ST/ESA/STAT/SER.F/66

Department for Economic and Social Information and Policy Analysis
Statistics Division

Studies in Methods Series F, No. 66

Handbook of National Accounting

Use of the System of National Accounts in Economies in Transition

United Nations
New York, 1996

NOTE

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ST/ESA/STAT/SER.F/66
United Nations publication
Sales No. E.96.XVII.11
ISBN 92-1-161384-1

FOREWORD

Since the 1993 System of National Accounts[1] (SNA) guidelines were released, the member organizations of the Inter-Secretariat Working Group on National Accounts (ISWGNA) namely, Eurostat (the Statistical Office of the European Communities), the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD), the Statistics Division of the United Nations Secretariat, the regional commissions, and the World Bank, have initiated work on a coordinated Handbook series. The objective of this Handbook series is to assist countries in the implementation of specific segments of the SNA, to present information on the extension of the SNA to satellite accounting, and also to demonstrate the analytical and policy uses of the System. Some of these Handbooks were published after the 1993 SNA was released, and others are in preparation and will be released in 1996, 1997 or thereafter.[2] The present Handbook forms part of this series of Handbooks. It focuses mainly on implementation in the selection of the issues that are addressed by national accountants in countries in transition. However, it also draws attention to the analytical and policy uses of national accounts data in transition economies. To the extent that high inflation is an important economic phenomenon, the Handbook should be read in close relation with a parallel Handbook published by OECD,[3] which deals with national accounting under circumstances of high inflation in a large group of transition countries.

The events that have led to the Handbook's being issued were the economic changes taking place in the so-called countries in transition. These changes then required national accountants to change from the Material Product System (MPS), used in the past during the period of central planning, to the SNA which is geared to market economies. The issues addressed by the Handbook include, among others, the orientation of data compilation, the valuation and institutional organization of production, the economic consequences of privatization, changes in the social benefit system, and general changes in the use of national accounts data in analysis and policy-making. Many of the issues, however, are not confined to so-called transition countries. They may also be faced by national accountants in other countries that are confronted with the consequences of privatization and other drastic shifts in the institutional organization of economic activities.

The Handbook has greatly benefited from the practical experiences of the consultant Mr. Yuri Ivanov, who drafted most of the Handbook in cooperation with Mr. Jan W. van Tongeren, Interregional Adviser on Macro Accounting for Policy-Making and Analysis, and Ms. Marina Seglina of the Statistics Division of the United Nations. The Handbook has benefited from a lengthy review process during which many detailed technical comments were received from Mr. Janos Arvay of the Economic Commission for Europe (ECE); Mr. Kevin O'Connor and Mr. Adriaan Bloem of IMF; and Ms. Anne Harrison of OECD. Furthermore, very valuable comments were received from statistical offices in a number of transition countries,

including, among others, the Czech Republic, Hungary, Lithuania and the Russian Federation. Nevertheless, the final responsibility for the text remains with the Statistics Division of the United Nations Secretariat.

Notes

[1] Commission of the European Communities, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations, World Bank, System of National Accounts, 1993 (United Nations publication, Sales No. E.94.XVII.4).

[2] The Handbooks concerned are the following: IMF: Balance of Payments Manual (Washington, D.C., IMF, 1993), Monetary and Financial Statistics (Washington, D.C., IMF, 1996), Government Finance Statistics (Washington, D.C., IMF, 1998); OECD: Handbook on Inflation Accounting (Paris, OECD, 1996); United Nations Statistics Division: Integrated Environmental and Economic Accounting, Studies in Methods, Handbook of National Accounting, Series F, No. 61 (United Nations publication, Sales No. E.93.XVII.12), Input-Output (United Nations publication, forthcoming in 1996), Systems Approach to SNA Compilation (United Nations publication, forthcoming in 1996); Eurostat: Regional Accounts Quarterly Accounts

[3] OECD, Handbook on Inflation Accounting, prepared by Peter Hill, OECD consultant, and scheduled to be published in the first quarter of 1996.

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EXPLANATORY NOTES

Reference to "tons" indicates metric tons, unless otherwise stated. A full stop (.) is used to indicate decimals.

The following abbreviations have been used:

BOP	balance of payments
CBNE	Classification of Branches of the National Economy
CCIS	cross-classification by industries and sectors
CIS	Commonwealth of Independent States
CMEA	Council of Mutual Economic Assistance
COFOG	Classification of the Functions of Government
CPC	Central Product Classification
CPE	centrally planned economy
EBRD	European Bank for Reconstruction and Development
ECE	Economic Commission for Europe
Eurostat	Statistical Office of the European Communities
FAO	Food and Agriculture Organization of the United Nations
FISIM	financial intermediation services indirectly measured
f.o.b.	free on board
GDP	gross domestic product
GNI	gross national income
IARIW	International Association for Research on Income and Wealth
ICP	International Comparison Programme
IEA	integrated economic account
INSEE	Institut national de la statistique et des études économiques
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification of All Economic Activities
ISWGNA	Inter-Secretariat Working Group on National Accounts
MPS	Material Product System
n.e.c.	not elsewhere classified
NPI	non-profit institution
NPISH	non-profit institution serving households
OECD	Organisation for Economic Cooperation and Development

PIM	perpetual inventory method
R and D	research and development
SINS	system of indicators of non-material services (MPS module)
SNA	System of National Accounts
SOE	state-owned enterprise
SUT	supply and use table
USSR	Union of Soviet Socialist Republics (former)
VAT	value added tax

INTRODUCTION

A. Scope, objectives and orientation of the Handbook

1. The present Handbook focuses on the use of the 1993 SNA[1] in studying issues affecting transition economies in countries that formerly had centrally planned economies (CPEs) and were referred to as socialist countries. The issues include those that are a consequence of the change in the nature of institutional structures - from those supporting the central economic control of the past to those characteristic of a more decentralized economy with a market orientation. Introduction of the SNA in these economies requires an adaptation of the concepts and classifications of the System, a revision of the concepts and classifications of the basic economic statistics supporting the national accounts, the alignment of classifications and basic statistics with international standards, changes in the process of collecting primary data, a revision of business accounting standards and practices, and so forth. In order to assist national accountants and also users of national accounts statistics in those countries, the Handbook:

- Identifies the accounts and tables of the SNA that are most relevant in addressing selected high-priority issues of policy analysis in countries in transition, and suggests priorities in implementing the SNA in stages;

- Clarifies the use of SNA concepts and accounting treatments related to the issues selected, identifies the most appropriate treatments when the SNA includes alternatives, for instance, on the valuation of output and the allocation of financial intermediation services, and, where necessary, suggests a further adaptation of concepts to make them more useful and applicable to countries in transition;

- Suggests sources of data needed for compiling the relevant accounts and tables.

2. The special characteristics of transition economies, and the rapid changes over time that they are experiencing, present two types of challenges in the application of the 1993 SNA. The first challenge concerns the actual application of SNA standards to determining the scope of production, the sectoring of the economy, the valuation of product flows and the valuation of stocks and changes therein, and, in general, the treatment of transactions in the national accounts of those economies. The second challenge entails how to deal with these varying aspects of accounting in economies that are not static but are actually changing rapidly in the direction of market economies. This raises the question how best to structure the accounts so that data comparability over time is secured, while maintaining those accounts as an effective means of studying the process of transition to market economies, as

well as the question how to restructure data sources so that the sectors and transactions reflecting the increasing importance of market mechanisms are well captured in the underlying statistics.

3. The Handbook is specially designed to clarify, to prioritize and, where needed, to adapt the SNA to face these challenges. Hence, the relevance of the Handbook may be gradually reduced when the transformation to a market economy is advancing, and the countries in question have adapted their institutional structures and the supporting statistical system. They will then be in a position to make comprehensive use of the 1993 SNA in their statistical practices to support a variety of policy analyses.

