STATISTICS

Update of Statistical Standards and Implications on the Calibration of Statistical Business Registers

Abstract

In view of evolving data needs, triggered by globalization and digitization among other developments, the international statistical community is currently updating the statistical standards—key among them, the System of National Accounts (SNA), Balance of Payments Manual (BPM), the International Standard Industrial Classification of All Economic Activities (ISIC), and the Central Product Classification (CPC). In some cases, the updates have implications on data collection and compilation by statistical agencies and the classification of units in macroeconomic statistics. In this context, this note briefly discusses the implications of some of the main recommendations that have been put forward for the update of these statistical standards on business registers. The note also provides guidance on how statisticians and business register experts can identify the specific characteristics of units affected to aid data compilation and undertake correct classification in macroeconomic statistics.

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1. INTRODUCTION

In response to changing data requirements by various stakeholders and changes in the global economic environment, the international statistical community is currently updating the Statistical Standards. These include the System of National Accounts (SNA), Balance of Payments Manual (BPM) as well as and the industrial and product classifications—the International Standard Industrial Classification for Economic Activities (ISIC) and Central Product Classification (CPC). This paper presents some of the main recommendations that have been put forward for the update of these statistical standards and their implications on the calibration of statistical business registers (SBRs) to aid their compilation.

The SBR covers a range of economic activities and units and can differ significantly across economies. The objective of the register is to improve the efficiency of the statistical system of the economy. The key aspects include the coverage of statistical units (establishments or enterprises), accuracy of the data on statistical units, and frequency of updates, among others. Against this background, some updates to the statistical standards will impact the data required by statistical compilers and thus impact the data required from SBRs.

This paper closely follows the themes of the SNA update: Section 2 outlines key issues related to digitalization, Section 3 describes those related to globalization, and Section 4 concludes. Issues related to sustainability and well-being, communication, and the informal economy were not covered in the note as only the main issues affecting the SBR are discussed. For Digitalization and Globalization, only selected topics covered in the update process that are expected to have major impact on SBRs are discussed in the paper.

2. DIGITALIZATION

2.1. Intellectual Property Product Assets

The update of the SNA proposes to extend the asset/production boundaries to include data[1] and potentially marketing assets.[2] The intertwining nature of expenditure on certain aspects of data will be challenging to have data as a standalone asset within the SNA. Currently the recommendation is to separate the current intellectual property product assets category *Computer software and databases* into two categories *Computer software* and *Data and databases.*

The first category *Computer software* would then also include an *of which* category for *Artificial Intelligence (AI) software* for those countries that would like to gather detailed information about this growing activity. AI is defined as “a computer program operating a system capable of recognition, reasoning, communication, and prediction simulating human recognition, reasoning, and communication”. It is also recommended that the CPC include new product categories to differentiate AI products from other software.

[1] Data is the information content that is produced by accessing and observing phenomena; and recording organizing and storing information elements from these phenomena in a digital format, which can be accessed electronically for reference or processing. Databases consist of files of data organized in such a way as to permit resource-effective access and use of the data. See guidance note DZ.6 Recording of Data in the National Accounts.

[2] The Advisory Expert Group on National Accounts (AEG) and the IMF’s Committee on Balance of Payments Statistics endorsed guidance note G.9 *Payments for Nonproduced Knowledge-Based Capital* (Marketing Assets) recommendation that, on a conceptual basis, marketing assets should be considered as produced assets. However, measurement issues have not yet been resolved and the full endorsement of the note is pending testing.

The second category has been renamed *data and databases* to recognize data's crucial role and the expansion of this asset category. While databases have been included in the SNA since the last revision, almost all countries present estimates of databases as a combined asset with computer software. This was seen as a pragmatic decision due to the difficulty of separating the two. However, it is strongly recommended that data and databases are compiled and presented separately, as the addition of data creates further differences in the asset characteristics between the two.

There are no anticipated related changes to ISIC. This issue may affect those SBRs that maintain detailed information on the products and/or assets of statistical units.

2.2. Cloud Computing

The update of ISIC proposes to include modifications to *Division 63, Information service activities* to better reflect the large and growing cloud computing activity. The Division is proposed to be re-named as *Computing infrastructure, data processing, hosting, and other information service activities*. Within the Division, two 3-digit Groups will separate Computing infrastructure, data processing, hosting and related activities from Web search portals, and other information service activities. SBR compilers will need to manage these changes to the ISIC classification.

