

7th Meeting of the Advisory Expert Group on National Accounts, 23-25 April 2012, New York

Agenda item : II
: Issues related to globalization

Introduction

In June 2011 the CES adopted the Guide *The Impact of Globalization on National Accounts* (hereafter the Globalization Guide) that was published in February 2012. The Guide does not cover all aspects of globalization and, given the limited time span and the limited experience thus far in implementing the 2008 SNA, not all issues could be resolved. Chapter 14 of the Globalization Guide (see annex to this document) contains a list with suggestions for future work, making a distinction between continuation of initiatives already started, further conceptual work and measurement issues. The list includes, among others, conceptual and measurement issues related to global manufacturing, international transactions in intellectual property products, the treatment of goods for processing, merchandising and special purposes entities.

In view of the above, the CES Bureau requested Statistics Netherlands to further elaborate on the issue of global manufacturing. As a follow-up Statistics Netherlands presented an in-depth review paper on global manufacturing to the Bureau at its meeting in November 2011. Following its discussion the Bureau agreed to establish a Task Force for developing conceptual and practical guidance on the unresolved issues related to global *production*. Hence, the Task Force should not be restricted to focus only on manufacturing but should also address problems associated with services and intellectual property products. The terms of reference of the Task Force, which is chaired by Statistics Netherlands, reflects this broader scope. The Bureau requested the Task Force to set up a detailed work plan including a priority list of issues to be discussed in the report. The Task Force should start with the most urgent issues in 2012 and leave those that require more time for the second stage of work. The detailed work plan of the Task Force and the list of priority issues were approved by the Bureau in February 2012.

The final report of the Task Force is to be circulated for consultation with countries and organisations in early 2014, and to be presented to the CES plenary in June 2014 for endorsement. The Task Force will submit an interim report in December 2012 and a draft final report in September 2013 to the ISWGNA and the AEG for comments and suggestions. It will also be circulated to OECD's Working Parties on National Accounts and International Trade in Goods and Services.

Guidance on documentation provided

- The document *Task Force on Global Production: Terms of reference and work programme*, includes the terms of reference and the work programme as agreed by the CES Bureau. This document will be presented to the Meeting of the Group of Experts on National Accounts on 30 April – 4 May 2012 in the session on Globalization. The Task Force will meet on Friday 4 May in the afternoon to discuss the feedback from the meeting and the way forward.
- Chapter 14 of the Guide *The Impact of Globalization on National Accounts*, containing a list of suggestions for future work.

Mains issues to be discussed

- Does the AEG have comments to the proposed list of research issues and their priorities.
- Does the AEG have specific comments on any of the research issues and/or does the AEG have additional issues to be considered in relation to globalization.
- Does the AEG have suggestions or inputs for the session on Globalization at the Meeting of the Group of Experts on National Accounts 30 April – 4 May 2012.

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Task Force on Global Production: Terms of Reference and Work Programme



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Globalization

Task Force on Global Production: Terms of Reference and Work Programme

Note by the Secretariat

Summary

This paper presents the Terms of Reference and Work Programme of the Task Force on Global Production. The objectives of the Task Force are twofold. The first goal is to develop guidance on the unresolved conceptual issues arising from the System of National Accounts 2008 and the sixth edition of the Balance of Payments and International Investment Position Manual in relation to global production. The second goal is to develop further guidance on implementation aspects of these new global standards. In doing so, the Task Force will study the existing practices of countries in relation to the different types of global production arrangements.

The Task Force met on 19-20 January 2012 in Geneva and agreed on the annotated list of research issues. The list is divided into six conceptual and six measurement issues. It includes the division of work between the TF members, prioritization and a time frame for each individual research issue.

