CHAPTER 1

Introduction, overview and main conclusions

Introduction

What is globalization?

1.1 Businesses once largely confined their production activities to the national economy, apart from exporting part of their production and importing part of their intermediate inputs. People were employed locally. Investment was funded within the economy and financial transactions were also largely domestic. For the most part, the national accounts were a measure of a self-contained domestic economy, with a greater or lesser amount of foreign trade in goods and services.

1.2 In national accounts terms, globalization is the process of replacing national economic structures and transactions by international ones. Corporations organize their production and marketing at a global level, with vertical production processes spanning several countries. Capital such as intellectual property can be used simultaneously across the world in a multinational enterprise (MNE). Labour is mobile, and income returned to the home country can be an important part of its national (disposable) income. Household and business spending becomes more international as the worldwide web expands spending opportunities. The increasingly global nature of economic transactions and arrangements presents a challenge to the application of national accounts concepts and the use of data collection and compilation systems for measuring developments in the domestic economy. Features of globalization which directly affect national accounts measures include the following:

a. MNEs organizing their business across national boundaries to maximize production efficiency and minimize their global tax burden.

b. Far more foreign direct investment (FDI) relationships, and the need to identify and allocate direct investment flows.

c. Transfer pricing between affiliated corporations (pricing of imports and exports between affiliated companies in the absence of a market transaction).

d. The use of offshore vehicles (special purpose entities (SPEs)) to arrange finance for global activities and for other purposes.

e. The increase in international trade in services, including the practice of sending goods abroad for processing with no change in ownership.

f. An increase in international merchanting, where the merchant arranges the export of goods from country A to country B, without the goods ever crossing the borders of the country where the merchant is resident.

g. The trade in and use of intellectual property products (IPPs) across the world.

h. The limitations of administrative data in capturing economic transactions in the context of complex enterprise groups and globally organized production processes.

i. International labour movement and the labour income arising from it, and remittances and other flows to the country of origin of the non-resident workers.

j. An increase in household travel and investment abroad (including in residential property).

k. International trading via the internet by corporations and households.

How does globalization affect national accounts?

1.3 Table 1.1 sets out a list of globalization factors and the main national accounts items (including financial accounts, the balance of payments and international investment position (i.i.p)) which are most affected by them.

1.4 Measuring a national economy in these circumstances requires coordinated and seamless international activities to be split up into those parts which occur within the borders of a country

Table 1.1 Globalization factors and the most affected main national accounts items

Global phenomenon	*National accounts items most affected*
Arrangements within MNEs, including transfer pricing	Allocation of Gross value added (GVA)/GDP across countries; international trade in goods and services; investment income and financial flows
FDI relationships	Investment income and financial flows; i.i.p.
Special purpose entities (SPEs)	GDP in relation to GNI, International trade in services; investment income and financial flows; i.i.p.
Goods sent abroad for processing	GVA/GDP; international trade in goods and services
Merchanting	International trade in goods (and possibly services)
IPPs	GVA/GDP; capital formation; international trade in assets and related services
Quasi-transit trade	GVA/GDP; international trade in goods
International labour movement and remittances	GDP; GNI; gross national disposable income; international transfers
Ownership of property abroad	International trade in services; investment income and financial flows; i.i.p.
Internet trading	International trade in goods and services; household consumption

and those parts which are to be allocated to the rest of the world. Furthermore, the relevant transactions between the domestic economy and the rest of the world need to be appropriately measured and recorded.

Looking at the activity of multinational enterprises

1.5 Measuring the activities of MNEs is the most serious challenge faced by statisticians. Where firms organize activities on an international basis, national statistical compilers will see only parts of their global activities. For the whole picture the parts of the MNE need to be viewed in relation to each other in order to present a consistent view of how business inputs relate to outputs.

1.6 The treatment of local entities in countries as individual enterprises can hide the real relationships between units in MNEs. Within countries there is concern to identify the real dimensions of enterprises, for competition regulation, to check on intra-firm transactions and transfer pricing and to understand structural market effects. These considerations lie behind the statistical definition of enterprise groups as associations of enterprises bound together by legal and/or financial links which imply control. While most national business registers identify membership of foreign-controlled enterprise groups and the country from which the control is exercised, few capture economic data on activities outside the domestic economy.

