

Chapter 23: Globalization (Chapter 15 BPM7)

Note: This draft chapter has been prepared jointly to cover the full range of topics to be included in the BPM7 and 2025 SNA chapters on globalization. Only those issues that are relevant to external sector statistics will be included in BPM7; likewise, only those issues that are relevant to national accounts will be included in the 2025 SNA.

A. Introduction

- 23.1 Globalization refers to the economic integration of economies around the world. Reduced trade barriers and advancements in communication, transportation, and technology have facilitated a rise in the cross-border movements of goods, services, capital, information, and people in recent decades. Those factors have also contributed to increasingly complex corporate structures that span across multiple economies. Such multinational enterprise (MNE) groups can be set up for many reasons, including to reduce labor costs, transportation costs, taxes, and proximity to markets. In addition, other global manufacturing and distribution arrangements, such as factoryless goods production and merchanting, have added to the complexities of interrelations between economies. These globalization [development activities](#) pose challenges to traditional macroeconomic statistics, which are based on the concepts of residence and economic presence.
- 23.2 This thematic chapter is designed to elaborate on issues related to globalization that are touched upon throughout the Manual/SNA. It focuses on the conceptual, measurement, and analytical challenges that arise from deeper corporate linkages and the fragmentation of production processes across economies. These challenges motivate additional breakdowns and supplementary presentations, which provide alternative views or additional details that complement traditional macroeconomic statistics and are vital for better understanding the connections between economies.
- 23.3 To address the statistical challenges related to globalization, it is important to implement harmonized methodological guidelines to foster comprehensive data collection and international comparability. Even if headwinds develop to some of the factors driving globalization, the guidance in this chapter will still yield macroeconomic statistics that provide insights into the changing nature of globalization.
- 23.4 This chapter is organized as follows. Section B describes global production arrangements, while Section C defines MNE groups and discusses their role in globalization. Section D presents some of the measurement challenges related to MNE groups and global production. Section E introduces existing macroeconomic indicators, additional breakdowns, and alternative presentations that can help address these challenges and meet user needs. Finally, Section F describes analytical tools that have been developed to better understand the relationship between globalization and the domestic economy, including trade in value added and global value chains.

B. Global Production

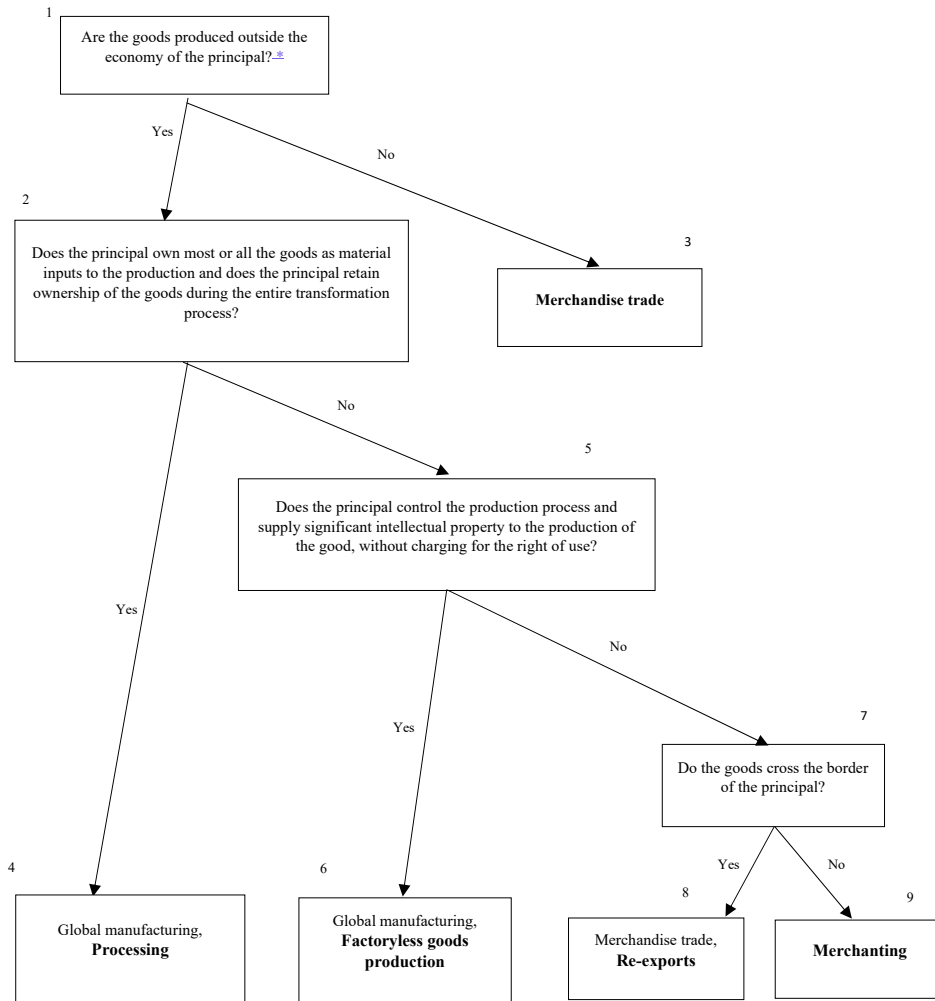
- 23.5 A distinct aspect of globalization is the fragmentation of production in production chains between resident and nonresident firms—the basis of global value chains (GVCs). GVCs are a fundamental pillar of the modern global economy, enabling companies to take advantage of global specialization, cost efficiencies, comparative advantages, and market opportunities. See paragraph [23.43.112] for more details about GVCs.

1. Global Manufacturing and Distribution Arrangements

- 23.6 Global manufacturing and distribution arrangements can be broken into different types. Figure [23.1] presents a decision tree to identify whether a transaction in a global arrangement is traditional merchandise trade, re-exports, merchanting, processing, or factoryless goods production. These arrangements are described below, and examples are provided in Box [23.1].

Commented [ED1]: This subsection will not be included in the BPM7 version of the chapter, but in BPM7 Chapter 10 on the Goods Account.

Figure 23.1. Global manufacturing and distribution arrangements decision tree



Notes: The decision tree is from the point of view of the principal enterprise that organizes or arranges the manufacture and/or movement of goods and has ownership of the goods at some stage. [Principals may engage in several types of production arrangements that may also involve a combination of domestic and foreign production.](#)

Re-exports

23.7 *Re-exports are goods produced in other economies, and previously imported, that are exported with no substantial transformation from the state in which they were previously imported [insert reference to 2025*

SNA Chapter 33]. The price of the re-exported good may differ from its price at the time it was originally imported, due to factors such as transport costs, dealer's margins, and holding gains or losses. For goods to be included as re-exports, a resident must acquire and subsequently resell the goods with the goods passing through the territory. Goods that are bought and resold but do not pass through the territory of the unit initially purchasing the goods are included in goods under merchanting—see paragraph [23.XX12]. By convention, goods which are imported from a contractor and subsequently exported to a final buyer by a factoryless goods producer are not treated as re-exports, even if the goods pass through the economy of the factoryless goods producer. Instead, these goods are recorded as goods traded within a global manufacturing arrangement.

- 23.8 Goods in transit are not recorded in imports or in re-exports—instead, they are excluded from the general merchandise of the territory of transit. Also, goods cleared by customs, but re-exported without coming into ownership by a resident of that economy, should not be included in re-exports. In contrast to re-exports, in the case of returned goods, there is no change of ownership or the parties later agree to annul the change of ownership.
- 23.9 In cases where the state of the imported goods is substantially transformed, which could be indicated by a change in the Harmonized System (HS) code, goods are recorded as domestically produced exports rather than re-exports (e.g., goods that have been assembled or processed, or goods that have become rags, waste, scrap, or antiques). Used goods that were previously imported and retain the same HS code, but have suffered wear and tear, could in most cases be included in re-exports depending on the rules of origin that the economy applies. Whereas international recommendations¹ on rules of origin exist, the origin of the goods will be determined at a national level. The case of imported goods processed without change of ownership is discussed in paragraphs [23.21 – 23.27]. Goods temporarily imported or re-exported without a change of ownership, such as for repair or operating lease, are not included.
- 23.10 Where possible, re-exports should be shown separately as a supplementary item, particularly in economies where re-exports are a significant proportion of exports. Because re-exported goods are not produced in the economy concerned, they have less connection to the economy than other exports. Economies that are major transshipment points and locations of wholesalers often have large values of re-exports. It may be of interest to derive the value of imports destined for re-export, calculated from re-exports with any timing adjustment.
- 23.11 *Re-imports are domestic goods imported in the same state as previously exported, without any substantial transformation occurring on the goods while they were outside the territory.* [\[insert reference to 2025 SNA Chapter 33\]](#). Where significant, re-imports may be shown separately. Re-imports tend to arise in order to reverse a previous export, while re-exports generally arise because of transport, storage, or distribution through a territory other than that of the buyer or seller. For the goods to be included in re-imports, a nonresident must have acquired the goods, then resell them to a resident with the goods leaving and reentering the territory. (In cases where there was no change of ownership, they are omitted from imports, e.g., goods for repair or goods sent for processing.)

Merchanting

- 23.12 *Merchanting is defined as the purchase of goods by a resident (of the compiling economy) from a nonresident combined with the subsequent resale of the same goods to another nonresident without the goods being physically moved in and out of the compiling economy.* Merchanting occurs for transactions involving goods where physical possession of the goods by the owner is unnecessary for the process to occur.
- 23.13 Inverse merchanting is a special case of merchanting, occurring when both the entity that is selling to the nonresident merchant and the entity that is subsequently purchasing from the nonresident merchant are both resident in the same economy (the compiling economy) and where the goods do not leave and re-enter the compiling economy. Because there is no physical cross-border flow to or from the compiling economy, it may be challenging to identify inverse merchanting from traditional merchandise trade data sources such as customs declarations. However, the goods account of the compiling economy should reflect that a change of economic ownership happens twice, first, as export of general merchandise when the goods are sold to the nonresident merchant and second, as import of general merchandise when the goods are subsequently

¹ World Customs Organization, *International Convention on the Simplification and Harmonization of Customs Procedures (Revised Kyoto Convention)*.

purchased from the nonresident merchant, and appropriate adjustments should be made if international merchandise trade statistics (IMTS) flows are used as a source.