I. Terms of Reference

A. Background

1. Global manufacturing is a topical issue which significantly complicates the compilation of economic statistics. It has evolved to encompass a broad range of business arrangements and organizational forms. Today, multinational enterprises account for a large share of international trade between countries. National statistical offices need to handle the changing forms of global manufacturing to produce the regular statistics. It is important to identify best practices developed by countries, and agree internationally on the practical guidelines needed in order to foster international comparability.
2. Already in 2007 the Conference of European Statisticians (CES) established an Expert Group on the Impact of Globalization on National Accounts. This group was asked to examine how globalization affects economic statistics and national accounts in particular. By the end of 2011 the findings of this expert group will be published in a statistical guide “The Impact of Globalization on National Accounts”.
3. In the course of drafting the chapters on industrial processing (chapter 5), merchandising (6) and international transactions in intellectual property (7), and measurement issues associated with administrative trade data (9), quite some attention was paid to the phenomenon of global manufacturing. At a rather late stage in the drafting process it was decided that the issue of global manufacturing would deserve a chapter (8) on its own. Although in a short period of time many aspects of global manufacturing were discussed and presented in this chapter, some important issues were not sufficiently dealt with and need further attention.
4. The CES consultation of the guide “The Impact of Globalisation on National Accounts” identified conceptual and practical aspects of global manufacturing arrangements in relation to the implementation of the new global standards 2008 SNA and BPM6 as the major priority for the future research agenda. In June 2011 the CES approved the guide including the proposed work. On this background the CES Bureau decided to make an in-depth review of global manufacturing and requested Statistics Netherlands to prepare a paper to provide basis for the discussion.
5. The in-depth review paper by Statistics Netherlands was sent for comments to the UNECE Steering Group on National Accounts and to the authors of the relevant chapters in the guide “The Impact of Globalization on National Accounts” i.e. to the following countries and organizations: Armenia, Canada, Finland, Ireland, Israel, Netherlands, Norway, Russian Federation, Sweden, The former Yugoslav Republic of Macedonia, United States, Eurostat, OECD, CIS-STAT, UNSD and IMF.
6. The consultation stressed the importance of establishing an expert group (in the form of a Task Force) to elaborate on the conceptual and measurement issues related to global manufacturing. The Steering Group also pointed out that rather than global manufacturing the research should focus on global production arrangements in general, not to understate the importance of production of services and transactions in intellectual property products.
7. Furthermore, UNSD and OECD highlighted the support of the ISWGNA for further work on global production arrangements as part of the global effort to develop implementation guidance for the 2008 SNA.

B. Mandate

8. The Task Force (TF) is established under the CES Steering Group on National Accounts. It will report to the Conference of European Statisticians (CES) and its Bureau. It will provide progress reports on its activities and outputs to be evaluated by the CES Bureau.

9. The TF will also regularly consult and provide progress reports to the ISWGNA and the Advisory Expert Group (AEG) on National Accounts to ensure the international coordination of the work related to implementation of the 2008 SNA.

C. Objectives

10. The objectives of the TF are twofold. The first goal is to develop guidance on the unresolved conceptual issues arising from 2008 SNA and BPM6 in relation to global production. The second goal is to develop further guidance on implementation aspects. In doing so, the TF will study the existing practices of countries in relation to the different types of global production arrangements.

D. Planned activities and outputs

11. The TF will agree on the content and structure of the report and organize the drafting of the sections. Drafts of the report will be circulated for discussion to the UNECE Group of Experts on National Accounts (organized jointly with OECD and Eurostat) and the OECD National Accounts Working Party. Consultation with other forums, such as BOPCOM and ESCAP Committee, shall be sought.

12. The output will be a report including guidelines on global production which should:

- (a) Focus mainly on national accounts and balance of payments aspects;
- (b) Collect information of existing global production arrangements and country experiences for their treatment in national accounts and balance of payments accounting;
- (c) Clarify typology, concepts and definitions;
- (d) Address arising conceptual and measurement issues;
- (e) Provide practical guidance on the statistical treatment of global production arrangements;
- (f) Provide guidance on the required data collection, including the use of administrative data;
- (g) Recommend examples of good practices whenever appropriate.

