

## CHAPTER 14

# The way ahead and a research agenda

### General remarks

**14.1** The focus of national accounts is national data to meet national policy needs. Even in a monetary union like the euro area, where data must be aggregated across countries for the use of the single monetary authority, national accounts retain their importance for individual countries for policy purposes, and the IMF, OECD and others continue to monitor national developments using national data complying with international statistical standards.

**14.2** The emphasis in this guide has been on the difficulties presented by globalization, and in particular on the challenges arising from the transactions of MNEs. Many of the issues discussed would however be difficult even if enterprises continued to be mostly autonomous national entities engaging in cross-border transactions. In this concluding section, a distinction is drawn between statistical difficulties which arise from recording cross-border transactions irrespective of who conducts them, and the challenges of recording MNE transactions in national accounts.

**14.3** Some transactions, or features of them, are difficult to record accurately whoever undertakes them, for the following main reasons:

- a. The difficulty of applying consistently the change in ownership principle in the new international standards when recording a transaction. Merchandise trade statistics as currently compiled cannot be used as the source for goods for processing and merchanting, because the merchandise trade statistics generally record movements of goods across the national frontier, irrespective of ownership changes. Goods sent abroad for processing cross the border but remain the property of the enterprise sending them, while goods being merchanting are acquired by the merchant and pass into his possession but do not enter the country in which he is resident. Enterprise surveys are likely to be the best source of information on processing and merchanting transactions, but the problems of excluding goods sent for processing from the merchandise trade statistics and capturing merchanting activity remain. The linking of international trade data and business statistics at enterprise level is an important area for future work.
- b. Under the international standards in the 1993 SNA, BPM5 and ESA 1995, most IPPs are treated as produced non-financial assets. The fruits of R&D are an exception, being considered a non-produced asset. Under the 2008 SNA and BPM6, they are treated as produced assets, generating services which contribute to GDP and bring benefits to the economic owner. A transaction in an IPP is thus a transaction in a produced asset, affecting capital formation. The use of an IPP constitutes the purchase of a service. But there are borderline cases depending on the terms of the licence to use the IPP. In practice, the fees for the use of IPPs may often be recorded under property income, as if the IPPs were non-produced assets.
- c. Although outsourcing is often associated with the activities of MNEs (see further below), even small companies which are not part of an MNE may commission entities abroad to manufacture products to their design and specification. It may then be difficult for the value added generated in the process as a whole to be measured, appropriately treated for statistical purposes, and correctly allocated to the two economies in which the parties to the operation are located.
- d. The recording of transactions relating to the cross-border movement of labour is complicated by the distinctions between migrant workers who are treated statistically as resident in the host economy, and those who continue to be resident in their country of origin. Similar complications arise from the distinction between workers with an employment contract with an entity in the host economy and those without. Those without such an employment contract (including those sent by their employer to work in the host country) are treated statistically as providing services to the host economy, and not as

receiving wages and salaries from an entity in the country in which they are working.

- e. Measuring cross-border transactions related to residential property presents many practical difficulties, especially for the country in which the owner of the property resides.
- f. Cross-border e-commerce can be difficult to record, even if the items supplied are delivered physically as opposed to being downloaded, like electronic books or music.

**14.4** Another aspect of globalization adds to the difficulties for those compiling national economic statistics. This is the growing importance of MNEs and cross-border transactions within the enterprise. As the country case studies indicate, these difficulties affect both large economies and small open economies, some of which are very susceptible to developments associated with globalization. MNEs feature large in the difficulties of measuring the following types of transaction or activity:

- a. Foreign direct investment (FDI), in particular the treatment of retained earnings.
- b. Transactions between affiliates of the same MNE but which do not have direct ownership links with each other.
- c. International transactions in IPPs between affiliates.
- d. Transactions of special purpose entities (SPEs).
- e. Global manufacturing.

