13th Meeting of the Advisory Expert Group on National Accounts,
1-3 October 2019, Washington D.C., USA

Agenda item: 2.2.4

UNECE Guide to sharing economic data: main recommendations

Introduction

The Task Force on exchange and sharing of economic data was established by the Bureau of the Conference of European Statisticians (CES) in 2017 with the aim to facilitate the sharing of data on the structures and activities of MNEs nationally and internationally among producers of official statistics.

The Advisory Expert Group (AEG) on National Accounts discussed the progress of the Task Force at its 11th meeting on 3-5 December 2017 and 12th meeting on 27-29 November 2018. The AEG recognized the critical importance of this work for understanding the activities of multinational enterprise groups (MNEs), reconciling bilateral asymmetries and, in general, issues related to globalization.

The Task Force has now finalized the draft Guide to Sharing Economic Data and submitted it to the CES Bureau to decide if the document can be sent for an electronic consultation among all CES members. During the consultation countries will be invited to provide more examples of data sharing, especially outside the EU region. The results of the Committee on Monetary, Financial and Balance of Payments Statistics (CMFB) Task Force on the exchange of confidential information should become available and will be reflected in the Guide. Subject to a positive outcome of the consultation, the report will be then submitted to the 2020 CES plenary session for endorsement.

Documentation

● A paper containing extracts (the Executive Summary, Introduction and the Way Forward) with the main recommendations of the draft "Guide to Sharing Economic Data"

● Full text of the draft guide can be downloaded here.

Main issues to be discussed

The AEG is invited:

● to review the provided extracts of the draft "Guide to Sharing Economic Data" and discuss the vision for data sharing, the strategic recommendations and practical action items, as presented in the Way Forward.
● to suggest additional examples of data sharing among countries, which could be included in the Guide.

A GUIDE TO SHARING ECONOMIC DATA

EXECUTIVE SUMMARY

1.   The impact of globalization and in particular the activities of Multinational Enterprises[1] (MNEs) on statistics represents one of the largest "measurement" challenges facing producers of economic statistics today. It is indisputable that statisticians need to understand MNEs' activities better to produce relevant economic statistics. Sharing data on the structures and activities of MNEs nationally and internationally among producers of official statistics has become an imperative to guarantee the high quality of official statistics.

2.   In this Guide data sharing refers to sharing of data for statistical purposes among producers of official statistics. The data that are shared can be qualitative, quantitative, confidential, non-confidential, aggregated or disaggregated, collected directly or otherwise obtained by statistical authorities from varying sources, or data that are publicly available. Confidential data can only be shared by using secure technology and among producers of official statistics that have a sufficient legal framework in place to ensure statistical confidentiality. Statistical confidentiality[2] has to be ensured in all phases of data sharing and processing including a full guarantee that the data are only used for statistical production and quality improvement, not for any administrative purposes or decisions about individual units.

3.   Data sharing has been common for a long time at the national level. It is essential that the national statistical office (NSO), the entity producing statistics in the national central bank (NCB) and other producers of official statistics share data and information to ensure the quality of economic statistics and reduce burden on businesses through data reuse. The idea should be that data are collected only once. In addition to data sharing between producers of official statistics, other entities that collect information in the course of their operations – for instance various ministries, health authorities, educational institutions and tax authorities – often provide data for statistical production. However, this is not regarded as data sharing but as administrative data going only in one direction: from other government organizations to producers of official statistics, never back due to statistical confidentiality.

4.   The work at the national level provides the foundation for international data sharing since the same prerequisites exist. There is a need for a solid legal base, well-defined processes and trust between those sharing data at both national and international levels. Such trust can only be built on strong and well documented legal structures and agreements assuring the confidentiality of the data and its use for only statistical purposes.

5.   The structures and activities of MNEs develop over time to support business requirements and these may not align with national borders. It may be difficult for MNEs to report their activities by country. While statisticians have developed guidance on how to account for the global production arrangements of MNEs, enterprise structures keep evolving

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[1] In this Guide multinational enterprise is understood as a group of (two or more) enterprises producing goods or delivering services in more than one country under a management headquarters in one (or rarely in more than one) country.

[2] Statistical confidentiality and exclusive use for statistical purposes means that individual data collected or obtained by producers of official statistics that refer to natural or legal persons are to be held strictly confidential and used exclusively for statistical purposes and accessed solely by those authorized to do so under statistical legislation.

to adjust to new business environments and opportunities. To ensure the correct recording of the largest MNEs in national statistics, it is often necessary to understand their global structures and value chains and, thus, share data with statistical authorities of other countries. However, first there must be a good understanding of national data needs and how data sharing might contribute, if benefits are to be gained from international data sharing.

6.   Several international initiatives related to data sharing and linking have been undertaken in recent years, and the importance of data sharing has been emphasized at different fora that have considered the challenges caused by globalization. These initial steps towards the "vision for statistical data sharing" have focused on how to share data for a specific statistical purpose. They have provided valuable information on the importance of data sharing for the quality of certain statistics and illustrated the complexities of global production arrangements. The discussion has focused on legal barriers and technical issues that need to be solved, even though engaging in data sharing requires, more than anything, a profound cultural change in statistical systems.

