**11th Meeting of the Advisory Expert Group on National Accounts,
5-7 December 2017, New York, USA**

Agenda item: 1.1

List of SNA research issues

Introduction

The work on the SNA research agenda is currently focused on practical implementation, clarification and interpretation of the 2008 SNA. However, in the recent past several discussion forums explored aspects that could be considered for the future updating of the 2008 SNA. As developing guidance to address issues that go beyond the 2008 SNA may take a long time to resolve, a strategy to address these issues need to be identified.

This strategy needs to involve collaboration with users, such as policy makers and academia; and other statistical groupings, such as the IMF's Balance of Payments Committee (BOPCOM) and the Government Finance Statistics Advisory Committee (GFSAC), on key methodological issues. It will also involve establishing a proposed timeline for the update process.

Documentation

A paper on: -   List of SNA research issues

Main issues to be discussed

The AEG is requested to:
- Express its views on the list of issues in the research agenda

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List of SNA research issues

1.   The list includes issues, which are currently considered by the ISWGNA and the AEG. The SNA research agenda is reflected on the SNA research agenda website, hosted by the Statistics Division, available at: http://unstats.un.org/unsd/nationalaccount/research.asp

Globalization

2.   Economic globalization has created new opportunities for businesses to organize their production chains more efficiently. This has increased the complexity of compiling economic statistics as it is more difficult to break down production activities on country-by-country basis. As a result the measurement of key economic indicators, including gross domestic product, has been affected. Emerging global production arrangements pose challenges to business and macro-economic statistics, business registers and economic classifications. These challenges include implementation of the principle of economic ownership, especially in relation to intellectual property products, and the recording of cross-border transactions in goods and services in compiling national accounts and balance of payments statistics.

3.   The Guide to Measuring Global Production (December 2015) provides detailed practical guidance to national accounts compilers on the implementation of the 2008 SNA recommendations related to global production. It also reviews some conceptual issues linked to emerging globalization phenomena that are not well addressed in current international standards. The guide however also highlights the need for further research and exchange of experience on data collection and compilation methods in respect to global production arrangements and particularly in the measurement of factoryless goods producers and intracompany services. It also emphasises the need of enhancing cooperation among countries, international profiling, exchange of economic data and data sharing. A UNECE Task Force on Exchange and Sharing of Economic Data will look closely into these issues. The objectives of the Task Force are to identify enablers and obstacles of data sharing and review the practical requirements of data exchange. On this basis, the task force will develop guidance, tools and principles to facilitate the exchange of economic data by NSOs. The guidance will also highlight innovative ways to exchange economic data to increase the quality, coherence and granularity of statistics and the ability to better analyse the activities of MNEs. The work will build on existing national and international experience, including the results of related initiatives of UNSD, Eurostat, OECD, WTO and IMF.

4.   There is a need to understand the cross-country benefits and risks by being able to "look through" the Global Value Chains (GVCs) and see the specific contributions other countries are making to production networks involving their domestic firms. A measurement framework for international trade and economic globalization, building on the existing statistical standards and international recommendations, is needed to address issues of micro-data linking of business and trade statistics, as well as address the integration of economic, environmental and social dimensions of trade and globalization.

5. For this purpose three initiatives are currently undertaken in close cooperation with each other, namely: the Full International and Global Accounts for Research in Input-Output Analysis (FIGARO) project to establish an annual production of European Union Inter-country Input-Output Tables and a five-yearly production of EU Inter-country Supply, Use and Input-Output Tables; the Trade in Value Added (TiVA) project that develops estimates of TiVA by constructing global input-output tables to reflect the increasingly global nature of production, driven by Global Value Chains (GVCs); and the Expert Group on International Trade and Globalization Statistics that is developing a handbook on a system of extended international and global accounts, which will serve as the measurement framework for international trade and economic globalization.

Digital economy

6. Information technology has introduced a profusion of new products, processes and market channels. The internet also allows the appearance and development of new goods and services, such as open source and cloud-based IT software, the provision of free services, the management and analysis of big data, as well as the appearance of new business models.

7. Recent years have seen an explosion in new technologies that have become generally characterised as "the sharing economy", or "uberisation" of the economy. This has raised new questions about whether current macroeconomic frameworks and compilation methods are adequate. New platforms that facilitate peer-to-peer transactions, such as Airbnb and Uber, raise questions about the ability of conventional national accounts compilation practices to adequately capture the activity generated by a growing category of the "occasional self-employed". Older more established platforms such as e-Bay blur the distinction between producers and consumers, and raise questions about the scope of household production. In addition crowd-sourcing, crowd-funding and the provision of "free" consumer goods and services have also entered the mainstream and brought with them a range of measurement and interpretation complexities.

