

# Outline Report from the Task Force on Global Production

(October 2012)

This document provides an overview of the work program of the task force and outlines the expected topics covered in its final report. It provides for each of the research issues a brief introduction followed by an overview of the main research questions. Each chapter addresses linkages to other chapters and signals possible overlap between the various research topics discussed by the task force.

This work program makes a distinction between priority 1 and 2 issues. An interim report, to be delivered by October 2012, will present the preliminary outcomes on the first priority issues. The chapters 1-5 deal with conceptual issues while chapters 6-12 are addressing the more practical, or measurement related, ones. The task force will base its recommendations as much as possible on best practices and countries experiences.

## Chapter 1 – Typology of global production arrangements

### *Introduction*

This chapter focuses on developing a typology of global production arrangements defined as an interlinked (production) process performed in more than one country, which leads to an output, where one entity, usually the principal, exerts a certain level of control over the process. These interlinked production activities are commonly referred to as global supply chains or global value chains.

The activities involved in global value chains can be grouped into broad stages of production from upstream R&D and design, through manufacturing, to downstream logistics, marketing, and sales. A breakdown into broad stages of production is useful in properly assigning the kind of economic activity (in terms of International Standard Industrial Classification, ISIC Rev.4) of principals, suppliers, contract producers and other participating units in the global production chain. Each stage of the production process includes a large number of tasks. In a global value chain many of the tasks are 'offshored', either through an enterprise's own affiliates located in foreign countries, or through independent contractors.

The main objectives of developing this typology are the following. It will support the proper breakdown of economic activities along the global production chain on a country-by-country basis. Secondly, it will help in assigning the kind of economic activity of principals, contract producers and other participating units in the global production chain. Thirdly, the typology will assist in identifying the economic ownership of inputs, outputs and intellectual property in all stages of the production chain.

This issue has **first** priority.

## ***Main research issues***

1.1 The most relevant features of global production chains will be systematically identified. The framework used for establishing a common typology of global production arrangements may address the following features:

- Identifying the kind of economic output in terms of the Central Product Classification of a global production arrangement;
- Mapping of the main entities active in the global production chain;
- Identifying, with the help of decision rules developed in chapters 2 and 3, economic ownership of material inputs, outputs and intellectual property products;
- Identifying the main international flows along the global production chain such as goods, services, intellectual property products, property income and financial transactions based on the 2008 SNA/BPM6 ‘transfer of economic ownership’ principles.
- Based on the above, providing a description of the production process typical for the production chain under investigation, e.g. outsourcing (of goods or services), industrial processing, factoryless production, merchanting (of goods or services), leasing of intellectual property products;
- Determining the kind of economic activity of the principal, contract producer(s) and, if necessary, other participating entities in the global production chain.

1.2 A second step is testing the typology’s usefulness and exhaustiveness based on a range of specific case studies. Depending on encountered accounting complexities, the examples may be stretched to (non-manufacturing) arrangements such as agriculture based production chains, power networks and telecommunication networks. In addition, many production chains are producer-driven while others are buyer-driven. The latter may require some investigation as well.

1.3 A third step concerns establishing supplementary or alternative recommendations for identifying the kind of economic activity of the factoryless producers, i.e. the ‘steering’ entities in global production chains. Following ISIC Rev.4 a unit that outsources transformation but owns material inputs is a manufacturer, while a unit that outsources transformation and does not own the material inputs is treated as being engaged in trade. This criterion for classification of a unit based solely on ownership of material inputs may be inappropriate in the case of factoryless producers. A factoryless producer may have substantial input in the form of R&D and other intellectual property products embedded in the good, and may organize and control the entire production process. As such they may be considered the economic owner of the outputs, despite the fact that contract producers, active in the chain, are made responsible for purchasing most of the material inputs (at local markets). In the context of establishing a typology of global value chains, recommendations supplementing, or if required, amending the current ISIC Rev.4 guidelines will be formulated with the purpose of properly identifying the kind of economic activity of factoryless producers.