7.   For decades, statisticians have engaged internationally to agree on statistical standards to ensure comparability. During the last decade that collaboration has expanded to the development of common statistical production models and sharing of software solutions. But so far, countries have remained highly isolated in statistical production and data collection, with only a few exceptions achieved, for instance, within the European Statistical System (ESS). Even the sharing of aggregated data may be very useful in indicating where problems and bilateral asymmetries lie though is not yet enough for reconciling MNE data globally.

8.   In recent years, several statistical offices have engaged in data sharing with statistical offices of important trading partner countries. These statistical offices have come to realise the pivotal importance of data sharing to producing relevant and reliable economic statistics. For instance, before data sharing, the bilateral trade asymmetry between Canada and China in 2016 was 21.3 billion USD of which 20.3 billion USD was explained by sharing aggregate level data and metadata on compilation methods. In March of 2018, Romania undertook a similar exercise with a number of European Union (EU) countries and significantly reduced asymmetries in both trade flows.

9.   The sharing of data on foreign direct investment (FDI) flows within the EU has led to improvements in the harmonization of statistical methods across member states. The Statistical Office of the EU – Eurostat, established a unique register containing more than 127,000 European MNEs as of 2017 to support the sharing of confidential micro-data on legal units, relationships, enterprises and enterprise groups by 32 EU and European Free Trade Association (EFTA) countries. The EuroGroups Register (EGR) contains information that identifies each enterprise in terms of ownership, activity, number of persons employed, as well as group structure and turnover.

10.   The Conference of European Statisticians' (CES) established a Task Force on the exchanges and sharing of economic data which led to this Guide to advance statistical data sharing. The following paragraphs summarize the main recommendations in support of the vision for data sharing for statistics. More detailed and practical recommendations to facilitate statistical data sharing are presented later in the Guide.

11.   The Task Force recommends that NSOs and other statistical authorities, as relevant:

- **Review national conditions for MNE data exchange** to assess barriers and enablers of MNE data exchange. First, clarify how the statistical law treats data sharing for statistical purposes among statistical authorities nationally and internationally. If necessary, draft legal texts allowing data sharing for statistical purposes among producers of official statistics with statistical authorities that have the legal framework in place to ensure statistical confidentiality. This requires that producers of official statistics are professionally independent, e.g. from their parent organizations, say a ministry. Therefore, it may be necessary to restructure parts of the national statistical system (NSS) to meet the requirements for data sharing before legislative changes are introduced. Revisiting the interpretation of the statistical law may also allow updating the guidance, procedures and rules for data sharing. Assess if and how the institutional set up of the NSS enables data linking. NSOs should also have access to all relevant MNE data sources that are necessary for ensuring the quality of statistics, including the country-by-country reporting data on MNEs.

- **Prepare the national set-up for MNE data sharing** and allocate adequate resources for statistical data sharing activities. NSOs should assign a responsible unit or staff to oversee and support the sharing of economic data between statistical authorities. Efforts are also needed to develop the statistical data infrastructure and metadata to allow linking of data in a secure environment between statistical domains and statistical authorities. Statistical offices may need to increase their technical and legal knowledge of data sharing and micro-data linking taking into account the protection of the confidential data. Develop tools and mechanisms for data sharing, using examples given in this Guide, and prepare guidance for MNE communication. Identify national priority areas for data exchange and critical MNEs considering the quality of statistics.

- **Engage in international collaboration** focusing on ways to address national challenges in measuring MNEs through joint work. First, engage in closer collaboration to share experience in international meetings and discuss challenges in collaborating with MNE respondents, collecting and using their data in statistics. Second, start international exchanges with major trade partner countries by reviewing asymmetries and engage in bilateral discussions and data exchange to improve data quality and treatment for critical MNEs. Third, make use of data reconciliation tools and platforms developed by international organisations, provide non-confidential data to the repositories and contribute by validating data, as possible, to improve MNE data repositories.

12.   These are the main recommendations to help NSOs enhance data sharing. Especially in the beginning, it will be important to prioritize data sharing projects, select statistical domains that will benefit most from data sharing and focus on the most significant MNEs in the economy. Data sharing starts at the national level with extensive and well-structured collaboration among the main producers of economic statistics. As MNE activities are not limited by national borders, statisticians need to engage in international collaboration. International data sharing may start with major trade partner countries, but the longer-term goal should be to become part of a global network of experts on MNEs. These actions, the review of the national legal and data framework, setting up the instructions, tools and processes, as well as adequate resourcing, will prepare the NSO for international data sharing.

13. The Task Force recommends that International Statistical Organizations:

- **Set up and coordinate an international network of experts on MNEs** and the international exchange of experience and innovations. In June 2018, the CES plenary session decided to create an international network of experts on MNEs and recognized the need for a regular international forum. The joint UNECE, Eurostat and OECD Group of Experts on National Accounts has undertaken to lead this effort. In the first instance, this network should regularly meet, or otherwise communicate, exchange experience and best practices in data sharing, and exchange metadata type information on MNEs (e.g. on their structure or on the statistical methodology applied to them) as well as share latest innovations in data collection and exchange information on tools and techniques. The network should also involve central banks. A steering group including members from international organizations and leading countries could be established to accelerate progress. Further, to enable international data exchange involving statistical entities of international organizations, the definition of the global statistical system and its role in data exchange should be clarified. Establishing a platform for the sharing of tools and innovations in data sharing would be useful.

