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Updated System of National Accounts (SNA):

Chapter 2: Overview

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Not yet updated

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Chapter 2: Overview

A. Introduction

- 2.1 This chapter provides an overall picture of the central framework of the System of National Accounts(SNA). It introduces the main categories, which are in a sense the backbone of the System, and the rules of accounting to be followed when recording the various entries. It then describes the System's accounting structure and discusses some of the ways in which the central framework may be applied flexibly, depending on specific country requirements. These presentations are based on the point of view that national accounts are an integrated system of accounts for which complete consistency is required. This is the traditional point of view on national accounting and it remains the central one. Thereafter, the chapter proceeds from a second point of view, one that regards national accounts as a set of interrelated subsystems, each of which is fully consistent internally and all of which, although differing from one another in some aspects, are compatible in a loose sense. Satellite accounts are introduced. These are constructs that are semi-integrated with the central framework.
- 2.2 As stated in chapter I, the central framework describes the essential phenomena which constitute economic life: production, income, consumption, accumulation and wealth. It provides an understandable and simplified but complete representation of this set of phenomena and their interrelations.
- 2.3 The central framework is an integrated system. That is, the same concepts, definitions and classifications are applied to all accounts and sub-accounts. For example, all dwellings are treated as assets used to produce goods and services. As a consequence, all housing services, whether sold or consumed by the owners, are included within the production boundary, and all of the corresponding income originating from the production of housing services appears in the System in the same accounts using the same definitions and classifications.
- 2.4 Nevertheless, integrated does not mean restricted to a single point of view. The central framework includes several points of view for example, stocks and flows, the nature of transactions and the purposes of transactions, institutional units and establishment-type units, market output, output produced for own final use and other non-market output, consumption expenditure and actual consumption. All of them are mutually consistent.
- 2.5 The central framework is also consistent. That is, each economic flow or stock is measured identically for the parties involved. This consistency is achieved by applying throughout the System the same concepts and definitions and also by using a single set of accounting rules for all entries in the System. Of course, the actual data coming from the accounts or statistics provided by elementary units will not be fully consistent for various reasons. In practice, achieving consistency in national accounts requires a large amount of additional work.
- 2.6 Integration and consistency are basic requirements originating from the fundamental characteristics of economic life and coherent accounting. These features allow the central framework to serve as a basis for the coordination of economic, and in part social, statistics.
- 1. Analysing flows and stocks**
- 2.7 Basically, the purpose of a system of national accounts is to record economic flows and stocks. Economic flows can be thought of in various ways. Consider the

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question “Who does what?” “Who” refers to the economic agent engaged in doing something, the operator. “What” is connected with the kind of action this agent is undertaking. In a few cases, the answer to this simple question provides a good preliminary characterization of an economic flow.

- 2.8 But in general the question is too simple to provide even a rough economic description of a specific flow. Take the example of somebody buying a loaf of bread. In order to characterize the flow, it is necessary to consider from whom this loaf of bread is bought (a retailer or a supermarket) and what is given in exchange (a coin or a note). So the starting question is transformed into “Who does what with whom in exchange for what?” This rather simple flow involves two operators (a buyer, a seller), two main actions (a purchase, a sale), two secondary actions (a payment, a receipt) and two objects (bread, a coin or a note). Again, a complete description would require more information: at least the weight, kind and price of the bread.
- 2.9 The picture in the real world is still more complicated. Before this flow occurred, the seller had a certain quantity of bread in his shop; afterward he has less bread but more money. The buyer had a certain amount of money, now he has less money but some bread (before eating it). So the flow between them has changed their initial situations. This means that flows cannot be looked at in isolation; the situations before and after a flow occurs need to be considered. At those two points in time, one must ask the question “Who has what?” The baker not only has bread and currency, he also has a house with the shop, a kneading-trough, some flour, a deposit in a bank, a car, etc. In other words, he has (he owns) a certain stock of objects. The same is true for the buyer. In addition to what they are in themselves, flows modify stocks. Flows and changes in stocks are intrinsically connected. The previous question is again transformed into “Who does what with whom in exchange for what with what changes in stocks?”
- 2.10 However, the various ways of looking at this example have not yet been exhausted. Before the baker can sell bread, he has to bake it. He uses flour, water, electricity, a kneading-trough, etc. So, an additional question is “Who does what by what means?” What he does can

also be characterized in two ways: his activity (to bake) and the result of it (a product: bread).

- 2.11 With respect to the buyer one can ask “Why does he buy bread?” The obvious purpose is for eating it, as food; however, it could be different for giving it to a beggar, as charity. This raises the question “Who does what for what purpose?”
- 2.12 Mixing all the questions together results in a rather complex combination of simple links: “Who does what by what means for what purpose with whom in exchange for what with what changes in stocks?” Answering these questions for all economic flows and stocks and operators in a given economy would provide an enormous amount of information describing the complete network of economic interrelations. However, it would require an enormous amount of basic data, which are not always available, nor complete (i.e., they cover only certain aspects of the complex chain of questions). In addition, it is necessary to organize the recording of economic flows and stocks in an intelligible way, as discussed in the next section. It will become apparent that full articulation of all the questions raised by the analysis of economic flows is not necessary.

2. Recording flows and stocks

- 2.13 Users’ needs set certain requirements for the accounting framework. First, it should provide a picture of the economy, but the picture, to be intelligible and manageable, must be simplified. Secondly, it should faithfully represent economic life by covering all important aspects in a balanced way without neglecting or giving too little emphasis to some aspects or giving others too much prominence. Finally, it should portray all significant economic behaviour, interrelations and the results of economic activity. Although meeting these requirements is necessary, they are contradictory to a certain extent. Achieving the right balance among them is not easy. Too great a simplification can lose sight of or neglect important aspects of economic life. Too close a portrayal of reality can overburden the picture and reduce insight. Too much sophistication can lower intelligibility and mislead some users, and so on.

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- 2.14 To meet these requirements, the System uses, first, a limited number of basic categories to analyse and aggregate certain aspects (Who? What? What purpose? What stocks?) of the very numerous elementary flows. This is explained briefly in the next part of this chapter and in detail in the relevant chapters. Secondly, the System simplifies the picture it gives of the economic interrelations by not recording systematically the “who with whom?” question; that is, it does not depict the network of flows between the various types of operators. However, the “who with whom?” relation, which is not introduced in the accounting framework, is obvious in a number of cases and recommended in practice in some others. Also, the System does not record at all the “what in exchange for what?” question; that is, it does not indicate, for example, the specific nature of the financial counterpart (currency or deposit or short-term loan, etc.) of the purchases of goods and services or the payment of taxes.
- 2.15 Thus, in lieu of showing the network of direct economic relations between pairs of operators, the System is structured to avoid the need to record relations between pairs of operators and to make it sufficient to record each type of relation between a given operator (or group of operators) and all the other operators indiscriminately. The dummy, or screen, accounts that accomplish this objective are presented below in paragraphs 2.152 and 2.154 to 2.160.
- 2.16 The fact that the System is integrated, although not fully articulated, does not reduce its consistency requirements. In effect, the purpose of the System is to get national accounts that are as consistent as they would be if they were fully articulated; each economic flow or stock should be measured identically for both parties involved. The consistency in the System is achieved by applying throughout the same concepts and definitions and also by using a single strict set of accounting rules. These accounting rules are also presented briefly in section C below and more completely in chapter III.
- 2.17 The recording of flows and stocks is made in accounts, each account referring to a certain aspect of economic life. National accounts may be presented in several ways. The System mainly follows the classical presentation in the form of balancing statements with incomings on one side and outgoings on the other side. The accounts of the System are described in section D of this chapter and, with more detail, in each relevant chapter. The other main way of presenting the accounts is a matrix, in which each account is represented by a row and column pair. The matrix presentation is introduced in the annex to this chapter (and is used systematically in social accounting matrices, which are discussed in chapter XX). The annex also introduces presentations in the form of diagrams and equations.

B. Main categories

2.18 The SNA contains a number of classifications which in a sense constitute the skeleton of the System and permit various aspects of the questions raised above to be answered:

- Institutional units and sectors (who?)
- Transactions and other flows (what?)
- Assets and liabilities (what stocks?)
- Activities, establishments, products (other aspects of who and what?)

- Purposes (what for?).

They are presented in turn.

1. Institutional units and sectors

2.19 The fundamental units identified are the economic units which are capable of owning assets and incurring liabilities on their own behalf. They can engage in the full range of transactions. These units are called institutional units. In addition, being centres of legal responsibility, institutional units are centres of decision-making for all aspects of economic life. In practice,

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some institutional units control others and thus in such cases autonomy of decision is not total and may vary over time. Legally independent holding of assets and liabilities and autonomous behaviour do not always coincide. In the System, preference is generally given to the first aspect because it provides a better way to organize the collection and presentation of statistics even if its usefulness is limited in some cases.

Institutional sectors

2.20 The institutional units are grouped together to form institutional sectors, on the basis of their principal functions, behaviour, and objectives:

- *Non-financial corporations*: institutional units which are principally engaged in the production of market goods and non-financial services
- *Financial corporations*: institutional units which are principally engaged in financial intermediation or in auxiliary financial activities
- *General government*: institutional units which, in addition to fulfilling their political responsibilities and their role of economic regulation, produce principally non-market services (possibly goods) for individual or collective consumption and redistribute income and wealth
- *Households*: all physical persons in the economy, with the institutional unit in the household sector consisting of one individual or a group of individuals. According to the criteria given for defining the institutional unit, the household of the owner of an unincorporated enterprise in general includes this enterprise, which is not considered an institutional unit (except under certain conditions). The principal functions of households are the supply of labour, final consumption and, as entrepreneurs, the production of market goods and non-financial (possibly financial) services
- *Non-profit institutions serving households (NPISHs)*: legal entities which are principally engaged in the production of non-market services

for households and whose main resources are voluntary contributions by households.

2.21 Each sector, except NPISHs, contains a number of sub-sectors (with various levels) distinguished according to a hierarchical classification (see chapter IV). A sub-sector comprises entire institutional units, and each institutional unit belongs to only one sub-sector. In addition, the distinction between public, national private and foreign controlled corporations and between various socio-economic groups of households is emphasized in the System in order to respond to policy concerns.

Delimitation of the total economy and the rest of the world

2.22 The total economy is defined in terms of institutional units. It consists of all the institutional units which are resident in the economic territory of a country. The economic territory of a country, although consisting essentially of the geographical territory, does not coincide exactly; some additions and subtractions are made (see chapter XIV). The concept of residence in the System is not based on nationality or legal criteria. An institutional unit is said to be a resident unit of a country when it has a centre of economic interest in the economic territory of that country - that is, when it engages for an extended period (one year or more being taken as a practical guideline) in economic activities on this territory. The institutional sectors referred to above are groups of resident units.

2.23 Resident units engage in transactions with non-resident units (that is, units which are residents of other economies). These transactions are the external transactions of the economy and are grouped in the account of the rest of the world. Strictly speaking, the rest of the world is the account of transactions occurring between resident and non-resident units, but it may also be seen as the whole of non-resident units that enter into transactions with resident units. So, in the System's accounting structure, the rest of the world plays a role similar to that of an institutional sector, although non-resident units are included only in so far as they are engaged in transactions with resident institutional units. Consequently, as far as coding of classifications is concerned, a specific item for the rest of the world is included at the end of the classification of sectors.

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2. Transactions and other flows

- 2.24 Institutional units and their members fulfil various economic functions; that is, they produce, consume, save, invest, etc. They engage in various economic activities (agriculture, manufacturing, etc.) as entrepreneurs or wage-earners or suppliers of capital, or they are unemployed. In all aspects of their economic functions and activities, they undertake a great number of elementary economic actions. These actions result in economic flows, which, in addition to their specific nature (wages, taxes, fixed capital formation) create, transform, exchange, transfer or extinguish economic value; they involve changes in the volume, composition or value of an institutional unit's assets or liabilities. The economic value may take the form of ownership rights on concrete objects (a loaf of bread, a dwelling) or intangible assets (a film original) or of financial claims (liabilities being understood as negative economic value). In all cases, it represents a certain quantum of abstract economic value which is potentially usable to acquire goods or services, pay wages or taxes, etc.
- 2.25 Most economic actions are undertaken by mutual agreement between institutional units. They are either an exchange of economic value or a voluntary transfer by one unit to another of a certain amount of economic value without a counterpart. These actions undertaken by mutual agreement between two institutional units are called transactions in the System. The System also treats as transactions certain economic actions involving only a single institutional unit which are similar in nature to actions undertaken by mutual agreement by two different institutional units, such as own-account fixed capital formation. They are internal, or intra-unit, transactions.
- 2.26 However, not all economic flows are transactions. For example, certain actions undertaken unilaterally by one institutional unit have consequences on other institutional units(s) without the latter's consent. The System records such actions only to a limited extent, essentially when governments or other institutional units take possession of the assets of other institutional units, including non-resident units, without full compensation. In real life, unilateral economic actions bearing consequences, either positively or negatively, on other economic units (externalities) are much broader.

However, such externalities are not recorded in the System. Also, human action may result in the transfer of natural assets to economic activities and the subsequent transformation of these assets. These phenomena are recorded in the System as economic flows, changing the amount of economic value. Moreover, non-economic phenomena, such as wars and natural disasters, may destroy economic assets, and this extinction of economic value must be accounted for. Also, the value of economic assets and liabilities may change during the time they are held as stocks, as a consequence of changes in prices. These and similar flows that are not transactions, which are called other economic flows in the System, are described in chapter XII.