## ***Links to other chapters***

This chapter is to address the conceptual issues and not delve into the measurement challenges. Nevertheless, many measurement issues relate to accounting for global production

arrangements on a country-by-country basis and these are discussed in other chapters of the report.

Further, there is a strong interrelationship between this chapter and the chapters 2 and 3 which deal with identifying inside global production chains the economic ownership of goods (chapter 2) and intellectual property (chapter 3).

### ***Leading author and other contributors***

The BEA acts as leading author of chapter 1. Other contributing organizations are the Central Statistical Bureau of Israel, Statistics Netherlands, Statistics Sweden, WTO and Istat.

## **Chapter 2 – Principles of economic ownership (of goods)**

### ***Introduction***

The overall objective of chapter 2 is to clarify the principles of economic ownership of products and assets inside global production arrangements (including recording of inventories held abroad). Chapter 3 will deal with the principles of economic ownership of intellectual property products.

These matters of ownership are discussed in the SNA 2008 (par's 26.20 – 26.22 and 28.13 – 28.24). However, this guidance does not fully extend to dealing with issues arising from global corporations and their related production chains. The chapter will address these issues from both a conceptual and practical perspective and offer guidance as required.

The Chapter will view the structure of company ownership in a foreign direct investment framework. Foreign direct investment is associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. The extension of this definition to cover the ownership chain of a multinational enterprise is termed the foreign direct investment relationship. It is important to note that measures of inputs and outputs produced along the production chain fall outside the scope of foreign direct investment statistics. A decision tree will be set out to illustrate the steps in economic ownership that might occur in a globalized production process. Much of the focus will be on the economic ownership of these outputs at different stages of production.

Moreover, it is important to note that the entities or companies involved in a global production chain are not always part of a foreign direct investment relationship. Specifically, elements of the production chain can relate to third parties such as contract manufacturers and other processors who are themselves outside the chain of ownership. The question is then about ownership of the output being produced by these industrial service providers. Once third parties are involved in global production chains, economic ownership of the product can become blurred and unclear. The Chapter will look closely at such situations and clarify the required statistical treatment or make new proposals.

### ***Main research issues***

2.1 The work of the subgroup is to review such situations where economic ownership and legal ownership diverge or become less clear. Supplementary to the 2008 SNA and BPM6, an advanced decision model will be developed for identifying the economic ownership of goods and assets, including inventories, inside the various stages of global production chains. The

model will particularly focus on assigning economic ownership of goods, either to the principal or to the contract producer. This model may help the statistical compiler to “look through” the legal structures of multinational enterprises by applying the more sophisticated decision rules of economic ownership of product inputs, product outputs, inventories and other assets. This will be achieved by examining parent-affiliate relationships (foreign direct investment relationships) or principal-contract producer relationships, and assessing which of them are in control and carry the risks of production activities. The decision model will be tested against several of the case studies examined by the task force.

2.2 A corresponding step is examining business accounting practices. The International Accounting Standard (IAS) No.1 requires that transactions be accounted for and presented in accordance with their substance and not merely their legal form. The requirement of treating the substance of a transaction over the legal form, in these jurisdictions, should mean that economic ownership is taken in preference to legal ownership where there is a potential divergence. Consultation of tax authorities may also help to obtain a better understanding of the underlying taxation aspects of global production arrangements.

2.3 In general, the difficulties in dealing with multinational enterprises and their production chains is that there may be distortions to the statistical data in relation to where production is taking place. The sub group will review measures to assess the possible distortions to trade and the resulting value added that might arise. Such a methodology has already been outlined in Lipsey (2010).

2.4 The treatment for merchanting and industrial processing outlined in both 2008 SNA and BPM6 will result in inventories abroad being included in the national accounts. The consequences for compilers arising from this treatment will be explored and recommendations outlined to assist compilers.

This issue has **first** priority.