- 23.14 The treatment of merchanting is as follows:
- a. The acquisition of goods by merchants is shown under goods [acquired under merchanting](#) as a negative export of the economy of the merchant;
 - b. The sale of goods by merchants is shown under goods sold under merchanting as a positive export of the economy of the merchant;
 - c. The difference between sales over purchases of goods for merchanting is shown as the item “net exports of goods under merchanting.” This item includes merchants’ margins, holding gains and losses, and changes in inventories of goods under merchanting. As a result of losses or increases in inventories, net exports of goods under merchanting may be negative in some cases;² and
 - d. Because the change of ownership differs from the physical flow of goods, merchanting entries are valued at transaction prices as agreed by the parties, not free on board (FOB).
- 23.15 The partner allocation of net exports of goods under merchanting should be done by adding the positive and negative entries of goods under merchanting for each partner economy.
- 23.16 The rationale for recording goods under merchanting in the goods account and for treating purchases of goods for merchanting as a negative export rather than an import is as follows: firstly, the merchant acts similar to a wholesaler or a retailer whose output is measured by the trade margin realized on the goods they purchase for resale; next, the treatment of the net exports as goods rather than services maintains a global trade in goods balance; and finally, if the amounts of imports and exports of the merchant were recorded gross, this would artificially inflate the merchandise trade in the economy of the merchant.
- 23.17 The merchanting label is only used in the accounts of the economy in which the merchant is resident. In the counterpart exporting and importing economies, export sales to merchants and import purchases from merchants are included under general merchandise. Goods under merchanting are shown separately in statistics of the economy of the merchant because they are of interest in their own right and because they are not covered by the customs system of that economy.
- 23.18 Wholesaling, retailing, commodity dealing, and management of manufacturing may also be carried out under arrangements where the goods are present in the economy of the owner, in which case they are recorded as general merchandise, rather than as merchanting.
- 23.19 When a merchant resells goods to a resident of the same economy as the merchant, this does not meet the definition of merchanting. Accordingly, the purchase of goods is shown as imports of general merchandise to the economy in that case. If the entity that purchased from a merchant in the same economy subsequently resells the goods to a resident of another economy, whether or not the goods enter the economy of the merchant, the sales of goods are recorded in exports of general merchandise from the economy of the merchant and the entity that purchased the good from the merchant. (Although such a case is very similar to merchanting, it does not meet the definition given above. In addition, it is impractical for the first merchant to record the purchases as merchanting because that merchant may not know whether or not the second merchant will bring the goods into the economy.)
- 23.20 Sometimes a purchaser may be uncertain whether the goods will be resold to residents of the same economy or others. In this case, intentions can be used as an indicator, with subsequent adjustment if intentions are not realized.

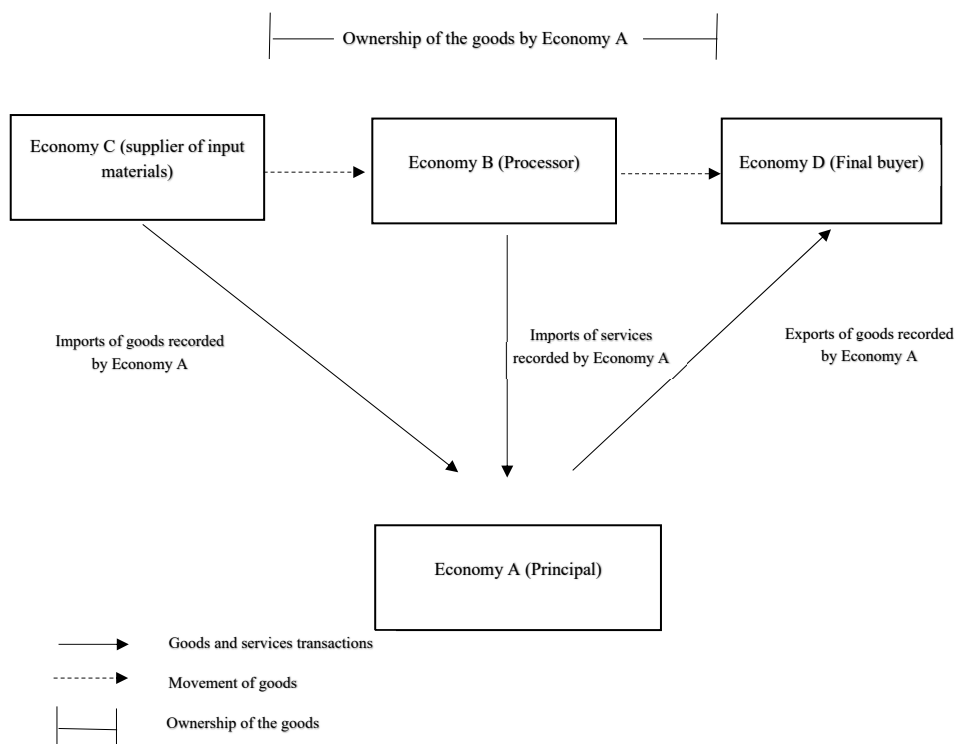
Processing

- 23.21 Under a processing arrangement, the principal owns or acquires material inputs and purchases manufacturing services from a nonresident processor (who may provide some material inputs), to substantially change the goods. The ownership of the processed goods does not change during the manufacturing process. The finished

² When compiling statistics by partner economy for goods under merchanting, it is common to see negative net exports for partner economies from which the merchant acquires goods.

goods are then returned to the principal, sent elsewhere for further processing, or dispatched to final customers. In the simplest scenario, goods are sent physically sent abroad from the economy of the principal to the economy of the processor and returned after processing. In this case, the movement of the goods are recorded in the IMTS of both economies, but no general merchandise transactions would be recorded. Figure [23.2] illustrates a more complex example of a processing arrangement.

Figure 23.2. Goods for processing arrangement



Notes: The principal in Economy A purchases material inputs from Economy C. The goods are shipped to Economy B for further processing. The final goods are sold to Economy D. The principal has ownership of the goods during the processing, but the goods may not pass through Economy A during the production process.

There are variations of processing arrangements. Material inputs may also be sourced from Economy A, Economy B or Economy D. Similarly, the final goods may be sold to Economy A, Economy B or Economy C. The key aspect in all variations is that the processor in Economy B does not take ownership of the goods during the processing. In all variations, the physical flow of goods differs from the change of ownership to some extent.

- 23.22 Goods transactions between the principal in a processing arrangement and other parties may be shown as a supplementary sub-item of general merchandise.
- 23.23 In some cases, the processor provides other materials that are used in the manufacturing process alongside the material inputs owned by the principal. Other materials provided by the processor are treated as intermediate consumption of the processor. In many cases, the principal supplies inputs of intellectual property such as product design without charging the processor for the right to use.

- 23.24 As there is no change of ownership of the processed goods between the processor and the economy from which the goods have arrived or between the processor and the economy to which the goods are dispatched, no general merchandise transactions are recorded by the processor.
- 23.25 Purchases of material inputs (i.e., goods to be processed) by the principal in a processing arrangement may be obtained from residents of the same economy as the principal, the same economy as the processor, or a third economy. The treatment is as follows:
- a. when the goods are acquired from residents of the same economy as the principal, there is no international transaction; and
 - b. when the goods are acquired from residents of the same economy as the processor or a third economy, the principal records imports of general merchandise.
- 23.26 Sales of finished goods (i.e., goods after processing) are treated as follows:
- a. when the goods are sold to residents of the same economy as the principal, there is no international transaction; and
 - b. when the goods are sold to residents of the same economy as the processor or a third economy, the principal records the sale as exports of general merchandise.

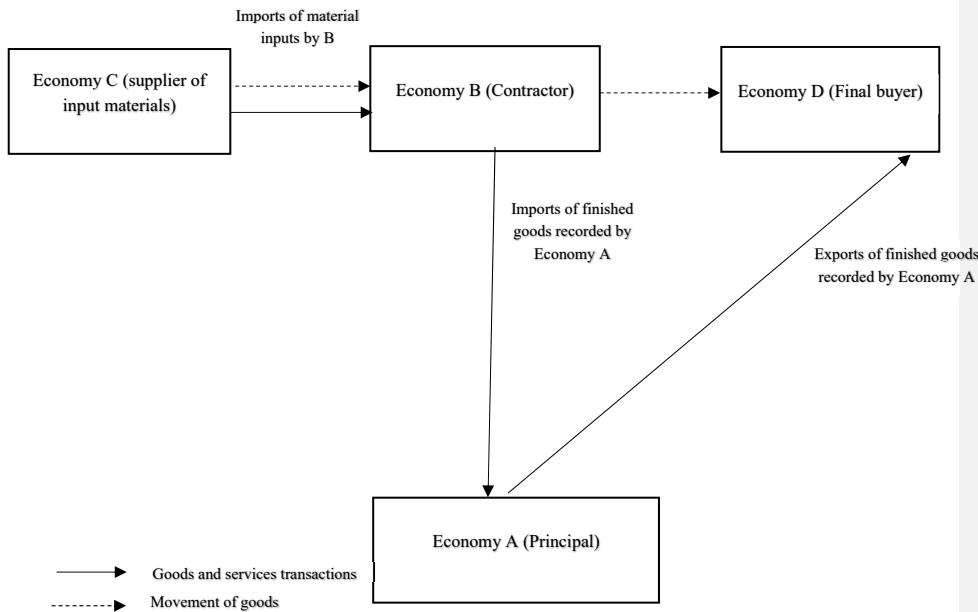
The principal could report merchanting in the case of minor processing (see paragraph [23.XX12] and the decision tree in Figure [23.1]).

- 23.27 The processing fee that the processor charges the principal under a processing arrangement should not be recorded under general merchandise but as a service [under manufacturing services on physical inputs owned by others](#).

Factoryless Goods Production

- 23.28 *A factoryless goods producer is a principal that controls the production of a good by undertaking the entrepreneurial steps and providing the technical specifications required to produce the good, but that fully outsources the material transformation process required to produce the output.* The factoryless goods producer supplies inputs of intellectual property such as product design, without charging for the right to use the intellectual property, but outsources both the acquisition of all of the material inputs and the manufacturing process to a, usually nonresident, contractor. The factoryless goods producer buys the finished goods from the contractor at a price that includes the value of material inputs and processing but does not include the value of intellectual property used in the transformation process. The finished goods may be used by the principal as inputs into further production, sent elsewhere for further processing, or dispatched to final customers. Figure [23.3] illustrates one example of a factoryless goods producer arrangement.

Figure 23.3. Factoryless goods producer arrangement



Notes: The principal in Economy A supplies the design specifications but outsources the acquisition of the material inputs and the manufacturing to a contractor in Economy B. The contractor acquires the material inputs from Economy C. The contractor sells the finished goods to the principal at a price that includes the cost of the material inputs plus the manufacturing costs. The goods are then sold to the final buyer in Economy D at a price that will further reflect the input of the design specification by the principal. The final goods may be shipped directly from Economy B to Economy D without passing through Economy A.

There are variations of factoryless goods production. Material inputs may also be sourced from Economy A, Economy B, or Economy D. Furthermore, the principal may source the material inputs and sell them via merchanting to the contractor. The key aspect is that the contractor takes ownership of the material inputs. Finished goods may also be sold to Economy A, Economy B, or Economy C.

- 23.29 Transactions between the factoryless goods producer and other parties may be shown as a supplementary sub-item of general merchandise.
- 23.30 Under factoryless goods production, the material inputs are substantially transformed by the contractor. The inputs of intellectual property products into the transformation of the product retained by the factoryless goods producer should also be significant. As a general guideline, the input values of intellectual property products such as of research and development, design, innovation, and other marketing assets (trademarks, brand names, logos, etc.) supplied by the factoryless goods producer will be greater than the fee paid to the contractor excluding the material inputs.
- 23.31 The goods that the factoryless goods producer buys from the contractor are recorded as general merchandise imports at the value agreed between the principal and the contractor. These goods are considered inputs to the production of the factoryless goods producer.
- 23.32 Sales of finished goods are treated as follows:
 - a. when the goods are sold to residents of the same economy as the factoryless goods producer, there is no international transaction but a domestic transaction to show the sale of the goods to final

[consumer in the resident economy](#); and

- b. when the goods are sold to residents of the same economy as the contractor or a third economy, the factoryless goods producer records the sale as exports of general merchandise.

Box 23.1. Examples of Global Manufacturing and Distribution Arrangements

Example 1—Re-exports

A seaport in Economy A serves as a gateway hub for international trade for economies in the region. One practice is for car dealerships to set up near the port. Individuals can travel to the seaport and buy new and secondhand cars directly from the dealer in Economy A.