2.3. Digital Intermediation Platforms

The update of the standards recommends that the classification of digital intermediation platforms, defined as units that charge an explicit fee for facilitating digitally conducted transactions between independent parties, be more explicitly identified in industrial and product classifications. The recommendation will be to create separate ISIC classes within each relevant section to delineate intermediation activities (both digital and non-digital). For example, within ISIC Section I, *Accommodation and Food Services*, separate classes would be created for statistical units that primarily intermediate accommodation and food services (e.g., Airbnb). It is also recommended that the output of these intermediary platforms be recorded on a net basis, reflecting only the explicit fee for intermediation and not the full value of the intermediated good or service.

Since these digital intermediary platforms often provide services across borders, SBR compilers must determine the residency of these statistical units and the amount of net intermediation output produced in the relevant economic territory. As with other digital services providers, international collaboration will be beneficial to accurately identify the value of production to be recorded in each country. The explicit guidance to record digital intermediation services on a net basis may also have implications for processes to determine the correct classification of a statistical unit that engages in both intermediation and direct service provision. There is also interest in identifying informal sector statistical units that utilize digital intermediation platforms to sell their goods and services. Where feasible, SBR compilers may need to modify data sources to collect this information.

2.4. Classification Changes for Retail Trade

The ISIC Rev. 4 classification for retail trade groups statistical units based on the type of store, with non-specialized stores classified in 471, specialized stores and markets classified in 472–478, and non-store retailers classified in 479. With sales over the internet becoming increasingly ubiquitous, the revised ISIC will remove the category for non-store retailers. With this change, all retailers will be classified based on the types of goods that they sell and not the distribution channel that is used. The distinction between non-specialized retailers and specialized retailers will be maintained. This change is intended to address the difficulties with classifying statistical units that sell both online and in stores and maintaining classification stability for these retailers.

2.5. Fintech

Fintech is defined by the Financial Stability Board as "technology-enabled innovation in financial services that could result in new business models, applications, processes, or products with an associated material effect on the provision of financial services. The update of the statistical standards recommends classifying fintech companies and financial instruments and services provided by fintech companies within the existing institutional sectors and categories (e.g., deposits, financial services) without introducing a new sector or financial instruments and services categories (Table 1). However, it also allows the introduction of an *of which* institutional sector category for fintech companies if a country has a strong need to separately identify them. Such an *of which* category may also be considered for instruments or services classifications where necessary (e.g., for central bank digital currencies or crypto assets, or financial services provided by fintech platforms) to separate out fintech-related instruments and services. Further information is available in Guidance Note F.7: Impact of Fintech on Macroeconomic Statistics and Guidance Note F.18: The Recording of Crypto Assets in Macroeconomic Statistics.[3] Statistical units engaged in fintech will be classified across multiple ISIC sections. However, classification of new units will only be relevant for new activities and not existing activities that are being carried out in a different form. For countries that are interested in gathering detailed statistics about these emerging activities, SBR and business statistics compilers should evaluate the available information that may assist with identifying them. This may include administrative data from financial regulators, or simple queries based on company names as a start.

Table 1. Proposed Classification of Fintech Activities in the Update of ISIC Rev.4

Fintech Activities	**Proposed Classification in (revised) ISIC**	**Business Register Implications**
Fintechs engaged in digital lending	Section L: Financial & Insurance Activities	Business register experts will be expected to expand the coverage to include these units where not previously captured
• Investment Management for example, *Robo-advisory services or Electronic trading services* • Insurance Services such as *Insurtechs*	Section L: Financial & Insurance Activities Section L: Financial & Insurance Activities or Section K: Information & Communication	
Digital Payment providers and Digital Currency Producers / Operators *Crypto exchanges* *Digital wallet providers* *Validation activities* *Crypto asset mining*	Section L: Financial & Insurance Activities, and Section K: Information & Communication	

[3] These guidance notes are jointly produced for both the SNA and BPM updates.

3.1. Multinational Enterprises (MNEs) and Special Purpose Entities (SPEs)

Multinational Enterprises

The SNA/BPM guidance note G.2: Treatment of MNE and Intra-MNE Flows recommends defining an MNE as a legal entity that (i) has at least one nonresident affiliate or branch and (ii) exercises control over its affiliate(s) or branch(es) either directly—by owning over 50 percent of the voting power in the entity—or by indirect transmission of control. The MNE is the ultimate controlling parent (i.e., the direct investor at the top of the control chain).

While the update provides guidance on how to identify these units and how to make the activities of MNEs more prominent in the national accounts, major adjustments will be needed to both the data sources and SBRs to implement these recommendations.

To the extent that MNEs organize their activities globally, national statistical compilers will see only parts of their global activities. Consequently, a complete and symmetric view of the MNE group activities requires compilers to be able to view each entity within the group in relation to the others. Further, while most national SBRs identify membership of foreign-controlled MNE groups and the country of the ultimate controlling parent (UCP) as an input to direct investment statistics, few capture economic data on activities outside the domestic economy.