- 2.27 The economic flows can be actual, observable flows or they can be built up or estimated for analytical purposes. Certain flows may be directly observed in value terms. This is the case for monetary transactions between two institutional units, such as a purchase/sale of a good or the payment of a tax. Other two-unit flows are observable but cannot be immediately valued. These flows include barter of goods and services or education services consumed by students and provided free of charge by government; a value in money terms has to be attributed to them. Both of these types of two-unit transactions may or may not involve a "quid pro quo"—that is, a flow in one direction is linked to a counterpart flow in the opposite direction. Barter is an example of a two-unit flow involving a quid pro quo; a social assistance benefit in cash is a two-unit flow that does not involve a quid pro quo. Another kind of flow involves only one institutional unit. They may be physically observable, as in the case of output, own-account consumption or capital formation, or destruction by natural catastrophes. A value has to be attributed to them (this may be fairly easy in certain cases, such as when output is mostly sold). Other intra-unit, or internal, flows may not be observable as such; accounting entries are then constructed for the sake of measuring economic performance correctly. This is the case for the consumption of fixed capital or the revaluation of assets and liabilities. Certain inter-units flows, like the reinvested earnings on direct foreign investment, are also accounting entries created for analytical purposes. Finally, some observable monetary transactions are not recorded as they are observed in

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practice because they are of a composite nature (nominal interest, total insurance premiums) or their legal nature does not correspond to their economic one (financial leasing). Consequently, for the System, they are split up into various components and/or their classification and routing is modified.

- 2.28 In modern market economies, most transactions are monetary and take place between different institutional units. They constitute the fundamental basis for valuing flows in national accounts. The relative importance of non-monetary transactions varies according to the type of economy and the objectives pursued by the accounting system. It is generally greater for less developed economies than for developed ones, in which, however, it is not negligible.

Main types of transactions and other flows

- 2.29 Elementary transactions and other flows are innumerable. They are grouped into a relatively small number of types according to their nature. The System's main classification of transactions and other flows includes four first-level types, with each subdivided according to a hierarchical classification. It is designed to be used systematically in the accounts and tables of the central framework and cross-classified with institutional sectors, industry and product, and purpose classifications.
- 2.30 *Transactions in goods and services (products)* describe the origin (domestic output or imports) and use (intermediate consumption, final consumption, capital formation or exports) of goods and services. By definition, goods and services in the System are always a result of production, either domestically or abroad, in the current period or in a previous one. The term products is thus a synonym for goods and services.
- 2.31 *Distributive transactions* consist of transactions by which the value added generated by production is distributed to labour, capital and government and of transactions involving the redistribution of income and wealth (taxes on income and wealth and other transfers). The System draws a distinction between current and capital transfers, with the latter deemed to redistribute saving or wealth rather than income (see chapter VIII).

- 2.32 *Transactions in financial instruments* (or financial transactions) refer to the net acquisition of financial assets or the net incurrence of liabilities for each type of financial instrument. Such changes often occur as counterparts of non-financial transactions. They also occur as transactions involving only financial instruments. Transactions in contingent assets and liabilities are not considered transactions in the SNA (see chapter XI).

- 2.33 *Other accumulation entries* cover transactions and other economic flows not taken into account before which change the quantity or value of assets and liabilities. First, they include consumption of fixed capital and acquisitions less disposals of non-produced non-financial assets. Then, they cover other economic flows of non-produced assets, such as discovery or depletion of subsoil resources or transfers of other natural assets to economic activities. They also cover the effects of non-economic phenomena such as natural catastrophes and political events (wars for example). Finally, they include holding gains or losses, due to changes in prices, and some minor items (see chapter XII).

Characteristics of transactions in the System

- 2.34 In order to provide more useful answers to the questions raised in the analysis of flows, some transactions are not recorded in the System as they might be directly observed. First, the System often uses categories which are more closely identified with an economic concept. For example, gross fixed capital formation, a sub-category of transactions in goods and services, is broader than the limited coverage thought of as "purchases of fixed assets". In order to be closer to an economic concept, it covers the acquisition of new and existing fixed assets, through purchases, barter transactions, own-account capital formation or investment grants received in kind, less the disposal of existing assets, through sales, barter transactions or investment grants made in kind.
- 2.35 Secondly, as the previous example shows, the System also often uses categories which are compacted, that is, are the result of combining a number of elementary transactions. "Changes in inventories", for example, is the difference between entries into and withdrawals from inventories and recurrent losses. The same netting

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happens for transactions in financial instruments. All transactions in an instrument held as an asset (or as a liability) are grouped under the heading of this instrument. The item "loans," for example, covers issuance of new loans, conversions, and redemptions or cancellations of existing loans. Finally, some categories of transactions in the System, such as distributive transactions concerning interest and net non-life insurance premiums, require an actual transaction to be split into parts.

- 2.36 Although monetary transactions have a basic role in the valuation of flows in the System, non-monetary transactions are also significant. They include flows of goods and services that take place between institutional units for which values have to be estimated and also some flows that are assumed to take place within units. It is often desirable, therefore, to show monetary transactions separately from non-monetary in the broad sense, with in-kind transactions as an additional sub-category.

Complementary classification of transactions and other flows

- 2.37 Since introducing all relevant distinctions throughout the classification of transactions and other flows would overburden the picture, the System provides a complementary classification to facilitate additional presentations and analysis. The complementary classification is not intended for regular use but for use when a more detailed analysis of certain accounts or of certain transactions is needed and when users need help in understanding the results. Moreover, it is not intended to limit the extension of national complementary classifications: the latter may indeed have a broader coverage, according to specific needs.
- 2.38 The complementary classification of transactions and other flows shows, first, a number of transactions in kind explicitly, such as own-account final consumption, barter transactions and wages and salaries in kind. Secondly, it shows the components of compacted flows, such as output and intermediate consumption. Also, it includes observed composite transactions, such as nominal interest or total insurance premiums, that are split into components for use in the System. Finally, it provides additional details and complements. As

stressed in chapter XIX, countries are invited to use both the main and complementary classifications in a flexible way. In particular, they may want to subdivide some headings of the main classification to analyse specific transactions; the complementary classification provides a useful reference.

3. Assets and liabilities

- 2.40 Assets and liabilities are the components of the balance sheets of the total economy and institutional sectors. In contrast to the accounts that show economic flows, a balance sheet shows the stocks of assets and liabilities held at one point in time by each unit or sector or the economy as a whole. However, stocks are connected with flows: they result from the accumulation of prior transactions and other flows, and they are modified by future transactions and other flows. Generally recorded at the point in time when an inventory is drawn up, they result in fact from a continuum of entries and withdrawals, plus some changes, either in substance or in value, occurring during the period a given asset or liability is held. Thus stocks and flows are closely related.

- 2.41 The coverage of assets is limited to those assets which are subject to ownership rights and from which economic benefits may be derived by their owners by holding them or using them in economic activity as defined in the System. Most consumer durables, human capital, culture as such and natural resources that are not capable of bringing economic benefits to their owners are outside the scope of assets in the System.

- 2.42 The classification of assets distinguishes, at the first level, financial and non-financial (produced and non-produced) assets (see chapter X). Most non-financial assets generally serve two purposes. They are primarily objects usable in economic activity and, at the same time, serve as stores of value. Financial assets are directly stores of value, although they may also fulfil other functions.

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4. Producing units and products

Producing units

- 2.43 Institutional units such as corporations may produce various types of goods and services. These goods and services result from processes of production which may differ as regards materials and supplies consumed, kind of equipment and labour employed and techniques used. In other words, they may come from different economic activities.
- 2.44 To study production and production functions in detail, it is necessary to refer to more homogeneous units. The ideal solution would be to delineate, among institutional units, units which would be totally homogeneous - that is, engaged in only one economic activity - and observable. In practice, it is not always feasible to distinguish, inside multi-activity units, units of production engaged in a single activity and for which the necessary data are available so that some secondary activities that cannot be separated are covered. For that reason, the SNA uses for the detailed study of production a unit which, in addition to its principal activity, may cover secondary activities. As it is also necessary to give a picture of the distribution of production in space, this unit also has to be in a single location or nearby sites. This unit is the establishment.
- 2.45 Establishments that have the same principal activity are grouped in industries according to the International Standard Industrial Classification of All Economic Activities (ISIC, Revision 3).
- 2.46 Given the fundamental role played by the market in modern economies, the SNA distinguishes, as an essential feature of its structure, between establishments which are market producers, producers for own final use and other non-market producers. Market establishments produce mostly goods and services for sale at prices which are economically significant. Producers for own final use produce mostly goods and services for final consumption or fixed capital formation by the owners of the enterprises in which they are produced. Other non-market establishments supply most of the goods and services they produce without charge or at prices which are not economically significant.

- 2.47 There is a hierarchical relationship between institutional units and establishments. An institutional unit contains one or more entire establishment(s), either market, producers for own final use or other non-market. An establishment belongs to one and only one institutional unit.
- 2.48 For more refined analysis of the production process, use is made of an analytical unit of production. This unit, which is not always observable, is the unit of homogeneous production, defined as covering no secondary activities. These units constitute homogeneous activities.

Products

- 2.49 Goods and services, also called products, are the result of production. They are exchanged and used for various purposes: as inputs in the production of other goods and services, as final consumption or for investment. Here again the SNA makes a conceptual distinction between market, own final use and other non-market goods and services, allowing in principle any kind of good or service to be either type. In order to study transactions in goods and services in detail, the System uses the Central Product Classification (CPC).

5. Purposes

- 2.50 The concept of purpose, or function, relates to the type of need a transaction or group of transactions aims to satisfy or the kind of objective it pursues. Transactions are first analysed in the System according to their nature. Then, for certain sectors or kind of transactions, they are analysed from the expenditure side, by purpose, answering the earlier question "for what purpose?" In any analysis by purpose, the transaction or group of transactions is, in principle, the statistical unit to which a classification is applied. The classifications used in the System are described in chapter XVIII.
- 2.51 In the case of households, consumption expenditure and/or actual consumption are traditionally classified by purpose in household surveys and national accounts. Such analysis may cover other parts of household accounts, like fixed capital formation, interest paid and

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some transfers. All expenditure by NPISHs is broken down by purpose.

- 2.52 For government, the analysis by purpose applies to all transactions except, in most instances, to transactions in financial claims and interest on the public debt.
- 2.53 Normally, the analysis by purpose of market goods and services has to be made from the users' side. A market producer is normally not directly concerned with the

purpose for which a purchase is made, even if the purpose is of interest for market research. For market producers, the problem is different: in some instances producers may incur costs (intermediate, labour, capital) which contribute to market prices but serve a purpose that is different from the one the market good or service itself is destined to satisfy. This is the case, for example, for expenditures for environmental protection or employee training. The System provides for additional analysis in this connection.

C. Rules of accounting

1. Introduction

Terminology for the two sides of the accounts

- 2.54 The SNA utilizes the term *resources* for the side of the current accounts where transactions which add to the amount of economic value of a unit or a sector appear. For example, wages and salaries are a resource for the unit or sector receiving them. Resources are by convention put on the right side. The left side of the accounts, which relates to transactions that reduce the amount of economic value of a unit or sector, is termed uses. To continue the example, wages and salaries are a use for the unit or sector that must pay them.
- 2.55 Balance sheets are presented with *liabilities and net worth* (the difference between assets and liabilities) on the right side and assets on the left. Comparing two successive balance sheets, one gets changes in liabilities and net worth and changes in assets.
- 2.56 The accumulation accounts and balance sheets being fully integrated, the right side of the accumulation accounts is called *changes in liabilities and net worth* and their left side is called *changes in assets*. In the case of transactions in financial instruments, the changes in liabilities are often referred to as (net) incurrence of liabilities and the changes in assets as (net) acquisition of financial assets.

Double entry/quadruple entry

- 2.57 For a unit or sector, national accounting is based on the principle of double entry, as in business accounting. Each transaction must be recorded twice, once as a resource (or a change in liabilities) and once as a use (or a change in assets). The total of transactions recorded as resources or changes in liabilities and the total of transactions recorded as uses or changes in assets must be equal, thus permitting a check of the consistency of the accounts. Economic flows that are not transactions have their counterpart directly as changes in net worth, by construction. This is shown in section D below (and also in chapter XII, which describes the other changes in volume of assets account and the revaluation account).
- 2.58 The implications of the double entry principle are easy to grasp in a number of cases: a household's purchase on credit of a consumer good will appear as a use under final consumption expenditure and as an incurrence of a liability under loans, for example. If this good is paid for in cash, however, the picture is less simple: the counterpart of a use under final consumption is now a negative acquisition of assets, under currency and deposits, for instance. Other transactions are even more complicated. Output of goods is recorded as a resource in the account of a producer, its counterpart among uses is recorded as a positive change in inventories. When the output is sold, there is a negative change in inventories - that is, a negative acquisition of assets - balanced by a positive acquisition of assets, for instance under currency and deposits.