A car dealer of Economy A imports a car from Economy C for 1000. A resident of Economy B travels to the seaport and buys the car for 1200, driving home through Economy A to Economy B.

Since the goods are imported and subsequently exported, with a change of ownership happening twice in Economy A, and the goods pass through Economy A, the goods are recorded gross in the imports and exports of [Economy A](#) as follows:

General merchandise imports (from Economy C)	1000 Expenditure
General merchandise exports (to Economy B)	1200 Revenue
<i>Of which: Re-exports</i>	1200 Revenue

(As the goods are in excess of customs thresholds in this example, they are included in general merchandise rather than in travel).

Example 2—Merchanting with manufacturing services that do not change the condition of the goods

A resident of Economy A acquires books from a resident of Economy C for 10. The resident of Economy A has them sent to Economy B, without the books passing physically through Economy A, for a resident of Economy B to put in boxes, for a charge of 3 payable by the resident of Economy A. The books are then sold by the resident of Economy A to a resident of Economy D for 20.

Since the goods are in the same condition, the merchanting treatment applies. The goods and services account entries for Economy A would be:

<i>Goods acquired under merchanting (from Economy C)</i>	<i>-10 Revenue (negative exports)</i>
<i>Goods sold under merchanting (to Economy D)</i>	<i>20 Revenue</i>
Net exports of goods under merchanting	10 Revenue
Manufacturing import of manufacturing services on physical inputs owned by others (with from Economy B)	3 Expenditure

(Economy C records goods exports of 10 to Economy A under general merchandise; Economy B records services exports of 3 with Economy A; and Economy D records goods imports of 20 under general merchandise with Economy A.)

Example 3—Processing arrangement: Manufacturing services that change the condition of the goods

A resident of Economy A (the principal) acquires oil from a resident of Economy C for 10. The oil is sent to Economy B, without passing through Economy A, for refining by a resident of Economy B, for a charge of 15; the oil continues to be owned by the resident of Economy A. ~~The oil~~[The refined product, for instance fuel](#), is then sold to a resident of Economy D for 30.

Since the goods are not in the same condition, the merchanting concept does not apply. The goods account and services account entries for Economy A would be:

*General merchandise import (from Economy C)	10 Expenditure
*General merchandise export (to Economy D)	30 Revenue
Import of manufacturing services on physical inputs owned by others (from Economy B)	15 Expenditure

Economy C records goods exports of 10 to Economy A (10 Expenditure). Economy B records only manufacturing services on physical inputs owned by others exports of 15 to Economy A (not exports or imports of goods), and as noted above, Economy D records goods imports of 30 from Economy A under general merchandise (not goods imports from Economy B).

Economy B may wish to identify the values of material inputs received and goods sent abroad after processing as supplementary items.

Example 4—Factoryless goods production

A resident of Economy A (the principal, or factoryless goods producer) contracts the production of sportswear to a manufacturer in Economy B. The contractor in Economy B purchases the material inputs from Economy C for 3. The transformation of the material inputs by the contractor in Economy B is done under specifications provided by the principal. The principal purchases the finished sportswear from the contractor for 7 (which was agreed as part of the contracting arrangement), and resells these goods directly to the final buyer in Economy D for 28 without the goods passing through Economy A.

The goods account entries for Economy A would be:	
*General merchandise imports (from Economy B)	7 Expenditure
*General merchandise exports (to Economy D)	28 Revenue

The goods account entries for Economy B would be:	
General merchandise imports (from Economy C)	3 Expenditure
General merchandise exports (to Economy A)	7 Revenue

Economy C and Economy D should record the counterpart transactions with Economy A and Economy B. No trade is recorded between Economy B and Economy D.

Example 5—Factoryless goods production with material inputs acquired and resold under merchanting by the principal to the contractor

A resident of Economy A (the principal, or factoryless goods producer) contracts the production of sportswear to a manufacturer in Economy B. The principal sources the material inputs from Economy C for 3 and resells the material inputs to the contractor in Economy B for 4, without the goods passing through Economy A. As in Example 4, the transformation of the material inputs by the contractor in Economy B is done under specifications provided by the principal. The principal purchases the finished goods from the contractor for 8, and resells these goods to the final buyer in Economy D for 28 without the goods passing through Economy A.

The goods account entries for Economy A would be:	
*Goods <u>acquired</u> under merchanting (with from Economy C)	-3 Revenue (negative exports)
*Goods <u>sold</u> under merchanting (with to Economy B)	4 Revenue
Net exports of goods under merchanting	1 Revenue
*General merchandise imports (from Economy B)	8 Expenditure
*General merchandise exports (to Economy D)	28 Revenue

Economy C records goods exports of 3 to Economy A; Economy B records goods imports of 4 and goods exports of 8 with Economy A; and Economy D records goods imports of 28 with Economy A.

* Items marked with an asterisk are recommended to be shown separately as supplementary items for recording global production arrangements of Economy A (see paragraphs [23.XX14, 23.22, and 23.XX29]).

C. Multinational Enterprise (MNE) Groups

References:

International Monetary Fund (IMF), *Special Purpose Entities: Guidelines for a Data Template*

Organization for Economic Cooperation and Development (OECD), *OECD Benchmark Definition of Foreign Direct Investment*

United Nations Economic Commission for Europe (UNECE), *UNECE Guide to Measuring Global Production*

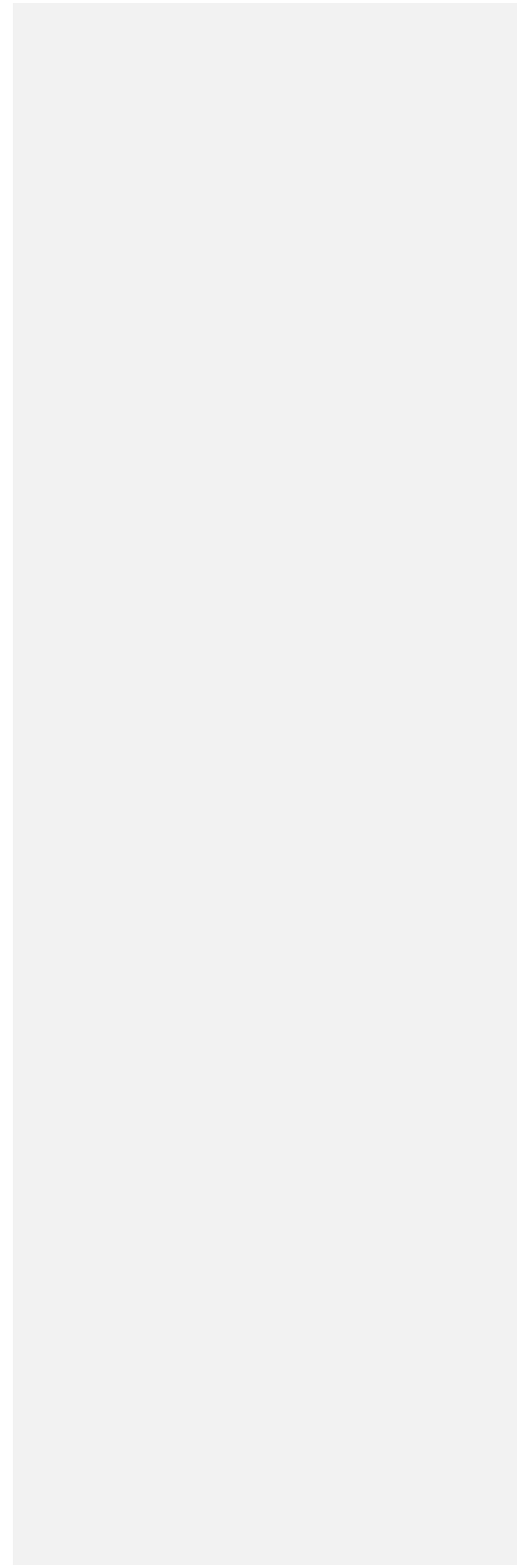
1. Definition of MNEs, MNE Groups, and Concept of Control

- 23.33 *An MNE is a legal entity that has at least one nonresident affiliate or branch, and exercises control over its affiliate(s) or branch(es) either directly—by owning over 50 percent of the voting power in the entity—or by indirect transmission of control. The MNE is the ultimate controlling parent—the direct investor at the top of the control chain. The MNE group consists of the MNE and the set of entities—regardless of their economies of residence—that are under the control of the same ultimate controlling parent [insert reference to relevant paragraph in BPM7 Chapter 4/2025 SNA Chapter 5].*
- 23.34 *Control refers to the ability to determine general corporate policy of a corporation. In practice, control is determined to exist if an investor has more than 50 percent of the voting power in an enterprise. The control may be direct (through ownership of voting power or other arrangements) or indirect (through ownership of enterprises that in turn have voting power). This definition of control is aligned with the Framework of Direct Investment Relationship (FDIR), which is a generalized methodology for identifying and determining the types and extent of direct investment relationships [insert references to BPM7 Chapter 6 and OECD Benchmark Definition of Foreign Direct Investment].*
- 23.35 It is important to distinguish between ownership and voting power when determining control. While ownership shares and voting power generally are aligned, this is not always the case. For instance, voting power may be greater or less than the percentage of shares held when there are “golden shares” or dual classes of shares, i.e., in cases in which nonvoting shares or some shares have higher weights that allow one or more parties to exercise voting power disproportionately to their share ownership [insert reference to BPM7 Chapter 6]. Control by government, or another public unit, can also be exercised in other ways than owning more than half of the voting power.

2. Understanding the Role of Special Purpose Entities (SPEs) within MNE Groups

- 23.36 Through their activities, MNEs manage production, trade, financial services and intermediation, direct investment, and international transfer of knowledge and technology, with the aim of maximizing their global after-tax profits. MNEs often have significant impact on the real economy through their activities, but they sometimes set up entities with limited presence in the form of employment and physical production to benefit from different regulatory and tax regimes. Special purpose entities (SPEs) are specific cases of such entities and are defined in Chapter 4/5 [insert reference to relevant paragraphs when available]. The decision tree in Figure 23.4 can also be used to identify SPEs.

Figure 23.4. Decision Tree to Identify Resident SPEs



- 23.37 Although SPEs have no or little physical presence, they can have a substantial impact on traditional macroeconomic statistics—for example, inflating (foreign) direct investment statistics due to pass-through funds or data for services exports if they own IPPs. Host jurisdictions are encouraged to report supplementary data for SPEs, particularly when such entities are significant [insert references to relevant paragraphs in *BPM7/2025 SNA*].
- 23.38 A typology of SPEs is presented in Table [23.1]. It can be used to identify SPEs and to determine their appropriate institutional sector. The typology aims to delineate the different types of SPEs based on their economic functions and relate them to their institutional sector.
- 23.39 The typology should be used as a complement to the definition of SPEs as it is not meant to be either exhaustive or prescriptive. The entities covered by the typology may be SPEs, but not all entities of the types listed are classified as SPEs. For instance, SPEs may include securitization vehicles, but not all securitization vehicles meet the definition of SPEs. A securitization vehicle would, for example, not be classified as an SPE if it has significant transactions with residents.