- **Create platforms to facilitate the analysis of asymmetries.** This kind of database with aggregated data and statistics would encourage cross-border cooperation among statisticians. Countries could use the findings from the database to initiate discussions with statistical authorities of other countries so as to address large discrepancies and work bilaterally to find solutions to the differences. An extension of the database could collect information about ongoing reconciliation projects and their results. Sessions of national accounts and trade statistics expert meetings could be dedicated to the discussion of asymmetries, as topical.

- **Develop guidance and training to build national capacities to exchange and reconciliate MNE data.** The international organizations should play a role in developing and providing training modules to build NSO capacity to share data, including the skills and tools, as well as development of data architecture that supports data sharing. Statistical offices and international organizations should also work together to develop a Guide to Data Reconciliation to outline some of the operational approaches and methods countries can use to reconcile bilateral and multilateral trade, investment and production figures. The development would benefit from the sharing of experience and lessons learned within the global network of experts on MNEs and could take stock of good practices shared in the network.

- **Facilitate secure exchange of MNE data building on existing initiatives.** The goal would be to create a single register of the largest MNEs for statistical purposes. Ideally, countries able to do so would supply micro-data into this statistical register. Current initiatives, presented in the Guide, provide useful tools to be further developed, e.g. the EuroGroup Register (EGR), the Early Warning System, the FDI-network and the GNI-MNE Pilot approach. The work could start by reviewing possibilities to develop extensions to OECD's Analytical Database on Individual Multinationals and their Affiliates (ADIMA). As a starting point, NSOs could be involved in validating and complementing the MNE data for their economy by sharing publicly available information on MNEs, e.g. from public business register data. At a later stage,

confidential unit-level data on MNEs and data exchanged between statistical authorities could be included in an extension to be used exclusively for authorised statistical purposes. The confidential unit-level data on MNEs supplied by statistical offices would not be made available in the public-use ADIMA. Access by NSOs should be limited to data about MNEs that have active entities in the country of the NSO and that are necessary for statistical production. The aim would also be to create an infrastructure for secure data exchange for statistical offices, as the volume of data exchange starts increasing. This may include exploratory work on processes by which statistical offices apply an 'algorithm' to link micro-data, identify enterprise level asymmetries and feed the results back to countries.

- **Engage with MNEs, accountants and law makers to improve the basis for future data collection.** Global efforts are needed to address the challenges of measuring MNEs. The international statistical community should plan concrete steps to advance the introduction and use of global unique business identifiers and support their adoption by governments. The Legal Entity Identifier (LEI) System provides a global unique identifier that could be applied across countries. The network of MNE data experts should reach out to a couple of the largest MNEs to review their data provision processes to different national statistical authorities, and assess possibilities for developing a more coherent and efficient data reporting process serving statistical authorities of several countries (towards the vision of data collected only once for MNEs). Collaboration with business software producers in introducing statistical reporting requirements to business IT systems would be a potential avenue. Furthermore, doing things in isolation is no longer effective. Reaching out to international communities working on business accounting standards to pursue collaboration with MNEs and further improve quality of data reporting should be investigated. Such collaboration of statisticians and MNE representatives could be pursued at the meetings of the Business at OECD (BIAC) and the UN Standing Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting.

14.   In general, the main responsibility of international statistical organizations should be to develop mechanisms and design the overall setup for international data sharing and facilitate data sharing with the development of technical solutions, tools and guidance.

15.   Small steps and successful experiences are probably the best way to demonstrate that data sharing among statistical authorities is the way forward in the globalized world. The exchange of individual data cannot happen without sufficient resources for the work and the necessary initial investments in technology, process improvements and methodology.

I. INTRODUCTION

1.1   Why is Guide on data sharing needed?

16.   In recent decades, advances in technology and communication, increasing capital movements and dominance of multinationals as well as reductions in shipping costs have redefined global production. With firms re-organizing themselves to maximize efficiency and minimize taxation, globalization has brought more trade, capital flows and movement of people across borders. Globalization has led to tighter integration of economies worldwide. This complicates economic measurement. Why? Largely because the production of our bread and butter statistics is nationally focused and based on residency.

17.   National statistical offices (NSOs) increasingly find it difficult to delineate MNEs and their economic activities to identify those that are resident.   With economic activity increasingly global, global value chains operate within and across MNEs. MNEs and associated value chains modify their strategies and spatial organization quickly, and without information on the full value chain, it may be difficult to define which parts of their activities belong to which economy. Different treatment of the same MNE's data across countries is a source of important asymmetries.

18.   Enterprises are digitalizing their information management systems. These digitized systems are increasingly standardized, rigid and adapted for international accounting standards. With internal data sets, organized to support global activities, it may be challenging for MNEs to divide their activities to align with national economies as required for official statistics. MNEs will need to provide varying kinds of reports to individual statistical authorities of different countries. MNEs would benefit from better respondent relation management in developing solutions for reporting their data to these various statistical authorities in a consistent way.

19.   Later in this Guide examples will be presented to show how, sharing and reusing data can lead to an improved quality of statistics and develop more efficient ways to produce them. The increasingly globalized world has forced official statisticians to look beyond the national border and consider solutions that include the national and international exchange of economic data.