4. The Handbook may not serve all countries with transition economies in the same manner. During recent years, many countries in transition took steps to introduce the SNA into their practices. However, so far full implementation of the SNA has not been achieved by any country, though some countries may lay claim to faster progress than others. None of the countries in transition have yet managed to implement the SNA as a unifying framework for generating macroeconomic information. The issues dealt with in the Handbook also respond to the needs of the newly independent States with transition economies that have been created as a consequence of political developments. Some of the independent States that belonged to the former Union of Soviet Socialist Republics (USSR) are members of the Commonwealth of Independent States (CIS). Some of these have already taken certain steps towards the compilation of selected accounts of the SNA, while others are at very early stages of the process. Furthermore, most of the conceptual issues and some of the data-related issues dealt with in this Handbook also apply to other countries with large non-market activities where similar changes are taking place in the direction of a market economy. Therefore, when the special features of national accounting in economies in transition are mentioned in this Handbook (see particularly sect. B below), they might apply to a larger group of countries than that normally signified by this terminology.

5. Clearly, detailed discussion of topics associated with the transformation of the entire statistical systems of the former CPEs is outside the scope of this manual, but some of the issues pertaining to the collection of primary data are of paramount importance for the compilation of national accounts, and will therefore be dealt with. The discussion of data sources is based on the assumption that during the transition period both old data sources based on a compulsory reporting system, and new sources of data sources including censuses, sample surveys and so forth, will be used in parallel for the compilation of national accounts. The Handbook does not deal with such matters concerning new data sources as the organization of registers and the organization of family budget surveys, nor does it discuss in any detail the many complex accounting issues resulting from inflation which is rampant in some transition economies; for the latter topic, the reader is referred to a parallel Handbook to be published by the Organisation for Economic Cooperation and Development (OECD)

dealing with national accounting under circumstances of high inflation.[2]

6. Two final observations are needed so as to avoid any misunderstanding about the nature of the present Handbook. First, the 1993 SNA provides the conceptual framework for the Handbook. Therefore, instead of repeating or paraphrasing what is contained in the SNA on the accounting framework, classifications and concepts, extensive references will be made to the System. This may be seen as an inconvenience, insofar as readers will be required either to be intimately familiar with the SNA or to consult extensively the sections and paragraphs that are referred to; the advantage, however, is that full attention can be paid to the specific issues in transition economies and the possibilities for misinterpretations of the SNA kept to a minimum. Second, as the discussion about the accounting treatment of the issues dealt with this Handbook has not reached a final consensus in all respects, the Handbook's presentation should not be regarded as constituting a definitive statement, but rather as reflecting the present state of the art and as contributing towards the reaching of a further consensus in the future.

B. Characteristics of transition countries and issues to be addressed

7. Most of the transition countries have committed themselves to reforms aimed at transforming their system of central planning, with large-scale non-market activities, into a market-oriented economic system. The reforms have been under way for a number of years and much has been done to alter the administrative methods used in the central management of the economy and to instal market-oriented mechanisms and institutions. At the same time, it is obvious that the long-term objectives of the reforms have not been fully achieved in most of the countries in transition, that is to say, in most of those countries genuine markets of capital and labour do not yet exist, transformation of the financial system into a two-tiered banking system has not yet been completed, the currencies are not fully convertible, and large-scale privatization has not been completed. The other important characteristic of countries in transition relevant to national accounts involves the relatively fast growth of foreign investments and substantial humanitarian assistance from abroad. These features require clarification of the treatment of many of the transactions recorded in the national accounts, such as reinvested income from foreign direct investments, for example. There is a general consensus that the intermediate position of the transition economies will not change in any major way for a relatively long period of time, though in some countries the movement towards the market will be faster than in others.

8. While in many respects countries in transition do not represent a homogeneous group, they have some general characteristics in common. Most of these economies were characterized in the past by large-scale production by government units or public enterprises at prices that had been administratively

determined and often set at levels far below cost, with public enterprises not only assuming considerable social cost with respect to their employees but also often covering family members and even the community at large, and with a financial system that was very little developed. These characteristics are changing rapidly over time, resulting in mixed economies in which some of the characteristics of the former central management of economies are still holding, while at the same time in an increasing number of sectors of the economy, prices are being determined by market forces, and production is in private hands and often carried out on a small informal scale. Accompanying these transformations of the economies are changes in the way in which social benefits are being provided to the population, and funds are being allocated to investment uses through an increasingly developed financial system. At the same time, some of the countries are plagued by high rates of inflation that were non-existent when prices were set by decree in the time of central planning. In particular, mention should be made of the following structural economic features that characterize these economies in transition:

- There is still a high degree of monopolization of production; in some countries many industries are concentrated in one or two enterprises;

- In some countries, anti-monopoly legislation has been adopted but it will take a long time before it has an impact on reality;

- In spite of the relatively fast growth of the private sector, the role of the government sector remains significant in many countries; this is reflected above all in the role it plays in the allocation of resources; in many cases, privatization did not change the methods of management;

- Reforms of the price systems are not yet completed in many countries and production of many goods and services is still subsidized or regulated in one way or another (for example, by regulations that establish a certain level of profitability for trade organizations);

- Many administrative rules and financial regulations are still in effect in many countries in transition; they distort market forces and hinder the process of adaptation of enterprises and households to the requirements of the modern market system;

- The financial system and financial instruments are underdeveloped; a system of multiple exchange rates still exists in some transition economies;

- There is still a relatively high degree of isolation from the world economy.

9. The other characteristics of countries in transition that were formerly

CPEs concerns the general organization of the statistical system. While they have adopted programmes of transformation of their statistical systems according to international standards, implementation of these programmes may take a relatively long time. In the recent past, these statistical systems were characterized by the following common features:

- The Material Product System (MPS) was used as the system of national accounting and some may continue to compile both the SNA and the MPS during the transition period;

- The major socio-economic classifications differed from international standards;

- Predominance of data pertaining to real flows related to production, rather than to income and financial flows;

- Statistics were collected with the help of a compulsory and comprehensive reporting system;

- Development of branch statistics was not, as a rule, properly coordinated and integrated.

C. Strategy to implement the System of National Accounts (SNA) in transition countries

10. The System of National Accounts (SNA) is a very broad and comprehensive system. It includes information on flows of products, incomes and expenditures, flows and stocks of produced and non-produced assets and financial assets and liabilities, input-output data and so forth. It systematizes and coordinates data that refer virtually to all aspects of the economic process. The Handbook through its organization (see sect. D below) suggests that the SNA be implemented in response to issues of policy analysis relevant to transition countries, and thus provides guidance as to which parts of the System to compile to address those issues. From the point of view of policy analysis, it is not relevant to attempt to introduce the SNA in its entirety, and there are also many statistical limitations.

11. The most reasonable approach during the transition period may consist in gradual compilation of those accounts and tables of the SNA that are relevant for addressing the policy issues that are considered to be of the highest priority. An important restriction on determining what to compile, of course, is the availability of statistics. This restriction may be of particular importance in the beginning of the transition process, insofar as the orientation of the statistics is still determined to a large extent by the policy issues of the past and by the experience with compiling MPS balances that responded to policy issues of that time. However, new policy orientations based

on the introduction of a market-oriented economic system in the transition countries should determine the introduction of new types of statistics and this in turn should reduce the statistical restrictions that are currently being faced when compiling parts of the System that are particularly relevant to the current policy issues.

12. In view of the above, it is proposed that the SNA be introduced in two stages. During the first stage, those accounts and tables of the System may be compiled that can be based roughly on such existing types of statistics as might have been used in the past in a different policy context. At a later stage, compilation of the parts of the System may be extended to those accounts and tables that address issues that can be addressed only with the help of new types of statistics. Roughly, the implementation may be carried out in line with the implementation stages developed by the Inter-Secretariat Working Group on National Accounts in a recent report prepared for the Statistical Commission.[3] This implies that, during the first stage, priority should be given to the compilation of production and generation of income accounts for industries, and to the establishment of accounts for the total economy and counterpart external sector, so that major aggregates such as gross domestic produce (GDP), national income, national disposable income, and saving and net lending for the total economy may become available. Thereafter, attention may be given to the government sector accounts and subsequently to accounts for other sectors, covering production, income generation, income and use of income and capital accounts. It is believed that in the majority of countries in transition there is a solid statistical basis for the compilation of these accounts in the immediate future. Financial accounts, balance sheets and data on stocks of produced and non-produced (non-financial) assets may be introduced later. However, in some transition countries, earlier priority may be given to the compilation of produced asset accounts including estimates of consumption of fixed capital, as such a compilation can be based on their past MPS experiences.