Table 23.1. Typology of SPEs [*The table will be updated to include 2025 SNA and BPM7 references in due course*]

No	SPE Type	Description	2008 SNA	BPM6	2008 SNA sector
Category I: Corporate Groups' Captive Financial Entities					
<i>(Those captive entities created by a financial or nonfinancial nonresident corporate to fulfil specific financial activities, other than insurance, for the sponsor)</i>					
1.1	Conduits	Raising or borrowing funds, often from unrelated enterprises, and remitting those funds to its parent or to another related enterprise. Typically, do not transact on the open markets on the asset side.	Para 4.59	Para 4.51 Para 4.86	S127
1.2	Holding companies	Owning a controlling level of equity in subsidiaries, without actively directing them (Passive holding corporations)	Para 4.59	Para 4.51 Para 4.84	S127
1.3	Holding financial assets for securitization			Para 4.51	S127
1.4	Intra group lending companies	Loan funding from and to intra group companies Entities taking and granting inter-company loans		Para 4.51	S127
1.5	Captive factoring and invoicing companies	Concentrating sales claims and invoicing sales.			S127
1.6	Captive financial leasing companies	Engaging in lease-in lease-out agreements or as a financial intermediary in a chain of vehicles in which the end		Para 4.83	S127

No	SPE Type	Description	2008 SNA	BPM6	2008 SNA sector
		vehicle is involved in the leasing of equipment or fixed assets.			
1.7	Other captive financial companies	Dealing with financial needs of a group, such as financing particular projects and loan origination.		Para 4.87	S127
Category II: Specialized Financial Entities					
<i>(These financial entities, with a degree of operational autonomy, have been specially created to isolate the risks of the parent companies to structure financial transactions for or securitize assets of the parents)</i>					
2.1	Captive insurance companies	Providing insurance to group enterprises.		Para 4.88	S128
2.2	Securitization vehicles/Financial vehicle corporations	Carrying out securitization transactions in order to isolate the payment obligations of the undertaking from those of the originator, or the insurance or reinsurance undertaking (in the case of insurance-linked securitizations). Repackaging of existing financial assets.	Para 4.59	Para 4.51 Para 4.77	S125
2.3	Holding financial and nonfinancial assets (including real estate) for related companies	Holding financial and nonfinancial assets of related companies with the goal of capital appreciation, interest/dividend income, and other income.			S11 and S125
2.4	Companies carrying out other financial functions	Performing factoring, invoicing on open markets, financial leasing on open markets, and other financial assets management.		Para 4.51 Para 4.76	S125
Category III: Corporate Groups' Nonfinancial Entities					
<i>(Those SPEs created by a financial or nonfinancial nonresident entity to fulfil specific nonfinancial activities)</i>					
3.1	Ancillary companies	Registered or incorporated companies providing ancillary services that are not resident in the same economy as its parent.		Para 4.51	S11
3.2	Operational leasing companies	Holding fixed assets, such as planes, vessels, and machinery, for the purpose of leasing them out.			S11
3.3	Merchanting companies	Purchasing goods from a nonresident and re-selling the goods to another nonresident (merchanting companies have ownership of the goods traded).			S11

No	SPE Type	Description	2008 SNA	BPM6	2008 SNA sector
3.4	Royalty and licensing companies	Concentrating group receipts concerning royalties and similar flows received from intellectual property rights and trademarks. Such a company of an SPE-type receiving royalties or similar flows for a group of enterprises or individuals is regarded as an independent royalty and licensing company.			S11
3.5	Legal ownership of intangible assets	Holding intangible assets for a related company or group of companies.			S11
Category IV: Wealth management entities <i>(Those SPEs created by household entities or groups of individuals to hold or manage wealth or real estates for their owners)</i>					
4.1	Companies holding/managing wealth and real estate for individuals and families	Managing family trust funds, foundations, personal holding companies.	Para 4.59	Para 4.51	S11, S126, and S127
Category V: Government Owned Financial Entities <i>(Those SPEs created by governments for fiscal activities)</i>					
5.1	SPEs owned by governments for fiscal purposes	Raising or borrowing funds on behalf of a nonresident general government.		Para 8.24	S11, S12, or S15
Category VI: Other structures <i>(Those SPEs created to conduct any type of transactions other than those covered in the other categories)</i>					

Note: The entity types listed may be SPEs, but not all entities of the types listed are necessarily SPEs. The SPE definition and decision tree should assist compilers in determining which entities are SPEs.
Source: IMF, *Special Purpose Entities: Guidelines for a Data Template*.

3. MNEs, SPEs, and Intellectual Property Products (IPPs)

- 23.40 MNEs often manage intellectual property products (IPPs), which are defined and described in further detail in Chapter 11 [insert reference to relevant paragraphs in *BPM7* Chapter 11/*2025 SNA* Chapter 11]. MNEs increasingly establish SPEs not only to channel financial investments, but also to manage IPPs.
- 23.41 The intangible nature of IPPs makes the transfer and use of IPPs difficult to observe. Especially for IPP transactions within an MNE group, this nonphysical feature can cause significant measurement difficulties. The main difficulty relates to identifying economic ownership (as opposed to legal ownership), which has repercussions for the treatment of related flows, namely those related to IPP use.³

³ The following paragraphs on determining economic ownership of an IPP observed in global production are based on Chapter 4 of the *UNECE Guide to Measuring Global Production* where additional information can be found.

- 23.42 Figure [23.5] shows a decision tree which assists in determining the economic ownership of IPPs and IPP-related transactions (including IPP-related import and export flows). The tree represents a sequence of steps, from left to right, guiding the statistics compiler to a decision. The starting point of the tree is the observation of IPP output or IPP ownership at the level of a certain unit. The obtained information is examined in 4 different steps:
- Control/ownership of the unit: ~~Is~~Does the unit participate in a global production arrangement as member of an MNE group?
 - ~~Is~~Did the unit ~~the producer of~~produce the IPP?
 - What is the main kind of activity of the unit, or is the unit expected to use the IPP in its production process?
 - Does the unit receive ~~income~~revenue related to IPPs, or does the unit pay for the use of IPPs (royalties and licenses)?
- 23.43 Together these steps should lead to a coherent decision on ownership, the recording of capital formation and the recording of IPP-related service flows (including imports/exports). However, it should be acknowledged that the availability of information needed to go through each of these steps may be insufficient. Particularly inside MNE groups, it may be quite challenging to classify IPP-related transactions properly, identifying separately IPP funding, IPP purchases, and sales and payments for IPP use. This means that each situation identified in the decision tree will be provided with a default solution in case information is insufficient to run properly through each of the decisive steps.
- 23.44 The first part of the decision tree describes the situation of units inside MNE groups. TheIn cases where the unit produced the IPP, the observed unit may be a main producer of goods and non-IPP services (1.1.1) or a main IPP producer (1.1.2) serving the IPP needs of the various members of the MNE group. In the case of a main producer of goods and non-IPP services, the (default) decision is to assign economic ownership to the unit in question. It could be that other units inside the MNE group equally benefit from this IPP. However, in such cases, it is recommended that intra-group transactions are only recorded when data sources point at receipts for IPP use by member units.
- 23.45 In case of a main IPP producer, economic ownership of the produced IPP is assigned to this unit (1.1.2.2) unless there is evidence the unit does not generate any IPP-related turnover (e.g., sales of copies, licences to use), or there is evidence of sales of the original to the parent or to other customers (1.1.2.1). No observed IPP-related turnover implies the unit is indirectly funded by the parent. Without conclusive evidence, the default solution is to assign economic ownership to the producing unit (1.1.2.2).
- 23.46 Source statistics may indicate the use or ownership of IPPs, but without the observed unit being identified as the producer of IPPs (1.2). Unless there is evidence of purchases of IPP originals, such units will generally not be considered the economic owners of IPPs. One may expect that payments for IPP use will be observed (1.2.1.1). But even without such payments, it is quite possible that these units use IPPs provided by the MNE parent in their production processes (1.2.1.3).
- 23.47 However, one could also argue that since these units are obtaining the benefits from IPPs, they could alternatively be identified as the actual economic owners inside MNEs. This would require imputing the transfer of the IPP original from the parent to the unit and capitalization of this IPP on the balance sheet of the unit under observation. This is not an easy task, and not without risks. The nature, size, and timing of these flows are principally unknown. This is why such an approach is not recommended under 1.2.1.3.
- 23.48 Case 1.2.2 reflects those units created by MNEs with the purpose of taking advantage of low-tax jurisdictions. The default solution is assigning economic ownership of the IPP to these units, in correspondence with legal ownership. Rerouting of Reassigning economic ownership, and corresponding ~~income~~revenue flows, from the legal ~~to the economic~~ owner to some other unit is not recommended. However, ~~income~~revenue received by these ~~units~~legal owners should preferably be ~~classified under~~shown as an "of which" item with a separate heading such as "IPP-related services provided by SPEs", as the provision of these services by SPEs is likely to have very little impact on employment and physical economic activity in the domestic economy. A separate reporting of these IPP services will provide a clearer view on national accounts and balance of payment

statistics.

- 23.49 The second part of the decision tree (2) reflects the situation of global production in which a principal ~~that does and a manufacturer with which it contracts are~~ not belong to a part of a common MNE group ~~contracts with a manufacturer~~. In appraising IPP ownership under such conditions, there are typically two situations to consider. In the first situation (2.1.1), the manufacturer owns the IPP and uses it in its production process, which implies the principal is simply obtaining a full-fledged product including the IPP service. In this case, there is no necessity of recording IPP transfers. The principal has no involvement in the manufacturing process and is expected to concentrate its business on trade-related activities. The IPP recording aspects are relatively straightforward: the manufacturer in question invests on own account in IPP and the asset value should be recorded in its balance sheet.
- 23.50 In the second situation, the principal owns the IPP and provides a contractor with its blueprints of the required output (2.1.2). No IPPs, or IPP-related transactions, will need to be identified when observing the contractor's production activities. The contractor will deliver a product to the principal; however, without reflecting the user costs of the IPP.
- 23.51 The decision tree also reflects the (perhaps hypothetical) situation in which the factoryless producer puts into use the IPPs developed by others (2.2.2.2). Such units will be IPP owners when they purchased the IPP originals. Alternatively, they could use the IPPs owned by dedicated IPP producers.
- 23.52 Outside the scope of MNEs, IPP-related transactions may be observed when dedicated producers provide IPP originals or IPP-related services (2.1.2.1) to those entities in the production chain engaged in manufacturing (2.2.1).
- 23.53 In conclusion, when ~~there is a need to record~~ IPP-related transfers occur outside the domain of MNE groups, such transfers are usually observed from market transactions, and this makes the recording much less complicated. Similarly, the identification of IPP ownership is usually more straightforward when the entities involved do not belong to the same MNE group.
- 23.54 Yet, the analysis of IPP use in production typically requires a complete picture of the global production chain, which will not be obtained from a national input-output table. Alternatively, a worldwide input-output table may show how IPPs are linked, for example via factoryless goods producers, to the global production chain.

Figure 23.5. Decision tree for determining economic ownership of an IPP observed in global production

<i>Control/ownership of unit</i>	<i>Production of the IPP</i>	<i>Type of producer</i>	<i>Revenue and expenditure related to the IPP</i>	<i>Decision about economic ownership of the IPP</i>	<i>Related decisions</i>
		1.1.1. The unit is a main producer of other (non IPP) goods and services and is expected to use the IPP in its production process	1.1.1. The unit may, or may not, receive funding from the parent as compensation for IPP development costs but this aspect is not decisive.	Attribute by default economic ownership of the IPP to this unit	The IPP is by convention recorded on the balance sheet of this unit, even when other member units of the MNE may benefit from the IPP.
1.1 The unit produced the IPP			1.1.2.1. The unit does not receive revenue from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	Do not attribute economic ownership to the unit. This unit serves as a dedicated IPP producer for the benefit of the MNE as a whole.	Do not record the IPP as fixed capital formation of the unit. Instead record the developed IPP as export to the (foreign) MNE parent. Reported sales of IPP originals may show up in international trade in services statistics.
			1.1.2. The unit is a main IPP producer.		