20.   New data sharing mechanisms are needed, nationally and internationally, to enhance the quality, coherence and relevance of economic statistics and the efficiency of their production. Without a full picture of the activities of the MNEs, it is a challenge to ensure continued meaningful and correct measurement of global production and trade, and to understand the influence of MNEs on macro-economic and business statistics. Such a complete view and systematic approach to data reporting by statistical authorities is likely to come with many benefits for the MNEs as well. There is a need to analyse the risks and obstacles of data sharing and exchange and identify enablers that will lead to an increase in the sharing of economic data (including information on business structures) in statistical production.

21.   Outside of official statistics, other activities also face the need to exchange data to carry out their tasks in this increasingly global environment. New data exchange initiatives include, for instance, the base erosion and profit shifting (BEPS) data exchange for taxation. Such initiatives could provide a useful source of internationally exchanged data for official statisticians and could help improve the quality of statistics further.

22.   National authorities other than those producing statistics also collect lots of data to carry out their tasks. Often these data can be used for the compilation of official statistics. In areas where administrative data are useful for official statistics, important reductions in statistical response burden can be achieved by using data collected by other national authorities.

23.   In some countries, NSOs face the general requirement that the data needed for public administration, including statistics, should only be collected once. Furthermore, statistics need to remain relevant in the increasingly globalized economy and provide more detailed and timely information about changes in the economy. This calls for access to more data on activities beyond the national territory and often outside the reach of the NSO of one country.

24.   To summarize, there are both external factors that influence data sharing (e.g. digitalization in its different forms) and statistical needs to increase data sharing to ensure the relevance and the overall quality of official statistics. Therefore, NSOs may need to rely more and more on the use of secondary data and, consequently, share and exchange more data with other institutions, both nationally and internationally.

25.   The challenge globalization presents for economic statistics has been the focus of ongoing work for over a decade as illustrated by the following list:

- Economic Globalization: A Challenge for Official Statistics[3] (Joint EFTA/UNECE/SSCU Seminar, 2008)

- Report: TF on the recording of certain activities of multinationals in national accounts[4](Eurostat, 2009)

- OECD Handbook on Economic Globalisation Indicators[5] (OECD, 2010)

- Guide on Impact of globalization on national accounts[6] (UNECE/OECD/EUROSTAT, 2012)

- Guide to Measuring Global Production (UNECE, 2015) English[7], RU[8]

26.   This work has led increasingly to the view that the sharing and exchange of data must be an important element in the toolbox of statisticians as they develop approaches to the measurement challenges posed by globalization.

27.   The Guide to Measuring Global Production identifies as a priority the need to develop new methods and sources for collecting and compiling statistics on the largest and most complex MNEs in a consistent and effective way. The Guide also notes the limits of national and international data sharing among producers of official statistics due to legal and

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[3] https://www.unece.org/fileadmin/DAM/stats/publications/Economic%20globalization.pdf
[4] https://www.unece.org/fileadmin/DAM/stats/groups/wggna/Report_TF_recording_activities_multination als_national_accounts.pdf
[5] https://www.oecd-ilibrary.org/docserver/9789264108103-en.pdf?expires=1568133912&id=id&accname=ocid195767&checksum=B307D0B36827F3A631F63B2BCA422E9 0
[6] https://www.unece.org/fileadmin/DAM/stats/publications/Guide_on_Impact_of_globalization_on_national_ accounts__web_.pdf
[7] https://www.unece.org/fileadmin/DAM/stats/publications/2015/Guide_to_Measuring_Global_Production__2015_.pdf
[8] https://www.unece.org/fileadmin/DAM/stats/publications/2016/Guide_to_Measuring_Global_Production_-_RU.pdf

confidentiality constraints, which in many cases hamper the possibility of improving the analysis of the impact of MNEs on official statistics.

28.   In the 2015 and 2016 meetings of the joint UNECE/Eurostat/OECD Group of Experts on National Accounts, countries emphasized the need for data confrontation and exchange between the producers of economic statistics within a country and between countries to enable proper data validation and improve quality, relevance and consistency of data across domains. Globalization requires statistical agencies to understand the significance of counterparty information and how this can provide insight from the other sides of major transactions. National circumstances, legal and technological challenges will need to be considered as well as possible risks, for example related to production processes of statistics, trust of respondents and the general public, and privacy issues.

1.2   Work process

29.   When the Group of Experts on National Accounts discussed data sharing in 2015 and 2016 as part of the follow up to the *Guide to Measuring Global Production*, they recognized that data sharing is essential when looking for solutions to the challenges related to global production, and asked international organizations to consider ways to facilitate the exchange and sharing of economic data.

30.   In view of these developments, the CES Bureau decided to undertake an in-depth review of the exchange and sharing of economic data. The review was carried out in October 2016, based on a paper by Statistics Finland with inputs from a number of countries and organizations. The paper[9] identified issues and problems and made recommendations on possible follow-up in areas where progress is achievable, including the need to develop coordination mechanisms, exchange experience, develop general guidance and principles for data exchange and develop technological tools for this purpose.

31.   As an outcome of the review, the Bureau emphasized that national and international data sharing is a prerequisite for statisticians to be able to depict economic reality, profile MNEs and provide meaningful data on their activities. The Bureau stressed the urgent need to operationalize the exchange of data between NSOs and asked a group of countries and organizations to identify key streams and priorities and develop terms of reference for a task force to undertake work in this area.