13. The TF should develop a more detailed priority list and timetable for the work on the outstanding conceptual and measurement issues and consider what is possible to achieve within its mandate.

E. Timetable

14. The following timetable is proposed:

December 2011	The TF constitutes itself with members and chairs.
January 2012	The First meeting of the TF to agree on the more detailed research agenda and plan for the division of work for the February 2012 CES Bureau.
October 2012	Interim report with first results to the CES Bureau, BOPCOM, and OECD WPs on national accounts and international trade.
December 2012	Interim report with first results to the ISWGNA.
February 2012 – October 2013	Preparation of the draft sections of the report.
September 2013	Draft report to the ISWGNA and AEG.
October 2013	Draft report to the CES Bureau, BOPCOM, and OECD WPs on national accounts and international trade.
Early 2014	Finalization of the report and global consultation.
June 2014	Presentation of the final report to the CES plenary session for endorsement.

F. Methods of work

15. The TF starts its work with the face to face meeting in mid January 2012 in Geneva. The work agreed in the meeting will mostly be carried out by use of e-mail and audio-conferences. The TF may use the wiki infrastructure available at the UNECE website. The TF will also meet in conjunction with National Accounts meetings of the UNECE and OECD.

G. Membership

16. The following countries and international organizations have expressed interest to participate in the TF: Canada, Finland, Ireland, Israel, Italy, Netherlands, Norway, Sweden, United States, Eurostat, IMF and OECD. The TF members may decide to involve additional countries in the work e.g. countries beyond the UNECE region.

17. The TF will be chaired by the Netherlands and the secretariat will be provided by UNECE.

II. Work Programme

A. Proposed list of research issues

18. The TF met on 19-20 January 2012 in Geneva and agreed on the annotated list of research issues. The list is divided into six conceptual (1.-6.) and six measurement (7.-12.) issues. It includes the division of work between the TF members, prioritization and a time

frame for each individual research issue. The action to be taken under each research issue is indicated in *italics*. Summary of research issues, division of responsibilities and a time table are presented in the table below:

<i>Issue</i>	<i>Leading author*</i>	<i>Other contributors</i>	<i>Priority</i>	<i>Deadline</i>
1. Typology of global production arrangements	BEA	Israel Netherlands Sweden Italy WTO	1	Interim report in October 2012
2. Principles of economic ownership	Ireland	BEA OECD (reviewer) Finland Italy	1	Interim report in October 2012
3. Transfers of intellectual property products (IPP)	Israel	OECD Netherlands Ireland	1	Interim report in October 2012
4. Multi-territory enterprises	Norway	Finland IMF Australia (tbc)	1	Interim report in October 2012
5. Merchanting of services	Ireland	IMF WTO UNECE	2	Final report in October 2013
6. Quasi-transit trade	IMF	Eurostat Italy	1	Interim report in October 2012
7. Recording international commodity trade	Eurostat	IMF WTO UNSD (tbc)	1	Interim report in October 2012
8. Recording of production abroad	Canada	Netherlands Norway Ireland	1	Interim report in October 2012
9. Complex units (country case studies)	UNECE	Israel Italy	2	Memorandum item
10. Large and complex cases	Ireland	Country examples of large enterprise units	2	Final report in October 2013
11. Trade in value added	OECD	Eurostat Canada Netherlands WTO	2	Final report in October 2013
12. Price and volume measurement	Eurostat		2	Memorandum item

* The leading author is responsible for coordinating the work with other contributors and will combine all contributions to the final report.

19. The issues 9 and 12 are called memorandum items as it is not yet clear whether they will be discussed separately or under the other research issues.

20. Contributors will provide an annotated outline of their research issue by 2 March 2012. These outlines will be circulated for comments within the TF, combined into one document and then consulted with the Group of Experts on National Accounts at their meeting on 30 April - 4 May 2012 in Geneva.