8. The main challenges related to the digitalisation of the economy have been set out in the paper "Measuring GDP in a Digitalised Economy"[1]. This paper, which was also discussed at the latest meeting of the AEG, describes the range of related measurement issues and challenges, and highlights the need for further consultation amongst countries to determine current and best practices. OECD conducted a survey amongst OECD member and key partner countries to gather feedback on the range of measurement issues and views on potential conceptual grey areas in this area. The survey showed that not many countries can provide quantifications of the relevant phenomena at this stage, and future areas of research include, in addition to the development of a satellite account on the digital economy,:

- the potential mismeasurement of GDP, investment, and productivity that arise from (inadequate) price indices that are not adjusted for quality changes introduced by the digital technology;

- the mismeasurement of investment due to the partial use of consumer durables as business assets in the digital/sharing economy;

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[1] Ahmad, N. and P. Schreyer (2016), "Measuring GDP in a Digitalised Economy", OECD Statistics Working Papers, No. 2016/07, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5jlwqd81d09r-en

- the value of free digital services financed by revenue from advertising and explicit monetary transactions of user data;

- the value (to consumers) of free digital services provided by, for example, Wikipedia.

The treatment of statistical units in supply and use tables and institutional sector accounts

9. The rapidly changing nature of production and in particular the ways in which producers produce goods and services has cast a spotlight on the SNA's preference for the use of the establishment unit to compile industrial statistics, and in particular, supply and use tables. One of the primary motivations for this preference reflected the view that establishments classified to the same industrial classification grouping shared similar characteristics in their production functions, and, so, were considered broadly 'homogeneous'. However the increasing international fragmentation of production, coupled with the growing emergence of new types of producers has weakened underlying assumptions of homogeneity.

10. A Task Force on Statistical Units (TFSU) has been established to take stock of the 2008 SNA recommendations on statistical units (including institutional units), and to reflect on whether or not the recommendations on statistical units need to be adjusted in the future. The task force is expected to provide a clear view of what needs to be measured in the economy and to identify ways to improve the definitions, if necessary, thereby taking into consideration current country practices, regional accounts as well as productivity measurement. The task force will consist of and consult with a broad community of experts, including business register experts, survey specialists and classification experts.

11. The review of statistical units in the SNA is a long-term issue in the research agenda. In 2017, a detailed survey has been conducted among the countries participating in the task force. The consolidated results of this survey, including the best way forward in discussing the issue of statistical units, are presented for discussion to the AEG.

Financial services – Islamic finance

12. Islamic finance refers to the provision of financial services in accordance with Shari'ah Islamic law, principles and rules. Further research on the statistical implications of Islamic finance in the national accounts is required, and practical guidance on the treatment of Islamic finance transactions in the SNA needs to be developed. Accordingly, a Task Force on Islamic Finance, under the auspices of the Working Group, has been created to address the statistical treatment of Islamic finance in the national accounts. The Task Force comprises representatives and experts from countries where Islamic finance is important, international and regional organizations and academia.

Financial Intermediation Services Indirectly Measured

13. Research continues to further develop the conceptual arguments to either include or exclude credit default risk in the calculation of Financial Intermediation Services Indirectly Measure (FISIM) and methods for measuring volume and price changes of FISIM. In the case of excluding credit default risk, this includes the development of methods and data that could support its possible exclusion in the future. Given the increasing prevalence of negative interest, compilers have raised questions about the statistical treatment of negative interest rates in macroeconomic statistics, which require further reflection and investigations in the context of the 2008 SNA.

14.   The long-term research agenda on FISIM includes: (a) further development of the "costs of funds" approach to determine the reference rate and of possible alternative approaches (vintage reference rate); (b) consideration of the financial instruments and units scope of FISIM; (c) connection between the recommendations on implementing FISIM and the definition of income.

Accounting for pensions: Recognition of liabilities

15.   Further clarification is needed in the delineation and measurement of pension entitlements and the articulation of when to record the transactions, other flows and positions of defined benefit pension schemes in the core accounts in line with the 2008 SNA recommendations.

16.   An assessment of the criteria that are being used in countries to differentiate between employer related pension funds and social security schemes, based on experience, needs to be carried out in order to provide further guidance in the short term on which schemes should be recorded in the central framework. There are valid arguments for using the asset boundary to determine when liabilities should be recognised and recorded in the central framework, and more generally guidance for applying the principles governing the SNA asset boundary should be considered over the longer term.

