First meeting of Friends of the Chair on Economic Statistics

Approaches and mechanisms for the update of statistical standards and frameworks for the system of economic statistics

Note by UNSD

As we move into the 21st century, the economy as we know it is rapidly changing through the acceleration of technological breakthroughs, demographic and social change, shifts in economic powers, climate change, rapid urbanization and rising inequalities.

This note presents a summary description of the system of economic statistics, its building blocks and scope as set out in the *United Nations Guidelines on Integrated Economic Statistics* (2013). It reflects on the challenge to coordinate the update of the statistical standards and other normative manual and guidance materials across the elements of its building blocks. It further indicates the emerging ideas and initiatives for the update of the umbrella framework for the system of economic statistics and its statistical production process and institutional arrangements. Given the scope and complexity of the future update of the system of economic statistics and to remain flexible and applicable to all countries, the FOC Group may consider an update of the *United Nations Guidelines on Integrated Economic Statistics* based on a broad-based user centric consultation at national, regional and global level.

The purpose of the system of economic statistics is to provide a set of economic statistics that depict a consistent and coherent picture of economic activities for policy, business and other analytical uses. The set of economic statistics is about the use of common concepts, definitions, estimation methods and data sources for statistical reconciliation. In today's global and digital economy, the users of the statistical services ask for more, better and more timely statistics and indicators, and the statistical services need to be proactive in satisfying the increasing user needs for integrated economic data through a digital and data transformation. In addition, there are initiatives on the broader measures of economic progress that require to extend the traditional set of economic statistics to a multidimensional set of economic statistics that integrate measures of economic activity with environmental sustainability, social progress and well-being.

The policy demand for integrated and coherent official statistics and indicators to inform on complex issues related to globalization, digitalization, well being and sustainability do pose challenges to statistical offices to produce integrated economic, environmental and sociodemographic statistics. The development of such integrated and multidimensional statistics requires developing the capacity to integrate the production of economic statistics and establish the appropriate enabling institutional arrangements.

The motivation for integrated economic statistics comes from the benefits such data sets provide for coordinated national and global policy initiatives in an increasingly interconnected world under the 2030 Agenda for Sustainable Development, the Addis Ababa Plan on Financing for Development and Paris Agreement on Climate Change. The motivation is relevant for all countries, independent of their level of development of statistical systems and national economies. The integration is achievable for small and comprehensive national economic data sets and can be progressively introduced into the national statistical system.

The practices to achieve the integration of economic statistics may vary depending on the degree of centralization or decentralization of the national statistical system. National statistical systems that are less advanced and complex should incorporate, at an early stage, the principles of the integration of economic statistics into the design of their statistical production process and institutional arrangements. More advanced statistical systems should incorporate the principles of integration into the re-engineering of their statistical production process and institutional arrangements.

It should be recognized that one single and detailed implementation approach towards a system of economic statistics is neither possible nor desirable, because national statistical systems are different. There are, however, general guiding principles and good practices. As formulated in the *UN Guidelines on Integrated Economics Statistics*, integration requires a broad and comprehensive system-wide approach encompassing: (a) the adoption of the conceptual framework of the SNA as the umbrella framework for organizing economic statistics, (b) the alignment of the interdependencies of the components of the statistical production process and (c) the establishment of enabling institutional arrangements for statistical integration. But first, the scope of the integration of economic statistics must be decided.

The scope of the system of economic statistics

Regarding the present scope of the system of economic statistics, selected from the full list of the subject areas of statistical activities of the Classification of Statistical Activities[1], the *Guidelines* presently and primarily cover the following statistical domains: Domain 1. Demographic and social statistics - 1.2 Labour 1.5 Income and consumption; Domain 2. Economic statistics - 2.1 Macroeconomic statistics 2.2 Economic accounts 2.3 Business statistics 2.4 Sectoral statistics 2.4.1 Agriculture, forestry, fisheries 2.4.2 Energy 2.4.3 Mining, manufacturing, construction 2.4.4 Transport 2.4.5 Tourism 2.4.6 Banking, insurance, financial statistics 2.5 Government finance, fiscal and public sector statistics 2.6 International trade and balance of payments 2.7 Prices 2.8 Labour costs 2.9 Science, technology and innovation; Domain 3. - Environment and multi-domain statistics 3.1 Environment Domain (SEEA and environment statistics); Domain 4[2]. Methodology of data collection, processing, dissemination and analysis; and Domain 5[3]. Strategic and managerial issues of official statistics.

