

Chapter 38: Thematic and Extended Accounts

A. Introduction

- 38.1 The integrated framework of the SNA is a fully integrated and internally coherent system, and it provides a relatively limited amount of disaggregation in order to present an uncluttered view of the major macroeconomic aggregates. Yet answering the broad range of relevant questions about economic activity and phenomena often requires multiple perspectives and the sort of detailed disaggregation that would overburden the integrated framework of economic accounts. Demands therefore frequently arise for further data that will permit deeper insight into economic activities or phenomena of special interest or importance and show the broader context.
- 38.2 Thematic and extended accounts (formerly known as satellite accounts) are flexible tools for increasing the visibility of key phenomena by bringing all the pertinent data together in one place, and by presenting further disaggregation, alternative aggregations and approaches, and broader context while maintaining coherence with the overall conceptual framework of the SNA. They can also be a place where experimental methods are tested. Complementary and experimental data may also be presented in a supplementary table or account rather than a fully elaborated thematic or extended account in cases of topics that can be covered in a single table or account of limited scope. The positions of supplementary tables or accounts, thematic accounts and extended accounts in the taxonomy of SNA accounts are shown in chapter 21, Box 4.
- 38.3 Thematic and extended accounts are linked to, but distinct from, the integrated framework of economic accounts. Their links to the integrated framework enable thematic and extended accounts to inherit the rigour of the SNA, including its definitions for concepts such as production, consumption, income, and assets, and its framework for ensuring the consistency of the estimates with each other and with higher level aggregates. For example, as part of ensuring this consistency, compilation of a thematic account may include balancing the supply and use of the products included in the key activity of interest. The link to the integrated framework also allows these accounts to show the economic significance of the items they cover through meaningful comparisons to macroeconomic aggregates such as GDP/NDP, gross value added, and trade in services.
- 38.4 One of the strengths of the SNA is its flexibility, and this flexibility extends to the choice of topics for thematic or extended accounts. The economy's structure and growth pattern, the key policy issues, and data availability are factors to consider in identifying the themes that would be appropriate to cover in a thematic or extended account. Nevertheless, the compilation of certain thematic or extended accounts is encouraged to fill important information gaps on aspects of well-being and sustainability. These include: (i) the labor account (discussed in chapter 16), (ii) the thematic account on the digital economy (discussed in chapter 22), and (iii) the extended accounts on household unpaid service work, health, and education and human capital (discussed in chapter 34). In addition, tables analyzing inequality by disaggregating household income, consumption, and wealth (discussed in chapter 32) are part of the recommended data dissemination on the household sector.
- 38.5 This chapter explains the roles of thematic accounts and extended accounts in dissemination of macroeconomic statistics and provides general guidelines for compiling a thematic account. The purposes and scope of thematic and extended accounts are explained in Section B. Section C provides an overview of the main tools for developing a thematic account, including supply and use tables. Section D explains the steps in developing a thematic account on a key activity in the framework of supply and use tables, which include disaggregation of the relevant elements of the supply and use tables, complementing the information provided in those tables with physical indicators, and, possibly, extending the production boundary to bring visibility to goods and services produced for own consumption. This section concludes with a discussion of the conditions that allow compilation of the measures derived further down in the sequence of economic accounts on institutional sectors, which include the income, saving, investment flows, and balance sheet of the key activity.

B. Relation between Thematic Accounts and Extended Accounts

- 38.6 Both thematic and extended accounts provide complementary data that allow insight into a key activity or aspect of the economy that lacks visibility in the integrated framework of economic accounts, but they differ in their relationship to those accounts. Thematic accounts disaggregate and rearrange the items in the integrated framework of the SNA, while extended accounts expand, or look beyond, the standard SNA boundaries to give a different perspective or a more comprehensive view of a phenomenon and its broader context. However, to provide the full picture or the broader context, it may be necessary to add items beyond the standard SNA boundaries to a thematic account, and it is common to include items providing further detail on measures in the standard sequence of accounts as part of an extended account. Whether an account containing both thematic account and extended account elements is considered a thematic account or an extended account is determined by its focus. If, for example, measures of imputed monetary values of services or externalities beyond the SNA production boundary are the focus, the account is typically referred to as an extended account. This also holds if the focus is on measures that extend the asset boundary.