Accounting for pensions: Recording of flows between pension fund and sponsor

17.   The 2008 SNA states that when a pension sponsor is responsible for meeting the liabilities of a defined benefit pension fund in case of any shortfall, the shortfall should be recorded as a claim of the fund on the sponsor. In this way, the net worth of the pension fund is always equal to zero. The pension entitlements and assets of the pension fund are subject to many changes; therefore, the claim between the sponsor and the pension fund will also be affected by a variety of events. The 2008 SNA does not provide clear guidance on how to deal with any mismatch between the property income of a defined benefit pension fund and the unwinding of the discount factor on the pension liabilities, and also on how to deal with any other changes affecting the level of pension entitlements. An AEG consultation on the recording of flows between a defined benefit pension fund and its sponsor took place at the beginning of 2017 and the outcome of the consultation will be discussed.

Accounting for pensions: Table on household retirement resources

18.   Funding retirement incomes with an aging population, increasing debt concerns and the sustainability of consumption patterns are issues that are being addressed by the Advisory Expert Group (AEG). In this regard, the AEG is reviewing the development of a table on household retirement resources which is intended to provide extensive and detailed information on the various household resources for retirement, including the scope of assets and cross border transactions. Further work is required regarding the delineation of social assistance benefits and the possible inclusion of assets such as owner occupied dwellings.

Distributional aspects

19.   Distributional measures of income, consumption, saving and wealth across household groups are being developed, amongst others to assess vulnerability, interconnections and spillovers on a regular basis as part of the recommendations of the G-20 Data Gaps Initiative. A methodology consistent with national accounts definitions and totals is being furthered developed.

Informal sector

20.   The informal sector plays an important role in developing economies, where a large proportion of people work in the informal sector. However, an exhaustive measurement of the size of the informal sector and the contribution of informal sector activities and informal employment to GDP is particularly challenging.

21.   Data collected for understanding the informal sector are often not sufficient for measuring economic activity, and various surveys and collecting methods – focussing on household, consumption and employment data – may be needed as source data for an exhaustive measure of the informal sector in the national accounts. The supply and use framework, with a possible distinction between formal and informal activities, provides the greatest potential in which available source data are combined and balanced to arrive at exhaustive estimates of economic activity.

Treatment of the output of international financial institutions

22.   The characterization and compilation of the output of international financial institutions and the use of that output by their member countries require elaboration under the current SNA guidelines, taking into consideration the valuation at cost (possibly including the full cost of capital) for the nonmarket part of output.

Capital income of insurer's own funds

23.   In the 2008 SNA, the calculation of the output and value added of insurance corporations excludes the capital income derived from the investment of the own funds of these corporations. However, the insurance industry regards all capital income is part of the production process of insurance protection. It may therefore be useful to assess the implications of reconsidering the role of investment income (or some part thereof) on insurers' own funds in measuring insurance service output and how it would affect the recording of transactions and other flows in national accounts.

The valuation of natural resources

24.   The valuation of natural assets based on the net present value (NPV) method relies on the assumption that the asset market is in equilibrium, implying that the market value of the asset is equal to the sum of discounted (expected) future income associated with the exploitation of the asset. As commodity prices show large swings, there is significant uncertainty about their future development and thus the value of the asset. Further research is needed to address volatile asset values where the valuation of natural assets exclusively relies on current commodity prices as being equivalent to the expected value of future incomes.

Measuring resource extraction industries

25.   A set of template tables is being prepared to show national accounts stocks and flows related to natural resources in a standard presentation that aid a standard compilation of national accounts in support of macroeconomic analysis of natural resources. The natural resources covered are those that are extracted and sold by the mining industries, including oil and gas extraction. The types of stocks and flows considered are those that fall within the scope of the national accounts central framework. The templates use the concepts recommended in the 2008 SNA. This facilitates comparisons of the natural resource industries with other parts of the economy and comparisons across economies.

Capital services of assets not contributing to production

26. The change of ownership basis of recording capital formation creates capital service measurement problems where production of an asset takes place over a number of accounting periods. While a building, structure or other significant asset may not be contributing to production, the SNA recommends that gross fixed capital formation be recorded progressively as production of the asset takes place. The question is the nature of capital services provided by assets not contributing to production. In addition, the treatment of progressive change of ownership to buildings and structures needs clarification to be consistent with the treatment of other assets which have the same characteristics of buildings and structures.