B. Conceptual issues

1. Developing a typology of global production arrangements and providing guidelines for recording related activities in national accounting

Leading author: BEA

Other contributors: Israel, Netherlands, Sweden, Italy, WTO

Priority: 1

Deadline: To be included in the interim report in October 2012

21. Global production can be understood as a chain of interlinked production activities that are spread over several countries whereby one entity, usually the principal, exerts a certain level of control. Often the outputs of the various units active in the global production chain are difficult to observe independently due to strategic alliances and tight mutual relationships. Chapter 8 of the Globalisation Guide provides a number of examples. In the in-depth review reference is made to the literature on global value chains to obtain an overview of the possible forms of global production arrangements. Among the most complex examples of global production are those managed by so-called factoryless producers.

22. To extend this work, *the TF will develop a 'typology' of global production arrangements*, preferably based on real life examples, with the purpose of formulating *guidelines on how to account for each of the identified arrangements* on a country-by-country basis. Attention needs to be given to properly assigning the kind of economic activity (in terms of ISIC) of principals, contract producers and other participating units in the global production chain. Expectedly, a crucial step in this process is identifying the economic ownership of inputs, outputs and intellectual property in all stages of the production chain.

2. Clarify the principles of economic ownership of products and assets inside global production arrangements including recording of inventories abroad

Leading author: Ireland

Other contributors: BEA, OECD (reviewer), Finland, Italy

Priority: 1

Deadline: To be included in the interim report in October 2012

23. The strong linkages of units operating in global production arrangements complicate identifying economic ownership of products and assets transferred along the production chain. The general SNA principles of determining economic ownership should be tightened to make them applicable to the various forms of global production. This task becomes even more complicated when looking at the different (foreign) affiliates of one enterprise representing together a global production chain. The 2008 SNA provides some guidance, for example by stressing the possible differences between legal and economic ownership, i.e. those entities that are in control, carry the risks and obtain (most of the) benefits of holding goods or assets.

24. *The TF aims to develop more sophisticated decision models to identify the economic ownership of goods and assets inside the global production chain.* Also the exchange of experiences on how to apply these guidelines in practice is undoubtedly useful.

25. A related issue concerns measuring inventories held abroad in connection to activities such as processing, merchanting and production abroad. This measurement issue has its

mirror image, namely those inventories physically held in the domestic economy but subject to foreign ownership.

3. Recording transfers of intellectual property products (IPP) inside global production chains

Leading author: Israel

Other contributors: OECD, Netherlands, Ireland

Priority: 1

Deadline: To be included in the interim report in October 2012

26. Several multinational enterprises perform (part of) their research and development (R&D) in centralized units while those affiliates using this R&D in their production activities should be considered the beneficial units. Direct invoice methods to recover R&D costs are not always applied by the headquarters of such enterprises. As a result statistical sources may fail to map these (international) intra-company flows of R&D. This may lead to an incomplete coverage of R&D imports and exports, and subsequently to wrong R&D investment estimates. So this issue has both conceptual and measurement aspects.

27. Another issue highlighted in Chapter 7 of the Globalisation Guide is that the intangible nature of intellectual property also means that the legal ownership could be assigned to a unit in a low tax country while being used in production somewhere else. This may give rise to so-called phantom imports and subsequently distorted valued added and investment figures. *The TF will consider alternative recording options for these tax driven arrangements.*

28. The issue extends beyond transactions in those IPPs recognised as fixed assets in the SNA asset boundary however. Firms are increasingly offshoring other intangibles, such as brand names, where payments, if recorded, are registered as property income flows. Ensuring the correct recording of these transactions is important but in practice this may be highly complicated as often payments for the use of IPPs recognised as fixed assets are not always distinguishable from these 'other intangibles'.

4. Treatment of multi-territory enterprises

Leading author: Norway

Other contributors: Finland, IMF, Australia (tbc)*

Priority: 1

Deadline: To be included in the interim report in October 2012

**) to be contacted by the IMF*

29. The activities of multi-territory enterprises represent a special case of global production. Multi-territory enterprises operate their activities on a temporary or permanent basis over more than one economic territory. Typical examples of such enterprises are airlines, shipping lines and the creation and operation of cross border infrastructure, e.g. bridges, tunnels. The activities of project vendors of large construction projects are presented as an example in chapter 8 of the Globalisation Guide.