Thematic accounts

- 38.7 Analytically important items for understanding the key activity or phenomenon that is the focus of a thematic account are often invisible in the integrated framework of economic accounts because they are subsumed in broader aggregates or are implicit components of transactions estimated at a higher level of aggregation. Thematic accounts increase the visibility of such items by compiling more granular decompositions and by compiling alternative aggregations that summarize the relevant granular data. These alternative aggregations may, for example, introduce a different treatment of ancillary activities in which the elements of the standard framework of economic accounts are rearranged without altering the boundaries of the underlying SNA concepts.
- 38.8 Most thematic accounts cover a key activity, which is an activity that is of high economic importance or of special interest for policymaking or other purposes. To provide a complete view, the key activity must often be defined broadly enough to include segments of several of the industries defined in the classification system used for the standard supply and use tables (such as ISIC rev. 5). The boundary of the key activity may therefore encompass detailed industries or industry segments from different sections and divisions of the standard classification system, in effect rearranging that system. A thematic account may also analyze a key phenomenon covered by the standard framework of economic accounts in more detail by providing additional breakdowns and alternative aggregations. Information on other related activities may also be provided as part of showing the impact or broader context of the key activity or phenomenon – for example, a thematic account on the digital economy may provide information on the producers that use digital intermediation platforms to sell their (non-digital) output.
- 38.9 Tourism accounts are an example of widely compiled thematic account. Accounts for health and education (discussed in chapter 34) are also widely compiled either as thematic accounts or extended accounts. Other common topics for thematic accounts are agriculture, culture, sports and recreation, transport, and social protection. Finally, the profound impact of digitalization has made the digital economy a frequent theme for the work on new types of thematic accounts; see chapter 22 for a discussion of these accounts.

Extended accounts

- 38.10 A different perspective or a more comprehensive view can provide important context for the standard SNA indicators, and cover aspects of, for example, well-being and sustainability and of production, income and wealth that are beyond the scope of the standard framework of economic accounts. Extended accounts present concepts that expand or modify the standard boundaries of production, consumption, investment, income, assets, and wealth, and indicators that concern phenomena beyond these boundaries. Measuring these concepts could involve the use of experimental methodologies.
- 38.11 Extended accounts often include imputed values for indicators measured in monetary units and/or non-monetary indicators measured in physical units. Expanding an SNA boundary usually requires imputing a monetary value for goods, services, or assets that are not sold in markets, or estimating a monetary value for

externalities. This imputation may, for example, be based on actual or inferred costs of production, observed market prices of related products, the net present value of expected future returns, or the value of the harm to health or the environment caused by an externality.

- 38.12 Areas in which extended accounts can fill information gaps include unpaid household service work, education and human capital, health, and free digital services. Unpaid household service work, including volunteering, is a frequent theme for an extended account (see chapter 34). Extended accounts for education and human capital may also expand the production boundary to include unpaid household production of educational services and expand the asset boundary to include income-based and cost-based measures of human capital (see chapter 34). Similarly, the extended account on health care may expand the production boundary to include unpaid household production of health care and long-term social care (see chapter 34). Finally, an extended account could impute direct household consumption of free services of digital platform (see chapter 22).
- 38.13 Although monetary measures of stocks and depletion of natural resources are included in the SNA, addressing concerns about sustainability is another area where complementary systems provide a multitude of additional data. The System of Environmental-Economic Accounting (SEEA) provides two related sets of statistical standards to guide the collection, organization, and presentation of the data needed for the analysis of environmental aspects of sustainability. First, the *SEEA 2012 Central Framework* provides a framework for producing environmental-economic accounts in physical and monetary units on natural resource stocks and flows, natural resource inputs to the economy and on impacts of the economy on the environment and expenditures to mitigate these impacts. Second, *SEEA—Ecosystem Accounting* extends the SNA asset and production boundaries to recognize and account for ecosystem assets and the services derived from these assets in physical and monetary terms. The close relationship of the SEEA to the SNA and the use of its key components to assess sustainability are discussed in chapter 35.
- 38.14 When an extended account expands or modifies the SNA boundaries of production, consumption, or assets, it must remain internally consistent. Therefore, expanded definitions of production, income, and expenditures must maintain the accounting identities between production and income from production and between total supply and total use of a product. Furthermore, the terminology used in the extended account should clearly distinguish the alternative and expanded concepts from the standard SNA concepts.