13. Introduction of the SNA into the regular statistical practices of countries in transition requires a radical transformation of the entire system of socio-economic statistics which until recently was used primarily for monitoring implementation of the plans of economic development and as a basis for compilation of the plan for the next planning period. As a result, statistical methodology in the former CPEs was predetermined to a considerable extent by the content of the indicators devised by the planners. These indicators reflected not only concepts and definitions elaborated by the agencies responsible for planning but also peculiarities in the organization of the economy, administrative methods of distribution of resources, and so forth. Transformation of the statistical system of the former CPEs on the basis of international standards will have to be carried out in parallel with the work of introducing the SNA in the narrow sense. This will first of all require radical changes in the areas of macroeconomic statistics that are close to the SNA or integrated with it: government finance statistics, money and banking statistics and balance-of-payments (BOP) statistics based on International Monetary Fund (IMF) guidelines, price and labour statistics, statistics based on household

surveys, and so forth. In many countries in transition, BOP statistics were practically not compiled in the past, and the parts that were compiled were not consistent with the international standards. Therefore, introduction of the SNA, including the important interaction between the operation of the resident economy and the rest of the world, will have to be accompanied by, and placed on, with high priority parallel statistical work on BOP statistics.

14. Transformation of the statistical system requires furthermore introduction of new economic classifications that are closely linked to the SNA: the International Standard Industrial Classification of All Economic Activities (ISIC), the Central Product Classification (CPC), the Classification of the Functions of Government (COFOG) and so forth. Considerable changes and modifications are needed in the underlying concepts and definitions of the statistics of major industries (manufacturing, construction, trade and so forth).

D. Organization of the Handbook

15. The issue orientation of the Handbook is reflected in the organization of the material by chapter. Each chapter deals with a selected group of issues and identifies the accounts and tables of the System that support policy analysis of those issues. The content of the chapters is broken down as follows: chapters I and II deal with the concepts used in analysis of production and use. Chapter I focuses on the items that are included in the production accounts of the SNA. It deals in particular with the consequences for the measures of production, intermediate consumption and value added of increasing shifts from non-market to market production. Chapter II extends the limited production analysis to full-fledged input-output (i-o) analysis based on the supply and use tables of the SNA, and shows in particular how a number of conceptual innovations affect the measures of final demand. Chapter III discusses how the changes in the institutional organization of production from public to private control could be best captured in an economic sectoring of the economy and how the SNA sector criteria should be interpreted within the specific circumstances of transition economies. Chapter IV deals with the accounting treatment of social benefits and corresponding contributions, how these are changing and how such changes should be recorded in the accounts, in order to facilitate studies based on time-series analyses. Chapter V discusses how the accounts would analyse the effects of privatization of enterprises, dwellings and other units and examines the consequences of privatization and the emerging financial system for the identification and measurement of capital transfers and property income and also the treatment of newly emerging financial instruments such as options. Finally, chapter VI deals with data sources, indicating their present status and how they should be changed in order to capture more accurately the changes taking place in the transition economies. In addition, the Handbook includes an annex on conceptual and data links between SNA and MPS which might be useful for those national accountants who are familiar with the work on the MPS in the past

and thus may get a better understanding of the SNA by comparing its features with those of the MPS. Also, knowledge of the links between past MPS and present SNA concepts and practices is important as a means of linking data over time and thus establishing long time series, particularly for the main aggregates, that could be used by analysts.

16. Underlying the structure of the Handbook are the accounting framework, concepts and classifications of the 1993 SNA. However, the Handbook does not deal explicitly with all parts of the System. Only those segments of the 1993 SNA will be dealt with that are relevant to the issues discussed. They include the following accounts and tables, which are briefly identified in the context of the issues addressed:

- Production and generation of income accounts, which are used in chapter I to explain how the shifts from market to non-market production affects the analysis based on production functions. For details, the reader should refer to the SNA, chapters VI and VII, in particular tables 6.1 and 7.1;

- The supply and use table (SUT), which presents in further detail the goods and services accounts and generation of income accounts of the SNA, and will be used in the discussion of chapter II dealing with i-o analysis in transition economies (the SNA, chap. XV, in particular table 15.1);

- Integrated economic accounts (IEAs), which are used in chapter III to explain what role institutional sectors play in the economic sectoring of the economy. Separate institutional sector accounts including all flow accounts and the balance sheets are referred to when explaining the accounting treatment of social benefits in chapter IV and the effects of privatization in chapter V. For more details on the IEA, the reader is referred to the SNA, chapter II, in particular table 2.8; for the concepts and classifications of the sector accounts, reference may be made to the SNA chapters VI-XIV; and for the integrated presentation of those accounts per sector the tables in annex V, part II, may be used;

- Cross-classification by industries and sectors (CCIS) of items of the production and generation of income accounts, which is used in chapter II to show how production is reorganized institutionally (the SNA, chap. XV, in particular table 15.3);

- Asset accounts for produced and non-produced non-financial assets, which are introduced in chapter II, as part of extended (that is to say, dynamic) i-o analysis in which not only data on (static) supply and use tables are needed, but also asset accounts that include the data on capital stock and changes therein (flows) for produced and

non-produced non-financial assets (the reader is referred to SNA, chap. II, in particular table 2.7);

- Transaction accounts covering all details of transactions of selected accounts for all sectors of the economy, which are used to explain in chapter IV the accounting treatment of flows resulting from changes in the social benefit system and in chapter V the effects of the privatization of the economy and the emerging financial system (the SNA, chap. II, in particular table 2.6).

17. Below is a list of specific accounting issues that the Handbook will deal with, including references to the chapters and sections in which they are discussed. These issues may arise in all countries in transition when implementing the 1993 SNA:

- Sectorization of the economy including subsectoring (chap. III);
- Distinction between market and non-market producers/output, valuation of own account production, treatment and allocation of non-market services provided to market producers (chap. I, sect. A.1);
- Treatment of subsidized goods and services (chap. I, sect. A.2);
- Distinction between property income and taxes received by government (chap. V, sect. C.1);
- Distinction between subsidies and social transfers (chap. IV, sect. B.4);
- Valuation and allocation of output of financial intermediation services indirectly measured (FISIM) (chap. V, sect. C.2);
- Treatment of foreign trade monopolies and conversion of transaction values to local currency when multiple exchange rates are in effect (chap. II, sect. C.3);
- Treatment of central banks (chap. III, sect. C; chap. V, sect. C.2);
- Treatment of insurance companies and computation of their output (chap. V, sect. C.3);
- Estimation of output in agriculture (chap. I, sect. B.1);
- Estimation of consumption of fixed capital at replacement values (chap. II, sect. A.2);
- Treatment of losses (chap. II, sect. A.6);

- Estimation of gross output of external trade activities (chap. II, sect. C.3);

- Treatment of capital and financial transactions and other flows resulting from privatization of public property, including the treatment of losses due to sales of public property at reduced prices (chap. V, sect. A).

18. Furthermore, the Handbook highlights new features of the 1993 SNA that are particularly relevant for conditions and institutions of countries in transition. These refer to:

- The special treatments elaborated in the revised SNA for social and cultural services provided free or almost free by enterprises to their employees (chap. IV, sect. C.2);

- The distinction introduced into the System between actual final consumption and final consumption expenditure (chap. II, sect. B);

- The treatment of holdings gains and losses aimed at removing the impact of inflation on measurement of output, changes in inventories, and so on (chap. II, sect. A.3);

- The introduction into the System of so-called asset accounts that are close to the balances of fixed assets in the MPS (chap. II, sect. A).

