Draft Chapter 2

Economic Ownership and Changes in Ownership
Goods, Non-financial Assets, Financial Assets and Liabilities

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1. Introduction

Data on economic ownership and changes in economic ownership are fundamental to the compilation of the macro economic accounts. The identification of changes in the ownership of goods, non-financial assets, and financial assets and liabilities presents a formidable challenge to statistical compilers. This is particularly true for the global production activities of multinational enterprises (MNEs). The entangled webs of MNE ownership structures often spanning continents are currently not accounted for in a way that easily accommodates the requirements of National statistical compilers. Instead compilers have to make the best use possible of accounting data sources prepared to meet business accounting requirements rather than statistical ones.

2. Economic Ownership and the Statistical Standards

The recommendations of the United Nations System of National Accounts 2008 (SNA 2008) require a recognition of changes in ownership in all cases. SNA 2008 says “There are no longer any exceptions to the recording basis of the change of economic ownership.” In fact certain recommendations from SNA ‘93 were clarified or changed in SNA 2008 to ensure this consistency in the treatment of economic ownership.

In SNA 2008 “the time of recording of the acquisition of goods is the moment when the economic ownership changes hands” with the economic owner already defined as “the economic owner

1 SNA 2008 par 26.21
2 SNA 2008 par 3.169
of goods and services, natural resources...is the institutional unit entitled to claim the benefits associated with the use of the entity in question in the course of an economic activity by virtue of accepting the associated risks.\(^3\)

5. In the macro accounts the owner is always the economic owner as distinct from the legal owner. Once again SNA 2008 clarifies this point “In general within the SNA, when the expression ownership or owner is used and the legal and economic owners are different, the reference should be understood to be the economic owner.”\(^4\)

6. The legal owner can differ from the economic owner although in most cases they are one and the same person. The legal owner is the person who is recognized in law to own the asset or good in question. At the same time the economic owner could be another person who exercises control over the asset and ultimately benefits from its use. For example a Multi National Enterprise (MNE) might finance the fixed assets and the working capital of a third party contract manufacturer (CME) that provides processing services to the MNE. In this case the legal owner is the CME - while the controlling entity and economic owner could be the MNE who is exposed to the risks and benefits from the returns of the CME. For the statistical compiler this scenario poses difficulties where the actual structure of legal ownership differs from the chain of economic ownership. This point will be discussed in more detail in the Chapter.

7. In other cases such as the recording of transactions in Finance Leases and Repurchase Agreements in SNA 2008 “a financial lease is one where the lessor as legal owner of the asset passes the economic ownership to the lessee who then accepts the operating risks and receives the economic benefits from using the asset in a productive activity.”\(^5\) In this case the SNA recognizes the substance of these agreements i.e. the person who bears the risks of using the leased or repurchased asset and who receives the benefits, is the economic owner. This is in contrast to recognizing the form of these agreements i.e. who is the legal owner.

8. Changes in economic ownership within large enterprises poses difficult challenges for compilers. SNA 2008\(^7\) in discussing this type of scenario says “Within a large enterprise with several specialized establishments, it is not immediately obvious whether a delivery of goods from one establishment to another is to be recorded or not. Since all the establishments have the same ownership, the distinction between economic and legal ownership needs refining.”

9. SNA goes on to say “the criterion used is to record a delivery or transaction when the receiving unit assumes the responsibility, in terms of economic risks and rewards, of the items delivered. If the receiving unit does not accept this responsibility, for example by returning the processed items to the original sending unit, then it is only performing a service on the items and they are not recorded as being delivered from the first unit to the second.” assuming risks in this context means that the unit is responsible for repairs and maintenance of the entity, and an ultimate loss of the entity will also be borne by the unit.

10. This case illustrates how difficult it is to determine economic ownership in transactions between affiliates of an MNE. For the statistical compiler it poses difficult questions, namely:

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\(^3\) SNA 2008 par 3.26  
\(^4\) SNA 2008 par 3.27  
\(^5\) SNA 2008 par 17.304  
\(^6\) SNA 2008 par 11.76  
\(^7\) SAN 2008 par 2.49 par 28.15
a. Even if all income and maintenance linked to an entity are measured correctly, can an affiliate really be said to accept risks or rewards, since it is ultimately controlled by the parent and consequently cannot be considered as the economic owner?

b. Should multinational enterprises (where parents have ownership of affiliates) be accounted for as one unit - just as it is recommended to account for an institution in domestic accounts for the same reasons?

11. On the other hand, the accounting for production of affiliates is important - similar to the accounting for establishments in domestic accounts – especially since the information is needed for the production accounts and external transactions of the countries. As pointed out above SNA also demands a special treatment within multinationals. Consequently it seems necessary to recommend certain conventions for recording some of the flows within multinational enterprises, since determining the assumption of risks and benefits within multinationals seems problematic. It also seems necessary to define, when such conventions are needed – which minimum degree of control indicates that the units are part of one multinational enterprise, where it may be difficult to determine separate ownership.

12. In the case of IPP's, where no repair or maintenance is required for intangible assets the approach to determining the assumption of risk and economic ownership described in paragraph 9 is less helpful. However, maintenance could be interpreted as the responsibility of paying for fees for patents, copyrights or other registrations of the entity. Ultimate loss is also not so relevant in the case of IPP's – value may go down, but since it is intangible, it isn't lost. Rewards may be taken to mean income received directly from sales of the entity, or income that can be attributed to the use of the entity in production. The direct income from sales of an entity may be measured, but sales of IPP’s are not so common. The second kind of income - from the use of IPP's in production - is more relevant in the case of IPP's, but may be difficult to measure, and guidance should be given on the determination of this part.