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- 2.59 In many instances, as explained earlier, the difficulty of seeing how the double entry principle applies is due to the fact that the categories of transactions in the System are compacted.
- 2.60 In principle, national accounts - with all units and all sectors - are based on a principle of quadruple entry, because most transactions involve two institutional units. Each transaction of this type must be recorded twice by the two transactors involved. For example, a social benefit in cash paid by a government unit to a household is recorded in the accounts of government as a use under the relevant type of transfers and a negative acquisition of assets under currency and deposits; in the accounts of the household sector, it is recorded as a resource under transfers and an acquisition of assets under currency and deposits.
- 2.61 The principle of quadruple entry does not imply that the relations between sectors (from whom to whom?) are directly shown in the accounts. Recording correctly the four transactions involved results in full consistency.
- 2.62 Although these accounting principles are the conceptual basis for the consistency of national accounts, national accounting cannot always take advantage of them in practice. The accounts of the nation are not kept in the same way as a business unit or government - that is, by actually recording all flows occurring in a given period. They rely on accounts of various units that are not always consistent, complete or even available. For household accounts in particular, other statistics such as those from household surveys have to be used. However, the quadruple entry principle remains fundamental.
- 2. Time of recording**
- 2.63 One implication of the quadruple entry principle is that transactions, or other flows, when relevant, have to be recorded at the same point of time in the various accounts in question for both units involved. The same applies to stocks of financial assets and liabilities.
- 2.64 The general principle in national accounting is that transactions between institutional units have to be recorded when claims and obligations arise, are transformed or are cancelled - that is, on an accrual basis. Transactions internal to one institutional unit are equivalently recorded when economic value is created, transformed or extinguished. Generally speaking, all transactions, apart from their intrinsic nature, can always be viewed as dealing with economic value.
- 2.65 One has thus to distinguish carefully between a transaction and the corresponding cash movement which takes place, except for a transaction in kind, at a given point of time. Even when a transaction (a purchase/sale of a good, for example) and the payment/receipt are simultaneous, the two aspects exist. The purchaser is incurring a liability, the seller acquiring a claim as a counterpart of the delivery of the good. Then liability and claim are cancelled by the payment. In most cases there is a delay between the actual transaction and the corresponding payment/receipt. In principle, national accounts record actual transactions, not on a cash basis, but on an accrual basis. Conceptually they follow the same principle as business accounting.
- 2.66 If the principle is clear, its implementation is far from simple. Institutional units do not always apply the same rules. Even when they do, differences in actual recording may occur for practical reasons such as delays in communication. Consequently, transactions may be recorded at different times by the transactors involved, sometimes not even in the same accounting period. Discrepancies exist which national accounts must eliminate by after-the-fact adjustments. In addition, because the time at which a claim/liability arises is not always unambiguous, further implementation problems arise. The rules and conventions adopted in the System for particular transactions are specified in "the relevant" chapters (see also chapter III).
- 3. Valuation**
- General principles**
- 2.67 Again, following the quadruple entry principle, a transaction must be recorded at the same value through all the accounts of both sectors involved. The same principle applies to assets and liabilities. It means that a financial asset and its liability counterpart have to be

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recorded for the same amount in the creditor and the debtor accounts.

- 2.68 Transactions are valued at the actual price agreed upon by the transactors. Market prices are thus the basic reference for valuation in the System. In the absence of market transactions, valuation is made according to costs incurred (non-market services produced by government) or by reference to market prices for analogous goods or services (services of owner-occupied dwellings).
- 2.69 Assets and liabilities are valued at current prices at the time to which the balance sheet relates, not at their original prices. Theoretically, national accounts are based on the assumption that assets and liabilities are continuously revalued at current prices, even if estimates are in fact made only periodically. The appropriate valuation basis for assets and liabilities is the price at which they might be bought in markets at the time the valuation is required. Prices observed in markets or estimated from observed market prices should preferably be used. Current prices may be approximated for balance sheet valuation in two other ways: by accumulating and revaluing transactions over time or by estimating the discounted present value of future returns expected from a given asset (see also chapter XIII).
- 2.70 Internal transactions are valued at current prices at the time these transactions occur, not at original prices. These internal transactions include entries in inventories, withdrawals from inventories, intermediate consumption and consumption of fixed capital.

Methods of valuation

- 2.71 Various methods of treating taxes on products, subsidies, and trade and transport margins in valuing transactions on products (goods and services) exist. For the sake of integrating the System, the same methods are followed in the institutional sector accounts and the central supply and use tables (see section D below).
- 2.72 The preferred method of valuation of output is at basic prices, although producers' prices may be used when valuation at basic prices is not feasible. The distinction is related to the treatment of taxes and subsidies on

products. Basic prices are prices before taxes on products are added and subsidies on products are subtracted. Producers' prices include, in addition to basic prices, taxes less subsidies on products other than value added type taxes. This means, to be specific, that three valuations of output may be encountered: at basic prices, at producers' prices in the absence of value added type taxes, and at producers' prices in the presence of value added type taxes.

- 2.73 In the same set of accounts and tables, all transactions on the uses of goods and services (like final consumption, intermediate consumption, capital formation) are valued at purchasers' prices. Purchasers' prices are the amounts paid by the purchasers, excluding the deductible part of value added type taxes. Purchasers' prices are the actual costs to the users.
- 2.74 The various methods of valuing output, with intermediate consumption always at purchasers' prices, imply consequences for the content and uses of value added (the difference between output and intermediate consumption) by a producer or a sector or an industry. In the same set of accounts and tables, uses of value added at basic prices include, besides primary incomes to labour and capital, only taxes less subsidies on production other than taxes less subsidies on products; uses of value added at producers' prices include, in addition, taxes, less subsidies, on products other than value added type taxes (which means all taxes, less subsidies, on products when value added type taxes do not exist). A complementary definition of value added is at factor cost, which excludes taxes on production of any kind.
- 2.75 When looking at the economy as a whole, that part of taxes on products (less subsidies) not included in value added is added to the sum of value added of all producers (either institutional sectors or industries) in order to reach the main aggregate of product and income generated in the economy.
- 2.76 Other methods of valuation may be used in other versions of the supply and use tables and symmetric input-output tables. In particular, valuation at basic prices may be used for output, when not already done in the central supply and use tables, and for uses of goods and services detailed by product. (In the latter case, an

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additional row for taxes, less subsidies, on products is introduced to get, for each type of use, the total at purchasers' prices.) Another alternative valuation of uses by product excludes trade and transport margins, the latter being directly channelled to the users.

Volume measures and measures in real terms

- 2.77 To this point, only current prices have been described. In addition, the System emphasizes calculation at constant prices, that is, use of the system(s) of prices which prevailed in a past period(s). The changes over time in the current values of flows of goods and services and of many kinds of assets can be decomposed into changes in the prices of these goods and services or assets and changes in their volumes. Flows or stocks at constant prices take into account the changes in the price of each item covered. They are said to be in volume terms. However, many flows or stocks do not have price and quantity dimensions of their own. Their current values may be deflated by taking into account the change in the prices of some relevant basket of goods and services or assets, or the change in the general price level. In that case, flows or stocks are said to be in real terms (at constant purchasing power). For example, the System provides for the calculation of income in real terms.
- 2.78 Inter-spatial comparisons raise similar but even more complex problems than inter-temporal comparisons. The additional difficulty is due mainly to the fact that many countries are involved. Purchasing power parities (the ratios between prices prevailing in various countries) are calculated and indicators of relations in volume between various groups of items and national aggregates for different countries are obtained by using a great many elementary calculations at prices constant-in-space.
- 2.79 Both inter-temporal and inter-spatial measures are discussed in chapter XVI.

4. Consolidation and netting

- 2.80 Consolidation may cover various accounting procedures. In general, it refers to the elimination, both from uses and resources, of transactions which occur between units

when the latter are grouped and to the elimination of reciprocal financial assets and liabilities.

- 2.81 For institutional units, normally only transactions with other institutional units are recorded. However, when it is necessary to give meaningful measures of economic phenomena, the System records internal flows. This is done for consumption of fixed capital and for output used for own final uses. As regards internal intermediate uses, the System follows a convention: deliveries among technical units of an establishment are consolidated with the corresponding output, but deliveries among establishments belonging to the same enterprise are not. Consequently, output and intermediate consumption, once measured at the establishment level, are not modified whatever level of aggregation is used.
- 2.82 For sub-sectors or sectors, flows between constituent units are not consolidated as a matter of principle. However, consolidated accounts may be built up for complementary presentations and analyses. This may be useful, for example, for the government sector as a whole, thus showing the net relations between government and the rest of the economy. Even then, transactions appearing in different accounts are never consolidated to avoid changing the balancing items.
- 2.83 Accounts for the total economy, when fully consolidated, give rise to the rest of the world account (external transactions account).
- 2.84 Consolidation must be distinguished from netting. For current transactions, netting refers, outside the context of consolidation of various units, to offsetting uses against resources. The System does this only in a few specific presentations; for example, taxes on products may be shown net of subsidies on products. For changes in assets or changes in liabilities, netting may be envisaged in two ways. First, various types of changes in assets (for example, entries in inventories and withdrawals from inventories) or various types of liabilities (for example, incurrence of a new debt and redemption of an existing debt) are netted. Secondly by changes in financial assets and changes in liabilities (or, in the balance sheet, financial assets and liabilities themselves) related to a given financial instrument are netted. As a matter of principle, the System discourages netting

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beyond the degree shown in the classifications of the System. Netting financial assets (changes in financial assets) against liabilities (changes in liabilities) is

especially to be avoided. Netting is discussed in chapters III and XI.

D. The accounts

1. Introduction

2.85 With the tools introduced in sections B and C above, all flows and stocks can be recorded. This is done in the accounts of the System. An account is a tool which records, for a given aspect of economic life, the uses and resources or the changes in assets and the changes in liabilities and/or the stock of assets and liabilities existing at a certain time.

2.86 Accounts can be built up for the categories presented in section B above:

- . Institutional units and sectors
- . Transactions
- . Rest of the world (external transactions)
- . Assets and liabilities
- . Establishments and industries
- . Products
- . Purposes.

2.87 For units (institutional units; establishments) or groups of units (institutional sectors and, by extension, the rest of the world; industries), different sub-accounts record the transactions or other flows which are connected to some specific aspect of the economic life (for instance, production). Such a set of transactions usually does not balance; the total amounts recorded as receivable and payable usually differ. Therefore, a balancing item must be introduced. Usually, a balancing item must also be introduced between the total of assets and the total of liabilities of an institutional unit or sector. Balancing items are meaningful measures of economic

performance in themselves. When summed up for the whole economy, they constitute significant aggregates.

2.88 Before entering into the details of the accounts, it is useful to survey the structure of the central framework. This can be done by looking at figure 2.1. The central framework thus consists of the following:

- (a) The integrated economic accounts in which are presented the full set of accounts of institutional sectors and the rest of the world, together with the accounts for transactions (and other flows) and the accounts for assets and liabilities; it is worth noting at this preliminary stage that the relations between sectors ("from whom to whom?") are not directly depicted in this table;
- (b) The supply and use table in which are integrated the accounts of industries, according to kind of economic activity, and the accounts of transactions in goods and services, according to type of product;
- (c) The three-dimensional analysis of financial transactions and stocks of financial assets and liabilities, in which the relations between sectors ("from whom to whom?") are directly depicted;
- (d) The functional analysis, in which certain transactions of institutional sectors are presented according to the purpose they serve, and
- (e) The population and employment tables.

Figure 2.1. Survey of the central framework

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2.89 These various blocks, which altogether constitute the central framework, are interlinked in various ways that are described later. They are fully consistent because they use the same set of concepts, definitions, classifications and accounting rules.

2.90 Two sections are devoted successively to:

- (a) The integrated economic accounts and their components; and
- (b) The other parts of the accounting structure.

2. The integrated economic accounts and their components

2.91 This section starts with a preliminary view of the integrated economic accounts. Then it presents:

- (a) The full sequence of accounts for institutional units and sectors and their balancing items;
- (b) The transactions accounts;
- (c) The assets and liabilities accounts;
- (d) The rest of the world accounts;
- (e) The aggregates; and
- (f) The integrated economic accounts: a complete view.

A first glance at the integrated economic accounts

2.92 The integrated economic accounts are at the centre of the accounting framework. They provide an overall view of a given economy. It is useful to take a first glance at them through the simplified presentation in figure 2.2. They will be described more completely after the various accounts have been introduced in detail.

Figure 2.2. Integrated economic accounts (simplified presentation)

2.93 Figure 2.2 shows that, in columns, the integrated economic accounts include the accounts of institutional sectors (on both sides, there is, of course, a column for each sector, which is not shown separately here). These accounts are structured in three sub-sets, for current accounts, accumulation accounts and balance sheets. The current accounts record production and the distribution and redistribution of income; they show how disposable income is used for final consumption; they end with saving. The accumulation accounts record all changes in assets and liabilities, and consequently all changes in the difference between assets and liabilities - that is, in net worth - which occur in a given period. Balance sheets record the stocks of assets and liabilities, and the difference between them, which exist at the opening and the closing of the accounting period. There is also a column for the rest of the world.

2.94 The central column includes the transactions, balancing items and assets and liabilities ordered according to the structure of the accounts referred to above. Thus, in a row for a given transaction, such as interest, the chart shows the payables and the receivables by the various institutional sectors and the rest of the world. Each account for a given transaction is in principle balanced: the sum of interest payable is equal to the sum of interest receivable. A transactions account is a dummy account. It does not show how much interest is payable/receivable by an institutional sector to/from each of the institutional sectors or the rest of the world, but only how much interest is payable and receivable in total by each sector. Transactions in goods and services are a special case, because there is a unique balance for all transactions in goods and services and not for each of them. For this reason, a special column corresponds to the goods and services account. As explained later, each transaction in goods and services (production, final consumption, etc.) appearing in the accounts of the institutional sectors is reflected in this column.

2.95 The integrated economic accounts also include a column for the sum of the (resident) institutional sectors, i.e., the total economy as a whole. Thus the aggregates for the total economy are directly visible. These aggregates are the sums of various transactions and, more importantly, of balancing items.