30. *The TF aims at drafting additional guidance to properly account for the activities of multi-territory enterprises.* Splitting the economic activities of multi-territory enterprises per country on the basis of 'prorating' or the creation of 'notional units', as recommended by the international guidelines, does not seem to match very well with the general national accounting principles of recording imports and exports on a strict transfer of economic

ownership basis. The creation of notional units may give rise to imputations of transactions (cross border movement of materials and assets) which may be difficult to account for in practice.

5. Merchanting of services

Leading author: Ireland

Other contributors: IMF, UNECE, WTO

Priority: 2

Deadline: To be included in the final report in October 2013

31. This issue was not addressed in the in-depth review. However, the Globalisation Guide (Chapter 6) mentions it as an item for further conceptual work. The significance of merchanting of services appears to be growing, particularly in areas such as telecommunications and web-based (internet) services. Sixth edition of the Balance of Payments Manual (BPM6) recognizes the issue of merchanting of services, but proposes no distinct treatment for such transactions.

32. *The TF will consider the question how the services being merchanting should be measured, e.g. in a similar way as merchanting of goods which refers to the ‘net’ approach: a negative export (the purchase) followed by a positive export (the sales).*

6. Measurement issues associated with quasi-transit trade and similar phenomenon

Leading author: IMF

Other contributors: Eurostat, Italy

Priority: 1

Deadline: To be included in the interim report in October 2012

33. For countries in the European Union an entity that does not meet the statistical definition of a resident may import and export goods. This may influence some other countries as well, although this phenomenon has so far been noted as important only in EU countries. When these goods are imported by the non-resident (sometimes called a “fiscal representative”), they are declared for customs purposes. The goods may later be sold to a resident of the importing country at a price that substantially exceeds the declared value, because the declared value may be based on the wholesale prices whereas the actual sales price reflects retail prices. This results in a statistical discrepancy as imports recorded in the current account are less than the financial transaction recorded in the financial accounts.

34. A similar outcome results when goods are imported into a country by the fiscal representative and later exported by it (this case has sometimes been called “quasi-transit trade”). For customs purposes, such goods are declared in imports and exports of the country in which the fiscal representative is located. If the imports are recorded at wholesale prices and the exports at retail prices, a statistical discrepancy results that is equal to the value of the net trade flow. *The TF needs to consider ways of measuring quasi-transit trade to help avoid statistical discrepancies.*

C. Measurement issues

7. Recording international commodity trade on the basis of transfer of economic ownership

Leading author: Eurostat

Other contributors: IMF, WTO, UNSD (tbc)*

Priority: 1

Deadline: To be included in the interim report in October 2012

**to be contacted by UNECE*

35. Global production arrangements may contain elements of industrial processing and merchanting causing measurement problems. One important obstacle to consider is that the International Merchandise Trade Statistics Manual (IMTS 2010) requires the value of materials sent abroad for processing to be recorded as exports of goods, irrespective of whether change in ownership takes place or not. The returned processed goods are according to the IMTS recorded as imports. This recording is according to 2008 SNA not allowed in the national accounts.

36. Following the new SNA standard, measuring purchases and sales of products abroad in terms of imports and exports becomes even more complicated. It should be noticed that this measurement issue is similar to that of merchanting. Generally, it is not expected that the national accounts recording of imports and exports of those goods that do not physically cross country borders can be directly obtained from foreign trade statistics. As such alternative data sources need to be considered. Expectedly, these measurement issues will also be discussed in the Eurostat TF on Goods sent Abroad for Industrial Processing. *This TF will rely on and work in close coordination with the current work of Eurostat in this area.*

8. Recording of production abroad

Leading author: Canada

Other contributors: Netherlands, Norway, Ireland

Priority: 1

Deadline: To be included in the interim report in October 2012

37. The design of business surveys may need to be adjusted according to the new 2008 SNA in order to properly capture the output or turnover of production abroad. *The TF aims at providing recommendations on how to capture production abroad.* This issue has a ‘mirror image’, namely restricting the recording of output in the national accounts of those domestic production activities carried out under the direct control and ownership of foreign producers to the industrial services provided. The output should not include the value of manufactured products.