13. So much for the concepts, in practice actually identifying changes in economic ownership is the real challenge for the statistical compiler. The following questions must be answered by the compiler:

a. Has a change of ownership occurred and consequently is there a transaction to be recorded in relation to a given corporate event?

b. If there is a change in ownership is it a change in economic rather than legal ownership?

Before going further some summary examination of how ownership is recognised in business accounting is necessary since this is the main source data used by the compilers of economic statistics.

3. **Ownership and Business Accounting**

14. Corporate reporting required to meet business accounting standards are in general less demanding in terms of the detail required from companies. This reporting generally takes the form of current accounts – profit and loss accounts and financial and capital accounts - Balance sheets. In many cases business accounts do not report transactions which are a core part of the macro economic accounts.

15. The treatment of economic ownership in business accounting discussed in this section relates to both principles based and rules based systems of accounts. Corporate financial reporting in the US follows a rules based system termed US Generally Accepted Accounting Principles (GAAP). In the case of the International Accounting Standards Board (IASB) the system of International Accounting Standards (IAS) along with UKGAAP are principles based.
16. In the UK GAAP a standard called Financial Reporting Standard (FRS) 5 requires accounts to reflect the substance of a transaction rather than its legal form where this is different. For example, in the associated reporting guidance it says: a company may sell (transfer legal title to) an asset and enter into a concurrent agreement to repurchase the asset at sales price plus interest. The asset may remain on the premises of the seller and continue to be used in its business. In such a case the company continues to enjoy the economic benefit of the asset and to be exposed to the principal risks inherent in those benefits, FRS 5 requires that the asset continues to be reported as an asset of the seller, notwithstanding the transfer of legal title, and that a liability is recognised for the sellers’ obligation to repay the sales plus interest.

17. International Accounting Standard (IAS) 8 states that for information to be reliable it must be reported in accordance with economic substance rather than strictly in adherence to its legal form. It could be said that if material transactions are not accounted for in accordance with their substance it is doubtful whether the accounts present a true and fair view. Indeed IAS 1 (paragraph 19) requires an item to depart from the accounting standard if it does not represent faithfully the transactions. In IAS 17 – Leases (paragraph 4) a finance lease is defined as a lease that transfers substantially all the risks and rewards incidental to ownership of an asset. This results in a recognition of the economic owner of the asset rather than the legal owner.

18. In the case of production, ownership of the raw material inputs used in the production process determines the ownership of the output produced. This output is recorded in the accounts of the owner of the inputs. This point becomes quite important in discussions on factoryless production later in this Chapter.

19. On the basis of this short review of the business accounting standards it appears that there is no substantial difference between the accounting standards of the IASB or the UK and US countries’ GAAP and the requirements of the SNA for the recording and recognition of economic ownership over legal ownership.

20. However this is not exclusively the case, in some countries’ accounting standards this same alignment between the statistical standards and the business accounting standards does not always exist. For example in appendix 3, Case Study 1 the accounting standards in question do not record assets subject to a finance lease on the basis of economic ownership.

4. Ownership and Transfer Pricing

21. Transfer pricing of goods and services traded between related entities in an MNE is discussed in SNA 2008\(^8\). The focus on transfer pricing arises from an accepted view that transactions between companies in a multinational group can be priced in a way that results in more value added or profits accruing in a tax friendly jurisdiction and at the same time the level of profits earned in high tax countries is minimised. There is also a view that the taxable entity is not always the economic owner of the output being sold through these entities and thus benefiting from these favourable tax rates.

22. SNA 2008 recommends that these off market transactions should be adjusted to reflect prevailing market prices. The difficulties associated with such adjustments are also accepted in the manual where it says that they may not always be practical or possible to implement in a comprehensive manner. For example if two jurisdictions are involved both compilers would need to implement the same level of adjustment to prevent international asymmetries.

\(^8\) SNA 2008 par 3.131, 3.132, 3.143 and 21.50
23. In an approach directed towards the MNEs themselves and the national tax authorities the OECD introduced a series of guidelines\(^9\) for the pricing of intra firm transactions and how they should be assessed. It essentially insists that these types of transactions should be priced in the same way as arms length transactions between unrelated third parties. The guidelines give recommendations on how these intra firm transactions can be analysed to determine if they meet these requirements. These recommendations cover comparable measures of profits or comparable measures of costs to be used in assessing transactions between firms.

24. These OECD guidelines have been generally accepted internationally. Nevertheless there is always the possibility that certain types of transactions that allow the shifting of value added from one MNE affiliate to another are effectively facilitating the types of transactions that the Guidelines are trying to counter. In fact many tax authorities have implemented regulatory rules and enforcement procedures to monitor the accuracy of transfer prices and related intercompany pricing policies.

25. A paper by Lipsey\(^10\) examines in considerable detail the impact of intra firm transactions both in relation to intangibles and also in relation to trade in goods and services. He argues that the objective in the location of these activities within a MNE are not random but instead are related to tax planning where MNEs are minimising their tax liabilities by locating activities in low tax countries. This could arise where a MNE affiliate earns substantial profits while the assets generating these large profits are not of a commensurate size. Lipsey analyses ratios of total assets to profits. He finds that exceptionally low ratios indicate the possible presence of transfer pricing. He determines that the results for most offshore locations indicate transfer pricing operations in MNEs. In considering the geographical nature of production he concludes that the ownership of production is more readily definable than the geographical location of production. Here he is clearly pointing to the difference between economic ownership and legal ownership of MNE affiliates.

26. As already stated the OECD Transfer Pricing Guidelines require that compensation for any intra firm transactions conform to the level that would have applied had the transaction taken place between unrelated parties. This concept is set out in article 9 of the OECD Model Tax Convention.