C. Tools for Developing a Thematic Account

- 38.15 Combining the data from the integrated framework of economic accounts with more detailed data from the supply and use tables and from outside sources will enable deeper insight into the key activity or phenomenon being analyzed in the thematic account. In addition, alternative aggregations based on alternative approaches to classification can aid in the analysis of the key activity or phenomenon. One of the steps in planning and designing a thematic account should therefore be to identify the outside data sources and alternative classifications that can help enhance the scope or depth of the analysis of the key activity or phenomenon of interest.
- 38.16 This section discusses commonly used resources for compiling a thematic account on a key activity. Supply and use tables are considered first, as they are typically used as a starting point for having more detailed breakdowns and can provide an organizing framework for the data. Outside data sources are discussed next. Last, this section discusses the use of alternative approaches for classifying and aggregating the data used to compile a thematic account.

1. Supply and Use Tables

- 38.17 Although disaggregation of the production and generation of earned income accounts of the relevant institutional sector (or sectors) can provide valuable insights into the key activity featured in a thematic account, the organizing framework and wealth of information provided by supply and use tables (discussed in chapter 15) will allow a much more complete and comprehensive description of the theme being addressed. For example, data on who consumes the sector's output can be provided by drawing on the information presented in the use table. Furthermore, the key sector's linkages with the rest of the economy can also be

derived from the use table and used to estimate the indirect impact of an increase in its output of goods and services. Compiling the thematic account in the framework of supply and use tables will also help ensure its accuracy and its consistency with the rest of the accounts. (An example of deriving data that can be used to compile a thematic account by breaking out digital transactions, products and industries in extended supply and use tables is discussed in chapter 22, section F.)

- 38.18 As illustrated in the simplified example of extending the supply and use tables discussed in section D below, a supply table breaks out the domestic sources of supply of every product by industry. Its columns contain industries, and its rows contain products, with an industry's output of a product valued at basic prices. The supply table also contains columns showing imports, taxes less subsidies on products, trade and transport margins, and the total supply of each product at purchaser's prices. The total supply of a product at purchaser's prices is conceptually identical to the total of the uses of the product, and a process of balancing the supply and use tables ensures that this identity is satisfied in practice.
- 38.19 The use table breaks out each industry's intermediate consumption of a product, with additional columns showing the final consumption expenditures on the various products broken out by each institutional sector, gross capital formation, exports, and the total uses of the product. The bottom section of the use table shows industries' total intermediate consumption, value added and output, along with a decomposition of value added that includes compensation of employees, other taxes less subsidies on production, consumption of fixed capital, gross and net operating surplus, and gross and net mixed income. Additional rows show total output, labor inputs as measured by hours worked, and gross fixed capital formation.

2. Alternative Aggregations

- 38.20 Alternative aggregations are a key tool for analyzing a phenomenon or activity that lacks visibility in the standard system of accounts. In an alternative aggregation, the items contained in the standard aggregates are reclassified in a way that brings the key phenomenon or activity into focus. The rows and columns of the supply and use tables follow the standard product and industry classifications (CPC version 2.1 and ISIC rev. 5) at similar levels of their respective hierarchies. It can be quite instructive to bring together a set of detailed expenditures with a common purpose, or a set of detailed activities involved in the production of a key type of product. For example, if the objective is to analyze the impact of oil and natural gas on the economy, the thematic account may contain the industries of extraction of crude petroleum and natural gas (ISIC division 06), manufacture of refined petroleum products (ISIC class 1920), transport via pipelines (ISIC class 4930), wholesale of solid, liquid and gaseous fuels and related products (ISIC class 4671) and retail sale of automobile fuel (ISIC class 4730). Depending on local circumstances, it may also be useful to include petrochemical processing.
- 38.21 Many thematic accounts group together a select set of detailed industries of special interest or importance to the economy. Such special groups of selected industries are commonly referred to as a "key activity", "key sector", or just "sector". (However, this use of the term "sector" can cause confusion, as "sector" is typically used as a way of referring to an institutional sector in the SNA.) For example, a key activity containing the industries with critical roles in the economy's external transactions might be useful to track. Another example of a key activity is the group of industries that produce, transport, and sell oil and gas products discussed above.
- 38.22 The detailed industries and products that are grouped together to form a key activity often come from different sections of the standard industry classification and standard product classification. For example, a special aggregation might be developed to allow insight into an emerging new technology or business model that cuts across the standard industry or product boundaries. The key activity might be narrowly specified, such as a particular agricultural crop or mineral, or it might be relatively broad, such as all the goods and services primarily serving tourism. In either case, special supply and use tables may be compiled that concentrate on the key activity and summarize the other industries or products in broadly defined aggregates. If the key activity comprises a discrete set of enterprises for which income statement and balance sheet data are available (discussed below in paragraph 38.43), a complete sequence of economic accounts for the key activity may also be compiled.
- 38.23 Classifications based on the purpose of the expenditure can also be used for the alternative aggregations.