I. SHIFTS TO MARKET PRODUCTION AND OTHER FACTORS AFFECTING CONCEPTS USED IN PRODUCTION ANALYSIS

19. Compilation of production accounts in countries in transition should not pose a serious problem in principle, as in the past countries in transition have placed much emphasis on analysing the process of production. However, a change in emphasis may be needed. Central planning required detailed input-output (i-o) tables that allowed policy makers to make decisions on how to allocate manpower, capital and financial resources among different production processes in order to satisfy a variety of uses. In a market-oriented economy, in which the government influences production and use indirectly through its economic policies, production data remain equally important for an adequate formulation of these policies, as they show how government policies affect production, and analysis of those data may indicate how different effects could be achieved with different policies. As the organization of the production process is rapidly changing in countries in transition to market economies, it is a challenge for any national accountant to capture effectively these changes in production, to analyse the reasons why such changes are taking place and to determine their economic (income, financial and monetary) and also social (for example, employment) ramifications, so that the government may be in a better position to evaluate the effects of alternative policies that are aimed at avoiding unwanted consequences.

20. In measuring production-related concepts, the most important accounting implications arise from the increasing shift taking place in those countries from largely non-market production activities (in which the goods and services were either not sold and therefore had no market prices at all or, if sold, had prices that were considerably below cost) to production for sale in the market. The distinction between market and non-market production activities is an important distinction in the SNA, and is closely related to, and therefore determines, other concepts of the System, including the production boundary and the unit of classification, the valuation of output, intermediate cost and value added, and the scope and accounting treatment of subsidies and also taxes on production.

21. The present chapter deals exclusively with the concepts of production and generation of income accounts in the SNA, which are used in analyses of production functions. The next chapter (II), a continuation of this one, offers an extended production analysis, in which the production functions are broadened to encompass comprehensive i-o analysis based on supply and use tables and asset accounts. Production and generation of income accounts are presented in tables 6.1 and 7.1 of the SNA and discussed in SNA chapters VI and VII.

22. This chapter contains two sections: section A discusses general issues concerning the scope and valuation of output, and section B dealing with output issues in selected industries, covers agriculture and construction, research and

development activities, and financial intermediation and health services.

A. Scope and valuation of output

23. Output is a starting-point in the measurement of the results of production. The term refers to the value of goods and services produced by resident units during the accounting period, and output itself "consists only of those goods and services that are produced within an establishment that become available for use outside that establishment" (para. 6.38 of the SNA).

24. Discussed below are two issues that are of particular relevance to the measurement and classification of output in transition countries. The first one concerns how to link data based on the distinction between material goods and services and non-material services to the industry and product classifications of the SNA, and how this distinction relates to that made in the SNA between market and non-market production. The second issue concerns the scope of taxes and subsidies on production and imports and the corresponding SNA valuations of output in basic and producer's prices. This chapter does not deal with the changes in prices of output and intermediate consumption for which adjustments need to be made, particularly in periods of high inflation, in order to arrive at "one homogeneous price vector for production analysis" (SNA, paras. 6.222-6.232). That issue is dealt with in the next chapter (sect. A.3) where changes in inventories are discussed.

1. Output classified by industries, market and non-market producers

25. The industry grouping of identical establishments is a classification underlying the SNA that is used for production analysis. It is applied to the production and generation of income accounts. The groupings are called industries, and the classification is elaborated in the International Standard Industrial Classification of All Economic Activities, Revision 3 (ISIC, Rev.3).[4] The term "industry" refers in the 1993 SNA to both market and non-market producers, and not only to producers of products sold on the market, as was the case in the 1968 SNA.[5] All activities of producers, no matter to which institutional sector they belong, can be classified by industries. It is recommended that countries in transition incorporate on an optional basis in their classification of production a distinction between material goods including material services, and non-material services, in order to ensure links with the MPS time-series of the past. As will be shown below, the latter distinction may be related to the SNA distinction between market and non-market producers.

26. In the past for international purposes, countries in transition used the Classification of Branches of the National Economy (CBNE), worked out by the

Council of Mutual Economic Assistance (CMEA), and for domestic purposes they used national versions of this classification. The structure of the CBNE is consistent with the underlying concepts of the MPS but less suitable for compilation of the SNA. Therefore, aligning national industrial classifications with the ISIC, Rev.3, would be an essential step towards introduction of the SNA and improving international comparability of statistical data. Though conceptually the ISIC, Rev.3, does not make a distinction between industries producing material goods and services and those producing non-material services, in practice only limited adjustments are needed to achieve this distinction. Table 1.1 shows how the distinction between industries of the material sphere and those of the non-material sphere can be made on the basis of ISIC, Rev.3, categories. That table reflects the practices in the majority of countries, but may require some adaptation for some countries. Table 1.2 provides further ISIC-related detail on the scope of non-material services.

27. Material goods and services and non-material services may also be distinguished in the inputs. This would require a systematic distinction between the input of goods including material services and the input of non-material services, in addition to the distinction between the activities producing material goods and those producing non-material services. Table 1.3

Table 1.1. Industries of the material sphere and the non-material sphere identified with the help of the categories of the International Standard Industrial Classification of All Economic Activities, Revision 3

ISIC, Rev.3, code	Description
	Industries of the material sphere
Divisions 01+02	Agriculture, hunting and forestry
Division 05	Fishing
Divisions 10-14	Mining and quarrying
Divisions 15-37	Manufacturing
Divisions 40-41	Electricity, gas and water supply
Division 45	Construction
Divisions 50-52	Wholesale and retail trade; repair of motor vehicles and personal goods
Division 55	Restaurants and hotels
Divisions 60-64	Transport storage and communications
	Industries of the non-material sphere
Divisions 65-67	Financial intermediaries (including insurance and pension funds)
Division 70	Real estate activities
Division 71	Renting machinery and equipment
Division 72	Computer and related activities
Division 73	Research and development
Division 74	Other business activities
Division 75	Public administration and defence
Division 80	Education
Division 85	Health and social work
Division 90	Sewage and refuse disposal
Division 91	Activities of membership organizations not elsewhere classified (n.e.c.)
Division 92	Recreational, cultural and sporting activities

Division 93	Other service activities
Division 95	Private households with employed persons

Table 1.2. Coverage of non-material activities in terms of the International Standard Industrial Classification of All Economic Activities, Revision 3

Description of activities allocated to non-material sphere	ISIC, Rev.3, codes
Financial intermediation excluding insurance and pension funds	Division 65
Insurance and pension funding, except compulsory social insurance	Division 66
Activities auxiliary to financial intermediation	Division 67
Real estate activities	Division 70
Renting of machinery and equipment without operator and of personal and household goods	Division 71
Computer and related activities	Division 72 excluding 725
Research and development	Division 73
Other business activities	Division 74 excluding 7495
Legal activities	7411
Accounting, bookkeeping, tax consultancy, and so on	7412
Market research and public opinion polling	7413
Business and management consultancy activities	7414
Architectural and engineering activities	7421
Technical testing and analysis	7422
Advertising	7430
Business activities, n.e.c.	749
Public administration and defence, compulsory social insurance	Division 75
Education	Division 80
Health and social work	Division 85
Sewage and refuse disposal, sanitation	Division 90
Activities of membership organizations n.e.c.	Division 91

Table 1.3. Scope of material and non-material inputs

Inputs of goods and material services include

- Raw materials and goods embodied in the output
- Materials used in the production process under normal technology, for example, materials used in carrying out test, maintenance and repair, materials necessary for use of equipment, spare parts, instruments, measuring devices and so forth
- Semi-manufactured goods and components that are assembled in the enterprise
- Fuel of all kinds
- Energy of all kinds; expenditure incurred in production of electricity and other types of energy at the given enterprise
- Expenditures connected with the delivery of goods undertaken by the enterprise itself as well as transportation services carried out by other enterprises
- Net costs of packing materials
- Payments for communication services and computing centres

Most common types of non-material inputs include

- Rent for non-residential buildings
- Rent of machinery and equipment
- Research and development services
- Sewage, sanitation cleaning and waste disposal services, including municipal services of this kind
- Personnel recruiting services
- Training of personnel
- Advertising services
- Bookkeeping services
- Auxiliary financial services
- Legal services
- Veterinary services
- Security services

Technical testing and analysis

Certification of products

Consulting services

Architectural services

Hotels

Typing, copying and other business services

Financial intermediation services

Non-financial insurance services

presents the most important input items that are to be included as inputs of goods and material services and non-material services. Inputs of non-material services include the relevant elements of imputed output of financial intermediation and non-life insurance services, as will be discussed in chapter V (sects. C.2 and C.3) and also the expenses by enterprises on research and development (see sect. B.3 below). However, payments for services that are associated with the transfer of ownership of existing goods or capital or land or non-produced intangible assets are excluded from intermediate consumption. They are recorded under gross fixed capital formation.