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- 2.96 The detailed presentation of the elements which are shown in the integrated economic accounts is considered next. As this is a lengthy explanation, it is useful to refer to figure 2.3, which includes a synoptic presentation of the accounts, balancing items and main aggregates and shows how they are articulated. The various elements appearing in figure 2.3 are presented in the following sub-sections.
- Figure 2.3. Synoptic presentation of the accounts, balancing items and main aggregates**
- The full sequence of accounts for institutional units and sectors and their balancing items
- 2.97 Before presenting the full sequence of accounts for institutional units and sectors, some preliminary remarks are useful. The purpose of this sub-section is to explain the accounting structure of the System in general, not to show the precise content of the accounts for each specific unit or sector. The accounting structure is uniform throughout the System. It applies to all institutional units, sub-sectors, sectors and the total economy. However, some accounts may not be relevant for certain sectors. Similarly, not all transactions are relevant for each sector and, when they are, they may constitute resources for some sectors and uses for others. The precise content of the accounts for each sector is presented in the following chapters, dealing in detail with the various types of accounts.
- 2.98 Another remark relates to the way the classification of transactions is used when presenting the general structure of the accounts. Section B above shows only the main categories of transactions, not the detailed ones which are displayed in the relevant chapters of the manual. However, in order to make the accounts clear, it is necessary to include a number of transactions. This is done by using the actual classification of transactions in the System at a level of detail sufficient for a good understanding of the accounts. However, definitions of these transactions are not given at this stage, unless absolutely necessary.
- 2.99 It is also worth noting that balancing items can be expressed gross or net, the difference being the consumption of fixed capital. Conceptually, net balancing items are much more meaningful. However, gross concepts, specifically gross aggregates, are widely used and gross accounts are often estimated more easily, accurately and promptly than the net ones. In order to accommodate both solutions and to ease the integrated presentation of the accounts and aggregates, a double presentation of balancing items is allowed.
- 2.100 Finally, it has to be said that the sequence of accounts shows the accounting structure of the System; it is not necessarily a format for publishing the results.
- 2.101 The accounts are grouped into three categories: current accounts, accumulation accounts, balance sheets.
- 2.102 Current accounts deal with production, income and use of income. Accumulation accounts cover changes in assets and liabilities and changes in net worth (the difference for any institutional unit or group of units between its assets and liabilities). Balance sheets present stocks of assets and liabilities and net worth.
- Current accounts: Production, distribution of income, use of income
 - Accumulation accounts: Changes in assets and liabilities and changes in net worth
 - Balance sheets: Stocks of assets and liabilities and net worth.
- 2.103 Accumulation accounts show all changes which occur between two balance sheets. Even when balance sheets are not compiled, a clear understanding of the conceptual relationship between accumulation accounts and balance sheets is necessary if the accumulation accounts themselves are to be correctly elaborated.
- 2.104 The relation between current accounts and accumulation accounts is a little more complex. All current transactions make net worth vary either positively (in the case of resources) or negatively (uses). The recording of a transaction as a current resource means an increase in the amount of economic value a unit or a

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sector has at its disposal; conversely, a transaction recorded as a current use means a decrease in this amount of economic value. The difference between all current uses and all current resources (saving) represents, for a given period, the change in net worth resulting from current transactions. However, the latter are not the only source of changes in net worth. These points are elaborated further below.

2.105 These three broad kinds of accounts are examined in turn.

Current accounts

2.106 Current accounts deal with production, distribution of income and use of income. Each account starts with the recording, as resources, of the balancing item of the previous one. The last balancing item is saving which, in the SNA context, is that part of income originating in production, domestically or abroad, which is not used for final consumption.

2.107 Production, distribution of income and use of income are considered successively.

Production account (Account I)

2.108 The production account (see table 2.1, Account I), is designed to emphasize value added as one of the main balancing items in the System. Consequently, it does not cover all transactions linked with the production process, but only the result of production (output) and the using up of goods and services when producing this output (intermediate consumption). Intermediate consumption does not cover the progressive wear and tear of fixed capital. The latter is recorded as a separate transaction (consumption of fixed capital) making the difference between the gross and net balancing items.

Production account - -> Value added

Table 2.1. Account I: Production account

2.109 Thus the production account shows only output as resources and intermediate consumption as uses; the balancing item is value added, which is measured both gross and net. As already explained (see section C.3 above), different types of valuation of output may be used according to the choice made between basic prices and producers' prices and, in the latter case, the existence or absence of value added type taxes. Consequently, the extent to which taxes (less subsidies) on products are included in value added differs.

2.110 All institutional sectors have a production account. However, in the production account of institutional sectors, output and intermediate consumption are shown in total only, not broken down by products.

Distribution of income accounts

2.111 The process of distribution and redistribution of income is so important that it is worth distinguishing various steps and depicting them separately in different accounts. As long as all kinds of distributive current transactions included in the System are actually measured, increasing the number of accounts adds very little to the work already done, but it allows the introduction of balancing items that are meaningful concepts of income.

2.112 The distribution of income is decomposed into three main steps: primary distribution, secondary distribution and redistribution in kind. The first refers to the distribution of value added to factors of labour and capital and to government (through taxes, less subsidies, on production and imports). It measures the balance of primary incomes. The second covers redistribution of income through, essentially, transfers in cash. It measures disposable income. The last one relates to further redistribution through transfers in kind. It measures adjusted disposable income, as shown below:

Distribution of income

Primary distribution of income	balance of primary incomes
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Secondary distribution of income	disposable income
Redistribution of income in kind	adjusted disposable income

(a) Primary distribution of income account (Account II.1)

2.113 The primary distribution of income account shows how gross value added is distributed to factors of labour and capital, government and, where necessary, flows to and from the rest of the world. Its balancing item is the balance of primary incomes.

2.114 In fact Account II.1 is subdivided between two sub-accounts, in order to measure, in addition, operating surplus/mixed income, a balancing item which is important both for institutional sectors and industries.

2.115 The generation of income account (see table 2.1, Account II.1.1) records, from the point of view of producers, distributive transactions which are directly linked to the process of production. The resources consist of value added; its uses include compensation of employees, and taxes on production and imports, less subsidies, as far as they are included in the valuation of output (see paragraph 2.7). The balancing item is operating surplus/mixed income.

Table 2.1. Account II.1.1: Generation of income account

2.116 The allocation of primary income account (see table 2.1, Account II.1.2) shows the remaining part of the primary distribution of income. It records, for each sector, property income receivable and payable, and compensation of employees and taxes, less subsidies, on production and imports receivable, respectively, by households and government. Since transactions of this kind may appear in the rest of the world account, these must be included also. Account II.1.2 has operating surplus/mixed income as resources and balance of

primary incomes as a balancing item. Thus primary income covers operating surplus/mixed income, net property income, compensation of employees and taxes, less subsidies, on production and imports receivable.

Table 2.1. Account II.1.2: Allocation of primary income account

2.117 For sectors which are important market producers - that is, for non-financial and financial corporations, and households - the allocation of primary income account is further subdivided in order to show an additional balancing item, entrepreneurial income, which is closer to the concept of current profit familiar in business accounting. This balancing item and the related sub-accounts are shown in chapter VII.

(b) Secondary distribution of income account (Account II.2)

2.118 The secondary distribution of income account, (see table 2.1, Account II.2) covers in principle redistribution of income through transfers in cash only, in order to distinguish two steps in the redistribution process, one through transfers in cash, the other through transfers in kind. This distinction is made in the relations between households from one side, general government and NPISHs from the other. However, it is not significant in the case of corporations and the rest of the world. For this reason, transfers in kind to and from corporations or the rest of the world are recorded in the secondary distribution of income account, as if they were in cash. This does not prevent showing them separately.

Table 2.1. Account II.2: Secondary distribution of income account

2.119 This account records as resources, in addition to balance of primary incomes, current taxes on income, wealth, etc. and other current transfers except social transfers in

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kind. On the uses side, the same types of transfers are also recorded. Since these transfers are resources for some sectors and uses for others also, their precise content varies from one sector to another.

2.120 It is worth explaining in some detail here the way social contributions are recorded in the System. Although employers normally pay social contributions on behalf of their employees directly to the social insurance schemes, in the System these payments are treated as if they were made to employees who then make payments to social insurance schemes. In terms of the accounts, this means that they first appear as a component of compensation of employees in the use side of the generation of income account (Account II.1.1) of employers and the resource side of allocation of primary income account (Account II.1.2) of households (adjusted of course for external flows in compensation of employees). Then they are recorded as uses in the secondary distribution of income account (Account II.2) of households (and possibly of the rest of the world), and as resources of the sectors managing social insurance schemes (essentially government). All employers' social contributions follow this route. This way of recording transactions as if they followed another course is often called "rerouting".

2.121 The balancing item of Account II.2 is disposable income. This is the income which can be used for final consumption expenditure and saving. Disposable income is mainly in cash. However it also involves an in-kind component. The latter includes compensation of employees in kind, transfers in kind from the rest of the world and corporations (if any), own final consumption, own-account fixed capital formation and that part of output which has not yet been sold or otherwise disposed of and is recorded under changes in inventories. For non-financial and financial corporations, disposable income is income after tax not distributed to owners of equity.

(c) Redistribution of income in kind account (Account II.3)

2.122 The redistribution of income in kind account (see table 2.1, Account II.3), shows two more elements in the description of the redistribution process. First, it records social benefits in kind, which include both benefits for which the recipient household does not incur the

expense and benefits for which the household makes the initial outlay and is later reimbursed. Secondly, it records the transfer of individual non-market goods and services, such as education, not included in social benefits in kind. All these transactions are included under the heading of social transfers in kind in the classification of distributive transactions.

Table 2.1. Account II.3: Redistribution of income in kind account

2.123 Account II.3 records as resources disposable income and, for households, social transfers in kind. Then, on the uses side, social transfers in kind appear for government and NPISHs. The balancing item is adjusted disposable income. Because of the nature of the transactions concerned, this account is significant only for government, households and NPISHs.

2.124 The purpose of this account is fourfold. First, it aims at giving a clearer picture of the role of government. Secondly, it delivers a more complete measure of household income. Thirdly, it facilitates international comparisons and comparisons over time when economic and social arrangements differ or change. Fourthly, it gives a more complete view of the redistribution process between sub-sectors or other groupings of households. Redistribution of income in kind is a tertiary distribution of income.

(d) Use of income account (Account II.4)

2.125 The use of income account (see table 2.1, Account II.4) shows, for those sectors which have some final consumption, how disposable income or adjusted disposable income is allocated between final consumption and saving. In the System, only government, NPISHs and households have final consumption. In addition, the use of income account includes, for households and for pension funds, an adjustment item (D.8 Adjustment for the change in net equity of households on pension funds) which relates to the way transactions between households and pension

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funds are recorded in the System. This adjustment item, which is explained in chapter IX, is not discussed here. There are two variants of Accounts II.4.

2.126 The use of disposable income account (see table 2.1, Account II.4.1) records disposable income as resources and final consumption expenditure as uses, as well as the adjustment item referred to above, when relevant.

Table 2.1. Account II.4.1: Use of disposable income account

2.127 Final consumption expenditure covers transactions on final consumption of goods and services for which a sector is the ultimate bearer of the expense. Government and NPISHs produce non-market goods and services in their production account, where intermediate consumption or compensation of employees are recorded as uses. Final consumption expenditure of these producers relates to the value of their output of non-market goods and services, less their receipts from the sale of non-market goods and services at prices which are not economically significant. However, it also covers goods and services that are purchased by government or NPISHs for ultimate transfer, without transformation, to households.

2.128 The use of adjusted disposable income account (see table 2.1, Account II.4.2) records adjusted disposable income as resources and actual final consumption as uses, as well as the adjustment item referred to above, when relevant. Actual final consumption of households covers goods and services which are effectively available for individual consumption by households, regardless of whether the ultimate bearer of the expense is government, NPISHs or households themselves. Consequently, actual final consumption of government refers only to collective consumption, whereas NPISHs, whose final consumption expenditure is deemed to be in total individual, have no actual final consumption.

Table 2.1. Account II.4.2: Use of adjusted disposable income account

2.129 At the total economy level, disposable income and adjusted disposable income are equal, as are final consumption expenditure and actual final consumption. They differ only when considering the relevant sectors. For each sector, the difference between final consumption expenditure and actual final consumption is equal to social transfers in kind, provided or received. It is also equal to the difference between disposable income and adjusted disposable income.

2.130 The balancing item of the use of income account, in its two variants, is saving. The figures for saving are the same in Accounts II.4.1 and II.4.2 as income in the resources side and consumption on the uses side differ by the same amount. Saving ends the sub-sequence of current accounts.

Accumulation accounts

2.131 Because the present accounting system is fully integrated, accumulation accounts cover all changes in assets, liabilities and net worth (the difference for any sector between its assets and liabilities).

2.132 As accumulation accounts show changes in assets, liabilities and net worth, they follow a presentation similar to balance sheets themselves. Balance sheets are conventionally presented with assets on the left side, liabilities and net worth on the right side. Consistently, in the accumulation accounts, all changes in assets, either positive or negative, are recorded on the left side; all changes in liabilities, either positive or negative, and changes in net worth, either positive or negative, are recorded on the right side. So, as already explained in section B, the left side is called "Changes in assets" and the right side "Changes in liabilities and net worth".

2.133 Saving, being the balancing items of all current transactions/accounts is, of course, the starting element of accumulation accounts.

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2.134 Accumulation accounts are structured in a way which permits various types of changes in assets, liabilities and net worth to be distinguished.

2.135 A first group of accounts covers transactions which would correspond to all changes in assets/liabilities and net worth if saving and voluntary transfers of wealth were the only sources of changes in net worth. A second group of accounts relates to changes in assets, liabilities and net worth due to other factors.

2.136 The first group of accumulation accounts contains the capital account and the financial account. These two accounts are distinguished in order to show a balancing item which is useful for economic analysis, that is, net lending/net borrowing.

(a) Capital account (Account III.1)

2.137 The capital account (see table 2.1, Account III.1) records transactions linked to acquisitions of non-financial assets and capital transfers involving the redistribution of wealth. The right side includes saving, net, and capital transfers receivable and capital transfers payable (with a minus sign) in order to arrive at that part of changes in net worth due to saving and capital transfers. Account III.1 includes among the various types of investment in non-financial assets. Because consumption of fixed capital is a negative change in fixed assets, it is recorded, with a negative sign, on the left side of the account. Entering gross fixed capital formation (+) and consumption of fixed capital (-) on this side is equivalent to entering net fixed capital formation. The balancing item is either net lending (+), which measures the net amount a unit or a sector finally has available to finance, directly or indirectly, other units or sectors, or net borrowing (-), which corresponds to the amount a unit or a sector finally is obliged to borrow from others.