5. **Ownership in Global Production Chains**

27. MNEs have sizeable global production chains and in general they develop a business model which is governed by maximizing profits and minimizing tax on a world wide basis. In each country affiliates in the chain earn profits and these same profits are taxed at the prevailing rates. Consequently economic statisticians reviewing these global production chains are concerned with the following aspects of ownership:

   a. Ownership of the MNE structure of subsidiaries, associates and other affiliates
   b. Ownership of the output of goods and services produced along the production chain.

28. Ownership structures of MNEs are often viewed in a Foreign Direct Investment (FDI) framework. FDI is a category of cross border investment 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. A significant degree of influence\(^11\) is determined to exist if the direct investor owns from 10 to 50 percent of the voting power in the direct investment enterprise while control exists if the

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\(^9\) OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations

\(^10\) Robert E. Lipsey (June 2010)

\(^11\) BPM6 par 6.12
equity holding exceeds 50 percent. The extension of this definition to cover the global ownership chain of an MNE is termed the Foreign Direct Investment Relationship (FDIR) and is illustrated in Appendix 1. This FDIR framework captures the globalised activities of MNEs in relation to ownership of equity capital, inter affiliate lending and related financial transactions. The example of an FDIR set out in appendix 1 shows an FDIR chain of subsidiaries (where the owner holds more than 50% of the equity) associates (greater than 10%) fellow enterprises and affiliates. The control of the parent in this structure is illustrated. In BPM6 it is also outlined that “transmission through chains of ownership is not linked to a particular equity share but a chain of control.”

29. However it is important to note that measures of inputs and outputs produced along the production chain fall outside the scope of FDI statistics. A decision tree is set out in Appendix 2 that illustrates the steps in economic ownership of inputs and outputs that might occur in a global production chain.

30. In this chapter much of the focus is on the production of these same outputs and on their economic ownership at the different stages of production. It is, however, important to note that the entities or companies involved in a global production chain are not always part of an FDIR (see appendix 2). Specifically, elements or members of the production chain can be third party contract manufacturers (CMEs) who are in the production chain but outside the chain of ownership (there can also be CMEs that are affiliates in the same MNE group). The question then arises about the ownership of the output being produced by these third party service providers. Once third parties are involved in global production chains, economic ownership of the output can become blurred and less clear depending on the nature of the relationship between these entities i.e. who owns the inputs being used, who owns the IPP etc.

31. In relation to the companies that form the chain of ownership, difficulties arise in the case of cross border branches of MNEs. A branch is part of the same legal entity as the Head Office however the economic ownership of goods and services transacted by the branch should lie with the branch entity itself. In fact although the branch in this situation is not a separate legal entity it is taxed separately from its Head Office and is located in another tax jurisdiction and as such could be considered as the economic owner of its output rather than the parent.

6. Identification of Changes in Ownership - Global Production Chains

32. When it comes to the actual identification and recording of changes in economic ownership of goods and services there are two types of transactions that cause considerable difficulties for the compiler; merchanting and goods for processing.

33. Merchanting and goods for processing are sometimes described as opposites – merchanting involves a change of ownership but no movement of goods across the frontier of the compiling economy, whereas in many cases processing involves a movement of goods across the frontier but no change of ownership. Processing, however, can also take place in the same economy where the principal is also resident.

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From BPM6 Box 6.1 Examples of Identification of Direct Investment Relationship under FDIR
Fellow enterprises are companies in the same FDIR with a common parent. There is no direct equity holding between the fellows.
BPM6 par 6.14
See BPM6 pars 4.13 and 4.26/4.27-
34. MNE affiliates are often engaged in merchanting and processing as part of global production chains. These activities have complex implications for NSIs and for other compilers of economic and business statistics. The challenges for the compiler can be summarised as follows:

a. detecting and recording merchanting activities because the actual goods do not cross the compiler’s frontier;

b. detecting movement of goods across borders for processing and excluding these goods from international trade because there has been no change of ownership.

c. Identifying materials sourced abroad. In BPM6\textsuperscript{16} the possibility of the processing fee including materials is discussed.

35. Merchanting occurs where a merchant or agent in one country buys goods from a non-resident producer or seller abroad and sells these same goods to another non-resident buyer abroad. The merchant never physically takes possession of the goods in question and they never cross the merchant’s border or frontier. In SNA’93 merchanting was treated as a service in line with other retail and wholesale activities where a margin is earned. This margin was effectively the difference between the proceeds obtained from the sale less the cost of buying the same product. The margin was considered in SNA’93 to reflect the value of the service provided. However, in SNA 2008 in the interest of global additivity of international trade in goods data and other concerns relating to valuation and the treatment of inventories, merchanting is recorded in the goods account rather than the services account\textsuperscript{17}. Consequently the sale by the merchant is recorded as an export of goods and the purchase is recorded as a negative export.

36. In a somewhat similar vein goods for processing - now called manufacturing services on physical inputs owned by others is now recorded as a service in BPM6\textsuperscript{18} and SNA 2008. The recording of processing under SNA ’93 depended on the pattern of goods flow i.e. whether they moved from the country of the principal to the processing country and back again, or whether there were more complex arrangements involving additional countries. In the former case goods for processing was recorded gross in the goods account in SNA93. Both the initial export, by the principal to the country of the processor and the subsequent import of the finished goods used to be recorded in the goods account of the balance of payments. Recording the gross flows in the goods account despite the fact that a change in ownership had not taken place i.e. the principal continued to own the goods while they were being processed, was a deviation from the standards followed elsewhere in the national accounts.

37. Where the processed goods were exported to a third country, rather than returning to the country of the principal, the recording differed. In this case BPM5 recommended that a service fee representing the processing fee be shown as an import of a service from the country of the processor. The processed goods were shown as an export from the country of the principal to the country of the final customer\textsuperscript{19}.