**14.5** An MNE will seek to organize its business in the most efficient way (having regard to production and transport costs), which may mean shipping goods back and forth between specialized processing units. It may not be clear which entity in the MNE at any particular stage in the process owns the raw materials, semi-processed goods, components and in due course the finished product. The goods may not be valued at market prices at the points at which national statisticians need to record them. This may be because the resident unit does not know the market price, or because the goods move around within the MNE at transfer prices which, within legal limits, minimize its tax burden. IPPs can be developed in one country and then made available for use throughout the enterprise, free of charge or at transfer prices which do not represent arm's-length prices. Staff may be switched from one entity to another in a different country, while being employed and paid by an entity in a third country which deploys specialist staff on behalf of the MNE as a whole. The growing concentration of business

in MNEs complicates the measurement and allocation of value added and the recording of economic activity generally in the national economy.

**14.6** What can statisticians do about the challenges described in the previous paragraphs? At present they collect data from, or in respect of, resident institutional units and assemble national accounts and other economic data from these sources. This approach is supported by national statistical legislation; indeed it may be the only possible approach using national legal instruments. But it depends on the ability of the resident institutional unit to provide the relevant information for the measurement and classification of its national economic activities. This condition may not be met when the unit is part of an MNE which conducts much of its business across national frontiers.

**14.7** In addition to the IMF's new Coordinated Direct Investment Survey (see below), three main initiatives point a way forward.

- a. The United States collects data on the global activities of MNEs with a US parent. These data help compilers of national US data, because an overview of the operations of the MNE as a whole can throw light on appropriate recording of that part of the activities which properly contributes to value added in the US economy.
- b. All 27 EU countries compile statistics on the activities of MNEs with a common methodology. Eurostat therefore receives comparable aggregated data (FATS) across the European Union, and the member countries have microdata which can be used to explain MNE activities. Initiatives such as the FDI network and the EuroGroups Register, including a recent development on profiling of large and complex MNEs (ESSnet on Profiling), take an EU-wide view of the activities of large enterprises.
- c. Several national statistical offices have established units on large enterprises to ensure that transactions of MNEs are treated consistently across all areas of national accounts and national economic statistics, linking all relevant areas of statistics. These separate national initiatives may not be able to address the problem that the resident entities lack the information to enable a correct allocation of value added and classification of activities on the national territory to be made. They are nevertheless an important step in the right direction.

**14.8** The financial crisis has given an impetus to viewing the transactions and positions of global enterprises as a whole. The research agenda set out in Annex 4 of the 2008 SNA suggests something similar:

*“Many enterprises operating within an economy are linked with other enterprises by complete or partial common ownership and a shared management structure to form an enterprise group. Enterprises also often share common ownership and management with foreign affiliates. It is common for enterprises within an enterprise group to trade with each other, sometimes exclusively, as when they perform an intermediate stage in a vertically integrated production process, and share the outputs and costs of ancillary production. They may also share the outputs and costs of research and development activities. Given their close ties it may be sometimes desirable to consider an enterprise group as a single entity and to consolidate the accounts of its members. Members of an enterprise group are usually engaged in different activities and sometimes in more than one sector, and so consolidation could affect aggregates, such as industry value added and sectoral balance sheets. It is therefore probable that the most likely way forward would be by way of supplementary tables (A4.12).*

*Separate consideration needs to be given to the case where some parts of the group are non-resident” (A4.13).*

**14.9** Earlier chapters of this guide point in the same direction – for example, to trace FDI through SPEs back to its original source (and forward to its destination), and to establish when an economic transfer of IPPs has occurred, and at what price. Earlier chapters also indicate the importance of establishing the nature of operations within MNEs. One example is the distinction between global manufacturers as merchants and processors of goods, which will lead to different treatment in the accounts. These needs are probably best served by direct surveys of MNEs, rather than surveys of those parts of them that happen to be locally resident.

**14.10** This guide in no way questions the need for the current standards on residence and sector classifications. But data collected from national entities which may have an incomplete picture of the MNE’s contribution to the national economy may not be enough to enable good quality national data to be compiled. It may be helpful to supplement this information with a bird’s-eye view of the MNE, or to compile region-wide statistics on the activities of large MNEs. This requires a change

in the way national statisticians work, and a need for more international cooperation, as well as the development of data sources to provide more data on the various aspects of MNE activities described in this guide – global manufacturing, the processing and merchanting-type activities associated with it, and the conduct of business through SPEs.