### ***Links to other chapters***

The research questions in this chapter are closely linked to those in chapter 1, as both chapters concern themselves with the group structures and chains of production and supply. Particularly research items 2.3 and 2.4 are closely related to chapter 8 on recording of production abroad. This may require further coordination of the task force’s activities.

### ***Leading author and other contributors***

The Central Statistics Office of Ireland acts as leading author. Other contributing organizations are the BEA, OECD, Statistics Finland and Istat. As elsewhere, an important role of the contributing organizations is providing relevant case studies. The possibility of combining the US perspective as owner of many multinational enterprises and other countries, where the same entities operate, while respecting statistical confidentiality, is another promising mode of cooperation.

## Chapter 3 – Transfers of intellectual property products

### *Introduction*

In contrast to chapter 2 on determining the economic ownership of products and (tangible) assets, this chapter deals with economic ownership issues of intellectual property products (IPP's) inside global value chains. This chapter continues some of the discussions picked up in chapter 7 of the manual on "The impact of globalization on national accounts". Within the framework of global production at least two key problems can be identified.

The first problem concerns the recording of IPP flows inside multinational enterprises. Multinational enterprises tend to divert their production to various countries in order to maximize revenues. The production of IPP's may be transferred to foreign affiliates, driven by e.g. tax discounts, capable and innovative labor, cheap wages and the proper knowledge infrastructure. Yet, the use of the IPP's in production will often take place in separate production units, which may be located in yet another country. This brings about a reallocation of IPP between the affiliates of one enterprise. Due to their intangible nature, IPP's need not pass through customs and are therefore difficult to identify as transactions involving IPP's. As such, they may not easily be covered by administrative data or surveys. An additional difficulty is that due to variations in tax or IP regulations, the multinational enterprises may choose to place the legal ownership of IPP in one country rather than another. Even if an IPP is produced by the enterprise in country A, the ownership may be registered in country B, while being used in production in country C. The multinational enterprise may not register actual payments between the unit that produced the IPP and the affiliate that used the IPP in production. Under such circumstances the obvious question emerges how to account for the ownership, use and transfer of the IPP's within the affiliates of one multinational enterprise.

The second problem is how to account properly for the ownership and use of IPP's in cases of outsourcing of production activities outside the enterprise. Outsourcing production to independent contract producers leads to a situation in which the contract producer virtually uses the IPP's developed by the principal enterprise in its production. Again, the accompanying flows of IPP's may not be identified and traced down as they may not be captured by surveys or administrative data in a satisfactory way. In this case, identifying the economic ownership of the output of contract producers is strongly related to identifying ownership (and actual use) of IPP's in production. This depends on whether the output of the contract producer is classified as a good or as an industrial service.

This issue has **first** priority.

### *Main research issues*

3.1 A first step is adding guidance to identifying the economic owners of IPP's in global production chains, taking into consideration the complexities highlighted in the introduction. For this purpose, a similar kind of decision model (or decision tree) will be developed as the one proposed in chapter 2. However, the complexities encountered when determining the economic ownership of IPP's may be quite different from those of goods. The decision model will also focus on situations in which legal ownership of IPP's seem to be at odds with economic reality and the general perceptions of economic ownership. One example is when legal ownership is assigned to so-called 'brass plate' affiliates, which have an administrative function but nothing else.

3.2 The second step is formulating detailed recommendations on the recording of production, ownership and use of IPP's inside global production chains. The 2008 SNA and the OECD IPP manual will be used as starting points. The recording of several IPP related flows such as licenses, royalties and direct foreign investments will also be addressed. The various modes by which IPPs are made available will be discussed: an original can be sold or transferred, copies can be sold as licenses to use for more than year or licenses to reproduce. The services of IPP's can also be made available without transferring ownership of the asset.

3.3 Thirdly, the possible modes of statistical observation and data collection will be reviewed. Various methods of collection of data on production and transfer of IPP's are reviewed, drawing on existing experience in various countries, such as globalization surveys conducted by several OECD countries.