7. Merchanting and Processing in Global Production/Supply Chains

38. The combination of merchanting and processing can allow an MNE to choose where to allocate the value added from a particular activity. Firstly the case of merchanting is illustrated below in the same typology or framework of Global Production used in Chapter 1. But there is a difference, in this example generally there is a change of ownership at each step through the production chain both legal

\textsuperscript{16} Balance of Payments 6\textsuperscript{th} Manual Par 10.64
\textsuperscript{17} See Impact of Globalization on National Accounts (2011) Chapter 6 for a more detailed discussion
\textsuperscript{18} BPM6 par 10.62 – 10.64
\textsuperscript{19} BPM5 par 199
and economic. It can be difficult to determine whether a change in economic or legal ownership has occurred between affiliates in a MNE group since conceptually the parent is the ultimate owner where the items being transacted remain within the group. In practice because transactions are compiled and recorded at the level of individual entities, particularly in the case of cross border intra group transactions full clarity may not be achieved. In these instances a consideration of the risks being managed e.g. inventories, fire and theft, production process etc. will indicate if the entity is the economic owner. In addition if the entity prepares a separate set of accounts and balance sheet this also indicates a level of autonomy.

39. In BPM6\textsuperscript{20} where a change in economic ownership is not obvious it is suggested “the change (in economic ownership) is considered to occur (or is proxied by) the time the parties to the transaction record it in their books or accounts”

40. Moreover, as the statistics are compiled at a individual entity level a pragmatic approach is needed in designating the economic ownership of the entities themselves and also of the products that they produce.

41. The introduction of a merchant, in the example below in figure 1, changes the vertical stepwise change in ownership that occurs at each stage of the production and distribution process. The merchant buys the finished goods from the UK affiliate and sells them to the customers in Europe, Middle East and Africa (EMEA). The goods themselves continue to move on through the vertical chain from UK to Belgium for warehousing and on to the customers in EMEA. But there is a change in ownership when the manufactured and packaged products are bought from UK and the merchant takes ownership of the goods. Another change in ownership occurs when the merchant sells the goods on to the customers and earns a margin; the difference between the buy and sell price.

**Figure 1: Merchanting in a global production chain**

<table>
<thead>
<tr>
<th>Physical movement</th>
<th>Economic Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D / Design - US</td>
<td></td>
</tr>
<tr>
<td>Raw Materials - US</td>
<td></td>
</tr>
<tr>
<td>Intermediate inputs - FR</td>
<td></td>
</tr>
<tr>
<td>Semi-Finished goods - BE</td>
<td></td>
</tr>
<tr>
<td>Final Good Assembly and Packaging - UK</td>
<td></td>
</tr>
<tr>
<td>Warehouse - BE</td>
<td>Merchant - IE</td>
</tr>
<tr>
<td>Retail/Delivery - EMEA</td>
<td></td>
</tr>
<tr>
<td>Customer Service</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{20}BMP6 par 3.42 and par 10.24
42. Within the production chain of the MNE this merchanting margin might itself be substantial and could account for a considerable element of the value added arising from the entire production process, possibly well in excess of the return from simply buying and selling the product. For example, the margin might also include the return on intellectual property products being used in the production process. The decisions being taken along the value chain by a MNE in relation to taking ownership of its output are illustrated in the decision tree in Appendix 2.

43. Another important point is that ownership no longer follows the vertical steps in the production chain between the affiliates. Instead ownership and the flow of goods have diverged. This has serious consequences for the compiler where data systems depend on customs data for compiling the cross border transactions. In this case the goods go from UK to Belgium to EMEA but there hasn’t been a transaction or change in ownership between these countries. Instead there has been a transaction between UK and Ireland and a second transaction between Ireland and EMEA.

44. From a statistical recording perspective, the SNA 2008 and BPM6 treatment of merchanting has led to greater clarity around the basis for the recording of these transactions. In line with the general principles for recording transactions in the economic accounts, the changes in ownership that occur between the seller and the merchant and between the merchant and the buyer are now recognised in the goods account. Under the previous standards the changes of ownership taking place between the merchant and the buyer/seller were not recognised, instead a service export was recorded.

45. Nevertheless, there is no escaping the difficulties of identifying and recording the transactions in goods taking place in the economy of the merchant where there are no associated customs data to base the transactions on. Instead, in these cases of merchanting the compiler must rely on survey data from surveys of trade in services or structural business surveys or possibly tax records.

46. In Figure 2 below the model of a global production chain already discussed in Figure 1 above is further elaborated with the manufacturing being undertaken by contract manufacturers (CMEs) who are outside of the FDIR chain of ownership but within the global production chain.

Figure 2: Merchanting and processing in a global production chain
47. These CMEs that are part of the production chain are located in Germany and UK where the intermediate inputs are transformed and packaged into finished products. The affiliates are therefore engaged in providing what is termed manufacturing services on physical inputs owned by others. In this case they are engaged by a principal in the Netherlands to supply these services to the inputs purchased in US. The principal retains ownership of the inputs and outputs until they are sold to the merchant in Ireland.

48. There are nevertheless two possible recordings for the purchase of the inputs from the US and the on-sale of the finished goods to Ireland after processing in France, UK and Germany. If the physical form of the goods is changed during the period the goods are owned as a result of the manufacturing services performed then the goods transactions are recorded under general merchandise rather than merchandising. In other cases where the form of the goods does not change the goods are included under mercantising with the selling price reflecting minor processing costs as well as wholesale margins.

49. Because no change of ownership occurs between the processor (UK or Germany) and the principal (Netherlands), a service export to Netherlands must be recorded in the Balance of Payments and National Accounts of France, the UK and Germany.