Detailed expenditures identified as having a common purpose in the four functional classifications of the SNA (see Annex X on functional classifications), may be reassembled into cross-cutting aggregates of analytical interest. For example, the SNA functional classifications identify the expenditures on education incurred by households, government, nonprofit institutions serving households and market producers that could be part of a cost-based measure of human capital. A reclassification of the goods identified as durables in the Classification of Individual Consumption by Purpose (COICOP) as gross capital formation is another example.

- 38.24 A thematic (or extended) account may provide more than one type of alternative aggregation. The classifications that define the alternative aggregations of products, activities or transactions may be based on any of five dimensions: (i) the purpose of the expenditure; (ii) the characteristics of the product; (iii) who the user of the good or service is (e.g., resident and non-resident visitors in a tourism account); (iv) who the producer is (e.g., household non-market producers or informal unincorporated household market enterprises); or (v) the characteristics of the transaction (e.g., digitally ordered). Special aggregations of products in a key activity thematic account may include relevant secondary or ancillary outputs of industries whose primary product is out-of-scope.

3. Additional Source Data

- 38.25 Constructing the relevant aggregates for the key activity that is the focus of the thematic account often requires further decomposition of the industries and products shown in the standard supply and use tables. Additional source data, such as an economic census or government or companies' administrative records or private data on electronic transactions, may be consulted to develop these further breakdowns. When drawing on alternative data sources, the differences in coverage, timing, and estimation methods between the additional source data and the integrated set of data in the supply and use tables must be taken into account. Supply and use tables often incorporate adjustments to ensure exhaustiveness (such as adding an estimate of the informal activity), to correct for differences in timing, and to balance the supply and use of the product.

D. Developing a Thematic Account on a Key Activity

- 38.26 Most thematic accounts concern a key activity. An organizing framework based on supply and use tables will help ensure that the thematic account on the key activity is consistent with the standard framework of economic accounts and provides a complete analysis of the key activity. Compiling a thematic account in a supply and use table framework involves a series of steps. These steps disaggregate the relevant elements of the supply and use tables, develop complementary indicators giving additional perspectives on the key activity, and add information on the broader context by expanding the standard production and asset boundaries. In some cases, it may also be possible to add information on revenues and expenditures beyond those arising from transactions in goods and services, and on financial assets and liabilities.
- 38.27 The process of developing a thematic account on a key activity can be divided into a planning phase and a compilation phase. This section first discusses the planning phase. It then discusses the steps to compile a thematic account on a key activity drawing on the standard supply and use tables in combination with other source data. Although a complete analysis of the key activity would include all the steps and indicators described in this section, in some cases the circumstances may not call for all of them to be included to enable the users of the thematic account to understand the role of the key activity in the domestic economy and analyze the policymaking concerns related to the key activity.
- 38.28 Additional information on compiling certain specific types of thematic accounts or the items that go into these accounts can be found in specialized handbooks and manuals such as, for example, the international handbooks on accounts on tourism (see [Tourism Satellite Accounts: Recommended Methodological Framework 2008](#), United Nations et al., 2010), and on nonprofit institutions and volunteering (see [Satellite Account on Non-profit and Related Institutions and Volunteer Work](#), (United Nations, 2018). Other examples of compilation guidance on specific themes are the [OECD Handbook on Compiling Digital Supply and Use Tables](#) and the [OECD Handbook on Measuring the Space Economy](#).