32.   In March 2017, the CES Bureau established a Task Force on exchange and sharing of economic data to advance this challenging area of work. The Task Force consisted of experts of National Accounts, Balance of Payments (BOP), business statistics, foreign trade statistics and other economic statistics from the following countries and international organizations: Canada, Denmark, Finland (Chair), Italy, Ireland, Mexico, Poland, the Netherlands, United Kingdom, United States, European Central Bank (ECB), Eurostat, the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), UNECE and the United Nations Statistics Division (UNSD). UNECE provided the Secretariat for the Task Force.

33.   The work built on existing national and international experience, including the results of related initiatives of UNSD, Eurostat, OECD, World Trade Organization (WTO) and IMF. The

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[9] http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/bur/2016/October/03-In-depth_review_on_data_sharing_final.pdf

Task Force ensured coordination by consulting regularly with the Group of Experts on National Accounts, CES Bureau and Conference, OECD Working Parties on National Accounts and Financial Statistics, and the Advisory Expert Group on National Accounts.

34.   After the first stage of work, the Task Force presented an interim report to the CES plenary session for discussion and comments in June 2018. The interim report suggested practical solutions and tools to be further developed for data sharing. It outlined the Task Force's findings on its first main tasks:

- Review concrete examples of useful data exchange;
- Identify enablers and obstacles and propose solutions;
- Find ways to identify MNEs crucial for data exchange;
- Large Cases Units (LCU) in statistical offices.

35.   The Task Force continued to the second stage of work, from July 2018 to June 2020, taking into account the feedback received from the CES plenary session and from other consultations carried out in 2018. In the second stage, the Task Force developed guidance, tools and principles for statistical offices to facilitate the exchange of economic data. They also collected examples of innovative ways to exchange economic data to increase the quality and coherence of statistics and the ability to better analyse the activities of MNEs.

36.   In addition to the regular coordination with several expert groups, the Task Force also provided input to corresponding work undertaken by the Expert Group on International Trade and Economic Globalization Statistics (ITEGS), the G-20 Data Gaps Initiative, Eurostat's Integrated Global Accounts (IGA) project, the relevant CES Task Forces and the Data Integration Project under the UNECE High-level Group for the Modernisation of Official Statistics.

37.   The Task Force submitted this final report to the CES Bureau in February 2020 and consequently to the CES plenary session for endorsement in June 2020.

1.3   Structure of the Guide

38.   After the executive summary and introduction, Chapter II reviews the status of data exchange in statistics and offers insights into statistical offices' current practices in data exchange. Using a number of sources, the Task Force collected and analysed real examples of regular data exchange and examples of one-off data exchange for statistical purposes. The chapter provides a summary analysis of the data exchange cases studied by the Task Force.

39.   Chapter III portrays enablers and obstacles of data sharing based on the examples reviewed. It identifies key benefits and challenges of data sharing with links to real examples. The intention of this chapter is to ensure that the Guide is based on a thorough analysis of lessons learned in previous data exchange so as to enable development of realistic and useful recommendations. The chapter considers obstacles to data exchange in order to identify solutions and strengthen enablers of data sharing. The chapter makes references to several useful resources and tools to help advance data sharing for statistics.

40.   Chapter IV looks at the prerequisites for better reconciliation of MNEs' data. It considers how to detect the MNEs that are most relevant for data sharing and the most significant changes in their activities. It shares practical experiences in selecting MNEs for special treatment, for instance to be included in the work of experts on MNEs, and makes

recommendations based on real examples on the types of data items to be exchanged to ensure the high quality and relevance of economic statistics. The chapter also analyses gaps in data exchange practices that should be addressed. Furthermore, the chapter examines the role of organizational units of statistical offices that work on large and complex enterprises, so called Large Cases Units (LCUs). Finally, it speaks about setting up and coordinating an international network of experts on MNEs.

41.   Chapter V highlights one of the key issues in enabling international data sharing – communication and engagement with MNEs. It provides the basic principles for the first contact and for the follow-up meetings. It provides guidance on how to motivate MNEs to engage with the statistical authorities and analyses the benefits of data sharing for MNEs.

42.   Chapter VI is devoted to presenting the Task Force's principles and practical guidance for the secure exchange of economic data. It covers issues, such as development of legal frameworks and safeguarding of confidentiality in the exchange of economic data, and the principles of effective and secure data exchange. The chapter also shares some useful, generally applicable tools and concrete solutions to be used in data exchange.

43.   Chapter VII makes proposals for future scenarios for the collection and exchange of economic data. It highlights some innovative practices in statistical offices and in other industries (e.g. taxation). The chapter concludes with a discussion of a vision on future data exchange for statistical purposes and makes proposals for further work.

VII. WAY FORWARD

44.   The guidance provided in the preceding chapters arises from work launched as a reaction to the view held by the CES Bureau that in a globalized economy, national official statistics cannot be produced in isolation from the rest of the world. Statisticians need to be able to exchange data with statistical authorities of other countries, in some cases potentially in the same way as tax authorities already do. To get a complete and accurate picture of the MNE activities affecting national statistics, the global statistical system needs to act decisively and in coordination to tackle the obstacles of international data sharing for statistical purposes, and more importantly, build a more consistent and efficient international statistical system by reaping the benefits from shared data. Statisticians should reach out to MNEs to establish and maintain close partnerships to discuss the benefits and facilitate data reuse in order to develop statistics that can offer new insights about national economies, global value chains, economic interlinkages and other policy-relevant phenomena in the global economy.