50. The table below illustrates the flows.

**Table 2.1: Flows associated with global production chain in Figure 2**

<table>
<thead>
<tr>
<th>Role</th>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>Input supplier Raw materials</td>
<td></td>
</tr>
<tr>
<td>France, Germany &amp; UK</td>
<td>Manufacturer manufacturing service (NL)</td>
<td>manufacturing service fee (NL)</td>
</tr>
<tr>
<td>Netherlands (economic owner)</td>
<td>Principal Manufacturing service fees (FR, DE, UK, final goods (price = inputs + manufacturing services + something else?))</td>
<td>Raw materials (US), Manufacturing services (FR, DE, UK)</td>
</tr>
<tr>
<td>Belgium</td>
<td>Warehousing Warehousing &amp; logistics services (IE)</td>
<td>Fees for warehousing &amp; logistics services (IE)</td>
</tr>
<tr>
<td>Ireland (economic owner)</td>
<td>Merchant Branded goods (EMEA, price = final goods + branding?)</td>
<td>Final goods (NL)</td>
</tr>
<tr>
<td>EMEA</td>
<td>Final consumption</td>
<td>Branded goods (IE)</td>
</tr>
</tbody>
</table>

51. In the case of the principal in the Netherlands the majority of the economic activity is recorded there. In addition to considering the statistical recording, the business accounts recording of this activity needs to be considered.

52. In paragraphs 10, 11 & 12 above the consistency between the business accounting treatment and the national accounting or statistical treatment in relation to economic ownership was outlined with particular reference to repurchase agreements and finance leasing. The conclusion was that the two sets of standards, certainly as regards the International Financial Reporting Standards (IFRS), were generally in agreement. This section did not address how processing is recorded in business accounts and how this treatment compares with the statistical recording in the economic accounts.

53. Sales of goods processed abroad are recorded in the business accounts of the resident principal as turnover. This is a recognition that the economic owner of the inputs and the outputs produced by the

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22 See BPM6 par 10.42
CME is the principal who owns both the inputs used by the CME and the outputs produced. The CME is treated as a fee earner that provides a service to the principal.

54. For statistical purposes, the recording requirements in the UN manual for the Index of Industrial Production (IIP) for the case of processing/outsourcing for a fee “In general if the principal outsources the complete production of a good or service it is classified as if it were carrying out the production process itself.” In this case the turnover is included in the IIP of the principal. This scenario is further elaborated: A principal who completely outsources the transformation process should be classified into manufacturing if and only if it owns the input materials to the production process – and therefore owns the final output. And finally, A principal who completely outsources the transformation process but does not own the input materials is in fact buying the completed goods from the contractor with the intention to resell it. Such an activity is classified to Wholesale and Retail trade – section G in ISIC. This reference relates to merchanting rather than processing and is consistent with the business accounting requirements for trading rather than production activities.

55. It follows therefore that there is considerable consistency in the recognition of economic ownership where goods are being processed by CMEs across the two systems of accounts; statistical and business related.

8. Factoryless Production and Economic Ownership

56. In global production chains the difference between the use of third party CMEs and CMEs that are related affiliates is that the production process or chain goes outside of the MNE. When this occurs, sometimes the status of the third party CME involved can be unclear; is the CME really unconnected and independent of the MNE? There may be questions as to the source of the CME’s funding and how truly independent they are. For example, if the MNE sells the components to the third party CME for the production of a particular product, then buys the finished product from the CME and also funds its capital requirements can it really be said that the CME is independent of the MNE. Nevertheless in this scenario, because the MNE is purchasing a finished product from the CME it is treated as a trader – in line with ISIC rev 4 it is classified to wholesale and retail trade. This classification is determined on the basis of ownership of the material inputs used in the production process.

57. In these cases the MNE has outsourced aspects of production - with the associated change in ownership of the inputs etc. - only to buy back the finished product and then to sell it on to the final customer. This is a case of factoryless production - effectively third party processing possibly combined with merchanting. However, in line with the latest statistical standards the MNE or principal in this scenario is not classified to production or manufacturing. The manufacturer is the third party CME and the MNE is treated as a trader.

58. As already outlined, the current ISIC classifies the economic activity of a unit solely on ownership of material inputs and does not take into consideration economic control of the manufactured output or the more substantial and costly inputs from intellectual property. When the CME purchases all the material inputs required to make a good and is considered the economic owner of those inputs its output is not just the processing fee. Instead the value of the output produced has to reflect the full value of the product. If the principal purchases this output then the principal is logically classified within the trade sector. However, if the value of the output produced by the supplier does not reflect the full value

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23 United Nations Statistics Division, Classification of Statistical Units - a special case: Outsourcing / activities on a fee or contract basis. *International Recommendations for the Index of Industrial Production 2010*, Section 3.2.2 pp 22 – 24

24 See ISIC Rev 4 pp 29 – 30 pars 139-145 Outsourcing / activities on a fee or contract basis
of the product because it excludes the value of the intellectual property embedded in the product one could argue that the supplier is not the economic owner of the material inputs. This is the case of the factoryless manufacturer.

59. The CME or supplier in the factoryless manufacturing case is the legal owner of the material inputs because the purchase of the materials is recorded on the accounting records of the CME. Nevertheless the CME or supplier may be the “owner” only within the scope permitted by the principal and is deemed the legal owner until the arrangement is terminated at which time the CME is entitled to compensation by the principal for the cost incurred.

60. The principal is responsible to the supplier for costs incurred should the arrangement be terminated (normally, but not necessarily at completion). The supplier has legal ownership rights in the material and the “contract” to produce because the principal cannot unilaterally terminate the contract without compensating the supplier. However, the principal in the factoryless manufacturing case also bears economic risk. This reflects a subtle difference between legal and economic ownership. The principal may only have a commitment detailed in its accounts while the supplier records the actual inventory/unbilled receivable. The principal may record an accounting loss/write-down if the value of the commitment exceeds the expected market value of the output (even though the principal has no “asset” on its books).