(b) Financial account (Account III.2)

2.138 The financial account (see table 2.1, Account III.2) records transactions in financial instruments for each financial instrument. These transactions in the System show net acquisition of financial assets on the left side or net incurrence of liabilities on the right side. The

balancing item is again net lending (+) or net borrowing (-), which appears this time on the right side of the account.

Table 2.1. Account III.2: Financial account

2.139 In principle, net lending or net borrowing is measured identically whichever account is considered. In practice, achieving this identity is one of the most difficult targets of national accounts.

(c) Other changes in volume of assets account and revaluation account (Account III.3.2)

2.140 The second group of accumulation accounts (see table 2.1, Account III.3.1) covers changes in assets, liabilities and net worth which are due to factors other than the accumulation transactions recorded in the previous group of accounts. Examples are discoveries or depletion of subsoil resources, destruction by political events, such as war, or by natural catastrophes, such as earthquakes. Other changes in assets may also be linked with changes in the level and structure of prices. In the latter case, only the value of assets and liabilities is modified, not their volume. Factors such as discoveries of subsoil resources or earthquakes actually change the volume of assets, in the SNA sense. Thus the second group of accumulation accounts is subdivided between an account for other changes in volume of assets and an account for revaluation.

2.141 The other changes in volume of assets account (see table 2.1, Account III.3.1), records those exceptional events which cause not only the value but also the volume of assets and liabilities to vary. In addition to the kind of events referred to above, such as the consequences of war or earthquakes, this account also includes some adjustment elements like changes in classification and structure which may or may not have an influence on net worth (see chapter XII). The balancing item, changes in net worth due to other changes in volume of assets, is recorded on the right side.

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Table 2.1. Account III.3.1: Other changes in volume of assets account

2.142 The revaluation account (see table 2.1, Account III.3.2) records holding gains or losses. It shows first nominal holding gains/losses. This item records the full change of value due to the change in specific prices of the various assets or liabilities since the beginning of the accounting period or the time of entry and the time of exit or the end of the accounting period.

Table 2.1. Account III.3.2: Revaluation account

2.143 Just as transactions and other flows in assets appear on the left of the account and transactions in liabilities on the right, so nominal gains or losses on assets appear on the left side of Account III.3.2, while nominal gains/losses on financial liabilities are recorded on the right side. For a given unit or group of units, a positive revaluation of its financial liabilities is equivalent to a nominal holding loss; a negative revaluation of its liabilities is equivalent to a nominal holding gain. The balancing item of the account is changes in net worth due to nominal holding gains/losses.

2.144 The revaluation account is then subdivided between two sub-accounts. The first sub-account (see table 2.1, Account III.3.2.1) shows the revaluation in proportion to the general price level which is obtained by applying, during the same periods of time, an index of the change in general price level to the initial value of all assets or liabilities, even to those that are fixed in monetary terms. The results of this operation are called neutral holding gains/losses because all assets and liabilities are revalued in exactly the same proportion. The balancing item of Account III.3.2.1 is called changes in net worth due to neutral holding gains/losses.

Table 2.1. Account III.3.2.1: Neutral holding gains/losses account

2.145 The second sub-account (see table 2.1, Account III.3.2.2) shows the difference between the nominal holding gains/losses (see table 2.1, Account III.3.2) and the neutral holding gains/losses (see Account III.3.2.1). This difference is called real holding gains/losses. For instance, considering the left side (changes in assets) of this sub-account for a given unit or group of units, if the nominal holding gains/losses are higher than the neutral holding gains/losses, there is a real holding gain, due to the fact that on average the actual prices of its assets have increased more (or decreased less) than the general price level. In other words, the relative prices of its assets have increased. Correspondingly, a decrease in relative prices of its assets leads to a real holding loss. The balancing item of Account III.3.2.2 is the total of real holding gains or losses, which is called changes in real net worth due to real holding gains/losses.

Table 2.1. Account III.3.2.2: Real holding gains/losses account

2.146 Each of the three types of holding gains or losses are subdivided according to the main groups of assets and liabilities, a decomposition which is necessary even in a simplified accounting presentation.

Balance sheets (Account IV)

2.147 The opening and closing balance sheets (see table 2.1, Accounts IV.1 and IV.3), display assets on the left side, liabilities and net worth on the right side. Assets and liabilities, as previously explained, are valued at the prices of the date a balance sheet is established. Net worth, the difference between assets and liabilities, is the balancing item of balance sheets. It is equivalent to the present value of the stock of economic value a unit

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or a sector holds. In more detailed presentations of balance sheets, the various types of assets and liabilities are shown using the more detailed classification of assets and liabilities.

Table 2.1. Account IV.1: Opening balance sheet

Table 2.1. Account IV.2: Changes in balance sheet

Table 2.1. Account IV.3: Closing balance sheet

2.148 For each group of assets and liabilities, changes between the opening and closing balance sheets result from the transactions and other flows recorded in the accumulation accounts, including the changes in classification of assets and liabilities. Changes in net worth are equal to changes in assets less changes in liabilities.

2.149 The changes in balance sheet account (see table 2.1, Account IV.2) recapitulates the content of the accumulation accounts, that is, the total changes in assets and liabilities and the changes in net worth by main sources: saving and capital transfers, other changes in volume of assets and nominal holding gains/losses which can be subdivided between neutral and real holding gains and losses. Saving and capital transfers, other changes in volume of assets and real holding gains/losses contribute to changes in real net worth; neutral holding gains/losses convert real net worth to nominal general purchasing power as of the end of the accounting period. Combined with the opening balance sheet (Account IV.1), Account IV.2 leads to the closing balance sheet (Account IV.3).

2.150 Account IV.2 shows the relation in the SNA between saving (net) and changes in net worth. Saving (net) is equal to changes in net worth less capital transfers, less other changes in volume of assets, less nominal holding gains/losses. Considering only changes in real net

worth, saving (net) is equal to changes in real net worth less capital transfers, less other changes in volume of assets, less real holding gains/losses. This relation between saving and changes in real net worth implies that the relation between disposable income or adjusted disposable income and changes in real net worth differs from Hick's concept of income (see chapter VIII).

2.151 Because saving is a source of changes in real net worth, it follows naturally that all current transactions, of which saving is the balancing item, make real net worth vary either positively (resources) or negatively (uses). This illustrates the definition of net worth given above as a stock of (abstract) economic value. Most transactions in assets and liabilities do not change the magnitude of net worth, but only the nature of its components. Transactions in assets and liabilities corresponding to capital transfers and other accumulation flows also change the magnitude of net worth. In general, both current and accumulation transactions and other flows deal with creation, transformation, exchange, transfer or extinction of economic value.

Transactions accounts

2.152 A transactions account shows, for a given transaction or group of transactions (for example, interest), resources and uses for each sector (or industry if relevant) engaged in this type of transaction, but it does not show direct relations between transacting sectors. In other words, the account shows relations of the "what?/from whom?" type and "what?/to whom?" type, not relations of the "what?/from whom?/to whom?" type. Transactions accounts are basically dummy accounts, or screen accounts, in the System. Totals of resources and totals of uses balance by definition (practical difficulties might be encountered, of course); there is no balancing item. A transactions account is thus a way for recapitulating what may be found for a given transaction in the accounts of the various sectors/industries. The general structure of a transactions account is shown in table 2.6 (see the appendix to this chapter for tables 2.6-2.12) using property income as an example. The type of transaction is indicated in the central column. There is a column for each institutional sector, for the total economy and for the rest of the world. The column total allows the identity between total uses and total resources in each row to be verified.

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**Table 2.6 Example of a transactions account:
account for property income**

- 2.153 In order to make this structure workable systematically, the classification of transactions, referred to above, has been built up according to the nature of the transaction without specific reference to sector of origin or sector of destination.
- 2.154 In the case of transactions in goods and services (products), the transactions account, shown in table 2.2, Account 0, is particularly important. The goods and services account (Account 0) shows, for the economy as a whole or for groups of products, the total resources (output and imports) and uses of goods and services (intermediate consumption, final consumption, changes in inventories, gross fixed capital formation, acquisitions less disposals of valuables and exports). Taxes on products (less subsidies) are also included on the resource side of the accounts. The coverage of this item varies according to the way output is valued (see section C.3, "Valuation" above). The part (possibly the total) of taxes on products (less subsidies), that is not included in the value of output does not originate in any specific sector or industry; it is a resource of the total economy as such.

**Table 2.2 Account 0: Goods and services
account**

- 2.155 The goods and services account can show either final consumption expenditure or actual final consumption. For the economy as a whole, the data for the two items are identical. However, they differ for the sectors involved when the goods and services account is cross-classified with the classification of institutional sectors in order to show the resources and uses according to the institutional sector of origin or use.

- 2.156 An important feature of the goods and services account is that it is balanced globally - that is, there is a balance between all uses and all resources - not for each kind of transaction.
- 2.157 When looking at the goods and services account by type of products, output and intermediate consumption may be allocated by industry of origin or use, while other transactions may be shown in various ways (see the description of supply and use tables below).
- 2.158 Because it plays an extremely important role in the System, the goods and services account receives a special coding, Account 0. The other transactions accounts are identified, if necessary, by the code of the relevant transaction.
- 2.159 Another feature of the goods and services account is that uses are shown on the right side and resources on the left side. This is done in order to reflect transactions on the opposite side as compared to institutional sector accounts.
- 2.160 Accounts for other transactions simply follow the general model (see paragraph 2.152 and 2.154 above). For taxes, social contributions, social benefits and a number of other transactions, the nature of the recorded transaction easily identifies the "from whom to whom?" relation or a good approximation of it. In other cases, all sectors may have resources and uses and the interrelations are not shown explicitly. For interest, dividends and transactions in financial instruments, which are the most important cases, it is very useful, in addition to the dummy account procedure, to follow a "from whom to whom?" approach for practical and analytical purposes.

Assets and liabilities accounts

- 2.161 Transactions in assets and liabilities and other changes in assets appear in the accounts of institutional sectors and the transactions accounts already described. Stocks of assets and liabilities at the beginning and the end of the accounting period appear in the opening and closing balance sheets, respectively. All those data are combined in the assets and liabilities accounts.

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2.162 The assets and liabilities accounts, shown in table 2.7, record for each type of asset and liability, the opening stock at the beginning of the accounting period, the various types of changes which occur during this period and the closing stock at the end of it, as illustrated below:

	opening stock
<i>plus</i>	transactions recorded in the capital account, by type of transactions
<i>plus</i>	transactions recorded in the financial account
<i>plus</i>	other changes in volume of assets, by type of changes
<i>plus</i>	nominal holding gains/losses
	<i>of which:</i>
	neutral holding gains/losses
	real holding gains/losses
<i>equals</i>	
	closing stock.

Of course, changes may be positive or negative. In the sequence of accounts for institutional units and sectors, this relationship between balance sheets and accumulation accounts has been presented, for sake of simplicity, only for broad types of assets (non-financial assets, distinguishing produced and non-produced ones, and financial assets) and for liabilities as a whole. However, in the structure of the System, this relationship exists for each type of asset and liability, according to the System's classification. Conceptually it exists for each elementary asset (a given dwelling or loan for example) or liability. Assets and liabilities accounts are identified by the code of the relevant asset.

Rest of the world account (external transactions account) (Account V)

2.163 The rest of the world account covers transactions between resident and non-resident institutional units and the related stocks of assets and liabilities when relevant.

2.164 As the rest of the world plays a role in the accounting structure similar to that of an institutional sector, the rest of the world account is established from the point of view of the rest of the world. A resource for the rest of the world is a use for the nation and vice versa. If a balancing item is positive, it means a surplus of the rest

of the world and a deficit of the nation, and vice versa if the balancing item is negative.

2.165 The rest of the world account (see table 2.3, Account V) follows the general accounting structure, but it differs slightly in order to focus on the relevant characteristics of external transactions.

2.166 Current transactions are recorded in only two accounts. The first account, the external account of goods and services (see table 2.3, Account V.I), shows imports of goods and services as resources and exports of goods and services as uses. The balancing item is the external balance of goods and services. If positive, it is a surplus for the rest of the world and a deficit for the nation.

Table 2.3. Account V.I: External account of goods and services

2.167 The second account, the external account of primary incomes and current transfers (see table 2.3, Account V.II), shows the following entries on both sides: compensation of employees; taxes, less subsidies, on production and imports; property income; current taxes on income, wealth, etc., and other current transfers, receivable and payable, respectively, by the rest of the world. The balancing item of this account is the current external balance. It plays a role in the structure of the System equivalent to saving for institutional sectors.

Table 2.3. Account V.II: External account of primary incomes and current transfers

2.168 The accumulation accounts are relevant, although for only a limited set of flows out of financial transactions. For example, table 2.1, Account V.III.3.1, records uncompensated seizures. The external assets and liabilities account is essentially equivalent, with a reverse sign, to the part of the consolidated balance

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sheet of the economy which relates to financial assets and liabilities. For non-financial assets which are owned by non-residents in the economic territory, a notional institutional unit is always created. The rest of the world is deemed to have acquired a financial asset (and vice versa for assets owned in other economies by resident units).

Table 2.3. Account V.III.1: Capital account

Table 2.3. Account V.III.2: Financial account

Table 2.3. Account V.III.3.1: Other changes in volume of assets account

Table 2.3. Account V.III.3.2: Revaluation account

Table 2.3. Account V.IV.1: Opening balance sheet

Table 2.3. Account V.IV.2: Changes in balance sheet

Table 2.3. Account V.IV.3: Closing balance sheet

The aggregates

2.169 The aggregates of the System - for example, value added, income, consumption and saving - are composite values which measure the result of the activity of the entire economy considered from a particular point of view. They are summary indicators and key magnitudes for purposes of macroeconomic analysis and comparisons over time and space. The SNA aims to provide a simplified but complete and detailed picture of complex economies, so the calculation of the aggregates is neither the sole nor the main purpose of national accounting. Nevertheless, summary figures are very important.