1. The unit participates in a global production arrangement as member of an MNE group		1.1.2.2. The unit receives revenue from royalties or licences to use, or does not receive any compensation for IPP development from the parent, so it can be assumed that it is expected to obtain revenue from royalties and licences to use in the near future.	Attribute economic ownership to the unit. The unit functions as a dedicated IPP producer with revenue from units outside the MNE from the IPPs produced.	The IPP is recorded as fixed capital formation of the unit.
		1.2.1.1. The unit pays royalties or licences to use.	The unit does not own the IPP	Do not record the IPP as fixed capital formation of the unit. IPP service payments to foreign suppliers are recorded as import of IPP services (or royalties).
	1.2.1. The unit is a main producer of other (non IPP) goods and services and may use the IPP in production	1.2.1.2. The unit purchased the IPP original for use in production	Attribute economic ownership of the IPP to the unit	The IPP is fixed capital formation of the unit. If purchased from abroad register an import of the IPP (original)
1.2. The unit did not produce the IPP		1.2.1.3. No IPP related payments are being observed. IPP use may be indirectly observed based on the nature of the production process (with usually high IPP requirements) and above average returns to capital.	The MNE parent is expected to be the economic owner and supplier of the IPPs used in production.	Conceptually, an imported IPP service flow should be recorded. But this is not an easy task (and not without risks) as the nature and size of these flows are principally unknown. Such imputations of imports/exports should preferably be the outcome of a concerted action in which all national statistical institutes (NSI) involved join efforts in filling in the IPP flows between the units of an MNE.
	1.2.2. The unit is not a producer of other (non IPP) goods and services. Its main output is IPP related.	1.2.2. Purchase of the IPP from the parent and revenue from royalties and licences to use may, or may not, be observed.	The unit is assumed to have purchased the IPP (original) from the parent and to receive (on behalf of the parent) revenue from royalties or licences to use the IPP. Attribute economic ownership of the IPP to the unit. The unit is considered an IPP holding SPE providing its services to the MNE parent.	It is recommended to classify the fixed capital formation, revenue and expenditure related to these IPP holding SPEs separately to allow analysis excluding "brass plate" units, also because the transactions carried by these units are not necessarily at arm's length.

<i>Control/ownership of unit</i>	<i>Production of the IPP</i>	<i>Type of producer</i>	<i>Revenue and expenditure related to the IPP</i>	<i>Decision about economic ownership of the IPP</i>	<i>Related decisions</i>	
2. The unit participates in a global production arrangement but not as member of an MNE group	2.1. The unit produced the IPP	2.1.1. The unit is a producer of other (non IPP) goods and services and is assumed to use the IPP in production		Attribute economic ownership of the IPP to the unit	The IPP is fixed capital formation of the unit.	
			2.1.2.1. The unit receives revenue from copies, royalties or licenses to use.	Attribute economic ownership of the IPP to the unit.	The IPP is fixed capital formation of the unit. If royalty payments are received from abroad register these payments as exports of IPP services.	
		2.1.2. The unit is a main IPP (or factoryless goods) producer.				
			2.1.2.2. The unit does not receive revenue from copies, royalties or licenses to use the IPP. One may assume that this unit operates as a factoryless goods producer (FGP).	Attribute economic ownership of the IPP to the unit.	The IPP is fixed capital formation of the unit.	
	2.2. The unit did not produce the IPP.	2.2.1. The unit is a main producer of other (non IPP) goods and services and is expected to use the IPP in production		2.2.1.1. The unit pays royalties or licenses to use the IPP	The unit does not own the IPP	Don't include the IPP as fixed capital formation of the unit. If payments to abroad register imports of IPP services
				2.2.1.2. The unit purchased the IPP.	Attribute economic ownership of the IPP to the unit.	The IPP is fixed capital formation of the unit. If purchased from abroad register imports of the IPP
		2.2.2. The unit is a main IPP (or factoryless goods) producer.		2.2.2.1. The unit receives revenue from royalties or licenses to use the IPP	Attribute economic ownership of the IPP to the unit	The IPP is fixed capital formation of the unit. If revenue is received from abroad register exports of IPP services
				2.2.2.2. The unit does not receive revenue from IPP related royalties or licenses to use. Instead, payments for IPP use (originals or copies) may be observed. This unit is expected to operate as an FGP.	The economic ownership of the IPP should be judged on the basis of the IPP related transactions observed with this unit. It is possible that the unit makes use of IPP services provided by dedicated IPP producers.	The IPP is fixed capital formation of the unit when the purchase of an original is observed. Otherwise, the unit is expected to purchase IPP services in which case royalty or license payments should be observed.

Source: UNECE *Guide to Measuring Global Production* (2015).

D. Measurement Challenges

- 23.55 MNE and intra-MNE group flows present measurement challenges for the [SNA/Manual], which can lead to misinterpretation or, in some cases, even mismeasurement of the values in the accounts. The concepts of residence and economic presence, which are central to macroeconomic statistics, ~~are less important to assume a different relevance for~~ MNE groups, for which activities extend across national boundaries. This has increased the complexity of compiling national statistics, as it is more difficult to break down production by economy. The [SNA/Manual] treats foreign affiliates of MNEs as residents in their respective economies of operation. This treatment is designed to place production in the economy in which it occurs, which is fundamental for estimating the economy's GDP and other key balancing items. Furthermore, the existence of distorted transfer pricing on intra-group flows—when prices do not reflect the “arm's length” exchange values recommended by the [SNA/Manual]—or the practice of not recording transactions for the intra-group use of intellectual property products may result in the misallocation of production between the economy of the parent company and those of its affiliates (see also Section C). Moreover, in many cases, estimates recorded by MNEs in national statistical surveys may not be best suited to meet the purposes of national accounts and external sector statistics.
- 23.56 Although the extent of these issues is not easily quantified, the problems are significant because of the growing size and importance of MNE activities. Economic decisions made by MNEs can have a significant effect on macroeconomic statistics. When misinterpreted or mis-measured, these activities can adversely affect the quality of key macroeconomic indicators. The impact on GDP might result from the misallocation between statistics on international trade in goods and services relative to income and the depreciation charges associated with movable corporate assets, especially intangible assets. Consequently, without robustly accounting for MNE group activities, the reliability of macroeconomic statistics for policymaking purposes may be challenged.

1. Allocation of Activities to Different Economies

- 23.57 With complex global corporate structures and production arrangements dividing activities across many jurisdictions, there arises the issue of the subsequent allocation of these activities to different economies. MNEs are likely to try to maximize their enterprise-wide global after-tax profits rather than their profits in each of the economies in which they operate. Toward this end, they often structure the locations of their operations, the legal ownership of their assets, and the pricing of intra-enterprise transactions in ways that are designed to reduce their global tax liabilities or regulatory burdens. As a result, statistical measures based on MNEs' business records may be difficult to interpret and for certain types of analysis may even be considered to provide a distorted view of the value of the intra-enterprise transactions and the allocation of activities across economies.
- 23.58 MNEs can reduce their global taxes through a number of strategies, including using distorted transfer pricing between the parent and its affiliates or among the affiliates to shift ~~in eome profits~~ to lower tax economies; assigning or transferring ownership of IPPs or other movable assets across economies in a manner that reduces tax burdens; interposing a finance or holding company affiliate in a low-tax economy between themselves and their affiliates; establishing offshore factoring corporations in low-tax economies that bill and collect for the parent's worldwide sales; and inverting the corporate ownership structure, with an overseas affiliate in a low-tax jurisdiction becoming the parent that collects net income for the MNE's worldwide corporate structure. As explained in [chapter 4, section on transfer pricing], transfer prices may be distorted – that is, incompatible with the valuation principles used in the [SNA/Manual] – in which case they should be adjusted to actual ~~exchange values if it is praetieal to do so. market prices. However, because of all the complexities involved to arrive at a consistent recording of the adjustments, national accounts and external accounts often refrain from trying to approximate true market prices (see paragraph 4.160).~~
- 23.59 The use of finance or holding company affiliates, factoring corporations, and corporate inversions are not necessarily inconsistent with the principles used in the system, but they may lead to difficulties in compiling and reconciling the statistics and in interpreting the flows reported by the accounts. Complex financing and ownership structures of MNEs can mask ultimate ownership links and inflate (foreign) direct investment flows and positions as each flow into and out of each economy is counted even if the funds, or income, are just passing through. Compilers can provide additional breakdowns to show, for example, the effects of any

adjustments made to transfer prices (or of the potential effects of not being able to adjust transfer prices to exchange values) or of other factors that lead to multinational profits that are not reflected in measured income in the domestic economy. The macroeconomic indicators and supplementary information discussed in Section E of this chapter also help address misinterpretation of the accounts, including by distinguishing between domestically and foreign-controlled corporations.

2. Cross-Border Mobility of Corporate Assets

- 23.60 Cross-border mobility of movable corporate assets, including intangible assets such as IPPs, can make the true location of the generation of profits and value added ambiguous. Because intellectual property products are not physically constrained and the use of an IPP by one part of an MNE group does not prevent the simultaneous use by another part, the MNE can potentially register a previously produced IPP in another economy to maximize the MNE group's overall post-tax profits.
- 23.61 Determining economic ownership of IPPs potentially has a major effect on the recording of assets and related flows in macroeconomic statistics. The creation of IPP assets at one location in an MNE group is quite often funded by affiliates elsewhere in the group. These arrangements are known as cost sharing agreements where the costs associated with research at one location are funded by a number of affiliates across the group.
- 23.62 Section C of this chapter and Figure [23.5] describe the decision tree that should be used to determine the economic ownership of IPPs. It should be emphasized, however, that the measurement of the IPP-related flows within an MNE group, such as recording the sale or transfer of IPP assets or the payment of royalties based on reported transfer prices, could significantly bias the flows shown in the accounts relative to the discounted present value of expected future returns, which unfortunately may not always be available to the compiler. Also, if faulty data are used in implementing the decision tree for determining economic ownership, ownership of IPPs could be attributed to the wrong economy, which would lead to distortions in GDP and other macroeconomic indicators. Furthermore, even when the data underlying the determination of economic ownership and the measurement of IPP flows are correct, in some cases the resulting flows could be surprising to data users and might be inappropriate for certain types of analysis. For example, if a large MNE that produces software originals transfers the ownership of the originals to a low-tax economy, and the global sales of copies of the software are routed through the [low-tax](#) economy, ~~the~~[this](#) economy could show high value-added in software copies with very little associated employment of labour or remuneration of employees. Some users of the GDP statistics for that economy might consider the statistics to be distorted, or at least to be difficult to interpret in the context of typical business cycle analysis that assumes a strong relationship between GDP and aggregate employment. Moreover, the transfer of the originals themselves poses challenges to the interpretation of net exports and capital formation. If practical, the identification within exports/imports and capital formation of transfers of previously produced IPPs contributes to understanding the role of those transactions in GDP and components.