1. The Planning Phase: Defining What is to be Measured

- 38.29 Developing a precise definition of what is to be measured before beginning the compilation process will help guide the compilation process and help avoid inconsistencies and omissions. A precise definition of the measurement objective can also clarify the interpretation of the results. If the thematic account concerns a key activity, the boundary of the key activity must therefore be specified precisely enough to guide the data gathering and compilation processes. If left undefined, questions can easily arise about the boundary of a key activity that brings together detailed industries and products from different parts of the standard classification system.

2. Steps to Compile Thematic Supply and Use Tables, with Transport as an Example

- 38.30 Compiling a complete thematic account for a key activity in a framework of supply and use tables requires steps to further disaggregate the relevant elements of these tables and steps to complement the information they provide with other monetary or physical indicators. For example, the further disaggregation in a thematic account on transport might distinguish different modes of transport, different types of passengers and freight, and public and private transport, and analyze physical indicators of cargo and passengers transported and of transport industry employment. It may also be appropriate to further complement the data in the supply and use tables with measures that extend the production boundary or account for environmental externalities. (As noted above, a thematic account can contain extended measures provided as supplementary information.)

Disaggregating the Relevant Elements of the Supply and Use Tables

- 38.31 The first series of steps in compiling a thematic account based on supply and use tables involves disaggregation. Items in the supply and use tables must be disaggregated as required to analyze the detailed components of the key activity and to allow construction of aggregate measures composed of the detailed industries (or detailed products) included in the key activity. In addition to using the disaggregated data to present further analytical detail, aggregate measures of the key activity that combine the relevant detailed industries or detailed products, including those that require disaggregation to identify, should be compiled.
- 38.32 The disaggregated information on items in the supply and use tables should include further breakouts of the relevant (i) industries, (ii) products, (iii) taxes and subsidies on products, and (iv) components of value added. Taking breakouts that could be included in a transport account as examples, the decompositions of the relevant elements of the standard supply and use tables needed to analyze the key activity may be compiled as follows:
- i. Identify the industry columns of the supply and use tables that are within the bounds, or partly within the bounds, of the key activity and disaggregate these columns as needed for expositional and analytical purposes. For example, in the case of a transport account, the breakouts might distinguish public and private suppliers of land transport, passenger transport, and other services. In cases of columns that straddle the boundary of the key activity, the detailed industries that are within the scope of the key activity must be distinguished from the other detailed industries with which they have been combined so that the in-scope components can be included in the aggregated measures of the key activity, such as measures of its scale.
 - ii. Disaggregate the rows of the supply and use tables that cover the key products produced by, or used in, the key activity, including the relevant parts of rows that straddle the product boundary of the key activity. In a transport account, the detailed products might include the different modes of transport of passengers and freight. The disaggregation of the supply and use of a product might also distinguish different types of buyers (e.g., foreign and domestic air travel passengers) or types of transactions (e.g., the digital transactions of the digital economy thematic account).
 - iii. Break out the taxes and subsidies on the relevant products. The use table measures the uses of products at purchaser's prices, which include taxes on products and exclude subsidies on products, while the supply table measures industry output at basic prices, which include subsidies on products and exclude taxes on products. Breakouts of the taxes embedded in the relevant rows of the use table and the subsidies embedded in the relevant rows of the supply table can be quite instructive in cases

of products that are highly taxed or highly subsidized. In a transport account, for example, the subsidies on public transport and the taxes on different fuels may be substantial.

- iv. For the industries included in the key activity, compile further breakouts of value added. The standard use table decomposes value added into (i) compensation of employees, (ii) other taxes less subsidies on production and imports, (iii) consumption of fixed capital and depletion, (iv) net operating surplus, and (v) net mixed income. A further decomposition of value added might include a split of compensation of employees into wages and salaries and social contributions as a way of identifying industries where low social contributions reflect a predominance of informal employment. In the case of a transport account, a further breakout of other taxes less subsidies on production may reveal important sources of government revenue from taxes on land and structures, taxes on the use of equipment, and licensing fees.