2.170 Some aggregates may be obtained directly as totals of particular transactions in the System; examples are final consumption, gross fixed capital formation and social contributions. Others may result from summing up balancing items for the institutional sectors; examples are value added, balance of primary incomes, disposable income and saving. They may need some further elaboration. Some of them are so commonly used that they deserve additional explanation at this early stage.

2.171 Gross domestic product (GDP) at market prices represents the final result of the production activity of resident producer units.

2.172 Basically, GDP is a concept of value added. It is the sum of gross value added of all resident producer units (institutional sectors or, alternatively, industries) plus that part (possibly the total) of taxes, less subsidies, on products which is not included in the valuation of output. Gross value added is the difference between output and intermediate consumption.

2.173 Next, GDP is also equal to the sum of the final uses of goods and services (all uses except intermediate consumption) measured in purchasers' prices, less the value of imports of goods and services.

2.174 Finally, GDP is also equal to the sum of primary incomes distributed by resident producer units.

2.175 Net domestic product at market prices (NDP) is obtained by deducting the consumption of fixed capital from GDP.

2.176 The concept of value added should conceptually exclude the counterpart of consumption of fixed capital. The latter, in effect, is not newly created value, but a reduction in the value of previously created fixed assets when they are used up in the production process. Thus, theoretically, value added is a net concept.

2.177 This conclusion applies to domestic product as well. Theoretically, domestic product should be a net concept. However, GDP is commonly used for various reasons. The depreciation of fixed assets as calculated in business accounting does not generally meet the requirements of SNA concepts. The calculation of consumption of fixed

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capital requires that statisticians estimate the present value of the stock of fixed assets, the lifetime of various types of assets, patterns of depreciation, etc. Not all countries make such calculations, and when they do there may be differences in methodology (with some of them using business data even when inadequate). Consequently, gross figures are more often available, or available earlier, and they are generally considered more comparable between countries. So GDP is broadly used even if it is, on a conceptual basis, less relevant than net domestic product. However, net domestic product should also be calculated, with improved estimates of consumption of fixed capital when necessary, in order to provide a significant tool for various types of analysis.

- 2.178 Neither gross nor net domestic product is a measure of welfare. Domestic product is an indicator of overall production activity. As such, its interpretation relies heavily on the concept of production that is used in the System and the way the borderline between intermediate consumption and final uses is drawn. For example, non-remunerated housekeeping services are not included within the production boundary and so are not reflected in domestic product, and in-house training activities by enterprises are considered intermediate consumption, resulting in lower domestic product than would be the case if they were treated as final uses.
- 2.179 On the other hand, the significance of market prices determines the meaning of the values which are measured when compiling GDP. First, no different value judgements are attached to certain goods or services in comparison with others: a given amount of tobacco consumption is equivalent to the same amount of milk consumption; the same is true for education and defence, etc. Secondly, externalities, like the nuisances in urban buildings caused by noise, are not taken into account.
- 2.180 In addition it should be noted that domestic product is not a concept of sustainable income to the extent that economic growth may depend on natural resources and changes in human capital and that exceptional events, such as wars or floods, are treated as directly affecting assets and net worth without influencing the measures of product and income.
- 2.181 Primary incomes generated in the production activity of resident producer units are distributed mostly to other resident institutional units; however, part of them may go to non-resident units. Symmetrically, some primary incomes generated in the rest of the world may go to resident units. This leads to the definition and measurement of gross national income (GNI) at market prices. GNI is equal to GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units. In other words, GNI is equal to GDP less taxes (less subsidies) on production and imports, compensation of employees and property income payable to the rest of the world plus the corresponding items receivable from the rest of the world. Thus GNI at market prices is the sum of gross primary incomes receivable by resident institutional units/sectors. It is worth noting that GNI at market prices was called gross national product in the 1953 SNA, and it is commonly denominated GNP. In contrast to GDP, GNI is not a concept of value added, but a concept of income (primary income).
- 2.182 By deducting the consumption of fixed capital from GNI, net national income (NNI) at market prices is obtained. The remarks above about the conceptual relevance of the net concept in case of product apply even more strongly to national income. The remarks about welfare or sustainability also apply.
- 2.183 Primary incomes receivable by resident institutional units may be used in part to make transfers to non-resident units; reciprocally, resident units may receive transfers originating out of primary incomes in the rest of the world. Gross national disposable income is equal to GNI at market prices less current transfers (other than taxes, less subsidies, on production and imports) payable to non-resident units, plus the corresponding transfers receivable by resident units from the rest of the world. Gross national disposable income measures the income available to the nation for final consumption and gross saving. National disposable income is the sum of disposable income of all resident institutional units/sectors.
- 2.184 By deducting the consumption of fixed capital from gross national disposable income, net national disposable income is obtained.

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2.185 All the aggregates referred to above are calculated in current values. The influence of changes in prices may also be eliminated. Domestic product is calculated at constant prices in order to measure the change in volume which occurs from one period to another. This may be done because output, intermediate consumption and taxes, less subsidies, on products can all be calculated at constant prices. On the other hand, aggregates of income may not be expressed in volume (at constant prices) because income flows may not, strictly speaking, be broken down between a quantity and a price component. They may be calculated at constant purchasing power, or in real terms. When moving from domestic product at constant prices to national income in real terms, the effect of changes in the terms of trade between the total economy and the rest of the world is taken into account (see chapter XVI).

2.186 The analysis of net worth is an integral part of the System. Changes in real national net worth is the sum of changes in net worth of all resident institutional sectors less the neutral holding gains/losses (that is, in proportion to general price level). They are equal to the sum of saving and capital transfers, other changes in volume of assets and real holding gains or losses.

2.187 Capital formation and final consumption grouped together constitute national expenditure - gross if gross fixed capital formation is included, net if only net fixed capital formation is considered.

Integrated economic accounts: a complete view

2.188 It is now possible to put together the various elements which have been introduced in the previous sub-sections and to present in detail the integrated economic accounts.

2.189 The integrated economic accounts, shown in table 2.8 give a complete picture of the accounts of the total economy including balance sheets, in a way which permits the principal economic relations and the main aggregates to be shown. This table shows, simultaneously, the general accounting structure of the System and presents a set of data for the institutional sectors, the economy as a whole and the rest of the world.

Table 2.8 Integrated economic accounts

2.190 The table takes its name from the fact that it assembles institutional sector accounts, the rest of the world accounts, transactions accounts and simplified assets and liabilities accounts. Uses, changes in assets and assets are on the left side; resources, changes in liabilities and net worth and liabilities are on the right side.

2.191 The columns refer to the institutional sectors and the rest of the world. There is also a column for the total economy and one for goods and services. As a matter of convention, a reverse order is followed on the two sides.

2.192 The rows show the transactions and other flows, assets and liabilities for balance sheets, balancing items and some important aggregates. The presentation of transactions and other flows follows the structure of the sequence of accounts for institutional sectors. With a few exceptions that are explained below, the row for a given transaction (compensation of employees or social benefits in cash, for example) shows the transactions account for this transaction.

2.193 In order to make this table simple but comprehensive, classifications of sectors, transactions and other flows, assets and liabilities are at the highest level of aggregation compatible with understanding the structure of the System. It should be understood that columns and rows can be subdivided to introduce sub-sectors or more detailed classifications of transactions and other flows, assets and liabilities.

2.194 Looking first at the institutional sectors current accounts, one can consider, for example, the columns for non-financial corporations. The production account shows output (1,753) on the right side, intermediate consumption (899) and value added (854 gross, 717 net, the difference referring to consumption of fixed capital 137) on the left side. Value added, the balancing item of the production account, appears again in the same row as a resource of the generation of income account. Then the uses of this latter account - compensation of

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employees (545) and other taxes, less subsidies, on production (51) - are shown on the left side, the balancing item being operating surplus (258 gross, 121 net), which appears again as a resource of the allocation of primary income account. After recording property income receivable on the right (86), and payable on the left (135), balance of primary incomes (209 gross, 72 net) appears as the balancing item of this account and again as a resource of the secondary distribution of income account. This latter shows current taxes on income, wealth, etc., other current transfers, when appropriate, and disposable income (185 gross, 48 net) that is undistributed income of non-financial corporations, which for this sector is then equal to saving, the balancing item of the use of income account.

2.195 The accounts for other institutional sectors may be read the same way, the relevant transactions varying according to the sector involved.

2.196 A peculiarity of the presentation of the use of income account needs to be explained. Accounts II.4.1 and II.4.2 are combined, both figures for disposable income and final consumption appearing in these accounts being shown side by side. On the right side of the use of income account, adjusted disposable income and disposable income, the balancing items, respectively, of Accounts II.2 and II.3, appear on two successive rows. On the left side, actual final consumption and final consumption expenditure are also shown on two successive rows. Disposable income, net, is 358 for general government, 40 for NPI's and 1,164 for households. Social transfers in kind are 212 as uses by government and 16 by NPISHs. They are received (228) by households. Final consumption expenditure is 368 for government, 16 for NPI's and 1,015 for households. Thus adjusted disposable income, net, is 146 for government (358-212), 24 for NPI's (40-16) and 1,392 for household (1,164 + 228). Actual final consumption for government is 156 and for households is 1,243. NPISHs have no actual final consumption because the goods and services composing their final consumption expenditure are transferred in total to households as social transfers in kind.

2.197 Now we may look at the rest of the world accounts. They are presented from the viewpoint of the rest of the world; a resource of the rest of the world is shown on

the right side, a use on the left side. The external account of goods and services is shown at the same level as the production account for institutional sectors. Imports of goods and services (499) are a resource for the rest of the world, exports (540) are a use. The external balance of goods and services is (-41). With a positive sign, it is a surplus of the rest of the world (a deficit of the nation) and vice versa. The external account of primary incomes and current transfers covers all other current transactions. Starting with the external balance of goods and services (-41) as a resource on the right side, it shows the various kinds of taxes, compensation of employees and other current transfers when appropriate. The current external balance remains 41. Again, with a positive sign, it is a surplus of the rest of the world (a deficit of the nation) and vice versa.

2.198 As stated above, the row for a given transaction generally shows the corresponding transactions account. For example, the row for property income shows that property income was payable by non-financial corporations (135), financial corporations (167), general government (42), households (41), NPISHs (6) and the rest of the world (68). In turn, it was receivable by non-financial corporations (86), financial corporations (141), general government (32), households (150), NPISHs (7) and the rest of the world (38). The total of payables is, of course, equal to the total of receivables (454).

2.199 The presentation of transactions on goods and services is different. In this case, as explained when presenting transactions accounts (see paragraphs 2.154 and 2.156 above), there is no balance for each type of transaction, such as exports or gross fixed capital formation, but only a global one between all uses and all resources of a good or service. Consequently, in the integrated economic accounts, the goods and services account is shown as a column, not in a row. It reflects the various transactions on goods and services which appear in the accounts of the institutional sectors. Uses of goods and services in the institutional sectors accounts are reflected on the right-hand column for goods and services; in turn, resources of goods and services in the institutional sectors accounts are reflected on the left-hand column for goods and services. On the resources side of the table, the figures appearing in the column for goods and services are the counterparts of the uses made by the various sectors and the rest of the world: exports (540),

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intermediate consumption (1,883), final consumption expenditure/actual final consumption (1,399), gross fixed capital formation (376), changes in inventories (28) and acquisitions less disposals of valuables (10). On the use side of the table, the figures in the column for goods and services are the counterparts of the resources of the various sectors and the rest of the world: imports (499) and output (3,604). On the same side taxes, less subsidies, on products (133) are shown directly in the column for goods and services. They are a component of the value of the supply of goods and services which has no counterpart in the value of the output of any institutional sector.

- 2.200 The columns for the total economy remain. Except for taxes less subsidies on products and domestic product, the figures in these columns are simply the sum of the corresponding figures for the institutional sectors. The production account for the total economy includes, as resources, output - that is, the total output of the economy - (3,604) and taxes less subsidies on products (133), the latter being the counterpart of the figure appearing on the left side in the column for goods and services. The use side of the production account for the total economy shows intermediate consumption (1,883) and domestic product at market prices (1,854 gross, 1,632 net). The latter is the sum of value added of the various sectors and taxes less subsidies on products. Domestic product then appears on the right side as a resource of the generation of income account for the total economy. Taxes less subsidies on products are shown again on the left side in the column for total economy and on the right side as a resource of government (and the rest of the world if relevant). This double routing of taxes less subsidies on products is made in order to get domestic product, gross and net, directly in the overall accounts, as explained above.
- 2.201 The other items in the columns for total economy are self-explanatory. National income at market prices (1,883 gross, 1,661 net) is shown directly as the sum of balance of primary incomes of the various sectors; national disposable income, national saving, etc. are also obtained directly.
- 2.202 The accumulation accounts follow the sequence of accounts for the institutional sectors.

2.203 It may be seen, for example, that saving, net of households is 160. Households receive 23 and pay 5 as capital transfers. Thus changes in their net worth due to saving and capital transfers is 178. Households have 61 as gross fixed capital formation (19 as net fixed capital formation after deduction of consumption of fixed capital), 2 as changes in inventories and 5 as acquisitions less disposals of valuables. Their acquisitions less disposals of non-produced non-financial assets (land actually) are 4. The net lending of households is 148. They incurred financial liabilities (net) of 33 and acquired financial assets (net) of 181. Other changes in volume of assets are 2. The value of the assets held by households increased by 96 due to changes in the actual prices of both non-financial assets (80) and financial assets (16); there are no nominal gains/losses on their liabilities, which means that all their liabilities are denominated in monetary terms and probably in the national currency of the economy in question.

2.204 The columns for goods and services records the counterparts of gross fixed capital formation, changes in inventories, and acquisitions less disposals of valuables on the right side. Transactions appear in the columns for the rest of the world only when it is relevant (mainly capital transfers and financial transactions).