## Suggestions for further work

**14.11** This guide raises a number of conceptual and measurement issues that will need to be addressed in the course of implementing the new international statistical standards. Earlier chapters discuss specific challenges and suggest solutions to improve the data but, given the limited experience thus far in dealing with them, leave many issues for further work. This section summarizes them in the following broad groups: continuation of initiatives already started; conceptual issues; measurement issues; practical steps in the areas of data collection and presentation; and exchanges of data and best practice. Following a wide country consultation, the following topics have been identified as the main priorities for the future work:

- a. Conceptual and practical measurement issues in relation to global manufacturing.
- b. The recording of international transactions in IPPs.
- c. Outstanding measurement and data issues related to the implementation of the new standards on goods for processing and merchanting.
- d. A conceptual framework for dealing with SPEs, including a harmonized definition.

## Continuation of initiatives already started

**14.12** Work relevant to the issues raised in this guide is under way:

- a. The introduction of the IMF’s Coordinated Direct Investment Survey, and the preparation of a *Guide* for compilers, is very likely to improve the quality of data on foreign-controlled enterprises, increase international comparability of results, and provide a wealth of mirror data for use in bilateral comparison of individual country results. Through its Working Group on International Investment and its network of investment experts, the OECD is seeking to integrate FDI and AMNE (activities of MNEs) data and carry forward the globalization agenda more broadly (Chapter 3).
- b. An OECD Task Force on IPPs has examined various aspects of statistics relating to them, and has developed new surveys on MNEs

including questions on their balance sheets (Chapter 7). The forthcoming Eurostat Task Force on R&D is expected to carry the work further forward.

- c. Work on improving remittance and related data continues at the international level. At their June 2008 summit, the G-8 announced the creation of a Global Remittances Working Group. Subsequent proposals include a new technical working group to promote global and regional efforts to improve remittance data, with the provision of technical assistance, the exchange of metadata and bilateral data, and a website to serve as a global repository for detailed metadata, bilateral data, and research results.
- d. The Suitland Working Group was formed, also in 2008, among other things to develop household surveys as a tool for collecting remittance data and to measure migration. Areas of focus include creating a draft module on migration and remittances to be included in nationally representative household surveys, linking administrative data with survey data, addressing data quality issues, and developing an online repository of household survey questionnaires. These initiatives should address issues arising in the areas of labour movements (Chapter 10) and remittances (Chapter 11).
- e. In the future the impact of emerging global environmental issues on national accounts will also deserve more discussion. Full application of the change in ownership principle in the new international standards (instead of physical movement of goods) will open a gap between the 2008 SNA and the SEEA, in the sense that, while transactions as recorded in the 2008 SNA reflect the change in economic ownership, physical flow accounts like the SEEA follow the movement of materials. It also has potential implications for environmental input-output analysis. Measuring the impact on FDI of environmental investment is on the agenda of the OECD's Working Group on International Investment.
- f. A Eurostat Task Force on Goods for Processing is undertaking work relevant to some of the issues raised in Chapter 5. The task force will study the main consequences of implementing the 2008 SNA and the ESA 2010 for the treatment of goods sent abroad for processing; identify the need for new data sources; promote the exchange of experiences; and propose some practical solutions to the main difficulties encountered. The task force will also

examine the links between goods sent abroad for processing and quasi-transit trade, global manufacturing and merchanting.

### Further conceptual work

**14.13** Several earlier chapters raised analytical or conceptual points. The major ones are as follows:

- a. Global manufacturing: there is need for additional research on the distinction between "traditional", contractor/processor, and outsourcing producers. Further guidance is necessary especially in the case where an entity undertakes the R&D underlying a product, organizes its manufacture (assuming associated risks and benefits), but does none of the actual manufacturing. Where production of goods and/or services is outsourced, it is also important to distinguish between the "goods for processing" treatment and the "merchanting" treatment. The different treatments have major implications for recorded trade in goods and services, and uncertainty about the underlying nature of the transaction(s) may introduce discrepancies between national data (Chapter 8).
- b. Transactions in IPPs within MNEs: it may not be easy to identify the source of the R&D and other intellectual property underlying the products, and the organizational and managerial input to the production process, and to record the corresponding value added where it arises. The fact that goods and associated services may move around within the MNE group at transfer prices which do not reflect market prices adds to the difficulty for national statisticians. The distinction between economic and legal ownership of IPPs, and how transfers of IPPs within an enterprise group should be treated statistically deserve further attention (particularly when the transfer happens for tax reasons or organizational convenience, but the benefits of ownership in effect remain with the unit which devised them) (Chapter 7).
- c. Merchanting of services through outsourcing facilitated by innovations in telecommunications and web-based (internet) services also deserves more investigation (Chapter 6). BPM6 recognizes the issue of merchanting of services, but proposes no distinct treatment for such transactions. The question arises of which is more appropriate: the gross approach, where the services being merchantied are recorded as an import of

services by the country in which the merchant is resident, followed by an export when they are sold on; or the net approach (a negative followed by a positive export), like that for merchanting of goods in the 2008 SNA and BPM6.