3. Consistency and Coherence of MNE Group Data

- 23.63 Ensuring that all activity of an MNE group is captured, not duplicated, and properly allocated by economic territory is a statistical challenge since the SNA/Manual standards do not view the MNE group as a single entity. If not properly recorded, the activities of MNE groups could result in a misallocation of GDP and, as a result, could distort an economy's macroeconomic indicators.
- 23.64 Inconsistent recording of some transactions of MNE groups can lead to large discrepancies in the accounts. Various data sources used in the compilation of statistics may use different statistical units or definitions and may record data in different ways, making it difficult for the compiler to achieve consistency in the measurement of economic activity. Compilers in some national statistical offices have addressed these issues by focusing attention on large MNEs, endeavoring to coordinate the collection of data from the MNE group, tracking changes in the composition of the group, and conducting coherence analysis to ensure that the data are consistent. The successful pursuit of this strategy requires monitoring and understanding of the business activities of the MNE group, as well as maintaining good communication with representatives of the group. In several countries, these tasks are carried out by specific statistical units, combining the expertise of national accountants, balance of payments experts, and business accountants. [Where confidentiality rules allow for it,](#)

[compilers are also encouraged to exchange data and reconcile the activities of MNE groups with their counterparts in other economies \(see paragraph \[21.55\]\).](#)

E. Macroeconomic Indicators and Supplementary Information to Monitor the Impact of Globalization

1. Existing Macroeconomic Indicators

Key Indicators other than GDP

- 23.65 Traditionally, analysis of economic activity within an economy focused on GDP as a broadly defined, internationally consistent measure of productive activity. Considering various ~~recent~~—economic developments, including increased globalization, the 2025 SNA has given increased prominence to other key indicators, such as gross/net national income (GNI/NNI), gross/net national disposable income (GNDI/NNDI), and household (adjusted) disposable income. These indicators are generally less affected by globalization and less sensitive to the impact of MNE activities than GDP. This is an important factor to consider, especially for economies with significant MNE presence. As such, indicators other than GDP may better reflect the impact of the underlying economic activities of MNEs on an economy’s residents.
- 23.66 To illustrate these differences, consider a direct investment affiliate that is wholly owned by a foreign parent and is engaged in capital-intensive production. Because the production process is capital-intensive, most of the value added accrues as operating surplus to the foreign parents, perhaps primarily as reinvested earnings on foreign direct investment, whereas only a relatively small part of the value added remains in the domestic economy as remuneration of employees. Similarly, if an MNE engages in distorted transfer pricing to boost the income of an affiliate in a lower tax economy and it is not possible to replace the distorted transfer prices with exchange values in the compilation of the accounts, the transfer pricing will have less effect on GNI than on GDP. In both cases, comparing GDP with GNI, GDP includes the full value added, whereas GNI excludes the property income that accrues to foreign investors, whether in the form of dividends or interest that are repatriated to the parent or in the form of reinvested earnings on foreign direct investment. The GNI comes closer to measuring the economic flows that are retained by the economy’s residents.
- 23.67 Similarly, net measures such as net national income (NNI) will tend to better capture the impact of MNE activities on domestic residents than the gross measure. [Insert reference to relevant paragraphs on net measures] For example, consider an economy to which an MNE relocates a large amount of IPPs. The IPP generates on-going production and income in the form of royalties or license fees, which directly feed into the measurement of GDP. GNI excludes the property income that accrues to foreign investors, but NNI goes one step further by also considering the depreciation that is associated with the IPP. If an MNE affiliate engages in activities that result in the depletion of mineral and energy resources, the depletion is now also reflected in NNI (but not in GNI). Similarly, the depletion of biological resources is deducted in the calculation of NNI, whereas the regeneration of biological resources is recorded as an addition to GDP, GNI, and NNI.
- 23.68 When current transfers represent a large share of an economy’s income, net national disposable income (NNDI) can provide a better measure of the income available to residents for consumption or saving. Furthermore, when interest is focused primarily on the material well-being of households, indicators such as net household (adjusted) disposable income may provide the best summary of economic conditions. The latter indicators are hardly affected by the activities of MNE groups; basically, only the remuneration from being employed by the domestic affiliates of the MNE group ~~feedfeeds~~ into household (adjusted) disposable income.

2. Supplementary Data

Additional Granularity in the Institutional Sector Accounts and External Accounts, including Special Purpose Entities

- 23.69 The institutional sector accounts show the full sequence of economic accounts from output and value added

to net lending and borrowing, the financial accounts, and the resulting balance sheets for institutional sectors. Adding granularity to these accounts and the external accounts based on ultimate control and ownership of corporations can highlight the full impact of MNE activities in the macroeconomic accounts and highlight not only foreign-controlled enterprises but also the domestic enterprises that are part of MNE groups. Because of the data intensity involved, it is recommended that the increased granularity be limited to the nonfinancial corporations sector and the financial corporations sector, and that the breakdown of MNE groups is not needed for any subsector.

- 23.70 For economies for which SPEs have a significant presence, it is recommended that SPEs be separately identified as “of which” items within the [institutional sector accounts]/[external accounts]. Separate identification of SPEs is important for better understanding the contribution of SPEs from both the national and external accounts perspective. For economies for which SPEs are significant, it is recommended that the presentation of the institutional sector accounts with enhanced granularity identify SPEs as an “of which” supplementary category for foreign-controlled financial and non-financial corporations.
- 23.71 Figure [23.6] [Note: if the table shown in Figure 23.6 appears in SNA Chapter 5/BPM7 Chapter 4, it should be referenced here] provides a template for the breakdown of the nonfinancial and financial corporations sector by domestic multinational corporations and foreign-controlled corporations as well as “of which” categories for SPEs.

Figure 23.6. Template for Institutional Sector Accounts and External Accounts with Additional Granularity and SPEs

Nonfinancial Corporations							
Domestically controlled nonfinancial corporations						Foreign-controlled nonfinancial corporations	
Total	Total	Public nonfinancial corporations	Of which:	National private nonfinancial corporations	Of which:	SPEs	
			Public nonfinancial corporations that are part of domestic MNE groups		National private nonfinancial corporations that are part of domestic MNE groups		
S11	S11DO	S11001	S110011	S11002	S110021	S11003	
Financial Corporations							
Domestically controlled financial corporations						Foreign-controlled financial corporations	
			Of which:		Of which:	Of which:	

Total	Total	Public financial corporations	Public financial corporations that are part of domestic MNE groups	National private financial corporations	National private financial corporations that are part of domestic MNE groups		SPEs
S12	S12DO	S12001	S120011	S12002	S120021	S12003	

Supplementary (Foreign) Direct Investment Statistics

23.72 The increasingly complex financing and ownership structures of MNE groups, driven by many factors such as tax optimization or labour and transport cost reduction, play an important role in direct investment relationships. (Foreign) direct investment often involves MNEs channeling investments through several economies, resulting in a large portion of direct investment flows in some economies being flows going in and out of the economy on their way to their final destination. This can make it difficult to interpret direct investment statistics and does not show the ultimate sources and destinations of direct investment when the statistics are compiled by immediate partner economy. Supplementary presentations of direct investment statistics, by ultimate investing economy, by ultimate host economy, etc., can help address these challenges. These supplementary statistics are covered in detail in [Annex 6 on Selected Issues on Direct Investment/ *BPM7* Annex 6, Selected Issues on Direct Investment] and the *OECD Benchmark Definition of Foreign Direct Investment*.

Supplementary Presentation of Trade and Investment Income

23.73 To develop indicators on GVCs and to better identify the role of MNEs in current account [international] transactions, a supplementary presentation of trade and investment income by characteristics of the enterprise, including ownership (e.g., domestically controlled or foreign-controlled) and size, is recommended. These indicators are not only useful for understanding international transactions by characteristics of the enterprise, but also for national accounts more generally, such as for the extended supply and use tables discussed in [Section F of this chapter paragraphs \[23.78-23.80\]](#).

23.74 Economies are encouraged to compile data on goods trade by enterprise characteristics (TEC) and services trade by enterprise characteristics (STEC). Many economies have added information on whether the enterprise is foreign or domestically owned to their TEC and STEC statistics. These statistics can answer questions such as: What kind of enterprises are behind the trade flows of goods and services? What is the share of small and medium-sized enterprises in total trade? What is the share of enterprises that trade with a certain partner economy and the amount of trade value they account for? These statistics can enable compilers to prepare a supplementary presentation that disaggregates exports and imports of goods and services and external flows of investment income broken down by ownership, size-class of enterprises, trading partner, product, and industry.

23.75 Table [23.2] provides a template for this supplementary presentation. The main breakdown is by domestic versus foreign ultimate control. The template also calls for the identification of small and medium-sized enterprises (SMEs) that employ fewer than a threshold of a given number of employees. ~~It will be beneficial to further divide SMEs into independent SMEs (i.e., not a part of a group) and those that are part of a group to try to identify the SMEs that might benefit from capital inputs of affiliated parties.~~ Many economies use the threshold of fewer than 250 employees. This threshold is encouraged to enhance international comparability, but other thresholds could also be considered. In cases where the underlying data are not collected or available at the enterprise level (for example, imports of goods or services by individuals), the transactions should be reported as "Unknown". ~~It will be beneficial to further divide SMEs into independent SMEs (i.e., not a part of a group) and those that are part of a group to try to identify the SMEs that might benefit from capital inputs of affiliated parties.~~

23.76 While the template represents a recommended level of disaggregation, some economies may be able to provide further disaggregation along certain dimensions, whereas in other cases economies may not be able to provide the recommended level of disaggregation because of their own confidentiality criteria for disseminating the information or lack of detailed data. However, the most economically relevant breakdown possible should be considered when publishing these statistics.

Table 23.2. Template to Identify the Role of Enterprise Characteristics in the Current Account

	Total	By trading partner Each of top 5 partners	Rest of the world	By product Each of top 5 products	The other products	By industry Each of top 5 industries	The other industries
TEC Balance of payments statistics							
1.A Export of goods and services							
Export of goods and services, total							
1.A.a Goods, BOP basis							
By enterprise's ownership							
Domestically controlled							
MNE							
Other							
Controlled from abroad							
Unknown							
By enterprise's size							
SME							
Independent							
Part of a group							
Large enterprises							
Unknown							
1.A.b Services, BOP basis							
By enterprise's ownership							
Domestically controlled							
MNE							
Other							
Controlled from abroad							
Unknown							
By enterprise's size							
SME							
Independent							
Part of a group							
Large enterprises							
Unknown							
1.B.2 Receipts of investment income							
By enterprise's ownership							
Domestically controlled							
MNE							
Other							
Controlled from abroad							
Unknown							
By enterprise's size							
SME							
Independent							
Part of a group							
Large enterprises							
Unknown							
1.A Import of goods and services							
Import of goods and services, total							
1.A.a Goods, BOP basis							
By enterprise's ownership							
Domestically controlled							
MNE							
Other							
Controlled from abroad							

Unknown				
By enterprise's size				
SME				
Independent				
Part of a group				
Large enterprises				
Unknown				
1.A.b Services, BOP basis				
By enterprise's ownership				
Domestically controlled				
MNE				
Other				
Controlled from abroad				
Unknown				
By enterprise's size				
SME				
Independent				
Part of a group				
Large enterprises				
Unknown				
1.B.2 Expenditures of investment income				
By enterprise's ownership				
Domestically controlled				
MNE				
Other				
Controlled from abroad				
Unknown				
By enterprise's size				
SME				
Independent				
Part of a group				
Large enterprises				
Unknown				

Other Supplementary Balance of Payments Statistics

- 23.77 Detailed balance of payments statistics are useful for the analysis of GVCs (see below). In particular, reporting of the following items is encouraged: total value of re-exports and main product and/or partner breakdown; total value of goods acquired or sold under merchanting and the main products and/or major trading partners; a reconciliation table between international merchandise trade statistics and balance of payments goods statistics; product and partner breakdown of total trade in goods on a balance of payments basis and geographical [breakbreakdown](#) of Extended Balance of Payments Services categories.