Problems of assembling data for use at national level

1.7 Much of the activity of MNEs is difficult for national statisticians to capture and/or for users of the data to interpret for policy purposes. Capturing some of the activity (e.g. the business of SPEs) may pose practical difficulties, and the results may severely distort some parts of national statistics (in the case of SPEs, gross flows in the balance of payments and the international investment position; trade in services; flows of property income; and gross domestic product (GDP) in relation to gross national income (GNI)). Other activities may be difficult to record accurately in conformity to international standards, at least if international trade statistics are used as a primary source. Examples of these are the practice of sending unfinished goods abroad for processing, and merchanting. Particular difficulties concern the use of intellectual property within an MNE. Research and development (R&D) is just one example of the shared use of intellectual capital across multinationals. An even more difficult problem is posed by the use of shared software across global firms. For example a major software corporation probably assembles much of its own system software which will be recorded as investment in software capital. But attempts to assign software investment activity or payments for its use to reporting units by country will be difficult particularly if some of the software is written in other countries. In effect the MNE behaves as if it

has a stock of intellectual capital - in software and other aspects of management systems - which is freely shared across its enterprise activities.

1.8 The implications for measurement of capital services of this effect are significant, and pose severe problems for statisticians. This extends beyond the software example quoted earlier. The need to measure software capital formation by an MNE accurately at national level is a significant challenge for national accounts.

The purpose of this guide

1.9 For a number of years national accountants were conscious of the impact of aspects of globalization such as those just described on the compilation and on the quality of statistical measures. The Joint UNECE/Eurostat/OECD meeting on national accounts, held in Geneva in 2006, devoted a full day seminar to discussion of the topic. In view of the high level of interest, it was proposed to consider follow-up work to explore how national accounts are affected by globalization and propose operational guidelines to address these effects.

1.10 Further a Rapporteur Report on Globalization Statistics, prepared by Statistics Canada and the UK Office for National Statistics was discussed by the Conference of European Statisticians (CES) in June 2006. The CES decided to establish a body to review the main distortions in the compilation of national accounts and related source statistics, as caused by the growing globalization of economies. As a result the Group of Experts on the Impact of Globalization on National Accounts (GGNA) was established. This guide is the outcome of the work of the GGNA.

1.11 The purpose of this guide is to help users and producers of national accounts statistics to understand how globalization affects the measures of national accounts. It is intended for the use of both economic statisticians in the broadest sense (those concerned with national accounts and the balance of payments, but also, for example, with labour market, business and price statistics) and those who use the data for policy analysis and research. The guide brings together in one place a description of the effect of globalization on national measures, and highlights those areas that will increasingly need attention and resources to maintain the quality of national accounts. It draws extensively on national experience, mostly in the form of case studies annexed to various chapters.

1.12 Much of the work underlying this guide was undertaken to facilitate the adoption of the revised international standards for measuring economies: the *System of National Accounts 2008* (2008 SNA), the International Monetary Fund's (IMF) *Balance of Payments and International Investment Position Manual, sixth edition* (BPM6) and the proposed *European System of National and Regional Accounts 2010* (ESA 2010). The new international standards are consistent with each other. This is a great strength, and this report describes the effects of globalization as part of this consistent framework. While however the previous standards continue to be widely used and many countries still face the task of implementing the new ones, it seems appropriate to give attention in this guide to the differences between them.

1.13 In terms of globalization, the main changes in the international standards are:

a. The application of the principle of change in ownership of goods has been made universal, resulting in changes to the recording of merchanting and of goods sent abroad for processing and then returned to the owner.

b. In recognition of the changing structures of production and finance in many economies, guidance is now provided about when SPEs, which can be created by corporations or governments, should be recognized as institutional units, how they should be classified and how their operations should be treated.

c. The treatment of remittances from the movement of persons abroad has been expanded, with coverage of the flows being closer to the economic reality.

d. R&D, like other types of intellectual property, is recognized as a capital asset, and the income generated by R&D is recorded as production of services.

Overview

1.14 The guide covers the main factors of globalization listed in table 1.1. Each chapter describes a particular aspect of globalization, and explains how it can affect estimates in national accounts. Guidance is given on how national estimates can be produced, or how statistical collection systems might be improved to maintain the quality of the accounts. Although common threads run through the whole guide, the chapters are arranged in three thematic sections. A summary by section and chapter is given below.

I Multinational enterprises

Chapter 2: Multinational enterprises and the allocation of output and value added to national economies

1.15 This chapter describes in general terms the measurement problems associated with the global nature of the production process as exercised by MNEs. MNEs can lower their global tax burden by a number of structural arrangements – affiliates overseas to act as income recipients, holders of intellectual property rights, and units designed to raise loans for use by other units in the MNE. Transfer pricing can cause GDP to be misallocated between countries if the transfer prices are not true reflections of the market price.