28. Expenditures of enterprises from which both employers and employees benefit are allocated to intermediate consumption rather than to compensation of employees. These refer to expenditure on goods and services that employees normally use at the workplace in order to carry out their functions properly. They include:

(a) Tools and equipment that employees use at work;

(b) Uniforms and special footwear used at work;

(c) Expenses on provision of working facilities such as libraries, bathrooms, medical rooms;

(d) Expenses on transportation of employees to and from work when it is organized by the producer;

(e) Expenditure on business trips (including payments for transportation, hotels, and so on);

(f) Special employee meals that are required owing to special production conditions in certain industries.

29. In some transition economies, enterprises and government agencies make annual lump sum contributions to medical and educational institutions on behalf of present - and also future - employees. These contributions are not included in intermediate consumption, but channelled through final consumption of households. Their treatment is discussed in detail in that section of chapter IV (sect. B), in which social contributions are dealt with.

30. Furthermore, intermediate consumption excludes:

(a) Major expenditures on construction and capital repair of buildings and structures that are made in order to increase the length of life of assets and to enhance productivity capacity: such expenditures are treated as gross fixed capital formation;

(b) Goods and services provided by an enterprise free or at a reduced

price when these benefit only the employee and not the employer: these are treated as compensation of employees in kind;

(c) Expenditure associated with the transfer of ownership of land, produced fixed assets and non-produced intangible assets which is treated as gross capital formation;

(d) Rent on land which is treated as property income rather than as payment for services;

(e) Costs of geologic exploration, drilling, and prospecting for oil and natural gas and all costs associated with exploration of mineral deposits: these are treated as gross fixed capital formation;

(f) Purchases of software which are allocated to gross fixed capital formation;

(g) Major land improvements including land clearance and land reclamation and preparatory work for the establishment of woods and orchards: these are also treated as gross fixed capital formation;

(h) Costs to employees of travelling between home and work paid for by households: these are treated as final consumption expenditure of households;

(i) Purchases of valuables by enterprises (for example, paintings, non-monetary gold, and so on) treated as a separate heading of capital formation;

(j) Expenses of general government on construction of military facilities such as airports, docks and roads that can be converted into civilian objects, which are allocated to fixed capital formation (expenses related to destructive weaponry and ammunition, however, being included in intermediate consumption.

31. The distinction between material goods and services and non-material services may be related to the SNA distinction between market and non-market services. This is depicted in table 1.4. Market services are the result of an activity of a market producing unit, that is to say a unit engaged in production of goods and services for profit that sells its output at economically significant prices; a market producer (establishment or enterprise) delivers most of its output to the market but may to some extent produce non-market output (see the SNA, paras. 6.45-6.52). The non-market collective services of general government identified in that table refer to services provided by budgetary organizations to enterprises free or almost free of charge: for example, irrigation services, research and development services, veterinary services, and so forth. These services are regarded by convention as non-market collective services of general government. Methods of measurement and valuation of output depend on whether the output is market or non-market. Non-market

output is characteristically produced by non-market producers furnishing goods and services free or almost free of charge. Non-market producers may to some extent also produce market output.

32. The main characteristic of market output is that it is sold at economically significant prices, which affect demand, approximate equilibrium prices and reflect relative consumer preferences and production costs. Although the concept of economically significant price is clear in principle, its application in practice may depend on particular interpretations; therefore the SNA allows a degree of flexibility. It should be recalled that in CPEs the functions of prices differed from those in a market economy, and as a rule they did not affect demand or reflect either production costs or consumers' preferences. In countries in transition, the situation has changed noticeably owing to economic reforms, though in at least some the market mechanisms do not yet work properly and price reforms have not yet been completed. For instance, in the Russian Federation and some other CIS member States, there are still administrative regulations of prices, which are imposed with the help of limits on retail trade margins. Therefore the above concept of market price should be applied in countries in transition with care and in a rather broad context; a too rigid interpretation of the definition of "economically significant price" may bring about inappropriate results. There are many borderline cases for which some conventions may have to be adopted so as to ensure delimitation of the concept of market output in a consistent manner. These conventions may be formulated in the form of ratios of output to cost.

Table 1.4. Proposed allocation of non-material services to market and non-market services

Market services

- Non-financial services
- Intermediation services of financial institutions (other than insurance companies and pension funds)
- Services of insurance companies and pension funds
- Auxiliary financial services

Non-market services

- Non-market collective services of general government
- Non-market individual services of general government
- Non-market services of non-profit institutions serving households (NPISHs)

Housing services of owner-occupiers

Domestic services

2. Basic and producer's prices, taxes and subsidies on production and imports

33. If output is valued at prices that exclude taxes on products less subsidies on products, it is referred to as output at basic prices, and the corresponding value added is also at basic prices. On the other hand, the output can also be valued at producer's prices, which excludes a non-deductible value added tax (VAT), VAT-type taxes and taxes less subsidies on imports, but includes other taxes less subsidies on products; in this case, the corresponding value added is also at producer's prices. In both instances, the total of value added is not equal to GDP at market prices, and global adjustments are needed for those taxes less subsidies on products that were excluded from output and value added. Thus, if value added is at basic prices, all taxes on products are added and all subsidies on products are deducted in order to arrive at GDP. If value added is at producer's prices, non-deductible VAT, VAT-type taxes and taxes less subsidies on imports are added in order to arrive at GDP. The taxes excluded from and included in GDP and value added in basic prices and producer's prices are identified in table 1.5. Their scope will be discussed in the latter part of the present section.

34. It is recommended that countries in transition generally value output at basic prices and intermediate consumption at purchaser's prices. This is the preferred option in the SNA which also matches the peculiarities of the pricing systems in transition economies. However, some countries may prefer valuation at producer's prices which is the other option in the SNA. Following this section, reference will therefore generally be made to basic prices and the producer's price option will be indicated in brackets.

Table 1.5. Taxes and subsidies included in (+) or excluded from (-) gross domestic product (GDP) and value added of industries and sectors

	Value added at basic prices	Value added at producer's prices	GDP at market prices
1. Value added tax (VAT)	-	-	+

2.	Taxes on imports	-	-	+
3.	Subsidies on imports	+	+	-
4.	Other taxes on products	-	+	+
5.	Other subsidies on products	+	-	-
6.	Other taxes on production	+	+	+
7.	Other subsidies on production	+	+	+

35. The basic price valuation mode has a number of advantages including better consistency between valuation of output and that of imports, between output and change in inventories, and so on. Application of basic prices is feasible in practice in most countries in transition. For example, existing information allows the distinguishing between taxes on products and other taxes on production, as well as between subsidies on products and other subsidies on production. It is also believed that in the conditions of countries in transition, valuation of output at basic prices will ensure more meaningful figures on the contributions of various industries to total value added. The final choice between the two types of valuation depends on the system of taxation and subsidization in each country as well as on the practical statistical problems that may arise in connection with the valuation.

36. In practice, in many former CPEs output was shown in statistical reports at wholesale prices which as a rule exclude taxes on products (in other words, at basic prices). However, in the material balance of the MPS, net taxes on products were added to arrive at output at producer's prices. Thus, from a technical point of view the derivation of output at basic prices is feasible by either (a) by adding subsidies on products to output valued at wholesale prices which exclude taxes on products or (b) excluding taxes on products from output valued at producer's prices and adding subsidies on products. At present, output shown in statistical reports may include taxes on products (that is to say, it is valued at producer's prices).

37. In some countries in transition, the taxes on products may include imputed tax payable to the budget by external trade organizations. This topic will be discussed in detail in chapter II (sect. C.3). In the former Union of Soviet Socialist Republics (USSR), this tax amounted to 56 billion roubles in 1989, that is, to nearly one quarter of all taxes on production and imports.

38. Taxes and subsidies on products also include imputed taxes and subsidies on exports and imports. They arise because of the existence of the system of multiple exchange rates, in which importers and exporters are faced with exchange rates that may either favour or disfavour their transactions with other countries. The details are discussed in chapter II (sect. C.3, which deals with

the valuation of external trade and trade monopolies).