Extended Supply-Use Tables

- 23.78 Extended supply and use tables (eSUTs) are extended tables designed to provide more granularity regarding transactions associated with globalized production processes in a flexible manner that allows for a number of possible extensions. This additional granularity can support the compilation of [Trade in Value Added \(TiVA\)](#) and GVC thematic accounts. Extensions may include details on origin (imports), destination (exports), goods for processing, and re-exports, as well as breakdowns by firm such as by size-class of firm, trading status (e.g., export orientation), or control (e.g., foreign controlled or domestic entities that are part of an MNE group). The details on control may be identified by trade-by-enterprise characteristics (TEC) and services-trade-by-enterprise characteristics (STEC) data. Other possible extensions may include links to the generation of income accounts, employment statistics, and greenhouse gas emissions.
- 23.79 Various eSUT extensions can capture important differences in the input and output structure of different producers in the same industry that are absent from conventional supply and use tables and input-output tables. Under the eSUT approach, as with other extended tables and thematic accounts, economies can implement them according to their own priorities and resources in a way that is most relevant to their specific

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needs, circumstances, and data availability. The objective of eSUTs is to create an integrated accounting framework that can link disparate data sources such as structural business statistics, trade-by-enterprise characteristics (TEC and STEC), foreign affiliate trade statistics, and trade data in a coherent framework. The eSUTs should be parsimonious in construction—that is, it is not necessary to break down all activities into more homogeneous groups. Like the GVC thematic accounts, the eSUTs only need to focus on ~~one~~[eSUTs](#) selected activities. Compilers can focus on the industries and/or products where extra granularity is needed in the context of analyzing their economy. If there is no foreign presence in a given industry, then there is no granularity to be added.

- 23.80 The data collected for the supplementary presentation of trade and investment income described in paragraphs [23.XX73–23.XX76] can help improve the quality of eSUTs, GVC thematic accounts, and TiVA estimates. eSUTs build on national supply and use tables and input-output tables through the integration of more detailed data provided via MNE surveys, surveys for the balance of payments purposes, tax data, integrated business statistics, and reconciled trade statistics, among others. The eSUTs provide a holistic, integrated view to better understand the complexities and interactions in measuring the effects of globalization on production processes. They can also serve as useful and important inputs in the compilation of TiVA statistics and GVC thematic accounts. Detailed discussions and recommendations for eSUTs can be found in the *OECD Handbook on Extended Supply and Use Tables*.

3. Alternative Presentations

Alternative Presentation of Reclassified Special Purpose Entities

- 23.81 Economies in which SPEs are deemed to be especially important are encouraged to consider a voluntary option of extending the sequence of economic accounts by compiling a supplementary presentation of SPEs reclassified from their economies of legal incorporation to the economies of their parents. Although this alternative presentation is outside the [*SNA/Manual*] conceptual framework, it would allow users to see the effects of consolidating the flows of SPEs with the other flows of parents, giving users an idea of the effects of pass-through flows within MNEs on core macroeconomic indicators. Presenting SPE statistics on a nationality basis would be a complement to the residency-based statistics and not a substitute. Compiling these supplementary statistics should be considered only for economies for which SPEs are deemed important, particularly where resident MNEs set up many foreign SPEs or non-resident MNEs set up many resident SPEs. This supplementary approach of compiling macroeconomic aggregates is considered too ambitious and resource intensive to implement consistently across economies in which SPEs are not deemed important.

4. Statistics on the Activities of Multinational Enterprises

References:

Eurostat, *Recommendations Manual on the Production of Foreign Affiliates Statistics*.

Organization for Economic Cooperation and Development (OECD), *OECD Benchmark Definition of Foreign Direct Investment*.

OECD, *OECD Handbook on Economic Globalisation Indicators*

United Nations, *Manual on Statistics of International Trade in Services*

[*Summary version of subsection for 2025 SNA*]

- 23.82 To complement statistics on foreign direct investment and other globalization indicators, information on foreign-controlled enterprises is also provided through statistics on the Activities of Multinational Enterprises (AMNE statistics) and the closely related Foreign Affiliates Statistics (FATS). AMNE statistics cover a range of variables on foreign direct investment enterprises. This wider dataset is compiled separately from balance of payments and international investment position statistics (although the data may be collected in the

framework of compiling foreign direct investment), as the data relate to the overall holdings and activities of foreign direct investment enterprises rather than just the direct interrelations (positions and transactions) by them with related enterprises. That is, the objective of AMNE statistics is to provide an additional perspective on the impact of foreign direct investment that is complementary to data on international flows and positions.

- 23.83 AMNE statistics cover those foreign direct investment enterprises in which the direct investor (or a group of investors in combination) directly or indirectly holds or controls a majority of the voting power (i.e., subsidiaries). This coincides with the scope of foreign controlled corporations in the SNA but differs from the scope of foreign direct investment enterprises due to the exclusion of associates.
- 23.84 For statistics on foreign-controlled enterprises in the compiling economy (inward AMNE statistics), the geographical attribution should be by the economy of the ultimate controlling parent. However, to facilitate links with foreign direct investment data, compilers are encouraged to also provide some data in which attribution is based on the economy of the immediate investor (that is, the first foreign parent). Statistics for foreign enterprises controlled by foreign direct investors resident in the compiling economy (outward AMNE statistics) should be attributed based on the location of the enterprises whose activities are being described. Ideally, all AMNE variables should be attributed on the basis of the industrial activities of the establishment or enterprise, according to the United Nations *International Standard Industrial Classification of All Economic Activities* (ISIC). In addition, particular variables such as sales or output, exports, and imports may be attributed by the types of products produced and sold.

[Full version for BPM7]

Introduction

- 23.85 To complement statistics on direct investment and other globalization indicators, information on foreign-controlled enterprises is provided through statistics on the Activities of Multinational Enterprises (AMNE statistics) and the closely related Foreign Affiliates Statistics (FATS). AMNE statistics cover a range of variables on direct investment enterprises, as described below. This wider dataset is compiled separately from balance of payments and international investment position statistics (although the data may be collected in the framework of direct investment compilation), as the data relate to the overall holdings and activities of direct investment enterprises rather than just the direct interrelations (positions and transactions) by them with related enterprises. That is, the objective of AMNE statistics is to provide an additional perspective on the impact of direct investment that is complementary to data on international flows and positions. This section is designed to give an overview of the nature and compilation of AMNE statistics for the information of balance of payments compilers and users who may be considering this extended range of information.
- 23.86 AMNE statistics may be produced for both foreign-controlled enterprises in the compiling economy (a subset of inward direct investment; so-called “inward AMNE statistics”) and foreign affiliates controlled by MNEs in the compiling economy (a subset of outward direct investment; so-called “outward AMNE statistics”). In addition, outward AMNE statistics also may cover the activities of resident direct investors.
- 23.87 AMNE statistics can be important for the analysis of the performance of domestically and foreign-controlled enterprises, both in absolute terms and relative to the larger domestic and foreign universes of enterprises. Direct investment enterprises may be involved in activities such as research and development that benefit the domestic economy but may not be recorded as balance of payments transactions. Also, data on transactions in goods and services (with both residents and nonresidents) can provide an additional perspective to balance of payments data, as transactions by direct investment enterprises with unrelated persons could be significant.
- 23.88 Detailed discussion and recommendations for measuring AMNE and for FATS is found in the *Manual on Statistics of International Trade in Services*,⁴ in the *OECD Handbook on Economic Globalisation Indicators*, and in the *OECD Benchmark Definition of Foreign Direct Investment*. A summary is provided here.

⁴ The *Manual on Statistics of International Trade in Services* focuses on foreign affiliates producing services, but notes that most of its recommendations (all other than those related to industry/product groupings) for compiling these statistics are equally applicable to goods and services.

Coverage

Universe or population

23.89 AMNE statistics cover ~~these~~[the subset](#) of direct investment enterprises in which the direct investor (or a group of investors in combination) directly or indirectly holds or controls a majority of the voting power (i.e., subsidiaries). This differs from the scope of direct investment enterprises due to the exclusion of associates. ~~These~~AMNE statistics follow the definition of direct investment discussed in this *Manual* (paragraphs [6.8]–[6.24]) in that coverage is defined as those enterprises with majority foreign ownership of the voting power by a single investor or a group of investors acting together. Only those enterprises with foreign control are covered in AMNE statistics, thereby corresponding to the coverage of foreign-controlled corporations in Figure 23.6.

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Economic variables for AMNE statistics

~~23.92~~[23.90](#) Basic variables of substantial interest may include: sales (turnover) and/or output; employment; value added; exports and imports of goods and services; and number of enterprises.

~~23.93~~[23.91](#) Other variables that might be collected to supplement these data include: assets (both financial and nonfinancial); ~~renumeration~~[remuneration](#) of employees; net worth; net operating surplus; gross fixed capital formation; taxes on income; research and development expenditures; total purchases of goods and services; and intra-group exports and imports.

~~23.94~~[23.92](#) The definitions of these variables are given in the *2025 SNA* and in the documents referenced above. It is also useful to have data for the total population of enterprises, or for the domestically-controlled enterprises on the same basis as AMNE statistics on inward direct investment, so performance can be compared with foreign-controlled enterprises.

Statistical Units

~~23.95~~[23.93](#) In principle, most AMNE statistics could be collected at the enterprise group or enterprise level, or the level of individual business locations or establishments. Some indicators, such as total assets, are more naturally collected from enterprise groups or enterprises than from establishments. Direct investment statistics are usually collected from enterprise groups or enterprises, so collection of AMNE statistics at this same level facilitates linkages between the two types of data. However, because enterprise groups and enterprises are more likely than establishments to have activities in multiple industries, data that are classified on the basis of primary activity can be more difficult to interpret for enterprise groups and enterprises than for establishments. There are thus advantages and disadvantages associated with every basis of collection, and no recommendation is made as to the appropriate statistical collection unit. AMNE statistics [will](#) often ~~will~~ be developed in the context of existing statistical systems, in which the statistical units are already defined, and in these cases there may be little choice in the units used.

Time of Recording and Valuation

~~23.96~~[23.94](#) Time of recording and valuation are consistent with the *Manual*. Flow variables, such as output or value added, should cover the whole of the reference period (usually a year), and should be measured on an accrual basis. Stock variables, such as assets and net worth, should be as at the end of the reference period. All transactions and positions variables in principle should be measured at market value.

Attribution of AMNE Variables

Geographic

[23.97](#)[23.95](#) For statistics on foreign-controlled enterprises in the compiling economy (inward AMNE statistics), the geographical attribution should be by the economy of the ultimate controlling parent. However, to facilitate links with direct investment data, compilers are encouraged also to provide some data in which attribution is based on the economy of the immediate investor (that is, the first foreign parent). Statistics for foreign enterprises controlled by direct investors resident in the compiling economy (outward AMNE statistics) should be attributed based on the location of the enterprises whose activities are being described.

By activity and by product

[23.98](#)[23.96](#) Ideally, all AMNE variables should be attributed on the basis of the industrial activities of the establishment or enterprise, according to the United Nations *International Standard Industrial Classification of All Economic Activities* (ISIC).