9. Complex units (Memorandum item)

Leading author: UNECE

Other contributors: Israel, Italy

Priority: 2

Deadline:

38. The idea of this research topic is to *collect country examples of complex units* which do not fall under any other topic listed above. Should several of such cases arise, they may be grouped into their own research topics. A decision on this will be taken at the end of 2012.

39. For example, global production activities may be managed or assisted by units whose kind of economic activity is very difficult to grasp:

- (a) Factoryless producers;

- (b) Holdings;
- (c) Project vendors;
- (d) Special purpose entities and other administrative kind of entities (often legal owners but not necessarily economic owners of goods or assets);
- (e) Other complex units.

It is expected that a better understanding of some of these units will be obtained via one of the research items introduced before.

40. *The TF may develop guidelines to properly identify complex units in terms of ISIC. Determining appropriate volume measures or price deflators for measuring the output of these activities in volume terms is a complementary issue the TF may want to investigate. Again, this research issue becomes more apparent by the end of this year.*

10. Large and complex cases

Leading author: Ireland

Other contributors: Country examples of large enterprise units

Priority: 2

Deadline: To be included in the final report in October 2013

41. Several national statistical institutes have installed special units for understanding the activities and measuring properly the economic activities of large and complex enterprises. *The TF may consider how organizational units, specialized to large enterprises, may be able to measure properly the activities of enterprises engaged in global production. The main purpose of this item is to collect country experiences and formulate best practices in this area.*

11. Trade in value-added

Leading author: OECD

Other contributors: Eurostat, Canada, Netherlands, WTO

Priority: 2

Deadline: To be included in the final report in October 2013

42. International trade flows are measured on a gross basis which can overemphasise the importance of trade to economic growth and the contribution it makes to value-added, a problem that has increased in recent years as production becomes more fragmented and globalized. Efforts to better estimate the contribution of trade to value-added are being coordinated by the OECD with a number of important partners such as the WTO. *This TF will rely on and work in close coordination with the current work of OECD on trade in value-added.*

43. The key statistical issue is to derive and motivate the development of improved estimates of bilateral trade flows both in goods and services and also to motivate the development of input-output tables that better reflect international production networks. This is being tackled on a number of fronts, such as the development of improved estimates of bilateral trade in services, databases that allocate imports by BEC classification to final users, and the use of microdata linking trade and business registers and structural business statistics.

44. Most of the work envisaged in the Global Production activity impacts the recording of trade in value-added; one area in particular that is relatively uncharted territory is to

extend the concept of trade in value-added to trade in income, which requires an investment in detailed data on property income flows. The focus of trade in value-added estimates using an input-output approach is also an opportunity to extend recommendations into the area of supply-use tables and, in particular, to develop guidance on the treatment of certain flows within a supply-use framework, as well as identify areas where supply-use tables are able to improve estimates.

12. Price and volume measurement (including transfer pricing)

Leading author: Eurostat

Other contributors: tbc

Priority: 2

Deadline: To be included in the final report in October 2013

45. The examination of those establishments active in managing global production arrangements may also lead to issues related to the price and volume measurement of their output. It is expected that a better view on the significance of price and volume measurement issues will be obtained halfway the taskforce's term. Price and volume measurement may also be discussed under the other research issues. *The TF will rely on and work in close coordination with the current work of Eurostat in this area.*

Annex: Chapter 14 of the Guide:

THE IMPACT OF **GLOBALIZATION** ON NATIONAL ACCOUNTS



UNITED NATIONS
NEW YORK AND GENEVA, 2011

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.