National compilers would need to identify the units within the domestic economy that are part of MNE groups. Where the coverage of the SBR does not extend to these units or the identifiers needed to classify MNEs and MNE units, significant changes will be required. The completeness of the SBR is essential for statistical offices targeting MNEs. SBRs are generally developed and updated from different sources. The administrative sources may include tax registers, compulsory registration systems maintained by regulators, social security data, and other public or private sector data holdings. For this purpose, direct investment (DI) information could be linked to the SBR. However, in many countries, there are legal or administrative limitations that prevent linking DI information with SBRs. Direct Investment registers are usually maintained by central banks while the business registers are maintained by NSOs, or confidentiality issues prevent the integration of these data. Example of work done on SBRs to identify MNEs include the UN Global Groups Register and the EuroGroups Register.

The following components—that are part of the ongoing global enterprise register initiatives—are key to identifying MNEs groups and maintaining consistent datasets on MNEs group structures across countries (Box 1).

Box 1. SBR Information Relevant for Identifying MNE Units

- **Control of the unit:** (a) the resident legal units that are controlled by the entity; (b) the resident legal unit that controls the entity.
- **Economies of registration**, and identity number or name and address of the nonresident legal unit which controls the entity.
- **Identity number of the UCP (legal entity),** if the UCP is resident. If the UCP is nonresident, then identify its country of registration (optionally the identity number, name and address can be collected if available). This information can be found from the websites of MNE groups, annual reports, corporate directories, investors' relationship information, or company profiles.

The OECD Analytical Database on Individual Multinationals and their Affiliates (ADIMA) another ongoing initiative that can assist countries in identifying MNE and the relationships between MNE units, by providing statistics on the scale and scope of international activities of MNEs.[4] ADIMA uses data from several sources such as commercial databases *(such as Orbis)*, company reports and regulatory submissions, legal entity identifiers (LEIs), and big data sources etc. The global LEI is a reference code that uniquely identifies legally distinct entities engaged in financial transactions and allows for mapping out relationships (who owns whom). The LEI is a key indicator that can help to identify the relationships between the units in an MNE group.

It has also been proposed that the update of the manuals include in the balance of payments supplementary data on current account items broken down by ownership/nationality and highlighting MNE and SPE units using the institutional sector accounts according to the residence of the ultimate controlling parent.

With regard to goods, services, and investment income accounts by enterprise characteristics, the update of the standards recommends providing supplementary data on enterprise characteristics as part of the annual reporting of the current account. Specifically, the GN recommends annual breakdowns of goods, services, and investment income accounts by enterprise characteristics, such as industry, nationality (foreign owned/domestically owned), and size, to enhance the relevance of the current account for the analysis of globalization (GN C.2: Goods, Services, and Investment Income Accounts by Enterprise Characteristics). SBRs should include unique identifiers such as enterprise size, trading status (i.e., importer only, exporter only, or importer and exporter (two-way trader)), and ownership characteristic (foreign controlled, or domestic owned).

There are also proposals for supplemental information on direct investment positions by the economy of the ultimate investor in GN D.6: Ultimate Investing Economy/Ultimate Host Economy and Pass-through Funds and GN D.9: Reconciling BPM-Based Direct Investment (DI) and Activities of MNEs (AMNE) Statistics.

Special Purpose Entities

The update of the standards recommends adopting a new standardized definition of SPEs, as aligned with the recent work of the IMF's Committee on Balance of Payments Statistics. This definition is as follows:

- An SPE, resident in an economy, is a formally registered and/or incorporated legal entity recognized as an institutional unit, with no or little employment up to maximum of five employees, no or little physical presence, and no or little physical production in the host economy.
- SPEs are directly or indirectly controlled by nonresidents.
- SPEs are established to obtain specific advantages provided by the host jurisdiction with an objective to (i) grant its owner(s) access to capital markets or sophisticated financial services; and/or (ii) isolate owner(s) from financial risks; and/or (iii) reduce regulatory and tax burden; and/or (iv) safeguard confidentiality of their transactions and owner(s).
- SPEs transact almost entirely with nonresidents and a large part of their financial balance sheet typically consists of cross-border claims and liabilities.

Integration of a voluntary breakdown of SPEs for countries for which SPEs are significant is proposed, and the update recommends integrating the recommended breakdown of SPEs within the institutional sector accounts on a supplementary basis for these countries *(GN G.4: Treatment of Special Purpose Entities and Residency)*.

[4] Detailed description of the OECD ADIMA can be found in: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=STD/WPTGS/DAF/WGIIS(2018)1&docLanguage=En.