### ***Links to other chapters***

As already mentioned, this chapter has strong linkages with chapter 2 on clarifying the principles of economic ownership of products and assets inside global production arrangements. The proposal is that both chapters will introduce decision models for identifying economic ownership and these are likely mutually related. Further, aspects of IPP's are also highlighted in chapter 1 when discussing the various examples of global production chains. In addition, the measurement problems of IPP flows are probably interlinked with complexities of measuring production abroad (chapter 8).

### ***Leading author and other contributors***

The Central Bureau of Statistical of Israel acts as leading author. Contributing organizations are OECD, Statistics Netherlands and the Central Statistics Office of Ireland. Contributing countries will provide case studies, examples of data limitations of measuring international IPP flows and contribute to the discussion on how to overcome these constrains.

## **Chapter 4 – Multi-territory enterprises**

### ***Introduction***

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 construction companies, airlines, shipping lines and the creation and operation of cross border infrastructure (e.g. bridges, tunnels, pipelines).

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. 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, but which are also against the general 2008 SNA principle of recording imports and exports on a strict transfer of ownership basis.

The chapter will discuss and clarify the characteristics of multi-territory enterprises, discuss their accounting treatment and review the challenges with regard to source statistics.

This issue has **first** priority.

### ***Main research issues***

4.1 The general characteristics of multi-territory enterprises are explained, based on a collection of real case examples. The purpose of this exercise is to get a better understanding of the nature of multi-territory operations and the possible accounting implications.

4.2 A second step is examining the feasibility and usefulness of breaking down the books of multi-territory enterprises on a country-by-country basis, given the general 2008 SNA recommendation to record (international) product transactions strictly on an exchange of ownership basis.

4.3 The statistical implications of pro-rating the activities of multi-territory enterprises are examined. One issue that comes to mind is that all activities are exhaustively recorded in the national accounts of countries in which these of multi-territory enterprises are active. Similarly, one should make sure that no double counting of activities takes place.

### ***Links to other chapters***

Multi-territory enterprises may also be introduced in the typology of global production chains as discussed in chapter 1. The issue of assigning the activities of multi-territory enterprises to individual countries is closely linked to issues of economic ownership (chapter 1), and the recording international commodity trade based on transfer of economic ownership (chapter 7).

### ***Leading author and other contributors***

Statistics Norway acts as leading author. Other contributing organizations are Statistics Sweden, IMF, WTO, Eurostat and Australian Bureau of Statistics (to be considered). Contributing organizations will assist in providing real life examples.

## **Chapter 5 – Merchanting of services**

### ***Introduction***

Under the new 2008 SNA and BPM6 recommendations, merchanting activities are to be recorded in the goods account rather than the services account, as recommended in BPM5. In addition, the new recording method is to follow a gross presentation showing the purchase (import) and sale (export) of the goods as negative and positive exports respectively in the balance of payments and national accounts of the country where the merchant is resident.

This change brought into stark relief the fact that there was an underlying assumption that merchanting applies to goods only. Nevertheless, chapter 6 of the manual on “The impact of globalization on national accounts” highlights the fact that in previous versions of the Balance of Payments Manual merchanting is discussed in the context of transactions in both goods and services. A case for the recording of merchanting of services is made in the Chapter (ref par 6.31 – 6.38) of the Globalization Manual. However, this is in the context of recommended future work on this topic.

The purpose of this chapter is to research this subject of merchanting of services in more detail, and to put forward, if possible, more compelling arguments for its inclusion in the current manuals or in the next editions of both SNA and BPM.

This issue has **second** priority

### ***Main research issues***

5.1 The phenomenon of merchanting of services will be further explored, based on real life examples of combined merchanting of goods and services and examples of pure merchanting of services.

5.2 Aspects of transformation are examined. In general if transformation occurs or a product is changed while being transacted, merchanting is not the correct classification of the transaction and instead it is a case of manufacturing services on physical inputs owned by others (processing).

5.3 The significance of merchanting of services is quantified, possibly through a survey of compilers or based on expert opinions on developments in the international services economy.

