations; (b) measuring the value of e-commerce; (c) non-survey-based measurement of e-commerce and the digital economy; and (d) developing capacities for measuring e-commerce and the digital economy.

Item 8
Adoption of the Chair's summary

52. The Working Group agreed that a Chair's summary reflecting the key issues discussed during the meeting would be produced after the end of the meeting. It authorized the Chair and the Vice-Chair-cum-Rapporteur to finalize the summary. The Chair's summary would be submitted to the seventh session of the Intergovernmental Group of Experts on E-commerce and Digital Economy on 6 to 8 May 2024.

Conclusion

53. As per the substantive agenda items, the Working Group conveys the following conclusions and recommendations below to the Intergovernmental Group of Experts:

On progress in measuring e-commerce and the digital economy

(a) Recommends that UNCTAD continue efforts to gradually improve the measurement of e-commerce and the digital economy by engaging with other international organizations and national statistical offices in future meetings of the Working Group.

On measuring the value of e-commerce

(b) Asks UNCTAD to continue coordinating the work of the task group on measuring e-commerce with a view to sharing national experiences, as well as developing measurement standards and statistical guidelines that can be used by developing countries to measure the value of e-commerce, and to report back on progress at the fifth meeting of the Working Group.

On non-survey–based measurement of e-commerce and the digital economy

(c) Encourage national statistical offices of developing countries to consider applying the digital supply-use tables framework and sharing the results with the Working Group.

(d)   Continue featuring experiences and approaches to using non-survey-based sources of data for official statistics in the discussions of the Working Group, with the aim of disseminating relevant knowledge resources to statisticians in developing countries to help them improve the measurement of e-commerce and the digital economy.

On building capacities for measuring e-commerce and the digital economy

(e)   Calls on the donor community to increase support for methodological development, capacity-building, training and technical assistance on e-commerce and digital economy statistics that are needed to support policymaking.

(f)   Requests UNCTAD to set up an online repository of practices and other statistical resources, including a road map for the production of digital economy statistics that could be accessed by all countries and support training, capacity-building and knowledge sharing.

54.   Based on the discussions of the fourth meeting of the Working Group, the Intergovernmental Group of Experts on E-commerce and the Digital Economy may wish to request that the Working Group continue the discussion on the following agenda items at its next meeting:

- Progress in measuring e-commerce and the digital economy work by relevant international organizations (standing agenda item);

- Measuring the value of e-commerce;

- Non-survey-based measurement of e-commerce and the digital economy;

- Developing capacities on measuring e-commerce and the digital economy.

55.   In closing, the Chair urged all stakeholders to actively participate in measurement initiatives that drive evidence-based policymaking within the digital economy. Collaborative engagement is vital for informed decision-making and the formulation of national strategies. The proactive involvement of pertinent stakeholders is essential to ensure the development of impactful policies that promote growth and innovation within the digital economy.

Annex I

Attendance list of the fourth meeting of the Working Group on Measuring E-commerce and the Digital Economy

1.   A total of 172 approved registered participants attended the meeting, 55 per cent of whom were women.

2.   Participants from the following member States of UNCTAD were in attendance:

Algeria	Malawi
Angola	Malaysia
Bahamas	Mexico
Belarus	Morocco
Belgium	Namibia
Botswana	Nicaragua
Brazil	Niger
Brunei Darussalam	Nigeria
Cambodia	Oman
Cameroon	Panama
Canada	Russian Federation
Central African Republic	Saudi Arabia
China	Singapore
Colombia	South Africa
Costa Rica	Spain
Cuba	Sri Lanka
Dominican Republic	State of Palestine
Egypt	Switzerland
El Salvador	Thailand
France	Türkiye
Georgia	United Arab Emirates
Indonesia	United Kingdom of Great Britain
Italy	and Northern Ireland
Kenya	United States of America
Luxembourg	Venezuela (Bolivarian Republic of)
	Viet Nam
	Zimbabwe