In-scope of the system of economic statistics are the domains for the compilation of consistent and coherent of basic, sectoral and macroeconomic statistics for the economy and the environment. This scope may have to be revisited with the policy interest in aspects of the measurement of human capital and related satellite accounts for unpaid household work, education and training, health, culture and distribution accounts. These new data requirements

[1] https://statswiki.unece.org/display/CSA?preview=/130909067/131104902/Classification%20of%20statistical%20activities.pdf

[2] Domain 4 covers activities that focus on the various processes that lead to statistical outputs. It covers the components of the integrated statistical production process, such as common concepts and metadata, classifications, business registers and frames, surveys, the use of administrative sources, dissemination and communication.

[3] Domain 5 covers areas that address institutional and management concerns, dealing with the organizational side of national and international statistical agencies. It includes the governance and coordination of the statistical system, including relationships with users; organizing the statistical office; promoting official statistics; setting up national statistical programmes; dealing with capacity-building, human resources management and training; and managing information and communications technology for statistical offices.

for an extended system of economic statistics with socio-demographic satellite accounts in addition to economic and environment accounts would warrant the extension of the scope to activities and subject areas of Domain 1 of demographic and social statistics related to population, education, health, culture, community activity and time use.

The SNA as the conceptual organizing framework

The internationally accepted standard for macroeconomic accounts, the SNA is the conceptual organizing framework for the system of economic statistics. The important role of the SNA is in ensuring that economic statistics are conceptually consistent with economic theory. First, it serves as a conceptual framework for assuring the consistency of the concepts, definitions and classifications used in statistical standards and manuals for related fields of statistics of other macroeconomic accounts (balance of payments, government finance, money and finance, environmental-economic, various satellite accounts, etc.), sectoral and basic statistics. Second, it serves as an accounting framework for ensuring the numerical consistency of data drawn from different sources, such as business and household surveys, customs, tax, social security and other administrative data.

The Statistical Commission in its 50th session in 2019 requested a way forward on the update of the SNA to be submitted at its 51st session to keep it relevant with and responsive to the rapidly changing structure of domestic and cross border relationships of economic activity from the global and digital economy. Moreover, the update needs to be responsive to the new policy demands for more detailed and broader measures of economic performance of the impact of economic activity on society and the environment. This update of the SNA will affect other main economic statistical standards (BPM, GFSM, MFSM and SEEA) and warrant their updates to remain mutually consistent and coherent for statistical reconciliation of statistical and indicators. Moreover, the range of satellite accounts (on unpaid household work, education and training, health, etc.) could be extended in the umbrella framework to support the policy demand for a human capital measure in addition to the produced and natural capital measure. Also accounting for the digital economy and global value chains are candidates for uptake in the umbrella framework building on existing statistical initiatives.

Whether an incremental or a major update, like the change-over from 1993 SNA to the 2008 SNA, should be made to the SNA as umbrella standard of the system of economic statistics is still to be considered. A decision on an incremental or a major update should be guided by assessment of the how, what and where of the SNA update will affect the overall macroeconomic framework or only individual parts. Also, a similar assessment of the SNA update should determine the effects on related macroeconomic standards, satellite accounts and classifications. Apart from the conceptual considerations, there are the practical implications to be determined on the cost for and the capabilities of national statistical systems to implement the update and maintain timeseries.

If the initial discussion of the Technical Sub Group on ISIC is any guidance, a radical change in the classification structure is more likely than a gradual change within the existing structure of the ISIC classification of economic activity. It is felt that the ISIC Revision 4 structure that builds on previous versions of ISIC is no longer representative for the 21st century production arrangements. To illustrate this sentiment for a radical change, various non-exhaustive examples can be shared. For instance, through globalization and fragmentation of production arrangements, new manufacturing activities have emerged and gained economic significance as