39. In some countries in transition, such as the Russian Federation, there exist product taxes paid by some enterprises exploiting natural resources. They are set up in the form of rental payments to the state budget by the extraction enterprises. In some cases, they are intended to capture the above-normal profits which are derived owing to the especially favourable conditions under which the natural resources are exploited. It is suggested that these be treated as taxes on income rather than as taxes on products. It should be noted that in this case the tax in question is paid only by some enterprises - those that are in more favourable circumstances and whose profit is therefore relatively bigger and is to be withdrawn to the budget; it should also be noted that under certain circumstances this payment can be treated as income from property (for example, when relationships between the owners and users of assets are clearly defined).

40. Other taxes on production include taxes that are payable by producers and are related to the use of land, capital goods and labour. They may also be payable on certain activities or transactions linked to the production process. The list of the most common types of other taxes on production in countries in transition includes:

Taxes on payroll and workforce

Tax on excess of wage increase

Taxes on land paid by enterprises

Taxes on buildings or other structures paid by enterprises

Taxes paid to obtain business and professional licences

Fees for the right to produce and sell liquors

Stamp-duties except those paid by households

Taxes on use by enterprises of vehicles (cars, ships, aircraft)

Taxes on financial and capital transactions

Taxes on international transactions

Payments for permission to engage in individual labour activities

Fees for obtaining market-places.

41. A very important tax that existed in the recent past in some transition

economies and that should be included in other taxes on productions is the tax on the use of fixed and circulating assets. In the former USSR, this tax amounted to 30 billion roubles in 1989, which was approximately 4 per cent of GDP; however, this tax has been abolished.

42. In some transition countries, a distinction is made between taxes on land which encompass taxes imposed on the holders of urban plots without buildings, and agricultural taxes which encompass taxes imposed on private holders of rural land. Both taxes are treated as other taxes on production if the land is used by the holders for production; a tax on land that is not used for production is classed as current tax on income, wealth.

43. In some transition countries, there is a tax on excess of funds available for consumption. This tax is a form of a tax on wage increases that are considered to be excessive. It should be treated as an other tax on production.

44. In some countries in transition, there are charges for water use and forest exploitation that are transferred directly to the state budget and not to the enterprises that are engaged in the provision of water or the exploitation of forests. These taxes, which were relatively small in the past, are likely to rise in the future to ensure government revenues and environment protection. They should be treated as other taxes on production.

45. Several other examples of other taxes on production are found in recent economic practices of countries in transition. They include:

Taxes on advertising which are levied as a fixed percentage over the payments by enterprises for advertisements

Taxes on users of roads paid by enterprises

Taxes on advertising which are levied as a fixed percentage over the payments by enterprises for advertisements

Compulsory payments in connection with mineral extraction.

46. In some cases, a distinction between taxes on products and other taxes linked to production is not easy to make. For example, in 1993 the Government of the Russian Federation introduced a tax on the development of agriculture to be levied on sales of goods by all producers (other than agricultural enterprises) at a rate of 3 per cent. This tax is not explicitly included in the price of products sold, but rather included in the cost of production reducing the profit, and therefore differs to some extent from other types of taxes on products. Nevertheless, because it is proportional to the volume of goods sold, it is suggested that it be classified as a tax on products. Another example of this type is the tax on development and maintenance of roads which has recently been introduced in the Russian Federation. As a matter of fact,

this tax consists of several different taxes; some of these, such as taxes on sales of cars, spare parts and other materials for cars, should be treated as taxes on products, whereas some others, such as taxes on vehicles owned by enterprises, should be allocated to other taxes on production.

47. In some countries in transition, the tax on net wealth has been recently introduced. This tax is allocated, in principle, to the SNA category called Current taxes on income, wealth, etc.; it is therefore not recorded in the generation of income account unless it relates to assets that are owned by enterprises and used in production.

48. As was noted above, in some cases a distinction between taxes and payments to the government for purchases of services can be made only with the help of conventions which as a rule may be based on prevailing national practices. Thus, the payments by households for licences to own or use vehicles, boats or aircraft and for licences to hunt, fish and so forth are treated as other taxes on production. Payments for all other kinds of licences including driving-licences or pilot licences, payments for passports, airport fees, and court fees are treated as payments for services. In the latter cases, it is assumed that government provides some regulatory services.

49. It should be noted that as a rule in countries in transition, budgetary government units engaged in the provision of non-market services do not pay taxes on production. However, there are exceptions to this rule. For example, in the Russian Federation public institutions pay taxes on development and maintenance of roads; these and similar taxes should be classified as taxes linked to production.

50. Table 1.6 illustrates, with the help of data for the Russian Federation, the scope of other taxes on production.

Table 1.6. Other taxes on production based on 1994 data for the Russian Federation

	Description of tax	Amount (Thousands of billions of roubles)
1.	Allowances for reproduction of mineral resources	260.3
2.	Taxes for use of forests	150.5
3.	Payments for water by industrial enterprises	64.2
4.	Payments for pollution	7.9

5.	Allowances for reproduction and protection of forests	11.6
6.	Other payments related to use of natural resources	129.5
7.	Taxes on construction in resort places	171.7
8.	Fees for right to produce and sell liquors	133.8
9.	Licence fees for right to organize local lotteries and auctions	2.0
10.	Taxes on land	1 046.6
11.	Fees for permit to conduct business activities	20.7
12.	Fees for maintenance of militia, city development, and so forth	182.8
13.	Taxes on property used in production	4 777.7

51. The most common type of subsidy in the recent past was compensation for the losses of government trading organizations which sell commodities at prices lower than established buying prices. These subsidies are known in practice as negative turnover taxes or "price differentials". They have been widely used in many former CPEs with respect to agricultural and food products, energy products and so forth, to compensate for the increasing disparity between changing wholesale prices and fixed retail prices. In the former Czechoslovakia during the late 1980s, agricultural and food subsidies of this type accounted for about 50 per cent of total subsidies. The liberalization of prices in many countries in transition led to a reduction in, and even the disappearance of, these subsidies. However, in some countries they are being reintroduced. For example, in the Russian Federation subsidies on agricultural goods purchased by the Government were reintroduced in April 1992. Other important product-related subsidies in transition countries involve the housing sector, culture, medicines, and energy products.

52. In the recent past, subsidies played a significant role in the economic mechanisms of CPEs. According to estimates published in a 1991 study of the Soviet economy,[6] the ratio of subsidies to GDP of the USSR in 1989 was equal to 13.5 per cent. The study noted, however, that in this case the economic concepts of subsidies, taxes and prices almost lose their meaning, as practically all commodities and factor prices were administered. In other countries, the percentages were different. In 1993, the ratio of subsidies to GDP was 6.3 per cent in Romania; 4.8 per cent in Slovenia; 3.3 per cent in Poland; and 3.1 per cent in Hungary. Recent developments have shown that some countries had even to reinstate certain subsidies abolished only a short time ago. Thus, in February 1993 the Government of the Russian Federation made a decision to fix procurement prices for grain at the level of 12,000 roubles per ton as a basis for determining the size of subsidies to producers of grain calculated as the difference between the actual procurement price on the market and the above-mentioned fixed price. The Russian Government also decided in 1993 to provide 500 billion roubles in subsidies to producers of cattle and other products of animal husbandry.

53. Although current economic reforms have already led to a considerable reduction in subsidies in most transition economies and further reductions are likely to follow in the foreseeable future, subsidization is still an important factor in the organization of the economic process in a number of former CPEs. Therefore, in the context of the compilation of national accounts, there is no other choice but to use the existing price, subsidization and taxation systems in countries where reforms have not yet changed the situation.

54. According to the SNA, subsidies are "current unrequited payments that government units make to enterprises" (para. 7.71). In a recent joint OECD/Economic Commission for Europe (ECE) meeting of National Accounts Experts,[7] it was recognized that linking subsidies to government payments would make the scope of subsidies in transition countries particularly dependent on the units

of reclassification to other sectors than the government. It was generally felt by participants in the meeting that such an effect of sector reclassification on the scope of subsidies would be undesirable for purposes of analysis and should be avoided as much as possible. In particular, changes in institutional sectoring and in the treatment of government unrequited payments should not lead to fluctuations in the level of GDP.