1.16 The chapter notes the considerable significance of MNEs in the United States. A case study of the position for Ireland gives some startling figures which show how the economy has been affected by the increase in MNE activity. In order to tackle the many issues introduced by the growing importance of MNEs in the Irish economy, the Central Statistics Office (CSO) in Ireland has set up a consistency unit with responsibility for analysing all aspects of data received from MNEs. While it is evident that such units cannot prevent distortions to certain key statistics (the CSO notes that GDP in Ireland exceeds GNI by some 17 percent due in part to the sort of effects mentioned here), they can at least help to identify them and promote consistency across the accounts. Other annexes to Chapter 2 note similar initiatives in the Netherlands, Finland and Sweden.

Chapter 3: Multinational enterprises, foreign direct investment and related income flows

1.17 Chapter 3 explains why high quality data on FDI are needed for compiling international and national economic accounts. It also shows how a coordinated international survey can play an important role in ensuring that the associated relationships can be measured on a consistent basis across different economies. The survey is the Coordinated Direct Investment Survey (CDIS) organized by the IMF – a major statistical undertaking with the express purpose of improving the quality and availability of data on FDI used in international and national accounts. Chapter 3 also notes work under way in the European Union (EU) to make recording of MNEs' transactions more consistent across member states. An annex notes work in The Russian Federation on the recording of FDI-related transactions.

Chapter 4: Special purpose entities

1.18 This chapter describes the main characteristics of SPEs. They are subsidiaries of parents in a different country (and therefore constitute separate institutional units), established to hold assets, incur liabilities, and receive and pay out income on behalf of the parent, often for tax reasons. The new standards make clear that SPEs are to be classified as resident in the country in which they are incorporated or registered even in the absence of a physical presence there. How SPEs are treated in the national accounts is set out, in the light of the 2008 SNA and BPM6, with examples in the annexes from the Netherlands, Ireland and Hungary, all countries with numerous entities of this kind.

II Some issues concerning trade in goods and services, and global manufacturing

Chapter 5: Goods sent abroad for processing

1.19 Chapter 5 describes the situation where production chains across several countries involve the export and import of goods for processing without a change in ownership of the goods. The 2008 SNA and BPM6 no longer recommend imputing a change in ownership in these cases. The consequence is that, under the new standards, only a service fee for the processing work is to be recorded in the accounts, and not the import and export of goods on a gross basis. This recording complies with the principle of recording trade flows only where ownership of the goods changes, but will be at odds with the gross recording of goods shown in the International Merchandise Trade Statistics (IMTS). The chapter sets out the impact of the update of the standards from the 1993 SNA to the 2008 SNA on input-output (IO) models and other structural indicators. It recommends a series of changes in data collection and compilation methods to handle the changes, and thereby seeks to provide operational guidance for the implementation of the new treatment of goods for processing. The chapter also explains how the revised treatment affects the analytical use of IO tables.

Chapter 6: Merchanting

1.20 The IMF's *Balance of Payments Manual, fifth edition* (BPM5) defines merchanting as *"the purchase of a good by a resident of the compiling economy from a non-resident and the subsequent resale of the good to another non-resident; during this process the good does not enter or leave the compiling economy."* The concept is the same in

the new standards, but the 2008 SNA and BPM6 introduce an important change in treatment. In accordance with the principle that a change of ownership (as where a merchant buys goods and later sells them) should be recorded as a transaction, merchanting will be recorded in the country of residence of the merchant as a negative export of goods when he acquires them, and as a positive export when they are sold on. The merchanting margin is the difference between the two entries. The treatment may be difficult to apply in practice, given that the goods concerned never cross the borders of the country of residence of the merchant. Chapter 6 offers guidance on the identification of merchanting activities in the country of residence of the merchant, and notes the apparent underrecording of merchanting activity at global level (most countries record nothing for merchanting activity). The treatment of merchanting of services is also discussed, with a view to improving consistency of approach across the world. Annexes explain some detailed aspects of the treatment of merchanting, with examples for Ireland. A further annex on Hong Kong relates to both merchanting and processing (the subject of Chapter 5).

1.21 Chapters 5 and 6 present forms of cross-border processing and merchanting operations of a kind long conducted by traditional producers and trading companies. MNEs however engage in operations with characteristics of both, in which for example a head office in country A arranges for goods produced by an affiliate in B to be shipped to C for further work to be done on them, and thence to a marketing unit in D which sells them to a customer – indeed, such practices are a feature of global manufacturing, as described more fully in Chapter 8.