- d. Although several groups have addressed the issue of SPEs, a common agreed definition has so far proved elusive. A harmonized definition and further clarity on some conceptual issues would improve the comparability of SPEs across countries, and enable entities with SPEs in more than one economy to be treated in the same correct way by all statistics compilers (Chapter 4). Non-resident SPEs set up by general government may be of particular interest, because of the special imputations that apply to an entity owned or controlled by general government when that entity is resident in another territory and is used for fiscal purposes (see BPM6 paragraphs 8.24 – 8.26, and also paragraph 4.23 of this guide). (This special approach avoids a misleading picture of government expenditures and debt.)
- e. Recording of international labour movements in labour force statistics, and links between labour statistics and national accounts (with possible further development of the social accounting matrix), merit attention (Chapter 10).
- f. Second homes: should the property be deemed to produce housing services continuously, or only when it is occupied? International and European standards are not consistent on this point (Chapter 12).
- g. E-commerce raises (among the measurement issues discussed below) a challenge for price statistics to do with quality adjustment (the issue of non-comparable imports, and how to link the prices of products that had been purchased domestically with those of products that have begun to be imported). A similar issue is mentioned as a consequence of outsourcing in Chapter 2, where imports replace domestically produced goods.
- h. The focus of this guide is globalization as it affects economic accounts. Globalization also has consequences for financial accounts (transactions and balance sheets). Developments and planned enhancements in this area are discussed in the addendum, but more detailed research on the consequences of globalization for financial statistics would be beneficial. One instance is portfolio investment in the balance of payments and international

investment position, which has substantially increased during the last decade, raising conceptual, methodological and data collection issues.

## Measurement issues

**14.14** Other issues present measurement problems:

- a. There is a need for further and more detailed guidance on the outstanding measurement and data issues related to the implementation of the new standards on goods for processing and merchanting. Among the issues are the measurement of inventories held abroad (for processing, in the course of merchanting or otherwise in connection with global manufacturing), and the development of price deflators for recording movements in the prices of inventories held abroad (Chapters 5, 6 and 8).
- b. Import substitution and compiling e-commerce data will be a challenge for some price statistics. Even if the conceptual issues of quality adjustment can be addressed, price statisticians still face the difficulties of collecting the detailed information on the characteristics of imported items which is needed for all methods of quality adjustment (Chapter 2 and, in the context of e-commerce and consumer price indices, Chapter 13).
- c. The challenges that statisticians face when using administrative data to estimate economic activities in the context of the complex enterprise structures and multi-stage production and distribution processes that are typical under globalization need further investigation. Quasi-transit trade is an example where goods entering a customs union apparently acquire more value while passing through one or more countries en route to a customer. The most important issue is to establish where the value added reflected in the price increase and a corresponding merchanting transaction (or, under the approach in the European Union, provision of branding services) should be recorded (Chapter 9). The work could be extended to accounting problems presented by VAT registration, where an entity is deemed to be resident in a country for certain administrative purposes but not for statistical purposes.
- d. Work on remittance-related issues has already been undertaken. However, the practical problem of recording (or estimating) remittances deserves further attention,

particularly emerging transfer methods and changes in the demographic profile of the remitting population (Chapter 11). Research should be conducted at the national and regional levels to capture both country-specific developments and regional changes.