Introducing Complementary Indicators

- 38.33 The next steps are to complement the measures presented in the standard or disaggregated supply and use tables with indicators that provide additional detail or context. The first set of indicators to compile includes the gross and net fixed capital formation and the closing stocks of fixed capital of the establishments included in the key activity. Second, physical indicators of production and consumption that help analyze the performance and condition of the industries that make up the key activity should be compiled. For example, a transport account might report physical data on passenger-kilometers and freight tonnage in conjunction with monetary data on these services. The data on values at current prices may also be complemented with price and volume data. Comparing the growth of the totals of physical quantities with the growth of a comparable volume index calculated by deflating with a price index will allow insight into the change in the mix of services being supplied – for example, a shift towards higher-priced routes (e.g., due to improved quality) would increase the relative growth rate of the volume index for freight transport services.
- 38.34 Third, the complementary indicators of employment needed to analyze the key sector’s impact on labour should be compiled. The labour indicators could disaggregate the data on hours worked in the bottom section of the use table by detailed industry and provide totals for the key activity and the suppliers of the products it uses. The data in the use table on compensation of employees and hours worked can also be complemented with data on the number of jobs or the size of the workforce employed in the key activity. For example, the usefulness of an account on transport might be enhanced by adding data on the composition of workforce employed in transport activities by occupation and gender or by the type of employment arrangement, including work intermediated by a digital platform.
- 38.35 The indicators of production may also be complemented by physical indicators of the environmental impacts of the key activity, such as quantities of pollutants and greenhouse gases emitted. For example, a transport account could include complementary indicators on the emissions generated by transport activities of enterprises and households.

3. Extending the Account beyond the Standard Production Boundary

Alternative Treatments of Own-Account Production of Services

- 38.36 The scope of the thematic account may be expanded to include measures that extend the production boundary in ways that add context and help give a complete picture of the key activity. One such extension is to include the relevant goods and services produced and consumed within the same establishment in expanded measures of the output and intermediate consumption of the key activity. This may include ancillary activities undertaken in the establishment where the output is used, which are not recorded in the integrated framework of the SNA (paragraph 6.41), Recording the production and intermediation consumption of an output by the same establishment, as well as the recording of production and intermediate consumption associated with ancillary activities, has no effect on value added but it brings visibility to previously invisible internal production. For example, in a transport account, the operating cost of trucks owned by enterprises in non-transportation industries might be used to measure in-house production of transport services.
- 38.37 A further step in extending the production boundary is to bring the relevant unpaid services produced by

households for their own consumption into an expanded measure of the output of the key activity. Household final consumption expenditures will then include the imputed value of the services produced by households for their own consumption and exclude households' expenditures on items used in producing these services either as intermediate inputs or for fixed capital formation (e.g., motor fuel and motor vehicles bought by households in the case of an account on transport). The value added from the households' production of own-account services can also be decomposed. For example, in the case of a transport account these components will be: (i) net mixed income equal to the imputed value of households' time spent in producing transportation services for own consumption, (ii) consumption of fixed capital reflecting the depreciation of the vehicles used in this activity, and (iii) the taxes on production associated with the vehicles (which are included in other current taxes paid by households in accounts based on the standard production boundary).

Bringing Visibility to Externalities

- 38.38 Externalities are impacts of the actions of a unit on the condition or circumstances of third parties that occur without those parties' consent. Although these impacts can be either positive or negative, externalities from production that significantly affect households' wellbeing or sustainability are usually negative. As discussed in Chapter 2, Section B.4, the relationship between aspects of wellbeing affected by externalities and accounting-based data such as the integrated framework of the SNA or the SEEA is complex and involves issues of measurement boundaries, indirect effects of externalities that are captured in the integrated framework of economic accounts, and valuation concepts. In the case of environmental externalities, the SEEA Ecosystem Accounting Chapter 12 (section 12.2.3) provides some examples of alternative presentations, including one in which the costs associated with the external effects are attributed to the causing unit. Such alternative presentations could bring visibility to selected externalities – in the standard framework of economic accounts, externalities are not attributed to “causing” units and their direct impacts on the affected units are not recorded.