Chapter 7: International transactions in intellectual property products

1.22 The 2008 SNA recognizes that R&D is capital formation of assets, and should be recorded as such in the national accounts. These assets are termed intellectual property. Computer software and databases are also scored as assets. Measuring the value of these assets and the associated service payments (in the form of fees or royalties payable for their use) is difficult. The challenges are even more formidable when the owner is an MNE and the benefits of holding and using the assets are spread throughout affiliates across the world. The chapter describes the types of intellectual property, and the surveys and collection processes already available to capture the relevant asset value, and makes a case for further research on the issue of economic ownership of intellectual property in MNEs. An annex presents extracts from the OECD *Handbook on Deriving Capital Measures of Intellectual Property Products*.

Chapter 8: Global manufacturing

1.23 This chapter brings together much of the material in Chapters 5-7, presenting examples with varying degrees of complexity, including the example of a turnkey project, to illustrate the statistical treatment of global production and the consequences of adopting the new statistical standards in the 2008 SNA and BPM6. It contains material on the classification and statistical treatment of manufacturing enterprises, from the "traditional" producer undertaking all stages of production, to the "factoryless" manufacturer who develops and owns the relevant intellectual property but outsources all production. Annexes describe the treatment of such enterprises in Israel, and some US work on classifying them.

Chapter 9: Measurement issues associated with administrative trade data and globalization

1.24 Re-exports are goods which are exported in virtually the same condition as that in which they were imported, and are usually included in foreign trade statistics. A change of ownership takes place because they enter into the ownership of a resident of the country through which they pass. Transit trade concerns goods which are transported across the country with no change in ownership; they are accordingly generally excluded from that country's foreign trade statistics. Quasi-transit trade, which is the main subject of this chapter, concerns goods imported into a country by an entity considered to be non-resident (so they are at no point owned by a resident of the country importing them), and then exported to a third country within the same economic union or customs area. At the first point of entry in the economic union, the goods are cleared for free circulation within the union – it is at this point that any import duty is levied. There is often a significant difference in value between that declared at the point of entry to the economic union, and that observed on entry to a second country within the union. A unified approach is required across the union on how this increase in value should be recorded in the separate national accounts and in the accounts relating to the economic area as a whole. An annex shows how a similar phenomenon may arise in a single country (Hungary).

III Household-related issues

Chapter 10: International labour movements

1.25 The movement of people across country borders is not a new phenomenon – there has been international migration on a large scale since the nineteenth century. However, temporary cross-border movement of labour is on the increase, as seen in the European Union (EU) within which movement of labour is relatively free. Better income prospects and employment opportunities, lower international barriers, improved communication and cheaper transport have all contributed to growth. International labour movement however creates statistical challenges, not least where some of the workers concerned may be unregistered or working illegally. Adding to the complexity, the statistical conventions distinguish between workers with an employment contract with an employer in the country in which they are working, and others – including people who are employees but not of a resident entity - who are deemed to be receiving payment for services rather than compensation of employees. Furthermore, long- and short-term workers have different residence status. The chapter describes these issues and the associated challenges in capturing the relevant data in official statistics, and properly reflecting them in derived statistics such as labour productivity. Annexes describe country experiences and practices in dealing with various aspects of labour movement in the Czech Republic, Germany, Israel, Moldova and Ukraine.

Chapter 11: Remittances

1.26 Cross-border remittances - household income from foreign economies arising from the migration of people to work there - have grown rapidly. As they have increased in size, remittances have become more important as part of national (disposable) income in many of the home economies. The distinctions mentioned above in connection with Chapter 10 affect the statistical treatment of the earnings of migrant workers and how flows back to their country of origin are recorded. Chapter 11 describes efforts to address the conceptual, definitional and measurement challenges arising from the growth in international remittances, and explains how a supplementary table introduced in the BPM6 brings together flows relating to migrant work and other forms of cross-border household-to-household transfers. Annexes describe country practices in Russian Federation, Ukraine, Czech Republic, Bulgaria and Netherlands.

Chapter 12: Second homes abroad

1.27 As people have increasingly moved across national borders, ownership of a house or apartment abroad has become more common, for work purposes or as a vacation home. International standards treat ownership of property abroad as a form of FDI – the non-resident owner is deemed to own, not the property directly, but a notional company which in turn owns the house or apartment. Like all residential properties, vacation homes are deemed to produce housing services which contribute to GDP and, where the owner is resident abroad, should be reflected in exports of services. The chapter explains these and associated flows and positions, with illustrations from experiences in a number of countries in capturing them (Norway, Ireland, Mexico, and also in France and Spain where, as in Ireland, much of the property is owned by UK residents).

Chapter 13: E-commerce

1.28 Households and businesses are increasingly buying and selling over the internet or using other electronic means. The items concerned may be delivered physically or electronically. Statisticians must try to capture e-commerce transactions in national accounts and in the balance of payments when the transactions cross national borders. There are implications for consumer and producer price indices, and for the deflators used in estimating volume measures of GDP and its components. Chapter 13 and annexes explain these matters with particular reference to experience in the Netherlands.