- e. There are major difficulties concerning measurement of the stock of second homes abroad, and – given its relevance – the correction for average occupation time. Once secondary dwellings have been identified, and occupation time established, a line must be drawn between vacation homes and dwellings owned for other purposes (with implications for especially tourism statistics). Then, once the stock of such dwellings is established, it is difficult to estimate the imputed rental using stratification and similar methods when – as in some regions, and in particular in rural areas – no relevant and explicit rental market exists for dwellings of this kind. Since a time share property may be owned by residents of different countries, a direct allocation of the housing services to the country of the owners is extremely difficult. Statisticians in the country of origin of the owner of property abroad face greater problems as there is no stock to be observed, and the stratification method cannot be applied. Chapter 12 suggests that these problems merit further work.

### Data collection and presentation

**14.15** The challenges posed by globalization and the new international standards will require further work on survey questionnaires and data collection methods.

**14.16** Several earlier chapters suggest that more use of (or additional questions on) *national business surveys* might help to resolve difficulties arising from globalization, in particular to collect information on business-to-business e-commerce, measure transactions in IPPs and apply the change of ownership principle. The business surveys should be linked with international trade data at enterprise level. The main long-term solution is however seen to be surveys on MNEs, since many of the difficulties stem from cross-border transactions within them. First steps in this direction have been already taken within the European Union (FATS, and the EuroGroups Register on profiling of large MNEs).

**14.17** Chapter 5 suggests separate coding within *merchandise trade statistics* of goods for processing, so that balance of payments compilers can exclude them. While this would be a good first

step, a longer run goal should be to have trade declaration documents that would allow the compilation of data both on physical flows and economic transactions. Again, the link with business surveys is important.

**14.18** One of the suggestions noted above in the context of labour movement and remittances (Chapters 10 and 11) concerns more *intensive use of household surveys*. Chapter 13 on e-commerce suggests more use of household surveys particularly where, as for cross-border business-to-household e-commerce, (national) business surveys cannot help. Chapter 13 also notes the possible use of credit card data as a source worth exploring.

**14.19** It is recognized, though, that household surveys may not be capable of providing a reliable solution to some of the problems for national accounts stemming from (notably) labour movements and e-commerce, and also that there may be limits in some countries to extra reporting burdens on business. In some areas fuller use of *administrative sources*, including tax authorities, may be possible.

**14.20** Additional analytical tables for international labour movements in order to analyze e.g. resident and non-resident compensation for employment and trade in services are proposed in Chapter 10. Further work is needed to test the relevance of the framework for different countries.

**14.21** Other suggestions include the presentation of national accounts with and without SPEs (Chapter 4).

### Exchanges of data and of best practice

**14.22** Exchanges of data among countries are seen as helpful in various contexts:

- a. FDI, where the FDI network in Europe enables statisticians to exchange data on large FDI transactions, and where the OECD Working Group on International Investment has started to compare bilateral data with a view to improving data quality (Chapter 3).
- b. Labour movements and remittances (Chapters 10 and 11).
- c. Second homes abroad, where data exchanges may in particular help to fill gaps for statisticians in the country of residence of the owner of property abroad (Chapter 12).

**14.23** Because cross-border movement of labour is often a regional phenomenon, the sharing of data within a regional group can highlight asymmetries between major partner countries, which the countries concerned can then examine

within the context of the larger region. The development of a centralized remittances database, either publicly available or restricted, would promote data sharing, and the development of a supply and use type of framework might facilitate analysis of the data. Chapter 12 notes that data exchanges between EU member states have been suggested for some years as a practical solution to the lack of information on cross-border ownership of property, with little progress so far. More ambitious would be bilateral comparisons between countries to record and analyze asymmetries in the tourism satellite account or national accounts data on non-resident dwellings. This could be done in a similar way as mirror statistics are used to identify and reduce asymmetries in cross-border transactions statistics within the European Union, as for example through the FDI network.

**14.24** Finally, exchanges of best recording practice among countries – not as a substitute for

international standards, but as complement to them - are seen as potentially helpful in many areas, and could usefully be encouraged at a time when the new international standards are being implemented. The initiatives in the areas of FDI and remittances were noted in the paragraph on work already being undertaken. SPEs (Chapter 4) are a particularly difficult area, both in terms of capturing the necessary information, and of compiling national accounts and national balance of payments and international investment position data both with and, for purposes of analyzing domestic economic and financial developments, without them. Chapter 4 suggests that national statisticians should pay close attention to developments in the treatment of SPEs by other countries. In the context of second homes, Chapter 12 suggests a reference database to which national statisticians would have access.