55. Analysis of subsidies in transition economies shows that practically all of them are product-related; other subsidies on production account for only a small part of all subsidies in countries in transition, approximately 2-3 per cent of the total. Furthermore, of all subsidies on production, most relate to agriculture; for example, in the former USSR in 1989, four fifths of all subsidies were related to agricultural products. Other subsidies have been provided - to mining, heavy industries, housing, culture, and so on, and should also be considered product-related. In other former CPEs, the structure of subsidies has been similar; the most important products that are being subsidized include food, agricultural, housing and pharmaceutical products.

56. A numerical example characteristic of those countries in transition where subsidies on products exceed taxes on products is presented in table 1.7. Suppose that sales of final product are equal to 50 and the producer receives an additional 10 as a subsidy from the government; the costs include intermediate input (30), compensation of employees (15) and depreciation of fixed assets (5). The two alternative versions of valuation of output and value added at producer's and at basic prices presented in the upper part of table 1.7 show that the choice of valuation affects value added and subsidies on products, but not operating surplus or any other component of value added. If it is assumed that output for intermediate and final consumption is produced by one industry and that there are no other industries, and that there is no VAT or similar taxes, then as is shown in the lower part of the table, the resulting GDP is the same in both cases.

Table 1.7. Alternative valuation at producer's and basic prices

	Valuation at producer's prices (alternative I)[a]	Valuation at basic prices (alternative II)[b]
Output	50	60
Intermediate input	30	30
Value added, gross	20	30
Compensation of employees	15	15

Subsidies on products, net	-10	0
Consumption of fixed capital	5	5
Operating surplus, net	10	10

[a] Alternative I: GDP = value added of production of final product at producer's prices (20 = 50-30) + value added in production of intermediate products (30) = 50.

[b] Alternative II: GDP = value added in production of final product at basic prices (30 = 60-30) + value added in production of intermediate goods (30) + subsidies on products (-10) = 50.

57. A common practice in the past was to have subsidies paid out not to producers of goods but to trade organizations and other distributors. They were compensated for the losses they suffered because their selling prices were kept artificially low, while the prices at which they purchased the products were much higher. This practice of giving implicit subsidies on agricultural products through procurement organizations does not constitute, however, the only way subsidies are given. There are an increasing number of instances in countries in transition including the countries of CIS, where subsidies are explicitly given to producers in order to keep the prices of agricultural products at the same level. For example, in the Russian Federation, Uzbekistan, Belarus and in some other CIS member countries, explicit subsidies are now more frequently being paid directly to the producers of agricultural goods when the costs of production exceed the discounted price that the producers receive from customers.

58. The numerical example presented in table 1.8 may help clarify the SNA treatment of subsidies under these circumstances. This example, which focuses on the case in which subsidies are given to procurement organizations, is based on illustrative data for three sectors: agriculture which produces agricultural products, manufacturing which uses the agricultural products as inputs and has no other intermediate consumption, and - for simplicity's sake - trade which includes the procurement organizations through which all agricultural products are purchased and distributed. Output of the three industries is presented at basic prices excluding product taxes less subsidies and therefore value added of each industry also excludes product taxes less subsidies. Thus, output of agriculture (400) at basic prices is the value that agricultural establishments actually receive from the procurement organizations (trade). The procurement organizations sell this output at a much lower value (320) to manufacturing. At the same time, they receive a subsidy of 100 from the government. This results in an output of trade in basic prices (that is, a trade margin) of 20 (= 320+100-400). Since total value added in basic prices (595) does not reflect the subsidies paid out to procurement organizations, they need to be deducted from total value added at basic prices in order to arrive at GDP at market prices, in other words, 495 = 595-100. In practice, the mark-up of the trade organizations is normally computed on the basis of information on cost and profits obtained from their reports; and given the manner in which the "price differentials" (the term is used in countries in transition to denote these types of subsidies) are technically handled and recorded, the subsidization does not affect the normal mark-up receivable by trade organizations. In those circumstances, there is no need to make an explicit adjustment for subsidies in order to estimate the output of the trade organization in basic prices. This adjustment is needed, however, if the output is computed as the difference between the buying and the selling price of the goods.

59. What has been described above is mainly the price effects of subsidies. However, subsidies, also have a social dimension. Low prices, particularly for basic goods and services, are a form of social assistance to less fortunate

groups of the population. For analytical purposes it is important to distinguish between the two, and therefore the SNA includes a concept of subsidies as defined above, and a concept of social transfers. The distinction is dealt with in chapter IV, which discusses the accounting treatment of social benefits, presents (in sect. B.4) several examples of cases on the borderline between subsidies and social transfers and develops practical criteria to distinguish the two.

Table 1.8. Illustration of how to estimate value added by industry, when subsidies on agricultural products are given to agricultural products procurement organizations

	Agriculture	Manufacturing	Trade	Total
Output at basic prices	400	600	20	1 020
Intermediate consumption	100	320	5	425
Value added at basic prices	300	280	15	595
Taxes less subsidies on products				-100
GDP at market prices				495

60. In most transition economies, other subsidies on production have amounted to relatively little, if anything at all. However, they are gradually being introduced. Thus, in 1993 the Russian Government adopted legislation that envisaged payments from the budget to enterprises that employed handicapped persons to make up for possible losses in income. In principle, other subsidies on production constitute only a small fraction of all subsidies on production and imports in countries in transition. Other examples along these lines are found in CIS member countries, where Governments encourage agricultural producers to use methods of planting and harvesting that are mechanized and require high consumption of energy, and pay subsidies to them to compensate for the higher cost these enterprises incur owing to increases in energy prices.

61. In making the above distinction between subsidies on products and other subsidies on production, it should be recognized that in the 1993 SNA subsidies on products are defined to include subsidies that make up for the overall losses of the enterprises charging prices that are lower than the costs of production, as a matter of deliberate government economic and social policy. As these subsidies are not clearly product-related, such treatment may not be fully satisfactory for countries in transition. Instead, they may call for a somewhat modified treatment, similar to the one described in the 1970 version of the European System of Integrated Economic Accounts (ESA),[8] in which these subsidies are allocated to other subsidies on production.

62. Special types of subsidies arise in transition economies (and above all in CIS countries) in connection with foreign loans provided to them in kind (so-called commodity loans). They are referred to by IMF as indirect subsidies. Under the existing arrangements, the Government that receives the loan in kind (in the form of grain, fuel or some other product) provides the commodities to the enterprises at relatively low prices and this results in proceeds that are

less than the liabilities incurred by the Government. The difference is the subsidy which should be taken into account in the valuation of the output at basic prices. To clarify this, consider the following example. Assume that the government proceeds from the sale of grain obtained as a result of a loan in kind from other Governments amount to 50,000 (that is, 50 x 1,000 tons of grain). This amount is less, however, than the liability of 60,000 incurred by the Government. The difference is the subsidy in question which is paid indirectly to the enterprise producing bread from the grain. This subsidy should be added to the output of the enterprise producing the bread, in order to

arrive at a value of output at basic prices. The commodities obtained as a loan in kind will have to be recorded as imports of the country. Special care is needed to secure consistency in the valuation of imports and intermediate consumption. The difficulty with this accounting of indirect subsidies is that fiscal reports do not as a rule contain data on this flow. If the amounts are significant, special inquiries may be needed to assess their magnitude. It is to be hoped that, in the future, fiscal reports will contain data on these subsidies, as recommended by IMF to the countries concerned. On the other hand, the significance of foreign loans in kind may diminish in the future.

B. Issues in the estimation of output of selected industries of transition economies

63. There are several instances where the application of the SNA definitions and accounting rules regarding production items in countries in transition requires additional specifications. This occurs when the transition to a market orientation of the institutions and mechanisms governing production has not yet been completed and they still retain many characteristics typical of CPEs. There are also instances where existing statistical information on production does not provide all the data needed for compiling the production and goods and services accounts of the SNA and advice might be needed on how the SNA is to be adapted to this state of affairs. In the paragraphs below a detailed discussion of these issues for selected industries is provided, covering agriculture, construction, research and development (R and D) services, housing services and health services. The scope of output of financial intermediation services indirectly measured (FISIM) and insurance services is discussed in section C.2 of chapter V. In the discussion of each industry given below, particular attention is paid to the application of the criteria regarding the production boundary, the unit of classification, and the distinction between market and non-market activities, and also to valuation aspects including the identification of taxes on production and imports and subsidies.