4. A simplified illustration of extending the supply and use tables

- 38.39 Tables 38.1-38.3 present a simplified example of extending the supply and use tables to record own-account services of enterprises and households. The starting point for the example is the standard set of supply and use tables in Table 38.1. The standard supply table shows that the economy produces apples valued at 35 at basic prices and imports apples valued at 20, and that trade margins and taxes on products raise the value at purchaser's prices of the total supply of apples to 75. The economy also produces motor fuel of 34 valued at purchaser's prices, motor vehicles of 40 valued at purchaser's prices, wholesale and retail trade margin services of 54, and transport services of 24. The use table shows that apple growers use motor fuel of 2 and transport services of 3, and that apples of 30 are used in the apple cider manufacturing industry. Another activity included in the manufacturing column refines imported crude petroleum of 18 into motor fuel, and a third manufacturing activity uses imported vehicles parts of 20 to produce motor vehicles. The manufacturing activities also use motor fuel of 5 and transport services of 6. The trade industry uses transport services of 15, and households use apples of 45, apple cider of 72, motor fuel of 12, and motor vehicles of 20 for final consumption. Motor vehicles of 20 are also used by domestic industries for gross fixed capital formation.
- 38.40 Table 38.2 extends the supply and use tables to include transport services produced and used internally by establishments in the agriculture and manufacturing industries. Recording the output and intermediate consumption of internally produced transport services increases the economy's output and the total intermediate consumption of transport services by 6 but does not change any industry's value added.
- 38.41 Table 38.3 further extends the production boundary to include the transport services that households produce for their own use. The imputed value of the transport services produced by households for their own consumption is 30. However, the value added of the transport industry and overall final uses only increase by 18. A change in the classification household expenditure of 12 on motor fuel from final consumption to intermediate consumption of the expanded transport industry partially offsets the impact of the additional output and final consumption of transport services of 30. The composition of final expenditures also changes, with a reduction of 2 in final consumption caused in part by the reclassification of household expenditures motor vehicles from final consumption and to gross fixed capital formation and an increase in gross fixed

capital formation of 20. The extended use table also includes a decomposition of the value added of households' own-account transport activity. Taxes on the use of motor vehicles of 4 and depreciation of the motor vehicles of 8 leave only 6 for the net mixed income generated by the transport activity.

- 38.42 To simplify Tables 38.1-38.3, motor vehicle maintenance and repair services are not included in these tables. However, in a more realistic example of bringing transport services produced by households for their own consumption inside the production boundary, there would also be a change in the treatment of household expenditures on motor vehicle maintenance and repair services from final consumption to intermediate consumption, in the same way as households' use of motor fuel shifts from final consumption to intermediate consumption in Table 38.3. The intermediate consumption of maintenance and repair services would reduce the value added of households' own-account transport activity and the mixed income from this activity. The change in treatment of maintenance and repair services would also reduce final consumption expenditures.

5. Adding an Analysis of Income and Finance

- 38.43 The standard sequence of economic accounts for institutional sectors begins with the production and generation of income accounts, then proceeds to present a series of accounts that analyze revenues and expenditures, changes in assets and liabilities, and stocks of assets and liabilities. If the main items in this series of economic accounts are feasible to calculate, they will provide important insights into the performance and financial condition of the key activity. Among these items are property income receipts and payments, balance of earned incomes, current transfers, including taxes on income and wealth, saving, as well as analytical breakdowns of (the changes in) the stocks of assets and liabilities. However, the feasibility of compiling these items depends on how the key activity is organized.
- 38.44 Production and the related transactions covered by the supply and use tables are undertaken by establishments. In contrast, the accounts that analyze income flows and the changes in, and stocks of, assets and liabilities concern transactions that are undertaken by institutional units, which are enterprises in the case of a key activity. Enterprises can comprise multiple establishments, and data on enterprises often combine multiple establishments. If the establishments involved in the key activity belong to enterprises that do not have significant other establishments engaged in different activities, the transactions and balance sheet of those enterprises can be linked to the key activity and a complete sequence of economic accounts for the key activity can be compiled. However, if the enterprises involved in the key activity also have significant establishments engaged in other activities, the enterprises' transactions and balance sheet cannot be treated as coming just from the key activity. In this case, the income flows and (changes in) assets and liabilities of the key activity cannot be measured.