5.4 The consequences of continuing the current approach of not recognizing merchanting of services as such will be considered. If desirable, alternative accounting proposals will be made for the recording of merchanting of services in the next versions of the SNA and BPM.

### ***Links to other chapters***

This chapter is largely a stand-alone module of the task force report. Nevertheless, it relates to issues of ownership and the structure of economic ownership in global production and supply chains. Therefore, there will be links to both chapters 1 and 2. Examples may be found of trade in services related to intellectual property products, as discussed in chapter 3.

### ***Leading author and other contributors***

The role of contributors, World Trade Organisation (WTO), International Monetary Fund (IMF) and UNECE, will be a key element of the work on this subject. The WTO view will be critical in terms of that Organisation's expertise in this matter and to its potential significance. The IMF is also a key contributor, particularly in relation to the conceptual issues. It is expected that IMF will bring greater clarity around the scope and boundaries of merchanting activities. UNECE will give the perspective of another key international organization in this matter.

## **Chapter 6 – Quasi-transit trade**

### ***Introduction***

This chapter is designed to discuss statistical measurement issues associated with quasi-transit trade and similar phenomenon. Quasi-transit trade has been shown to cause significant distortions in the data of some countries in the European Union (including the Czech Republic and Hungary), whereas a few other European Union countries have studied the issue and have not found significant distortions. At a global level, according to IMF data, in recent years, the world is recording significantly more goods exports than goods imports. Conceptually, global net exports should be close to zero, because one country's exports usually are another country's imports. The question that has arisen is whether quasi-transit trade may be contributing to this discrepancy. For obvious reasons, these statistics discrepancies are unwanted since they potentially lead to errors in national accounts and balance of payments statistics.

Quasi-transit trade occurs when a non-resident entity declare imports and exports of goods. When goods physically move into a country, they may be declared for customs purposes as imports by the non-resident (sometimes called a “fiscal representative”), although, because ownership has not changed hands, they generally should not be recorded in the balance of payments. 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 when the goods crossed the border may be based on wholesale prices and the actual sales price reflects retail prices. If customs data rather than change of ownership data are used, as is sometimes the case, this results in a statistical discrepancy. Imports recorded in the current account are less than the financial transaction recorded in the financial account. Also recorded global imports may be less than recorded global exports, if the exporter captures the full sale price.

A similar outcome results when goods are declared in imports by the fiscal representative and later declared as exports (as noted earlier, this case has sometimes been called “quasi-transit trade”). If imports are declared by the fiscal representative at wholesale prices and exports are declared at retail prices, and if customs data rather than change of ownership data are used in the balance of payments, a statistical discrepancy results that is equal to the value of the net trade flow.

This issue has **first** priority.

### ***Main research issues***

6.1 Methods and statistical sources are considered to adjust the value of goods imported or exported by so-called fiscal representatives according to the actual purchasers’ prices, that is, when these goods are at a later stage purchased by domestic customers.

6.2 Methods and statistical sources are considered to account appropriately for quasi-transit trade related imports and concomitant re-exports. When no exchange of ownership takes place these imports and exports should not be recorded in the balance of payments or national accounts at all.

### ***Links to other chapters***

This topic is related to other topics being considered by this task force such as the typology of global production arrangements (chapter 1), principles of economic ownership of products and assets (chapter 2), recording international commodity trade on the basis of transfer of economic ownership (chapter 7) and recording of production abroad (chapter 8).

### ***Leading author and other contributors***

The IMF will coordinate the work and prepare the first draft of the chapter. Other contributors are Eurostat and Istat. Eurostat will provide input and feedback based on the work of the Eurostat task force that was formed to also explore this topic, and provide relevant available documentation from EU member countries that have explored this topic. Istat will provide input and feedback, including on issues involving the supply-use framework.