2.205 The balance sheets also are presented. The rest of the world columns show the assets and liabilities position of the rest of the world vis-a-vis the nation (external assets and liabilities account). The row "changes in net worth due to saving and capital transfers" corresponds, for the rest of the world, to the current external balance and capital transfers.

2.206 In order to see the relationships between accumulation accounts and balance sheets, general government may be taken as the example. The opening assets are 1,987 (1,591 non-financial assets and 396 financial assets) and the opening liabilities 687, net worth thus being 1,300. The total value of non-financial assets increase by 56, which results from all changes in these assets recorded in the accumulation accounts, gross fixed capital formation, 37, consumption of fixed capital, -30, acquisitions less disposals of valuables, 3, acquisitions less disposals of non-produced non-financial assets, 2, other volume changes (0 in balance) and nominal

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holding gains, 44. Financial assets increase by 123 (net acquisition of financial assets, 120, other volume changes, 1, nominal holding gains, 2). On the right side, liabilities increase by 176, which results again from all changes in liabilities recorded in the accumulation accounts (net incurrance of liabilities, 170, other volume changes, -1, revaluation of liabilities 7). So the closing assets are 2,166 (1,647 + 519) and the closing liabilities are 863; closing net worth, 1,302 shows an increase over the year of 2. The sources of this change in net worth are summarized in the right side of Account IV.2: changes in net worth due to saving and capital transfers, -38 (see also the right side of the capital account), to other changes in volume of assets, 2 (see also the right side of the other changes in volume of assets account) and to nominal holding gains/losses, 38 (see also the right side of the revaluation account).

2.207 Taken in their entirety, the columns for the total economy show the sequence of accounts applied to the nation as a whole. In the table, these accounts correspond generally, in each row, to the sum of the values for the resident institutional sectors. This means that they are not consolidated. It is possible, outside the table itself, to show the sequence of accounts for the total economy after consolidation of the relations between resident institutional sectors.

2.208 The integrated economic accounts provide an overview of the economy as a whole. As already indicated, the integrated presentation contains much more than what has actually been included in the table and may be used for giving a more detailed view if so desired. Columns might be introduced for sub-sectors. The rest of the world column could be subdivided according to various geographical zones. The column for goods and services may show market goods and services separately. The classification of transactions in the rows might be used at more detailed levels (see chapter XIX) for further elaboration of these suggestions).

2.209 However, putting more directly in this scheme at the same time would result in a very complicated and unmanageable table. For this reason, more detailed analysis of production and transactions in goods and services, transactions in financial instruments, detailed balance sheets, as well as analysis by purpose are done in other frameworks. These are presented successively,

and their links with the integrated economic accounts also explained.

3. The other parts of the accounting structure

The central supply and use table and other input-output tables

2.210 The detailed analysis of production by industries and flows of goods and services by kind of products is an integral part of the integrated central framework. It would be feasible to include certain details in the integrated economic accounts table. For example, the rows for output, intermediate consumption and value added might be subdivided by kind of economic activity; the columns for goods and services might be subdivided by type of products. However, the System does not adopt this solution, because the table would become cumbersome. It provides a systematic cross-classification by institutional sectors and industries of output, intermediate consumption, and value added and its components (see table 15.3, chapter XV).

2.211 The integrated economic accounts contain only production and generation of income accounts by institutional sectors as well as a global balance of transactions on goods and services. The detailed analysis of production activities and goods and services balances is made in the input-output tables. The input-output framework of the System includes a number of different approaches as regards producing units, valuation of transactions, etc. They are presented in the relevant chapter.

2.212 The central input-output table (supply and use table) of the System presents:

- . The resources and uses of goods and services for each type of product
- . The production and generation of income accounts for each industry according to kind of economic activity.

The goods and services account has already been presented (see paragraphs 2.154 to 2.159 in section D.2 above). The sequence of accounts for establishments and industries is

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limited to the production account (Account I) and the generation of income account (Account II.1.1). These accounts, shown in table 2.7, are identical in format to the corresponding accounts for institutional units or sectors. However, in the supply and use table, the output and intermediate consumption of industries are broken down by products. Data on factors of production (labour and fixed capital) used by industries are also provided.

Table 2.9 Shortened sequence of accounts for industries

2.213 The supply and use table is presented fully in chapter XV, (see table 15.1). It includes a number of specifications which are not necessary at this stage of the presentation of the accounting structure. Table 2.10 shows a reduced format of the supply and use table. This reduced format is not a simplified version of the normal one and should not be used as such. It is intended only to introduce the overall structure of the supply and use tables.

Table 2.10 Supply and use (reduced format)

2.214 The upper part of the table shows the origin of the resources of goods and services. In the rows, the various types of products are presented according to a classification which can be used at various levels of detail. In the columns, starting from the right side, imports are shown first. Then a matrix showing the output of industries, according to the activity classification, appears. This is the make matrix. It may be valued either at basic prices or at producers' prices in the absence of a value added tax (VAT), or at producers' prices in the presence of VAT. The actual figures in the table are at basic prices which is the preferred method of valuation for output. The column for total industries records the total output of industries for each kind of

product. The output of a given industry may cover a number of different products, the principal and the secondary ones.

2.215 Taxes, less subsidies, on products - with varying content according to the valuation of output - and trade and transport margins are recorded in two columns in order to get total supply of each type of product valued at purchasers' prices. The corresponding trade and transport services are deducted globally at the intersection between the relevant rows and the column for trade and transport margins. Thus the total of the latter is zero.

2.216 Below, uses of goods and services are recorded at purchasers' prices (i.e., including taxes, less subsidies, on products except deductible taxes) in a use or absorption matrix. The same classification of products is used in the rows. For each product, of course, total supply and total use in purchasers' prices are equal. Columns include sequentially intermediate consumption of industries, again using the same classification as in the upper part; exports; final consumption expenditure and gross capital formation. The column for total industries records total intermediate consumption of industries for each kind of product.

2.217 As the columns for final consumption record first final consumption expenditure by institutional sectors, the column for government is further subdivided between individual consumption expenditure and collective consumption expenditure, in order to allow actual final consumption for households and government to be calculated.

2.218 The lower part of table 2.10 refers to gross value added and its components: compensation of employees, taxes, less subsidies, on products, other taxes, less subsidies, on production, operating surplus/mixed income (which is shown gross and net) and consumption of fixed capital. These rows appear only in the columns for industries and the total economy.

2.219 It is easy to recognize in table 2.10 the shortened sequence of accounts for industries (production and generation of income accounts) that has been presented above. For each industry, the composition of its output

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by product appears in the upper part of the table; below is intermediate consumption by product, and components of value added can be seen. Data on factors of production of each industry are also shown below: labour inputs, gross fixed capital formation and stocks of fixed assets.

2.220 The total gross value added of industries differs from GDP by the amount of taxes, less subsidies, on products not included in the value added of any industry. In order to get GDP directly in the supply and use table, a column for the total economy, distinct from total industries, is added in the lowest part of the table. It records first the components of value added which already appear in the column for total industries, and then taxes, less subsidies, on products. The latter are conveyed to the lowest part of the table through the column taxes, less subsidies, on products. This can be shown in the table: total value added of industries is 1,721. It excludes all taxes, less subsidies, on products because output is valued at basic prices. GDP (1,854) appears at the intersection between the row total gross value added/GDP and the column total economy. It is the sum of total gross value added (1,721) and taxes, less subsidies, on products (133), which appears at the intersection between the row "Taxes", less subsidies, on products and the column "Total economy".

2.221 Table 2.10 as it stands provides simple links with the integrated economic accounts. Exactly the same concepts and definitions and the same valuation are used for the central supply and use table and the institutional sector accounts. Consequently, the global figures for output, imports of goods and services, taxes, less subsidies, on products, intermediate consumption, exports of goods and services, final national expenditure, gross value added and its components and of course GDP are the same in both tables. Uses at purchasers' prices are close to the way economic units generally look at them and provide figures most current analysts require in the first instance.

2.222 The three approaches to GDP (1,854) appear in the supply and use table, as well as in the integrated economic accounts:

- . From the production side, GDP is equal to total output (3,604) minus total intermediate

consumption (1,883) plus taxes, less subsidies, on products (133) not included in the value of output.

- . From the demand side, GDP is equal to final consumption expenditure (1,015 + 16 + 156 + 212) plus gross capital formation (376 + 28 + 10) plus exports (540) minus imports (499).
- . From the income side, GDP is equal to compensation of employees (762) plus taxes, less subsidies, on production and imports (191), plus mixed income, gross (442), plus operating surplus, gross (459).

2.223 The central supply and use table integrates various approaches which often are only followed in part on an annual basis. The lower part of table 2.10 includes the breakdown of GDP by industry of origin which is familiar to many people. The two upper parts of the table correspond to the so-called commodity-flow approach. If one does not break down the intermediate consumption by industry of use, keeping only the total by product (column for total industries), a simplified commodity flow approach may be followed. This permits the balancing of supply and disposition to be undertaken on a regular annual basis, even when intermediate consumption can not be analysed with the same frequency for each industry according to its cost structure. Additionally, if detailed complete input-output tables are established from time to time, intermediate consumption cross-classified by industry and by product may be estimated for other years as a checking procedure for the balancing of the accounts. In brief, the central supply and use table (which is in fact an input-output table) may provide means of integrating regular analysis of production by industries and flows of goods and services, in the absence of more refined input-output analysis.

2.224 In addition to what is included in the central supply and use table (see table 15.1 in chapter XV), the System allows for a number of derived and analytical input-output tables, where the use table may be valued at basic prices, or domestic and import components of uses shown separately and supply and use tables converted into symmetric tables.

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The tables of financial transactions and financial assets and liabilities

- 2.225 The System provides for an in-depth analysis of financial transactions and financial assets and liabilities. In the integrated economic accounts, transactions in financial instruments are shown using the most aggregated level of their classification and the institutional sectors are also shown at the first level. Opening and closing financial assets and liabilities are shown only globally. This is a first overview of an integrated presentation of all financial transactions, other changes and stocks of assets and liabilities of the various institutional sectors in the context of accounts and balance sheets covering all aspects of economic life in the SNA sense. The juxtaposition of the accounts for all institutional sectors and the rest of the world allows the derivation of a balance of transactions in financial instruments for each main category of the latter. In total, the integrated economic accounts give an overall summary of the results of financial life.
- 2.226 However, one may want to know more about the financial transactions undertaken by a given sector. In that case, a more detailed level of the classification of financial instruments must be used. The financial account of each institutional sector showing the relevant details is presented in chapter XI. It is also necessary for financial analysis purposes to use the classification of institutional sectors at a more detailed level, especially in the case of financial corporations.
- 2.227 Grouping together the financial accounts for detailed sectors and sub-sectors and the detailed category of transactions in financial instruments results in a detailed table of financial transactions. In fact, this table is no more than an expansion of the financial part of the integrated economic accounts. This table (or conceivable variants) uses the full classification of transactions and more detailed levels of the sectors classification, especially for financial corporations. In addition, many of the categories of financial instruments, but particularly currency and deposits, are subdivided according to positions denominated in foreign currency and those denominated in national currency. Direct investment is recorded as a memorandum item (see chapter XI).

- 2.228 Tables cross-classifying financial instruments with debtor and creditor sectors, respectively, exhibit direct connections between debtors and creditors except when only one debtor sector or one creditor sector is involved. In order to show these links, which are very important for financial analysis, an additional three-dimensional approach is followed in the System. The objective is to show, first, for a given debtor sector and each type of financial instrument, which sectors have changed their creditor position toward the given one in the period. Secondly, conversely, the objective is to show, for a given creditor sector and each type of financial instrument, which sectors have changed their debtor position toward the given one in this period. Schematically, these relations may be summarized in the reduced format of table 2.11. There is a column for each financial instrument. Then, for each debtor sector, changes in its debtor position toward each of the sectors (including itself when transactions between units composing this sector have not been consolidated) are shown successively. Of course, the symmetric information (changes in creditor position of a given sector toward the various sectors, including itself) is automatically provided for. The lower parts of the table show the totals which correspond exactly to those found in a two-dimensional table of the kind referred to previously.

Table 2.11 Financial transactions between creditor and debtor sectors (reduced format)

- 2.229 In fact, the three-dimensional table of financial transactions assembles a number of matrices of the type sectors/sectors, one for each kind of financial instrument.
- 2.230 As such a presentation is not necessarily useful for actually presenting the data, other presentation(s) may be preferred in practice for publication. For example, a detailed classification of financial instruments combined with a sector classification may be cross-classified twice with the sector classification, in order to show, from one side, changes in the debtor positions of the debtor

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sectors and, from the other side, changes in the creditor positions of the creditor sectors. As compared to the presentation of the financial accounts made in the integrated economic accounts, this means, in short, introducing a sector distinction below headings of financial instruments when relevant (for a more complete explanation see chapter XI).

- 2.231 For financial analysis, tables showing stocks of financial assets and liabilities are very useful. As for transactions in financial instruments, these tables may show simply the assets position and the liabilities position of the various sectors without indicating which sector is the creditor or debtor of other sectors. In addition, three-dimensional tables may be elaborated showing the “from whom to whom?” links for each type of financial instrument, to permit better analysis. The presentation of such tables is exactly the same as for tables of financial transactions except that assets/liabilities are shown instead of changes in assets/liabilities and the net financial position of each sector appears instead of its net lending/borrowing.

Complete balance sheets and assets and liabilities accounts

- 2.232 Balance sheets in the integrated economic accounts are presented in a very aggregated way. For each sector or sub-sector more complete balance sheets may be built up using the detailed classification of assets and liabilities when appropriate. Changes in assets and liabilities for each sector may also be analysed for each type of asset and liability and each source of change, as in table 2.12, which is an integrated presentation of balance sheet and accumulation accounts, that is, a full presentation of the assets and liabilities accounts as described in paragraph 2.162 above.