Chapter 14: The way ahead and a research agenda

1.29 This guide cannot be the last word on how globalization affects national accounts, and what steps are needed to maintain the quality of the estimates. It is likely that globalization of industrial processes, consumer and other spending and labour markets will continue, and that the share in world trade of MNEs will further increase. Meeting the statistical challenges presented to national accounts by these developments will require international solutions, and international institutions will have an important part to play in pursuing them. This role will include implementing the recommendations of the October 2009 report by the IMF and the Financial Stability Board to G-20 Finance Ministers and Central Bank Governors (*The Financial Crisis and Information Gaps*) (the G-20 report), and helping individual countries to continue to compile national measures of economic activity while contributing to a coherent picture of the world economy. Chapter 14 brings

together the many suggestions for further work contained in earlier chapters.

Addendum: Impact of the financial crisis

1.30 The financial crisis began in 2007 and spread across much of the world in the following year or so. It did not arise from globalization, but close economic and financial interrelationships undoubtedly contributed to its rapid dissemination and pervasive effects. Although statistical deficiencies were not the cause, the crisis has given a strong impetus to statistical work, taking it in new directions. Among these directions are:

a. Identifying and measuring risk concentration and exposures.

b. Obtaining better information on complex financial products.

c. Obtaining group-consolidated data on large, especially financial, conglomerates.

1.31 These three initiatives have little direct connection with national accounts. Others, however, do. Examples are:

d. The increased emphasis on integrated economic and financial accounts by institutional sector.

e. The associated balance sheets, including the international investment position and government debt.

f. The enhanced interest in data on residential and commercial property, and related prices, which should make it easier to include estimates of real assets in sector balance sheets.

g. The drive for better securities issues statistics, and data on holdings of securities.

h. The emphasis on more comparable government finance data.

i. The interest in distributional data such as information on groups within a sector, as obtained from surveys of households and small and medium-sized enterprises.

1.32 The G-20 report also recommended more emphasis on communication, following which a database of Principal Global Indicators has been assembled, containing a wide variety of timely and comparable economic and financial statistics covering individual countries and wider aggregates.

1.33 While some of these initiatives were already planned or in progress, the G-20 report has accelerated the work and led more to be undertaken. An appendix describes a variety of work under way at the European Central Bank (ECB), which is both a major user of statistics in performing its monetary policy and financial stability functions, and a source of data, including to a new body, the European Systemic Risk Board, established in January 2011.

Main conclusions

1.34 Globalization presents conceptual difficulties and measurement challenges for national accounts. The reasons for this were outlined in paragraphs 1.3 to 1.8 and are explained in the relevant chapters. The chapters suggest work to tackle the difficult issues, and these suggestions are grouped and summarized in Chapter 14. Goods for processing, merchanting, offshore entities, the treatment of transactions in intellectual property, labour movement, ownership of property abroad and e-commerce all fall into this category. The growing role of MNEs in global manufacturing adds to the difficulties for national statisticians, in the areas of cross-border processing, merchanting and transactions in intellectual property. MNEs conduct their business with little regard to national boundaries, instead following organizational convenience, cost advantage and tax minimization. They often channel transactions through SPEs set up in jurisdictions where the MNE has little or no other business. The consequence is that statisticians find it difficult to identify the value added attributable to their national economy, and to record the appropriate entries throughout the national accounts, balance of payments and related statistics. This is the biggest statistical challenge posed by globalization.

1.35 A view of the operations of the MNE as a whole can help national statisticians to make appropriate estimates for that part of the business which should be recorded in their national accounts. The research agenda set out in annex 4 of the 2008 SNA suggests "*Given the close ties [between enterprises within an enterprise group] it may be sometimes desirable to consider an enterprise group as a single entity and to consolidate the accounts of its members*". From the perspective of financial stability, the G-20 report seeks information on conglomerates, mentioning in particular their exposures through offshore subsidiaries. US statisticians already collect information on group activities of MNEs with a US parent. In the European Union data on activities of foreign affiliates (both inward and outward) are collected, based on a common legal and methodological framework. Other initiatives are the IMF's new CDIS, the European Union's FDI network and EuroGroups Register, and the consistency units set up in various national

statistical offices to coordinate work on the recording of MNE activities. But obtaining a view of the activities of an MNE as a whole, and allocating its transactions across the countries in which it operates in a correct and consistent way, requires closer cooperation among national statisticians and increases the role of international and regional organizations. These points are further developed in Chapter 14.