compared to the existing classification of activities; existing descriptions of economic activities are outdated due to technological, environmental and climate change transformations and must be updated using today's language; and the conceptual distinction between manufacturing and services activities must be clarified. Also, with the emerged digital economy, a significant enlargement of services industries must be introduced reflecting the economic importance of the services industries in today's economies. Moreover, the ISIC classification should better reflect the industrial production arrangements in the developing countries as the present structure and descriptions are centered on production arrangements of advanced economies. Also, the use of the ISIC classification for global enterprise groups described in (cross border) business lines with core and supporting functions is to be reviewed as compared to the classification of economic activities of the traditional statistical units like establishments, KAUs and enterprises. Finally, a discussion is needed about the institutional arrangements for more regular update of the ISIC classification in line with the fast-changing landscape of today's production arrangements, alignment with the 5-year cycle of the revision of the trade related Harmonized System (HS) classification and the flexible use of sets of metadata categories for more dynamic updates.

Concluding the issues for update of the SNA is considering the opportunity to attain a more flexible umbrella framework across the main macroeconomic standards is the notion of adopting of a common core for the SNA, BPM, GFSM and SEEA resulting in an integrated single standard. This option could be the evolutionary outcome in harmonizing these macroeconomic standards during past revisions. The BPM, GFSM and SEEA will subsequently provide the internationally agreed standards for the very detailed description of supplementary data and analytical presentations they require. The benefits of a common core with a single macroeconomic standard would be multiple both for the consistency and coherence of the macroeconomic statistics and indicators and the institutional collaboration across the various domain communities.

<u>The statistical production process</u>

The main components of the statistical production process of statistical systems as described in the *Guidelines* are: standards and methods; business registers and frames; surveys and administrative sources; integration of statistics and accounts and dissemination and communication. The standards and methods component contains the adoption of common standards, classifications and common estimation methods such as data editing and processing, a common metadata system and common data quality frameworks. Business registers and frames make up the second component of the process, which provides an economy-wide population of the statistical units for which data must be collected. The surveys and administrative sources component represents the data collections, including the design and operation of a broad range of surveys and censuses and the use of administrative sources. Often those will be undertaken by different agencies for different purposes. Significant amounts of the data collected may come from administrative sources and big data sources from the digital economy.

These individual components of the statistical production process are changing rapidly with the introduction of big data sources and technology. By way of example, business registers are now developed for micro data linking and the compilation of macroeconomic statistics alike. The business registers now require close international cooperation to develop regional and global enterprise registers to inform about the direct investment relationships between enterprises of

the multinational enterprises operating in global value chains and the digital trade facilitated by digital platforms. Secure data exchange and sharing methods are put in place between countries to share information on their national business registers of multinational enterprises operating in different economic jurisdictions.

The institutional arrangements

Appropriate institutional arrangements are essential for developing and managing an integrated system of economic statistics. The integration of economic statistics depends upon the legal, organizational and planning framework, the coordination and governance arrangements, and human and financial resources, all of which differ widely across countries. There is no "right" institutional setting for integrating economic statistics, in the sense that the goal can be achieved in both centralized and decentralized statistical systems. A range of institutional approaches and arrangements need to be put into place to support the integration of economic statistics, and the approach taken will depend on the way the official statistics system is organized and will take into account the existing legal framework.

The institutional arrangements are fast evolving through the data and technology transformation of the system of economic statistics. Examples are the new legal frameworks put in place between national, regional and global statistical agencies and private sector data and technology partners to allow access to data, services and cloud-based technology. Also statistical agencies are addressing the new skill requirements of their staff to apply data science to the new big data sources for the compilation of official statistics ranging from the use of scanner data for CPI calculation to use of mobile phone data for tourism statistics to use of remote sensing and satellite data for the agricultural crop production statistics.

Considerations for the FoC Group members

There now seems to be a growing view that for the system of economic statistics to remain relevant and be responsive, more radical changes are needed to ensure appropriate representation of our modern economy by the statistical standards and the corresponding need for radial change of guidelines in supporting manuals to transform and innovate the statistical production process and institutional arrangements to keep pace with the fast-changing data and technology landscape. Do the FOCG members share this view on the update of the system of economic statistics and what are the implications for how we govern, review and maintain the system of economic statistics covering its three components: the SNA as umbrella conceptual framework, the institutional production process and the institutional arrangements? If the framework of integrated economic statistics remains a useful organizing framework for the system economic statistics, do the FOC Group members like to take on the update of the *Guidelines* incorporating the latest conceptual developments and practices since its endorsement by the Statistical Commission in 2011?