45.   What is the vision for statistical data sharing? If official statisticians had all the data needed, what could be achieved? Statisticians could reconcile the data on MNEs globally and produce economic statistics without statistical asymmetries, gaps or double counting. The same data could only be collected once from an MNE to be used for producing different statistics in various statistical authorities across countries. Policy makers, businesses and researchers would be able to base their work and decisions on more accurate statistics. It would be possible to better analyse shifts in economic globalization and changes in the global division of work.

46.   Unfortunately, statisticians are still far from being able to put together all relevant data on MNEs. First, we need to translate this vision, step by step, into practice. Where would the MNE data reside – in a global statistical data base? How would the data end up there – through a secure data exchange platform? Who would be responsible for data collection and validation – would there be a single point of MNE data collection or multiple? Who would be responsible for management of the global statistical database? Who would have access to data – producers of official statistics certified as statistical authorities with a sufficient legal backstopping to fully protect the confidential data?

47.   This Guide is a starting point for advancing data exchange practices in official statistics. Discussion on data sharing will continue at various fora, but discussion will not be enough. Concerted efforts are needed to bring forward the global agenda of data sharing for statistical purposes. This chapter puts forward proposals for such a global agenda and presents other ongoing work of international data sharing initiatives like the G20 Data Gaps Initiative and similar initiatives of the European Statistical System.

Main recommendations on data sharing for statistical purposes

48.   The recommendations on data sharing for statistical purposes are split between those where progress can be achieved at the national level and those where international institutions will need to be active in international cooperation with national statistical offices. The recommendations are followed by a detailed list of practical action items. The practical actions are presented in the order in which they would probably be implemented, and the link to strategic recommendations is shown in brackets.

49.   National level:

- **Review national conditions for MNE data exchange: the statistical law and statistical framework, interpretation of legislation and confidentiality procedures and rules**. (actions 1-3)

- **Prepare the national set-up for MNE data sharing: allocate resources, prepare tools, engage with MNEs and organize activities as appropriate for the country**. (actions 4-8)

- **Engage in international collaboration and data sharing to address national challenges in measuring MNEs** (actions 9-11)

1. Review the current legal framework to confirm whether it directly prohibits data exchange for statistical purposes among statistical authorities (nationally or internationally), or if such exchange could be allowed. For EU countries, refer to the ESS law that allows such exchange. Prepare legal texts to enable data exchange for statistical purposes among statistical authorities explicitly (nationally and internationally). This would be included in the next revision of the national statistical law. The UNECE Guidance on modernizing statistical legislation (2018) can serve as a reference when reviewing and revising the statistical law.

2. Review current data exchange practices and revisit the interpretation of the statistical law in relation to the current confidentiality procedures and rules. Assess needs to improve data interoperability, integration and linking within the national statistical system. Identify barriers and enablers of MNE data exchange to plan actions, as reflected in chapter III of this Guide.

3. Review the possibility of access for statistical purposes to the relevant internationally exchanged data, such as the country-by-country reporting data on MNEs held by tax authorities. Refer to international recommendations[10] on access to all data needed for statistical production and seek examples of how statistical offices use these data in other countries.

4. Assign a responsible team/unit to oversee and support data exchange between statistical authorities nationally and to engage in international data sharing. Such work could be part of the tasks of a large cases unit (LCU) or a similar function. Agree on the tasks of the unit in charge of data exchange, start building knowledge and skills for data sharing and assign a focal point for international collaboration in this area.

5. Make use of tools and best practices presented in this Guide to prepare for data exchange, including improving the statistical data infrastructure, updating instructions and confidentiality agreements, using the template agreement for bilateral data exchange, as suggested in Chapter VI of this Guide.

6. Prepare communication materials and guidance to address key points of data sharing and confidentiality when communicating with MNEs, as described in chapter V of this Guide.

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[10] The UNECE (2018) Guidance on modernizing statistical legislation notes that statistical legislation should allow access to all data sources necessary for statistical production.

7. Identify priority areas for data exchange to ensure the quality of economic statistics and national accounts; and select critical MNEs and data items for exchange. Use the selection criteria and the list of data items defined in Chapter IV of this Guide.

8. Form a collaboration group with major producers of economic statistics in the country or add data exchange to the agenda of an existing collaboration group. Start by the exchange of less sensitive aggregate level data, metadata and publicly available data.

9. Engage in closer collaboration to share experience, tools and lessons learned in international expert meetings, and to discuss challenges in measuring MNEs, collaborating with MNE respondents and collecting and using their data in statistical production. The joint UNECE/Eurostat/OECD Group of Experts on National Accounts has dedicated every second meeting to issues related to measuring global production.

10. Start international MNE data exchange with major trade partner countries to review asymmetries e.g. in foreign trade, foreign affiliate and international investment data. Use the opportunities for bilateral discussions organized and facilitated by Eurostat and OECD.