## **Chapter 7 – Recording imports and exports of goods on the basis of transfer of ownership**

### ***Introduction***

In the 1993 SNA it was more or less assumed that movements of goods from one country to another automatically involves a change of ownership. In reality, some of these goods may be sent abroad for processing, without ownership change of the good taking place. In the 2008 SNA and BPM6 the general principle of change of ownership is being followed strictly, meaning that goods sent abroad for processing are not recorded as imports or exports. Unfortunately, these revised accounting conventions are not in line with the International Merchandise Trade Statistics Manual (IMTS 2010), which continues to recommend merchandise trade statistics to be following a crossing border registration, regardless of transfer of ownership.

Business surveys are an important data source for compiling national accounts. The design of these surveys should be in line with business accounting practices. In business accounting the recording of product transactions will usually be based on change of ownership. As a result, in the supply-use framework, inconsistencies may emerge when integrating the data on production from structural business surveys with import and export data from the merchandise trade statistics. Both statistical sources do not follow the same recording principles.

These new 2008 SNA accounting recommendations may not lead to GDP adjustments but will certainly lead to adjustments in the production structure of supply and use matrices and the input-output coefficients of input-output tables. While industrial processors do transform material inputs into material outputs, this transformation will no longer be reflected by the input-output coefficients based on 2008 SNA conventions. This is because processors do not purchase material inputs and do not sell material outputs.

This issue has **first** priority.

### ***Main research issues***

These issues are addressed in a Eurostat task force on processing. This Task Force will meet three times. Two meetings already took place, on 8 November 2011 and 23 February 2012. The final meeting will be held on 7 June 2012. The final report is expected by end 2012. The main findings of this task force will be presented in chapter 7 of this task force's report. Key issues to be addressed are:

7.1 The task force will develop guidelines to bridge the outcomes of merchandise trade statistics to import and export figures based on the principles of ownership. Guidelines will be established based on best practices.

7.2 The analytical shortcomings of supply-use and input-output tables based in the 2008 SNA principles will be investigated, including methods to overcome these shortcomings.

The Eurostat task force will also discuss the issue of quasi-transit trade (see chapter 6).

### ***Links to other chapters***

This chapter is closely related to several other conceptual and measurement issues examined by the task force, i.e. typology of global production arrangements (chapter 1), clarify the principles of economic ownership of products and assets (chapter 2), inside global production

arrangements, measurement issues associated with quasi-transit trade (chapter 6) and recording of production abroad (chapter 8).

***Leading author and other contributors***

Eurostat will coordinate this chapter. Other contributing organizations are IMF, WTO and UNSD (to be considered).

## **Chapter 8 – Recording of production abroad**

***Introduction***

Although business surveys will generally follow the principles of economic ownership, some adjustments may be needed to properly capture the output or turnover of production abroad. In following the 1993 SNA concepts, business survey questionnaires may have explicitly asked respondents to strictly report on turnover in the domestic economy. In such cases, changes in questionnaires are needed for the transition to 2008 SNA guidelines.

This issue has **first** priority.

***Main research issues***

8.1 The task force will formulate recommendations on how to capture production abroad in business surveys or related statistics. This issue has a 'mirror image', namely removing from the national accounts the product outputs of industrial service providers in the domestic economy. Business surveys should only keep track of the value of the industrial services provided by these units.

***Links to other chapters***

This chapter is strongly related to the issue of measuring imports and exports on a transfer of ownership basis (chapter 7).

***Leading author and other contributors***

Statistics Canada acts as leading author. Contributing organizations are Statistics Netherlands, Statistics Norway and Central Statistics Office of Ireland.

## **Chapter 9 – Large and complex cases units**

***Introduction***

In recent years, several national statistical offices have installed so-called large cases (or consistency) units. The purpose of these units is to collect and produce statistics for complex companies that are often engaged in global production. The purpose of this chapter is to document how these units operate within national statistical institutes. The chapter will at the outset draw on the experiences of large and complex cases units detailed in the annexes of Chapter 2 - Multinational enterprises and the allocation of value added to national economies of the Globalization Manual as a starting point. Further detail on how these units typically deal with the variety of statistical data obtained from multinational enterprises will be obtained.