3.   Participants from the following international organizations were in attendance:

Statistical Office of the European Commission
International Labour Organization
International Monetary Fund
International Telecommunications Union
Organisation for Economic Co-operation and Development
United Nations Capital Development Fund
United Nations Conference on Trade and Development
United Nations, Department of Economic and Social Affairs
United Nations, Economic Commission for Europe
United Nations, Economic and Social Commission for Asia and the Pacific
Universal Postal Union
World Bank Group
World Trade Organization

4.   Representatives from civil society and the private sector included:

Data Economy Policy Hub
DevStat Servicios de Consultoría Estadística

Geneva Graduate Institute
International Bar Association
International Network for Standardization of Higher Education Degrees
Johns Hopkins University
Liquid Intelligent Technologies
Tony Blair Institute
Universidad de La Habana

Annex II

List of resources referenced at the fourth meeting of the Working Group

The 6 substantive documents and 21 presentations by international organizations and national experts are available on the meeting webpage at https://unctad.org/meeting/working-group-measuring-e-commerce-and-digital-economy-fourth-meeting.

Other resources referenced during the meeting include:

Brazil Dashboard on Digital Transaction Volumes: https://www.gov.br/mdic/pt-br/assuntos/observatorio-do-comercio-eletronico (available only in Portuguese).

Canada Survey of Digital Technology and Internet Use (SDTIU) – methodology and questionnaire: https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4225.

Canada Canadian Internet Use Survey (CIUS) – methodology and questionnaire: https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4432.

Eurostat ICT usage in enterprises survey – methodological manuals and model questionnaires: https://ec.europa.eu/eurostat/web/digital-economy-and-society/publications.

International Monetary Fund Financial Access Survey – guidelines, manual and questionnaire: https://data.imf.org/?sk=e5dcab7e-a5ca-4892-a6ea-598b5463a34c.

ITU ICT Statistics page (links to expert groups, methodological documents, Partnership on Measuring ICT for Development): https://www.itu.int/itu-d/sites/statistics/.

ITU Academy (see courses on big data and statistics): https://academy.itu.int/.

ITU DataHub (indicators and statistics): https://datahub.itu.int/.

OECD Going Digital Toolkit. https://goingdigital.oecd.org/.

OECD Going Digital Measurement Roadmap. https://www.oecd.org/digital/the-oecd-going-digital-measurement-roadmap-bd10100f-en.htm.

OECD Going Digital Integrated Policy Framework. https://www.oecd-ilibrary.org/science-and-technology/going-digital-integrated-policy-framework_dc930adc-en.

OECD Assessing national digital strategies and their governance. Featuring the National Digital Strategy Comprehensiveness indicator: https://www.oecd.org/publications/assessing-national-digital-strategies-and-their-governance-baffceca-en.htm.

UNCTAD Trade-in-services statistics information system: https://unctad.org/programme/trade-services-statistics-information-system-tisstat.

Annex III

List of organizations participating in the task group on measuring e-commerce as at December 2023

1. Bank of Jamaica

2. Department of Statistics of Malaysia

3. Electronic Transactions Development Agency (ETDA) of Thailand

4. Eurostat

5. Hungarian Central Statistical Office

6. International Telecommunications Union

7. Malta National Statistics Office

8. MCIT Egypt

9. Mexico National Institute of Statistics and Geography (INEGI)

10. Ministry of Industry and Commerce of Zimbabwe

11. National Bureau of Statistics of China

12. National Institute of Statistics and Economic Studies (INSEE) of France

13. Office for National Statistics of the United Kingdom

14. Organisation for Economic Co-operation and Development

15. Regional Centre for Studies on the Development of the Information Society (CETIC.br); Brazilian Network Information Centre (NIC.br)

16. Singapore Department of Statistics (SingStat)

17. Statistical Office of the Republic of Slovenia

18. Statistics Austria

19. Statistics Canada

20. Statistics Finland

21. Statistics Indonesia (Badan Pusat Statistik, BPS)

22. Statistics Korea (KOSTAT)

23. Statistics Poland

24. Turkish Statistical Institute (TurkStat)

25. UNCTAD

26. United Nations, Statistics Division

27. World Trade Organization