11. Make use of data reconciliation tools and platforms developed by international organisations, such as the IMF CDIS asymmetry database, the UN Global Platform and the OECD ADIMA database on MNEs. Participate in validating and developing ADIMA as a repository of MNE data, e.g. by sharing non-confidential business data, as possible.

50.   These actions aim at helping statistical offices to develop the statistical infrastructure and increase the technical and methodological knowledge on data sharing and micro data linking jointly with other national agencies and statistical offices of other countries.

51.   International level:

- **Set up and coordinate an international network of experts on MNEs and the exchange of experience and innovations.** (actions 1-3)

- **Create platforms to facilitate the analysis of asymmetries.** (actions 4-5)

- **Develop guidance and training to build national capacities to exchange and reconciliate MNE data.** (actions 6-7)

- **Facilitate secure exchange of MNE data building on existing initiatives.** (actions 8-9)

- **Engage with MNEs, accountants and law makers to improve the basis for future data collection.** (action 10-12)

1. Launch and coordinate the work of an international network of experts on MNEs to exchange experience and best practices, as well as to share innovations in MNE collaboration and data exchange. At a later stage, the network should engage in sharing MNE data and reconciling economic statistics.

2. Discuss and clarify the definition of the global statistical system: Which organizational entities of international organizations belong to the global statistical system? How is their adherence to the Fundamental Principles of Official Statistics ensured, and are they entitled to handle confidential data?

3. Establish a platform for the sharing of new tools, innovations and best practices related to data exchange. If possible, an inventory of international data sharing agreements could be developed, also covering examples from fields other than official statistics. Statistical authorities could consult this inventory as a source of best practices and templates when looking to establish similar data sharing agreements or arrangements.

4. Develop tools and platforms to analyse asymmetries of cross-border statistics (e.g. IMF CDIS asymmetry database and the UN Global Platform) in order to encourage cross-border co-operation to reconcile asymmetries by exchanging statistical information.

5. Dedicate sessions for the discussion of asymmetries, their causes and solutions at national accounts, balance of payments and trade statistics expert meetings, i.e. organized by Eurostat, UNECE, OECD, IMF,UNSD and WTO. Identify major reasons for asymmetries.

6. Develop and provide training to build NSO capacity to share data, including the skills and tools, as well as development of data architecture that supports data sharing.

7. Develop a Guide to Data Reconciliation, outlining the operational approaches and methods countries can use to reconcile bilateral and multilateral trade, investment, production and income figures.

8. Develop a central repository of key data on MNEs for use by NSOs by learning from the EGR, Global Group Register (GGR) and ADIMA. The work can start by validating ADIMA data by sharing publicly available information on MNEs, e.g. from public business registers, and by reviewing the possibility to develop an "ADIMA extension for statistics" to include confidential data exchanged between statistical authorities for authorised statistical purposes only. Review lessons learned in national projects, e.g. those developing the business register as the core of economic statistics production.

9. Create an infrastructure for secure data exchange among the network of MNE and other data exchange specialists of statistical offices, as the volume of data exchange starts increasing. In addition to the above repositories, learn from, and further develop, the Eurostat's Early Warning System, FDI-network and the GNI-MNE Pilot approach. As a first step, enhance opportunities for, and motivate, countries outside the EU to contribute to the Early Warning System. This may include exploratory work on processes by which statistical offices apply an 'algorithm' to link micro-data, identify enterprise level asymmetries and feed the results back to countries. In this case, micro-data would not need to be exchanged between countries.

10. Make global efforts to introduce unique identifiers and plan concrete steps to advance their use and adoption by governments. The Legal Entity Identifier (LEI) System provides a global unique identifier that could be applied across countries.

11. Engage with a couple of the largest MNEs to review their data provision processes to different national statistical authorities, and review possibilities for developing a more coherent and efficient data reporting process serving statistical authorities of

several countries (towards the vision of data collected only once for MNEs). Collaborate with business software producers (e.g. SAP).

12. Reach out to international communities working on business accounting standards to pursue collaboration with MNEs and further improve the quality of data, such as the Business at OECD (BIAC) and the UN Standing Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting.

52.   These actions aim at gradually improving the global statistical infrastructure and the technical and methodological capacity for secure MNE data sharing for statistical purposes.

Ongoing other work on data sharing

53.   Parallel to preparation of this Guide, the G20 Data Gaps Initiative II on data sharing has made seven recommendations to promote data sharing. European NSOs and NCBs have also established a common task force to conduct a feasibility study on the exchange of confidential statistical information[11] between the statistical offices and central banks. The work of these groups is still on going, but at least initial recommendations seem to be well in line with this Guide.