This issue has **second** priority.

### ***Main research issues***

9.1 The key task is documenting alternative approaches and best practices of large cases units inside national statistical offices. Besides (custom made) observation techniques and data analyses, the review will also address effective communications strategies with representatives of multinationals. Another important aspect is the skills of staff required in these units.

### ***Links to other chapters***

This chapter is largely self-standing.

### ***Leading author and other contributors***

The Central Statistics Office of Ireland acts as leading author. Other contributing organizations are Statistics Netherlands and UNECE.

## **Chapter 10 – Trade in value added**

### ***Introduction***

International trade flows are measured on a gross basis, which can overemphasize the importance of trade to economic growth and the contribution it makes to value-added. This problem 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 task force will rely on, and work in close coordination with, the current work of OECD on trade in value-added.

The key statistical issue is to derive and motivate the development of improved estimates of bilateral trade flows both in trade 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.

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.

This issue has **second** priority.

### ***Main research issues***

10.1 This chapter will highlight the significance of the findings of the task force for doing analyses such as measuring trade in valued-added. As mentioned, the key issue is to motivate the development of improved estimates of bilateral trade and its effects on a better reflection of international production networks.

### ***Links to other chapters***

This chapter is reasonably self-standing, but it will depend on the recommendations made elsewhere. This chapter is connected to issue 7.2 on the analytical consequences of supply-use and input-output tables based in the 2008 SNA principles in terms of the recording of industrial processing.

### ***Leading author and other contributors***

The OECD acts as leading author. Other contributing organizations are Eurostat, Statistics Canada, Statistics Netherlands and WTO.

## **Chapter 11 – Price and volume measurement (tentative)**

### ***Introduction***

The examination of the various establishments active in managing global production arrangements may also lead to questions about 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 through the taskforce's term. At a later stage it may be decided that price and volume measurement aspects are discussed under other research issues and do not need a separate chapter or that they are left for future research. The task force will work in close coordination with the current work of Eurostat in this area.

This issue has **second** priority.

### ***Leading author and other contributors***

Eurostat is leading author.

### ***Main research issues***

11.1 Take stock of possible price and volume measurement issues in connection to the output of certain establishments that are active in global production. This output could entail industrial processing services, IPP's and related services, other typical (managerial) services provided inside global value chains (the services provided by holdings or project vendors).

### ***Links to other chapters***

This chapter is particularly linked to the typology discussion in chapters 1 and the memorandum item on complex units.

## **Memorandum item – Complex units (country case studies)**

### ***Introduction***

The issue of complex units is addressed as a memorandum item as it is not yet clear whether this topic will be discussed separately, or under the other research issues. The purpose of this topic is to take stock of complex types of companies (or establishments) obtained from the country examples, which may fall outside the scope of other topics covered in the report. All these cases will be reviewed and a decision will be made by the end of 2012 whether to have a dedicated chapter on complex units. The task force may decide to develop guidelines in order to

properly identify complex units in terms of ISIC classes. Possible examples that may fall under this category are factoryless producers, holdings, project vendors, special purpose entities and other administrative kind of entities (often the legal, but not necessarily economic, owners of goods or assets). A better understanding of some of these units will be obtained through the other topics covered in the report. For instance, the nature of factoryless producers will be examined in chapter 1. Under treatment of multi-territory enterprises, the case of project vendors may be picked up.

This issue has **second** priority.

### ***Main research issues***

A.1 The task force will take stock of complex entities in global value chains obtained from the country examples, which may fall outside the scope of other topics covered in the report.

The task force will decide at a later stage whether a separate chapter for these special cases is needed.

### ***Links to other chapters***

Examination of the various topics will lead to a collection of complex units that may need to be addressed in this chapter.

### ***Leading author and other contributors***

UNECE acts as leading author. Contributing organizations are Central Bureau of Statistical of Israel and Istat. All participants of the task force are expected to report on cases of complex units.