[23.99](#)[23.97](#) In addition, particular variables such as sales or output, exports, and imports may be attributed by the types of products produced and sold. Data on a product basis would identify the specific types of goods and services delivered through foreign-controlled enterprises and could most readily be compared with data on goods and services delivered through trade between residents and nonresidents, and to domestic output. However, some variables, such as value added and employment, do not readily lend themselves to a product classification.

[23.100](#)[23.98](#) As a longer-term goal, compilers are encouraged to work toward disaggregating, by product, some or all of the variables that lend themselves to this basis of attribution (such as sales (turnover) or output, exports, and imports). Product-based statistics are free of problems of interpretation related to secondary activities and are consistent with the basis of classification used for trade in goods and services in the balance of payments.

Compilation Issues

[23.101](#)[23.99](#) There are two basic approaches, not necessarily mutually exclusive, to developing AMNE statistics. The first is to conduct surveys that directly request information on the operations of the covered enterprises (appropriate for both inward and outward AMNE statistics). The second identifies the subset of existing domestic enterprise data that is accounted for by foreign-owned firms (for inward AMNE statistics only). Direct investment registers may be used in either case to identify the units to be covered (as well as the economy of attribution, in the case of inward AMNE statistics). The collection of data for inward AMNE statistics can also be combined with the collection of data for supplementary data on foreign-controlled corporations in the external accounts.

[23.102](#)[23.100](#) For both inward and outward AMNE statistics, questions about key AMNE variables might be added to existing surveys of direct investment transactions and positions. However, because direct investment surveys may be conducted more frequently than AMNE statistics are required (for example, quarterly rather than annually) and require a quick turnaround, and also because AMNE statistics are needed for only the controlled portion of the direct investment universe, separate surveys may be a more appropriate way to proceed.

[23.103](#)[23.101](#) For inward AMNE statistics, it should be possible to link the direct investment statistics to the existing domestic economic statistics (for example, as collected for national accounts purposes) through the use of information on ownership structure to identify those resident enterprises that are foreign-controlled, as well as identifying the residence of the owner. AMNE statistics would be obtained as an aggregation of statistical variables across the foreign-controlled statistical population.

[23.104](#)[23.102](#) Additional questions may have to be added to direct investment surveys if information on the ultimate controlling parent is to be obtained.

F. Analytical Tools

[23.10523.103](#) The parts and components that make up a final product, whether a good or a service, are increasingly produced in different economies. Therefore, intermediate goods and associated services may cross national borders several times before they are assembled and sold as a final product. Moreover, international trade in goods and services is often intra-group trade, organized and led by MNEs.

[23.10623.104](#) Policy demand for more statistical information on GVCs has grown significantly over recent years. Production fragmentation has deepened the divergence between gross flows, as recorded by traditional international trade statistics, and the data on production and final demand as accounted for in national accounts. This section introduces analytical tools that have been developed to better understand the relationship between globalization and the domestic economy.

Trade in Value Added Indicators

References:

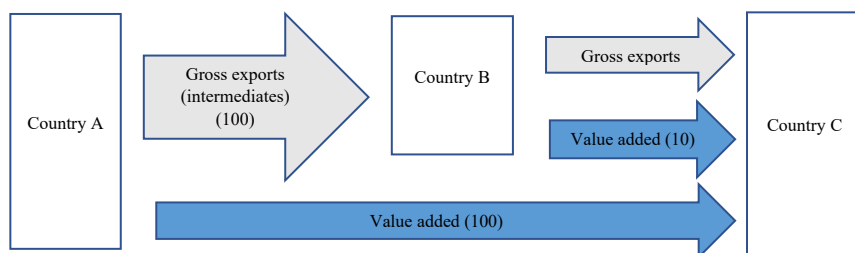
OECD (2021), *Guide to OECD's Trade in Value Added Indicators: 2021 Edition*.

United Nations Economic Commission for Europe (UNECE) (2015), *UNECE Guide to Measuring Global Production*

[23.10723.105](#) Trade flows are generally reported on a bilateral [gross](#) basis—that is, an economy will report its exports and imports with each of its trading partners [each time a change of ownership occurs](#). When the production process is fragmented across multiple economies, these bilateral gross trade flows taken by themselves may present a distorted view of the ultimate location of production.

[23.10823.106](#) Consider the example shown in Figure [23.7]. Country A exports goods produced entirely within A, to Country B, which further processes them before exporting them to Country C where they are consumed. The value added of A is 100 (the same as the value of the exports), and B adds value of 10 to the goods, thus exporting 110 to C. Trade statistics show total global exports and imports of 210, but only 110 of value added has been generated in their production. The bilateral gross flows show C importing 110 from B and no trade at all with A, even though A is the main source of value added in the goods that C is importing from B. Note that C's trade deficit with the world is 110, and the gross trade flows suggest that the deficit is entirely due to its trade with B, even though most of the income associated with the imports of the good ultimately flow to A. The bilateral gross trade flows and any deficit or surplus associated with those flows are likely to provide a misleading picture of the location of production and the ultimate benefits or harms resulting from international trade.

Figure 23.7. Inflated gross flows of trade



Source: UNECE *Guide to Measuring Global Production* (2015).

[23.10923.107](#) Several handbooks, guides, and statistics have been published since the last update of the [SNA/Manual] to better address the statistical challenges in understanding the nature of global production.⁵ The Trade in Value Added (TiVA) approach addresses the double counting implicit in gross flows of trade. TiVA measures the value that is added by each economy and industry in the production of goods and services that are traded and consumed worldwide.

[23.11023.108](#) The TiVA information thus incorporates information about the entire global value chain, providing information that policy makers can use to understand the global effects of their economy's trade flows, potentially impacting policies regarding the effects of trade on growth and competitiveness, global imbalances, macroeconomic shocks, employment, and the environment.

[23.11123.109](#) The TiVA measurement model involves compiling a worldwide input-output table, which combines national supply and use tables with trade statistics. The worldwide input-output table enables the tracking of exports of one economy that are used as intermediate consumption in an industry of a second economy. The worldwide input-output table also includes columns that record the final demand in each economy and rows that record taxes less subsidies on products, value added at basic prices, and output for each industry in each economy.⁶

[23.11223.110](#) Among the key indicators provided by the TiVA statistics are the domestic content of an economy's exports (that is, the domestic value added of exports as a percentage of total gross exports), a decomposition of an economy's gross exports by source economy in value added terms, and a similar decomposition of an economy's gross imports by source economy in value added terms. It is also possible to decompose the value-added content of exports by goods and services value added. Finally, these decompositions often show that a portion of the value added of imported intermediate goods reflects an economy's own domestic value added (from an earlier stage in the global value chain) that has "returned" to the economy.

[23.11323.111](#) Granular TiVA statistics can be computed using eSUTs (see paragraphs [23.78-23.80]). Because TiVA estimates rely on supply and use (or input-output) tables from multiple economies, they have generally been compiled by international or regional organizations. Nevertheless, national statistics are the ultimate source of the data used in their compilation, and international cooperation is required in providing the data at the required level of detail. Where sufficiently detailed data are not available, the compiler necessarily has to make several assumptions. Efforts to improve the quality of national data on global value chains has contributed to the next analytical tool, the global value chain thematic account.

Global Value Chain Thematic Account

Reference:

United Nations, Department of Economic and Social Affairs, Statistics Division (2021), *Accounting for Global Value Chains: GVC Satellite Accounts and Integrated Business Statistics*, Studies in Methods, Series F no. 120.

[23.11423.112](#) GVCs, coordinated and headed by lead firms, represent interlinked core production activities and supporting activities to produce a final product. GVCs consist of the full range of activities that firms and workers do to bring a product from its conception to its end use. This includes activities such as research and development, production, transportation and distribution, marketing and sales, and after-sales services to the final consumer. While one cannot fully see the activities of GVCs in conventional national accounts statistics, a GVC thematic account uses a bottom-up approach that looks at a specific production chain within the framework of national accounts.

[23.11523.113](#) The United Nations Handbook, *Accounting for Global Value Chains: GVC Satellite Accounts and*

⁵ For example, see OECD (2021), *Guide to OECD's Trade in Value Added Indicators: 2021 Edition*. International and regional organizations have also compiled regional versions of TiVA accounts for Europe, Asia, and North America.

⁶ A more complete description of the construction of TiVA statistics is available in Chapter 7 of the UNECE *Guide to Measuring Global Production*.

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Integrated Business Statistics, highlights the role of a GVC thematic account approach that can be used to identify and articulate a GVC for a specific product or group of products produced within a GVC. The GVC thematic account consists of GVC-specific supply and use tables (SUTs), either national or multi-country, based on an enterprise-centered approach. It combines integrated and more detailed business statistics and information on business lines and functions and GVC-specific institutional sector accounts. Accordingly, it includes production, including generated income and employment, investment income, and investment (both nonfinancial and financial), and provides information on balance sheets. This level of detail is not readily available in the existing accounting presentation at the level of sectors or sub-sectors that contain the activities of significant GVCs in an economy.

23.11623.114 National (or multi-country) GVC-specific accounts would be compiled from national supply and use tables. The scope of the GVC and the identification of the firms participating in the supply chain of the GVC must first be determined by the compilers. The integration of information starts from the compilation of national supply and use tables with a common breakdown of industries and products. The breakdown at industry level explicitly identifies the relevant International Standard Industrial Classification (ISIC) divisions and groups for the GVC. Similarly, the breakdown at the product level explicitly identifies the GVC-relevant products. However, there are significant additions required for a comprehensive GVC analysis as outlined in the United Nations Handbook.

23.11723.115 A global enterprise can organize its core production activities (production of goods and services to be sold in the market) in a number of different business lines. Such an enterprise could be a lead firm for various GVCs in different specific industries. Therefore, business, trade, and investment data for a GVC thematic account would need to be collected from the business line of a global enterprise to allow for the correct data specification of the industry-specific GVCs controlled by the lead firm. The enterprise or enterprise group would be able to delineate the statistical units in each of its business lines and further by each business function. The activities of the lead firm are recorded in the country of its residence. In addition, in order to reflect the governance structure in the supply and use tables, there should be a further breakdown of the firms in the ISIC categories that correspond with the business functions of a GVC undertaken in the economic territory to reflect if the firm is foreign controlled or nationally controlled and if the firm is part of the GVC or not.

23.11823.116 In a similar way, the list of standardized products explicitly identified in the GVC-specific accounts reflects the GVC-related products which include the final product of the GVC and the intermediate goods and services that are used to produce the final product. Finally, because of the multi-country nature of the GVCs, the trade of these products between the GVC partner countries would also be explicitly shown.

23.11923.117 The GVC thematic accounting framework is a flexible approach that can be implemented depending on an economy's needs and interests without overburdening or reducing the accuracy or consistency of the national accounts. In other words, GVC thematic accounts may focus on a single country or, preferably, expand to multi-country accounts with major GVC partners. Flexibility also applies in choosing one or more industries to focus on, with the selection based on the economic importance or dominance of the industry in the domestic economy and partner country markets. Moreover, GVC [satellite thematic](#) accounts may comprise only one or several GVC-specific SUTs of interest, but preferably it will also include the GVC-specific institutional sector accounts.

23.12023.118 Compilers can choose to focus on the most relevant GVCs for their economy based on their relative importance in terms of value added to the national economy, international investment, and trade relations, and/or to address specific policy questions. GVC thematic accounting aims to address the implicit homogeneity assumption among firms by deconstructing their contributions in the fragmented production process across multiple countries. Large firms, for example, capitalize on economies of scale, whilst affiliated firms may also have different production processes and different cross-border trade relationships than non-affiliated firms.