This new standard definition should be helpful for SBR compilers in identifying these units to enable the compilation of detailed statistics on activities of SPEs in countries where their impact may be significant. Some of the statistical units classified in ISIC 7010, Activities of head offices may qualify as SPEs, and therefore the flag "SPE" should be added in the SBR. It should be emphasized that the term SPEs only applies to those entities with direct and indirect foreign control. For resident-controlled affiliates, they should be referenced according to their typology (conduits, captives, etc.) and thus not included in the SPE category for the supplementary statistics.

Further, a recommendation is made to present nationality-based SPE statistics as a supplement to residency-based statistics. The nationality-based approach reflects a global consolidation of MNEs such that the statistics are organized according to the location of the entity that ultimately controls the SPEs rather than by the residency of the SPEs themselves, thus incorporating the dimension of ownership and control.

3.2. Factoryless Goods Producers

The SNA/BPM guidance note (GN C.4: Merchanting and Factoryless Producers; Clarifying Negative Exports in Merchanting; and Merchanting of Services) recommends that Factoryless Goods Producers (FGPs) be classified in the manufacturing sector and be deemed to produce and sell goods rather than distribution of services.

The classification community has also examined this issue. Currently, ISIC Rev. 4 recommends that FGPs be classified in *Section G - Retail and wholesale trade* if they do not provide (own) the material inputs, even though they may provide the technical specifications of the output and own and supply other critical inputs (ISIC Rev. 4 *Paragraph 140–141, and 144–145).*

After careful discussion and in line with the SNA/BPM recommendation, the ISIC Task Team has proposed to classify FGPs as manufacturers (Section C) in the same class where they would have been classified if they carried out the manufacturing process themselves. Furthermore, the ISIC Task Team agreed that the criteria for the definition of FGPs should be extended to include the ownership of the intellectual property products (IPPs) and not be solely based on the ownership of the input materials. Likewise, the distinction between affiliates and non-affiliates has been removed as a criterion in the definition and classification of FGPs.

This change has important implications for industrial classification of statistical units on the register, as SBR compilers will need to separately identify FGPs to ensure their proper classification—and particularly to properly classify FGPs to the relevant manufacturing classes. The key defining characteristic of an FGP is now that they exert control, including providing IPPs as a key input to the manufacture of processed goods by a non-resident unit. A close look at large firms currently classified as wholesale or retail traders may be needed to identify potential FGPs. Analyses and profiles of large firms at the enterprise group or enterprise level are likely to be more effective at identifying FGPs than bottom-up evaluation of establishments.

Box 2. Criteria for Identifying FGPs

The TT-ISIC discussed that the FGP exerts control over the production process by (i) maintaining ownership of the IPP used by the contractor in the production of the products; (ii) providing the contractor with the blueprints or technical specifications of the required products; (iii) managing the production chain (i.e., specifying the number of units to be produced and the market value of the final products); (v) assuming the entrepreneurial risks associated with the products (the FGP absorb the losses for unsold products or products that fail to meet customer satisfaction); (vi) assuming legal responsibility for any defects or damages caused by the products; and (vii) determining the customers (i.e., responsible for selling the final products—the contractor cannot sell the transformed product to other parties).

SBR experts may need to analyze the typology of production arrangements in their respective economies to start filtering out possible FGP arrangements. There will also be a need to establish thresholds by employment or turnover (through surveys etc.) to properly identify these entities and correct existing classification in *Trade* where they should be classified in *Manufacturing.*

3.3 Global Value Chains and Trade in Value Added

The update of the standards examines how production fragmentation has deepened the divergence between gross flows, as recorded by traditional international trade statistics, and the data on production and final demand as accounted for in value added statistics. The GN recommends including a description of global value chains (GVCs) and trade in value added in the updated manuals. Within the BPM, the update recommends including supplemental cross-border statistics detailed by geography or product as part of a reporting template for GVC data collection (GN G.7: Global Value Chains and Trade in Value Added). Incorporating geographical information and products in the Business register would be important to compile these supplementary statistics.

4. CONCLUSION

The update of the statistical standards proposes various recommendations on issues associated with digitization and globalization that have implications on the calibration of the SBR. This note summarizes these proposed recommendations and provides guidance on how SBR experts should identify the specific characteristics and units involved to aid the compilation of statistics. The digitization related recommendations include classification of intellectual property products, better reflecting the large and growing cloud computing activity, classification of digital intermediation platforms, changes in classification for retail trade, and the introduction of an “of which” institutional sector category for fintech companies. Globalization related recommendations include the integration of a voluntary breakdown of SPEs within national and international statistics, reporting supplementary data on balance of payments current account items by enterprise characteristics, supplemental direct investment positions by the economy of the ultimate investor, classification of Factoryless goods producers in the manufacturing sector, and including supplemental cross-border statistics detailed by geography or product as part of a reporting template for global value chains.