G-20 Data Gaps Initiative

54.   The second phase of the G-20 Data Gaps Initiative contains a general recommendation to promote data sharing. Building on the participating economies' practical experience on data sharing with a focus on the main obstacles preventing the sharing of granular data and the possible approaches to overcoming such obstacles, the G-20 Data Gaps Initiative makes the following seven recommendations[12]:

1. Promote the use of common statistical identifiers
2. Promote the exchange of experience on statistical work with granular data and improve transparency
3. Balance confidentiality and users' needs
4. Link different datasets
5. Provide data at the international level
6. Consider ways of improved data sharing of granular data
7. Collect data only once

55.   Further to the above recommendations, the G-20 Data Gaps Initiative also identifies certain main principles. National statistical authorities should first facilitate the sharing of data at the national level across and within relevant institutions. This will help build a solid base for data sharing at the international level. To do this, national authorities should review data sharing frameworks (including legal, technical, financial and cultural constraints) to maximize the amount of information which can be shared for statistical purposes (nationally and internationally). The detailed analysis of obstacles and enablers of data sharing in chapter

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[11] The term 'confidential statistical information' comes from the EU law (2533/98: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01998R2533-20150308&from=ES) concerning the collection of statistical information by the European Central Bank. Confidential statistical information' shall mean statistical information which allows reporting agents or any other legal or natural person, entity or branch to be identified, either directly from their name or address or from an officially allocated identification code, or indirectly through deduction, thereby disclosing individual information.

[12] See further detail: http://data.imf.org/api/document/download?key=61400076

III of this Guide and related recommendations support national authorities in this work. National authorities should also, in collaboration with the international organizations, build and maintain trust between all relevant parties. The discussion of communication issues in chapter V of this Guide provides tools for this. Common identifiers, harmonized definitions of data and the use of standard statistical methods and classifications accompanied with high quality metadata would facilitate data sharing and, the ultimate goal, data reconciliation and high-quality statistics. Chapter IV of this Guide discusses the data items to be exchanged, and criteria for selecting MNEs for data exchange. The proposed Guide on data reconciliation should develop this thinking further.

56. The DGI Contact Group Members[13] were suggested as first contact points for questions on data sharing and accessibility. To extend the international network of experts and enhance exchange of experience, this Guide recommends to set up and coordinate a global network of experts on MNEs. Further to sharing good practices and discussing issues related to the data of multinational enterprise groups and the sharing of economic data for statistical purposes, this network should engage in sharing MNE data in practice and, eventually, focus on reconciling economic statistics at global, national or regional levels based on the shared data. The network of MNE experts should also engage with some of the largest MNEs to review their data provision processes to different national statistical authorities and consider possibilities for developing a more coherent data reporting process.

CMFB Task Force on the exchange of confidential information

57. The CMFB Task Force on the exchange of confidential information was established in 2019 and aims at preparing a feasibility study on the exchange of confidential statistical information between the ESS and the ESCB. They will use the experience gained in the MNE GNI pilot exercise and the FDI Network and take stock of international work in the area of data sharing (including the work of the UNECE Task Force on Exchange and Sharing of Economic Data, Irving Fisher Committee and the second phase of the G20 Data Gaps Initiative etc.). The aim is to complete these ongoing studies by preparing a CMFB questionnaire for identifying confidential information held by the ESS and ESCB in statistical and other areas, restrictions that prevent the exchange of data and good practices of co-operation.

Conclusion

58. The choice to engage in data sharing for statistical purposes is in the hands of the management of the statistical organization. However, that decision will be influenced by the overall pressure to reduce response burden, reuse and manage existing data better and retain the high quality of economic statistics in the face of the data challenges posed by globalization. Engaging in data sharing for statistical purposes is likely to require a review and an update of confidentiality rules, a new data sharing policy, the necessary systems enabling secure data sharing and new governance procedures with a review of current legislation and any existing data sharing agreements. Each of these activities requires a substantial amount of effort and the consideration of risks.

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[13] DGI Contact Group Members are senior-level officials identified by the G-20 national authorities to serve as the main contacts for the IAG on the DGI. These officials are the first contact points for the annual monitoring reports, attend the global conferences, and coordinate with the policy departments of their respective institutions.

59.   Small steps and successful experiences are probably the best way to demonstrate that data sharing among statistical authorities is the way forward in the globalized world. The exchange of individual data cannot happen without the approval of the Head of the NSO or another authorized statistical authority. Furthermore, management needs to ensure sufficient resources for the work and support the necessary initial investments in technology, process improvements and methodology.

60.   International data exchange will only happen if NSOs are open and willing to:

1. Amend legislation if needed;

2. Harmonize practices with other statistical producers and NSOs of other countries;

3. Coordinate data analysis and exchange across statistical domains;

4. Adapt processes and technical solutions with counterparts in data exchange;

5. Consult with respondents and other stakeholders;

6. Implement quality control measures and analyse data; and

7. Incur costs, especially when launching or extending data sharing for statistical purposes.

61.   NSOs should build trust and enhance cooperation between NSOs and MNEs that provide them with data that are crucial for the quality of key economic statistics across countries.

62.   International organizations are key players in promoting cultural change and providing discussion fora to share country experiences. These fora should bring together various statistical authorities in addition to NSOs, such as statistical units of Central Banks, Ministries of Finance and Customs, to discuss the practical needs for data sharing and inform participants of successes and lessons learned.

63.   It will be important to have a communication plan and a set of risk management tools available to ensure that the general public is well-informed of the activities of the NSO in terms of data exchange and measures to safeguard privacy. Statisticians should work internationally to develop common tools for communication and risk management in the area of data sharing among statistical authorities.

64.   The results of data sharing should be measured in quantitative terms to show how the statistical asymmetries were decreased and the quality of statistics improved as a consequence of data sharing among statistical authorities. Respondents' trust would be easier to achieve if statistical authorities could show a measured decrease in response burden as a result of sharing data between NSOs.