61. The arrangement brings into question the meaning of economic ownership. The supplier may not to be the economic owner of the material inputs since the principal owns the intellectual property and the output. The factoryless manufacturer owns the blue prints of production, controls access to consumers, and the trademarks. The supplier acts like a contract manufacturer and delivers products - defined by the factoryless manufacturer - at predetermined prices. The supplier is not allowed to sell its output to other parties but must sell the final goods to the factoryless manufacturer.

62. One has to question whether the ISIC rev. 4 recommendation follows an antiquated view of manufacturing. The assumption that the unit that owns the input materials to the production process owns the final output seems inadequate in light of factoryless manufacturing. In some arrangements, the supplier may only purchase some of the material inputs. BPM625 indicates that a manufacturing service fee could include the cost of materials purchased by the processor. Many of these relationships are contractual where responsibility may be shared between the unit responsible for the transformation and the principal. Assigning industry classification based solely on material inputs appears problematic because it will rarely be the case that all the material inputs will be directly purchased by the principal. In fact, the U.S. Economic Classification Policy Committee (EPCP)26 considered a strict adherence to the ownership of materials as impractical because a slight change in how the materials were acquired would change the industry classification. For example, the principal could purchase the inputs and:

   a. and take physical possession of the inputs and ship them to the contract manufacturer, or
   b. arrange to have the inputs shipped directly to the contract manufacturer from another domestic or foreign location.

63. Under ISIC rules already outlined, the contractual arrangement of the principal purchasing the materials directly would result in the principal being classified in the manufacturing sector even if the principal did not take physical possession of the materials. However, rather than purchasing the inputs,

25 BPM6 par 10.64
the principal might simply approve the input providers from which the contract manufacturer must buy and monitor. This contractual arrangement would most likely result in the principal being classified in a trade sector because the principal did not directly purchase the material inputs.

64. Instead of making ownership of the material inputs the key criterion, the U.S. ECPC considers controlling the production process, ownership of the output, and ownership of the intellectual property or design of the final manufactured product more important criterion than ownership of material inputs.

65. An implication of classifying the factoryless manufacturer in the manufacturing sector is that its output would no longer be a margin activity; therefore the full value of the final product would be recorded as an output of a good. In annex 1 Table 1a illustrates the industry account using the hypothetical break down of the athletic shoe as discussed in Chapter one.

66. In appendix 3, Table 1a shows the industry account of the principal where the output is recorded as goods. But what is the output of the supplier in country B? Is the supplier in country B selling a good or providing a manufacturing service? There could be two variations in how the output of the supplier in country B is recorded. The supplier’s output could be a good as illustrated in table 1a which has the strange implication of the athletic shoe being “produced” twice (both the principal and supplier are recorded as if they both produced the athletic shoe). Or the output of the supplier in country B could be recorded as a manufacturing service as illustrated in table 1b.

67. There can also be a question regarding the use of intellectual property by the processor. As already discussed above, the difference between an affiliated processor and the contract manufacturer can be quite unclear. In some instances the MNE will purchase from third parties the components required for production and sell them to the contract manufacturer or even lend the funds required for working capital or fixed assets to the contract manufacturer. In this instance it is unclear if the contract manufacturer is really an independent third party supplying services to the MNE. Instead it could be argued that the third party CME behaviour is more like that of an affiliate of the MNE. Does this scenario call for the recognition of substance over form. The reality of this scenario is that the MNE bears the risks associated with the production and also benefits from the sale of the product. Therefore the economic owner of the production even when it is legally owned by and being processed by the CME is the MNE principal.

68. In the US, the final regulations reflect the continuing view of the IRS and Treasury that legal ownership provides the appropriate framework for determining ownership of intangibles. The legal owner is the controlled party that possesses legal ownership under intellectual property law or that holds rights constituting an intangible pursuant to contractual terms (such as a license), unless such ownership is inconsistent with the economic substance of the underlying transactions.

9. Inventories abroad

69. The treatment of inventories abroad is associated with the activities of both merchanting and goods for processing. In the case of merchanting these inventories arise when the buy side of the merchanting transaction is complete without the sell side being completed. In this case the unsettled leg is recorded as inventories abroad owned by the merchant.

70. Similarly when CMEs or affiliates abroad are acting as processors for a resident principal and their output has not been sold on to third party customers or other affiliates this product is recorded as inventories abroad of the country of the principal. This applies to both work-in-progress inventories and inventories of finished goods.
71. In each case, additions to inventories are recorded under net exports of goods under merchanting with negative value\(^{27}\). This negative export is offset in GDP estimates by the increase in inventories as part of Gross Domestic Physical Capital Formation (P.5). Similarly when the inventories abroad are exported the recording under merchanting is offset by a reduction in physical capital formation (inventories).

72. This data can either be collected using enterprise surveys or administrative data based on company records. However the key to identifying these inventories is to examine instances of merchanting or processing activities. In these cases the principal or merchant will own inventories abroad as everything that is produced or bought may not be sold immediately and remains in inventory.

10. Conclusions

73. In this chapter a clear case has been made that the recognition of economic ownership in both economic statistics and business accounting broadly follows the same principles. Both sets of standards have been quoted and examples cited such as finance leasing, processing, repurchase agreements where both accounting systems are in agreement. This is not always the case and some country specific business accounting standards can diverge from the statistical standards in the recognition of economic ownership.

74. On the statistical side, changes in the statistical manuals such as SNA 2008 and BPM6 have improved this consistency for example the recommendations regarding merchanting and goods for processing.

75. One of the main findings is that the difficulties of determining economic ownership discussed in this chapter lie more with the data sources such as customs data in particular for the recording of processing and merchanting transactions rather than any conceptual differences between the business and business accounting systems.