Table 38.1 The Standard Supply and Use Tables

Supply table

		Output by domestic industry					Imports	Trade and transport margins	Taxes less subsidies on products	Total supply
		Agriculture	Manufacturing	Trade	Transport	Total				
Supply by product	Apples	35				35	20	15	5	75
	Apple-cider		55			55		20	15	90
	Crude petroleum						18			18
	Motor Fuel		24			24		5	5	34
	Motor vehicle parts						16	4		20
	Motor vehicles		30			30		10		40
	Trade and transport			54	24	78		-54		24
	Total output/imports	35	109	54	24	222	54	0	25	301

Use table

		Intermediate consumption by domestic industry					Final expenditures			Total use
		Agriculture	Manufacturing	Trade	Transport	Total	Final consumption	Gross fixed capital formation	Exports	
Use by product	Apples		30			30	45			75
	Apple-cider					0	72		18	90
	Crude petroleum		18			18				18
	Motor Fuel	2	5	3	12	22	12			34
	Motor vehicle parts		20			20				20
	Motor vehicles					0	20	20		40
	Trade and transport	3	6	15		24				24
	Total intermediate consumption/final uses	5	79	18	12	114	149	20	18	301
Value added (gross)		30	30	36	12	108				
Output		35	109	54	24	222				

Table 38.2 Extending the Supply and Use Tables to incorporate Own-Account Transport Services of Enterprises

Supply table

		Output by domestic industry					Imports	Trade and transport margins	Taxes less subsidies on products	Total supply
		Agriculture	Manufacturing	Trade	Transport	Total				
Supply by product	Apples	35				35	20	15	5	75
	Apple-cider		55			55		20	15	90
	Crude petroleum						18			18
	Motor Fuel		24			24		5	5	34
	Motor vehicle parts						16	4		20
	Motor vehicles		30			30		10		40
	Trade and transport	0+2	0+4	54	24	78+6		-54		24+6
	Total output/imports	35+2	109+4	54	24	222+6	54	0	25	301+6

Use table

		Intermediate consumption by domestic industry					Final expenditures			Total use
		Agriculture	Manufacturing	Trade	Transport	Total	Final consumption	Gross fixed capital formation	Exports	
Use by product	Apples		30			30	45			75
	Apple-cider					0	72		18	90
	Crude petroleum		18			18				18
	Motor Fuel	2	5	3	12	22	12			34
	Motor vehicle parts		20			20				20
	Motor vehicles					0	20	20		40
	Trade and transport	3+2	6+4	15		24+6				24+6
	Total intermediate consumption/final uses	5+2	79+4	18	12	114+6	149	20	18	301+6
Value added (gross)		30	30	36	12	108				
Output		35+2	109+4	54	24	222+6				

Table 38.3. Extending the Supply and Use Tables to account for unpaid transport services produced by households

Supply table

		Output by domestic industry					Imports	Trade and transport margins	Taxes less subsidies on products	Total supply
		Agriculture	Manufacturing	Trade	Transport	Total				
Supply by product	Apples	35				35	20	15	5	75
	Apple-cider		55			55		20	15	90
	Crude petroleum						18			18
	Motor Fuel		24			24		5	5	34
	Motor vehicle parts						16	4		20
	Motor vehicles		30			30		10		40
	Trade and transport	0+2	0+4	54	24+30	78+6+30		-54		24+6+30
	Total output/imports	35+2	109+4	54	24+30	222+6+30	54	0	25	301+6+30

Use table

		Intermediate consumption by domestic industry					Final expenditures			Total use
		Agriculture	Manufacturing	Trade	Transport	Total	Final consumption	Gross fixed capital formation	Exports	
Use by product	Apples		30			30	45			75
	Apple-cider					0	72		18	90
	Crude petroleum		18			18				18
	Motor Fuel	2	5	3	12+12	22+12	12-12			34
	Motor vehicle parts		20			20				20
	Motor vehicles					0	20-20	20+20		40
	Trade and transport	3+2	6+4	15		24+6	+30			24+6+30
	Total intermediate consumption/final uses	5+2	79+4	18	12+12	114+6+12	149-2	20+20	18	301+6+30
Value added (gross)		30	31	36	12+18	108+18				
Other taxes (less subsidies) on production					+4	+4				
Depreciation					+8	+8				
Mixed income (net)					+6	+6				
Output		35+2	110+4	54	24+30	222+6+30				