Table 2.12. Integrated balance sheets and accumulation accounts (example for the total economy)

- 2.233 Assets, liabilities, and net worth are shown in the rows. The first column relates to the opening balance sheet (at prices as of the beginning of the period), the last one to the closing balance sheet (at prices as of the end of the period). The columns in between indicate the changes in assets, liabilities, and net worth described in the accumulation accounts. Thus this table is a cross-classification of assets/liabilities/net worth and sources of change in them, which can be done systematically if so desired.

- 2.234 Such tables for all institutional sectors, the total economy and the rest of the world may all be put together in a synoptic table.

Functional analysis

- 2.235 As explained in section B above, the purpose of a transaction is a different dimension from the ones which are dealt with in the previous tables. Some tables cross-classify, for certain sectors or sub-sectors, purposes and types of transactions when it is relevant (see chapter XVIII). As compatible but different classifications are used according to the sector concerned, these partial analyses by purpose cannot be integrated in a single table and, in most cases, no exhaustive total for the total economy may be calculated in the central framework. The functional analysis can be further developed, outside the central framework, in satellite accounts in which significant national aggregates are calculated (see chapter XXI).

Population and labour inputs tables

- 2.236 A dimension is added to the usefulness of a number of national accounts figures by calculating these figures per head. For broad aggregates such as GDP, GNI or household final consumption, the denominator commonly used is the total (resident) population. When sub-sectoring the accounts or part of the accounts of the household sector, data on the number of households and the number of persons living in each sub-sector are also necessary.

- 2.237 In productivity studies, data on the labour inputs used by each industry in the process of production are indispensable. Total hours worked is the preferred

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measure of labour inputs for the System. Inferior alternatives are full-time equivalent jobs, the number of jobs or the number of persons employed.

2.238 Data on population and labour inputs must generally be adjusted in order to be consistent with the System's concepts, definitions and classifications. The resulting tables are an integral part of the SNA (see chapter XVII).

E. The integrated central framework and flexibility

1. Applying the central framework in a flexible way

2.239 The central framework presented in this chapter is coherent in terms of its concepts and its accounting structure. Links between the various elements of the integrated System have been emphasized in order to depict its structure in a simple but complete way. That presentation does not imply any order of priority or frequency (quarterly, annually, etc.) for implementing national accounts. Priorities in compiling national accounts are a matter of statistical policy; no universal recommendation can be made. (However, some indications relevant to specific circumstances are provided in the relevant handbooks.) Similarly, the accounting structure does not imply that results always have to be presented exactly as they stand in this or other chapters. A country may choose to publish mainly time series, to prepare only some accounts or aggregates, etc. However, attention needs to be drawn to the following point. Because users may find it difficult to fully understand the conceptual and practical links between the various parts of the System, it is advisable to use the kind of presentation made in table 2.8, with the appropriate adaptations to a country's circumstances and needs.

2.240 In general, the System has to be looked at in a consistent but flexible way. According to analytical requirements and data availability, emphasis put on various aspects within the central framework may vary. In general, emphasis may be varied by using the System's classifications of institutional sectors, industries, products, transactions (including the complementary classification), sequence of accounts, etc. at various levels of detail (including additional ones); by using different methods of valuation; by using different

priorities for various parts of the accounts and different frequencies; by rearranging the results; by introducing some additional elements, etc.

2.241 The household sector provides a good illustration of what may be done in order to provide an in-depth analysis of the household conditions and the functioning of the economy as a whole. The necessary detailed approach to the household sector may be undertaken, first, by deconsolidating the household sector beyond the sub-sectors included in the main classification of the System, distinguishing, for instance, the type of economic activity carried out (formal/informal), the location of the household (urban/rural) or the level of skill. Secondly, it is possible to adapt the way household activities are portrayed in the sequence of accounts. For instance, a concept of discretionary income may be used, which relates to that part of disposable income which is provided in cash and on the use of which households may take decisions, or the classification of household transactions may be complemented, for example, to isolate in-kind components or to show the industry of origin of various types of income.

2.242 The flexibility of the System is further illustrated with the public sector, whose components are systematically shown at various levels of detail in the classification of institutional sectors. The components of the public sector may be re-arranged to group the accounts of the overall public sector. These accounts may be shown before consolidation and after consolidation to describe the relations between the public sector and the private sector and between the public sector and the rest of the world (by separating out the external transactions of the public sector).

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2.243 Chapter XIX provides a more detailed analysis of the above examples. It also presents illustrations of flexible uses of the central framework in the field of key sector accounting, external accounts problems and high inflation analysis. Finally, it touches briefly upon quarterly and regional accounts.

2. Introducing social accounting matrices

2.244 A social accounting matrix (SAM) is a presentation of the SNA in matrix terms that incorporates whatever degree of detail is of special interest. To date, builders of SAMs have exploited the available flexibility to highlight special interests and concerns more than compilers of regular national accounts, displaying the interconnections, disaggregating the household sector, showing the link between income generation and consumption, etc. The power of a SAM, as well as of the SNA, comes from choosing the appropriate type of disaggregation to study the topic of interest. In addition to a flexible application and the inclusion of various complements, SAMs may incorporate more extensive adjustments, which are of a satellite accounting nature, in order to serve specific analytical purposes. For further explanation of the matrix presentation and SAMs, see the annex to this chapter and chapter XX.

3. Introducing satellite accounts

2.245 In some cases, working with the central framework, even in a flexible way, is not sufficient. Even when conceptually consistent, the central framework could be overburdened with details. Moreover, some requirements may conflict with the central conceptual framework and its architecture.

2.246 In certain types of analysis, the basic intention is not to use alternative economic concepts, but simply to focus on a certain field or aspect of economic and social life in the context of national accounts. The intent is to make apparent and to describe in more depth aspects that are hidden in the accounts of the central framework or surface only in a limited number of points. Tourism is a good example. Various aspects of producing and consuming activities connected with tourism may appear in detailed classifications of activities, products and purposes. However, specific tourism transactions and

purposes appear separately only in a few cases. In order to describe and measure tourism in a national accounts framework, it is necessary to make a choice between two approaches: either subdivide many elements in the accounts of the central framework to get the required figures for tourism and pay the price of overburdening and imbalancing the various components of the accounts, or elaborate a specific framework for tourism. The latter approach, the only feasible one actually, also allows adaptation of the various classifications and measurement of additional aggregates, such as national expenditure on tourism, which may cover intermediate as well as final consumption.

2.247 In other types of analysis, more emphasis is given to alternative concepts. For instance, the production boundary may be changed, generally by enlarging it. For example, the production of domestic services by members of the household for their own final consumption may be brought within the production boundary. The concept of fixed assets and the related fixed capital formation may be broadened, by covering research and development expenditures, consumer durables or human capital. It is also possible in environmental accounting to record the relationships between natural assets and economic activities differently, by recording the depletion of subsoil or other natural resources and the degradation of natural assets. In these approaches, the economic process itself is depicted differently, and complementary or alternative aggregates are calculated.

2.248 The analysis of a number of important fields such as social protection, health or the environment may benefit from building a framework to accommodate elements which are included in the central accounts, explicitly or implicitly, plus complementary elements (either monetary or in physical quantities) and possibly alternative concepts and presentations. In all cases, however, the links with the central framework are made explicit, there are a number of common elements and any contradictory features are introduced, not by chance, but after explicitly considering various ways of looking at reality.

2.249 Those special constructs, which are semi-integrated with the central framework, are called satellite accounts. Chapter XXI is devoted to satellite analysis and

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accounts. Due to the importance of environmental concerns, a section in that chapter deals specifically with

satellite accounts for environmental accounting.

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Annex: Other Presentations of the Accounts

1 The System of National Accounts mainly uses the classical presentation of accounts in the form of balancing statements, with uses on one side and

resources on the other side. Other types of presentation may be used

A. Diagrammatic presentation

2 The diagrammatic presentation uses boxes linked together by arrows, to indicate the nature and size of the flows and stocks represented.

3 For the economy as a whole, figures corresponding to the ones which appear in the integrated economic accounts are shown in a simplified way in figure 2.4.

Figure 2.4. Diagram of the integrated economic accounts for the total economy

4 A set of equations, which are described below, corresponds to this diagram and to the integrated economic accounts.

B. Equations

5 The equalities of the System may be represented by sets of equations that are used, for example, in model building. The accounts for the total economy are shown in table 2.4 and in equation form.

boxes “production” and “goods and services” in the diagram.

7 Equations (3) to (6) cover the distribution and use of income accounts and the corresponding box in the diagram. The aggregates are not shown directly in the latter, but they are derived easily according to the relevant equations.

8 Equations (7) to (10) and (15) cover the accumulation accounts and the box “accumulation” in the diagram.

6 Equations (1) and (2) cover the production and goods and services accounts. All transactions in these equations correspond to arrows going to or from the

9 Equations (11) to (17) correspond to opening and closing balance sheets and changes between balance sheets. They cover the boxes “opening stocks” and

Table 2.4. Equations

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“closing stocks” and the changes between as they are shown in the diagram. Those changes are identical to the content of equations (7) to (10) and (15), the other changes in volume of assets and the revaluation being shown separately for the three types of assets and liabilities.

- 10 Equations (18) and (21) contain the external transactions (box “external transactions” in the diagram) and the external financial position of the nation presented from the point of view of the nation. The opening and closing

positions and the changes between are shown in the diagram.

- 11 Thus, the diagram may be read by reading the equations, and the equations are illustrated by the diagram.
- 12 Similarly the various parts of the System may be presented in equations form: the full sequence of accounts for institutional sectors, the shortened sequence of accounts for industries, the transactions accounts such as the goods and services account, the rest of the world accounts, etc.

C. Matrix presentation

- 13 A provisional matrix table 2.5 is shown in this annex. This table demonstrates one way in which the columns for the total economy, goods and services and rest of the world from table 2.8, integrated economic accounts, can be displayed in a matrix.

Table 2.5. Matrix presentation of the full sequence of accounts and balancing items for the total economy (reduced format)

- 14 The matrix is considered provisional because improvements are needed, particularly in the presentation of the accumulation accounts and balance sheets. The improvements will aim to make the matrix presentation less complex and easier to relate to the accounts in table 2.8.
- 15 The difficulty is related to the use of the main feature of the matrix presentation, i.e., that each item which is presented twice in the accounts of table 2.8 - as use and resource, asset and liability - is only included once in the matrix: at the intersection of the column of the account in which it is a use or asset and the row of the account in which it is a resource or liability, or vice versa. This feature of the matrix presentation works well in the case

of the current accounts and also for the capital account, as in these accounts there are always counterpart entries in the same or other accounts for each transaction. This is illustrated in the examples presented below.

- 16 For instance, the goods and services account (row and column 1), includes in its row and column in the same manner as in the account of table 2.8, the six major aggregates which define the main national accounts identity between supply and use. At the intersection of the column of the goods and services account and the row of production is recorded output and taxes on production and imports less subsidies (3,737) and in the same column and the row of the external account of goods and services is included the other element of supply, i.e. imports (499). In the row of the goods and services accounts are presented the four use categories, i.e., intermediate consumption (1,883), final consumption (1,399), gross capital formation (414) and exports (540).
- 17 Similarly the matrix items of the production account (row and column 2) correspond without any major change to those of table 2.8. Thus the account includes in the row output and taxes on production and imports less subsidies (3,737), and in the column intermediate consumption (1,883) and domestic product (1,854) which is recorded gross.

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- 18 The next rows and columns (3 to 5) of the current account for the total economy, i.e., the primary distribution of income, secondary distribution of income and redistribution of income in kind and use of income accounts of the total economy have similar links with the items of the accounts in table 2.8 and may be read in the same manner. As consumption of fixed capital is presented as a negative item (-222) in the row of the use of income account and the column of the capital account, all main aggregates including domestic product, national income, and disposable income are recorded gross, except saving which is recorded net. One should also note that the primary distribution of income account consolidates the elements of the generation and allocation of primary income accounts and the secondary distribution of income and redistribution of income in kind accounts are combined into one account. The items of the current accounts for rest of the world (rows and columns 13 and 14) correspond without any major changes to those presented in table 2.8.
- 19 The matrix presentation works less well for the other changes in volume of assets accounts and the revaluation accounts for which there are no counterpart entries. In order to incorporate the latter into the matrix presentation, several adjustments were made that affect all accumulation accounts and balance sheets. Dummy entries were introduced which cancel out in the same account. Furthermore, an additional account for net worth was incorporated to provide the link between opening and closing net worth. Finally, a different link was established between the rows and columns of the matrix and the two sides of the accounts in table 2.8. For the accounts starting with the goods and services account, production account and ending with the capital and financial accounts, the row items refer to resources and changes in liabilities and net worth and the items in the columns represent uses and changes in assets. On the other hand, in the accounts covering other changes in assets and opening balance sheets the presentation is reversed, i.e., the column items refer to liabilities, net worth and changes therein, and the row items concern assets and changes in assets; the presentation of the changes in balance sheet and the closing balance sheet is even more complex. As a consequence of these adjustments the link between the matrix presentation and the parallel accounts in table 2.8 is less obvious for the accumulation accounts and balance sheets.
- 20 The dummy entries in particular make the reading of the account more complex. For instance, the financial account of the total economy includes in the row two dummy items, i.e., net acquisition of financial assets and net acquisition of financial assets by rest of the world and in the column one dummy item called net incurrence of liabilities by rest of the world. These dummy items are presented twice with opposite signs and thus cancel out, and should be ignored in comparing the row and column entries with the entries in the financial account of table 2.8. Thus, the row of the financial account of the total economy opens with net lending of the total economy (38). Other transactions that correspond to items in the account of table 2.8 are in the row, transactions in financial assets between resident sectors (553) which is at the diagonal intersection between row and column of this account and net incurrence of external liabilities (50); and in the column, in addition to the diagonal element, net acquisition of external financial assets (88).

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