76. Enterprise surveys and possibly other administrative data sources such as taxation records are more appropriate data sources for the statistical compilers with their greater alignment with business accounts rather than customs data on trade in goods.

77. One of the main discussions relates to captive CMEs supplying manufacturing services to an MNE. In these scenarios where the CME takes ownership of the inputs, the standards require that the MNE principal be treated as a trader rather than a global manufacturer or producer. On the other hand if the MNE retains ownership of the inputs being processed by the CME, the MNE principal is treated as a manufacturer. In both cases the substance of the arrangement is that the MNE is the economic owner of the inputs and outputs and there is a compelling case for this reality to be recognized in the standards.

6. References

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\(^{27}\) See BPM6 par 10.44(c)
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United Nations, The Impact of Globalization on National Accounts 2011 joint publication by UN, UNECE, Eurostat
Appendix 1: Identification of Direct Investment Relationship under FDIR

Each enterprise is resident in a different economy from the others. Shaded boxes are direct investment enterprises of the Direct Investor A (so are affiliates of each other). In the example above, when the chain of ownership passes from a subsidiary to an associate and then to another associate, for example company D – D is not considered to be part of the FDIR as the control of the parent A in company D is less than 10%.

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Appendix 2: Change in Economic Ownership Decision Tree - Possible Transactions along a chain of production

- **Inputs produced by Company R**
  - **Yes - Change of econ ownership**
    - Have the inputs been sold by Company R?
      - **Yes** - Finished product sold to Customer
      - **No**
  - **No - No change of econ ownership**
    - No Transaction:
      - Sold to Contract Manufacturer for processing
      - Sent to Affiliate Company V for processing
  - Transaction:
    - Sold to Company S Subsidiary for further production
    - Sold to Contract Manufacturer for production as prescribed by Company R
    - Sold to Merchanting Affiliate Company T for onsale to Company U
    - Bought by Merchanting Affiliate
    - Sold to 3rd Party Customer
    - Bought by Merchanting Affiliate for sale to Customer
    - Finished product sold to Customer
### Appendix 3: Table 1a Industry Account

<table>
<thead>
<tr>
<th>Principal</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country A</strong></td>
<td><strong>Country B</strong></td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td><strong>Manufacturing</strong></td>
</tr>
<tr>
<td>Gross Output</td>
<td>110</td>
</tr>
<tr>
<td>Goods</td>
<td>110</td>
</tr>
<tr>
<td>Services</td>
<td>0</td>
</tr>
<tr>
<td>Intermediate inputs</td>
<td>57</td>
</tr>
<tr>
<td>Materials</td>
<td>50</td>
</tr>
<tr>
<td>Processing services</td>
<td>0</td>
</tr>
<tr>
<td>Other services</td>
<td>7</td>
</tr>
<tr>
<td>Value added</td>
<td>53</td>
</tr>
</tbody>
</table>

### Table 1b Industry Account

<table>
<thead>
<tr>
<th>Principal</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country A</strong></td>
<td><strong>Country B</strong></td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td><strong>Manufacturing</strong></td>
</tr>
<tr>
<td>Gross Output</td>
<td>110</td>
</tr>
<tr>
<td>Goods</td>
<td>110</td>
</tr>
<tr>
<td>Services</td>
<td>0</td>
</tr>
<tr>
<td>Intermediate inputs</td>
<td>57</td>
</tr>
<tr>
<td>Materials</td>
<td>0</td>
</tr>
<tr>
<td>Processing services</td>
<td>50</td>
</tr>
<tr>
<td>Other services</td>
<td>7</td>
</tr>
<tr>
<td>Value added</td>
<td>53</td>
</tr>
</tbody>
</table>
Case Study 1

Company A is an affiliate fully owned by group parent B, and operates cruise and passenger ferry transport in the Baltic Sea area. Companies A and B are located in different countries.

Group parent B is one of the largest passenger and freight shipping companies in the Baltic Sea area. Company B’s fleet comprises almost 20 vessels, five of which were owned by company A up to 2008.

Based on the annual reports of the companies, group parent B operates shipping routes from its own country of domicile and company A from its own country of domicile.

Group structure

Vessel ownership arrangements

During 2008, group parent B made arrangements concerning the fleet ownership.

All four vessels owned by affiliate A and one vessel of an affiliate fully owned by it were sold inside the group to Cypriot vessel owner companies fully owned by B.

After these vessel ownership arrangements, the vessels were leased back to A under an intra-group bareboat charter financial lease.

Since these arrangements, all vessels have continued to operate on their old routes and remain in the same vessel registers where they were prior to their sales.

Visibility in statistics

The vessel ownership arrangements are visible in the 2008 and 2009 national accounts of A’s country of domicile. (Due to A’s unusual accounting period, some of the effects of the vessel ownership
arrangements cannot be seen in the statistics on financial statements that are used as the source for national accounts until in the data for 2009).

The depreciations on vessel investments in statistics on the financial statements of enterprises conflict with the Board of Customs’ statistics on goods export because, in accordance with the legislation valid in 2008, the Board of Customs would not have recorded the vessels under exports until they had been removed from the Finnish vessel register.

Because the criterion in national accounts was change of ownership, the disinvestments were taken into account in machinery, equipment and transport equipment of the activity of water transport in 2008. The value of the vessel sales was added to the Board of Customs’ statistics on goods export for 2008.

**Capital stock - Activity 50, Water transport, N1113 Machinery, equipment and transport equipment**

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original figures</td>
<td>16</td>
<td>26</td>
<td>18</td>
<td>-11</td>
<td>3</td>
</tr>
<tr>
<td>Adjusted figures</td>
<td>16</td>
<td>26</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

**Financial ownership**

If we assume that the operative control of the vessels is in the country of domicile of parent B, basing on financial ownership, ownership arrangements of this kind would not have resulted in entries in the national accounts of A’s country of domicile (presuming that the operating model has remained unchanged).

Because the lease is bareboat charter of the financial leasing type, in other words, the long-term lessee of the vessel bears the responsibility for crewing and similar matters, who precisely owns the vessels and where this should be recorded remains open by the criterion of financial ownership.

In all likelihood, Cyprus is the owning country on paper only but how do we know whether parent company B or affiliate A has the financial ownership? This information is not obtainable from existing sources.

According to financial statements, both parent B and affiliate A operate their own routes between different countries, so should vessel ownership be determined from this information?

**Case study 2**

Company A is a Finnish manufacturing company belonging to group AA. Company A has a factory in its country of domicile. In addition, it owns in another EU country affiliate B which has manufacturing activity in that country.

Besides the turnover of the Finnish factory, the financial accounts of company A also include the turnover of B’s production centre in the other EU country.

All production of both A and B is sold to companies inside the group.
Information about A is obtained from the following data sources of national accounts:

- The Business Register
- Financial statement statistics on manufacturing
- Statistics on international trade in services
- Sales inquiry (domestic sales, sales abroad, sales from abroad to abroad)
- Commodity statistics (production of commodities, consumption of raw materials)
- Data from the Board of Customs’ statistics on foreign trade (goods export and import)

The treatment of company A has caused many problems in national accounts because information on it is not consistent in the different data sources. This is partly because A’s financial statements include data concerning its affiliate B abroad.

The main activity of A is manufacturing. However, only about 20 to 30 per cent share of its turnover is annually covered by the production of commodities it reports. The remaining turnover comes from the production of its affiliate B, which A enters as income in its country of domicile.

Besides the production entered as income it can also be concluded from the figures in financial statement statistics that A’s purchases also comprise B’s purchases of raw materials abroad.

The problem has been approached by itemising affiliate B’s production as commercial activity and B’s purchases, respectively, as purchases of goods for resale in the turnover. This way, production abroad can be separated from domestic production and the remaining trade margin describes the manufacturing fee A pays to B.

The volume of affiliate B’s production has been estimated from A’s production in commodity statistics and the volume of B’s inputs has then been further derived from this.
However, even this approach has its problems and finding consistency in the difference source data is challenging. Table 1 contains an example of A’s treatment within the supply and demand frame.

Table 1. Production and demand of production of company A

<table>
<thead>
<tr>
<th>Turnover of company A</th>
<th>TILKES</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodity production</td>
<td>200</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>Sales inquiry, domestic sales</td>
</tr>
<tr>
<td>Trade margin</td>
<td>140</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International trade in services, export (sales on fee or contract basis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>??</td>
</tr>
<tr>
<td>Turnover from construction</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sales inquiry, domestic sales</td>
</tr>
<tr>
<td>Unspecified turnover</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>??</td>
</tr>
</tbody>
</table>

- Transfer pricing between group companies makes it difficult to find consistency. Both A and B sell their production inside the group, so the figures reported to different statistics do not necessarily correspond with market prices.

- No demand can be found for about one-half of the trade margin on the production side and for unspecified turnover.
  - Would it be possible to find the missing demand from international trade in services?
  - Should all of the trade margin maybe have been visible as sales on a fee or contract basis in statistics on international trade in services?
  - In addition, company A could also export administrative, R&D and other similar services to its fully owned affiliates.

- As regards productionisation, the generated trade margin is difficult. Which product exactly should it be allocated to? The classification of products does not contain a suitable product for this purpose. At the moment, it is either allocated to wholesale trade or to sale on a fee or contract basis.

- On the other hand, there is no certainty about the magnitude of the trade margin. It is possible that the "surplus" also includes e.g. repair and installation services.
Table 2. Purchases of company A and their supply

<table>
<thead>
<tr>
<th>Purchases of company A (EUR million)</th>
<th>TILKES</th>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials and supplies</td>
<td>170</td>
<td>100 Commodity statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 Imports</td>
</tr>
<tr>
<td>Subcontracting</td>
<td>25</td>
<td>25 Domestic purchases</td>
</tr>
<tr>
<td>Transport</td>
<td>100</td>
<td>15 Imports of services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85 Domestic purchases</td>
</tr>
<tr>
<td>Repairs and installations</td>
<td>5</td>
<td>5 Domestic purchases</td>
</tr>
<tr>
<td>Other items</td>
<td>15</td>
<td>15 Domestic purchases</td>
</tr>
<tr>
<td>Other outlays</td>
<td>55</td>
<td>55 Domestic purchases</td>
</tr>
<tr>
<td>Goods for resale</td>
<td>500</td>
<td>Affiliate B’s inputs abroad, not visible in the data</td>
</tr>
</tbody>
</table>

- Figures match better on the expenditure side.
- However, the values of domestic purchases cannot be verified from any source data and if goods imports are included in the purchases of raw materials reported in commodity statistics, almost one-half of the purchases of materials and supplies remains unaccounted for.
- Furthermore, it should be borne in mind that assumed inputs of foreign affiliate B show in no source data because, in practice, they have never entered Finland.

Financial ownership

According to the information obtained from the companies, company B operates on the contract manufacturing principle, and parent A purchases its production and sells it onwards inside the group.

In addition, according to information obtained from group parent AA, the group’s operating principle is that the group parent bears risks and guarantees a certain margin to its affiliates.

It would, therefore, seem that production risks are borne in company A’s country of domicile. Thus, according to the SNA2008 principle on financial ownership, B’s production should be included in production in the national accounts of A’s country of domicile.

How would this work in practice with other companies; how could financial ownership be determined if a company itself does not give the information?

On the other hand, recording according to financial ownership also challenges statistics on goods trade because the flows of goods that never physically cross boundaries should show in imports and exports. How could this be solved in practice?