64. Before entering into a more detailed discussion of the four industries mentioned above, some general notions about the measurement of market services are highlighted:

(a) Output of retail trade and wholesale trade is measured by the trade margin, which in general terms is computed as the difference between the sales of goods and the value of goods purchased for resale. An adjustment is needed, however, for changes in the prices of goods added to or withdrawn from the stocks. This is explained in detail in chapter II (sect. A.3);

(b) Output of transport is measured by fares or freight charges;

(c) Output of restaurants and cafés includes the value of food, drink and tobacco sold;

(d) Output of financial intermediation services is taken to be equal to the excess of property income received by financial intermediaries (other than income from the investment of their own funds) over the interest paid out to their creditors. This output is therefore computed indirectly and is referred to as output of FISIM. More detailed explanations of the procedures to be used in countries in transition are given in section C.2 of chapter V, dealing with transactions in an emerging financial market;

(e) Output of financial auxiliary services is taken to be equal to the actual payments for services;

(f) Output of insurance is taken to be equal to the excess of the sum of gross premiums earned and net income from the investment of insurance technical reserves over the sum of claims due and changes in the technical reserves (see also sect. C.3 of chap. V);

(g) Output of pension funds is computed in the same manner as output of insurance companies;

(h) Output of institutions engaged in lotteries is taken to be equal to the excess of the receipts over the payments to the winners of the lotteries;

(i) Output of operating leasing (that is the renting out of machinery and equipment for specified periods of time that are shorter than the total expected service life of the machinery and equipment) is taken to be equal to the rentals the lessee pays to the lessor;

(j) Output generated as a result of the resale of existing produced assets is treated as the transfer cost included implicitly in the capital formation of the purchasing sector;

(k) Output generated as a result of the resale of existing non-produced assets is treated as the transfer cost explicitly included in the capital formation (under a separate heading).

65. In the case of countries in transition, other non-market output also includes the value of social and cultural services provided free or almost free by enterprises to their employees. The units producing these services namely, medical institutions, cultural centres, stadiums, rest homes and so forth, are subdivisions of the enterprises that possess the characteristics of establishments. Therefore their output is to be recorded in the production accounts of both industries and sectors. The methods of estimation and allocation of output of these services, which are classified as non-market services produced by NPISHs, are accorded a special treatment in the SNA. This will be discussed in detail in chapter IV (sect. C.2).

1. Measurement of output in agriculture, including agricultural services

66. Definitions in the 1993 SNA pertaining to the measurement of agricultural output (paras. 6.94-6.100 of the SNA) are in principle applicable to countries in transition. Nevertheless, there are certain issues that need clarification.

67. In many countries in transition, output of agriculture is computed on a gross basis, that is, including own produced intermediate consumption of seeds, fodder and other items. Sometimes this concept is referred to as gross output. This method is used in CIS member States as well as in a number of transition economies from Central and Eastern Europe, such as Bulgaria, Hungary and some others. In principle, the exclusion of own produced intermediate consumption and the derivation of output figures consistent with the SNA definitions should not pose serious technical problems for most countries in transition since they compile on an annual basis supply and use tables of a type (shown in table 1.9) in which the most important agricultural commodities or groups of commodities are identified separately. As the tables include a breakdown of intermediate consumption by origin of the goods, it is possible to derive output figures net of own produced intermediate consumption. Most countries in transition had experience with this type of adaptation of the output figures when they compiled data within the context of international comparisons of agricultural production that were regularly carried out in the past in the framework of the CMEA Standing Commission on Statistics. The exclusion of own produced intermediate consumption from both output and total intermediate consumption of course does not affect the measurement of value added.

Table 1.9. Supply and disposition of agricultural goods

Resources
1. Inventories of goods at the beginning of the period
2. Output
3. Purchases of goods
4. Barter
5. Wages in kind
6. Total resources
Uses
7. Sales

8. Barter

9. Wages in kind

10. Intermediate consumption of which

    (a) Own production

    (b) Purchases

    (c) Barter

11. Final consumption of which

    (a) Own production

    (b) Purchases

    (c) Barter

12. Losses

13. Inventories at the end of the period

Note: Types of holdings comprise the following: state farms, cooperative farms, private farms, subsidiary plots of households.

68. On the other hand, measurement of agricultural output on a gross basis may have certain merits. For example, the gross concept might be useful for the construction of input-output tables. Second, the gross concept would not be affected by mergers and divisions of agricultural enterprises which are on the way in many transition economies. Thus, those countries in transition that will be finding it difficult to obtain reliable data needed for the derivation of output, excluding own intermediate consumption, may continue compiling production figures on a gross basis, at least during the transition period. In the use of the gross approach, countries may base themselves on the recommendations of the Food and Agriculture Organization of the United Nations (FAO) handbook on agricultural accounting,[9] which depicts the full production process of agriculture and establishes links with conventional agricultural statistics (sown area, harvested quantities, average yields).

69. Furthermore, the compilation of the above-mentioned supply and use tables requires processing of a vast and diverse amount of information collected from different sources: records of the enterprises concerned, records of procurement and trade organizations, sample surveys of sales on the free markets, surveys of the family budgets of households, and so on. During recent years, compilation of the tables has become more difficult and costly, and in some countries the programme has been reduced.

70. As is clear from the scheme of table 1.9, output of agriculture is defined before the deduction of losses of agricultural crops incurred during storage and transportation. If the losses refer to purchased inputs, they are treated as intermediate consumption. As is explained in the annex to the present publication, on SNA-MPS links, losses were differently treated in the MPS as compared with the SNA, and adjustments may therefore have to be made by countries in transition that are still using the MPS. In instances where reliable harvest data are available, output in agriculture can be based on those sources of information and no adjustments for losses need to be made. However, the fact that in many cases - for example, those involving fruits and animal products - output is derived from other items in the table (for example, sales), implies that various adjustments are needed.

71. Some clarifications are also needed with respect to measuring the production of livestock on the basis of balances of production and use of livestock, as shown in table 1.10; these balances are compiled by many countries in transition. There are two possibilities for computing the output of livestock on the basis of data included in the balance. The first one involves deducting from the total use of animals that are classified as inventories, the relevant items of supply, namely, opening stock, purchases and reclassification. The second possibility involves taking the sum of: (a) changes in inventories of all animals, classified both as inventories and as fixed assets, (b) slaughterings on the farm and (c) net sales of animals recorded in the balance as inventories and as fixed assets. "Net sales" here means all sales by producers, less purchases by producers for breeding and fattening, excluding

purchases for slaughter. It should be noted that the reclassification items cancel each other out in the calculation of total output of the economy as a whole.

72. Treatment of agricultural services in countries in transition also deserves some clarification. During the past 20 years, the methodology dealing with agricultural services adopted by the CMEA Standing Commission on Statistics had been gradually moving closer to United Nations standards as set forth in the SNA. However, in practice many CPEs did not implement the CMEA guidelines. In fact, as a consequence of differences in organizational functioning of those

Table 1.10. Balance of production and use of livestock

	Cattle included as inventories			Cattle included as fixed assets		
	Number	Price	Value	Number	Price	Value
1. Opening stock						
2. Production						
3. Purchases						
4. Reclassified from other groups						
5. Total supply						
6. Sales						
7. Slaughtered on the farm						
8. Reclassified to other groups						
9. Closing stock						
10. Total use						

services, countries in transition adopted a variety of treatments of the services, which affected the comparability among them of output and value added. The country practices ranged from exclusion of agricultural services from the measurement of agricultural output to the inclusion of only selected agricultural services. There were also differences between countries in the allocation of agricultural services among various items of disposition.

73. In the SNA, output of agriculture is defined to include agricultural services provided on a contractual or fee basis. They are described in ISIC, Rev.3, under the heading "Agricultural and animal husbandry service activities, except veterinary activities". Included in agricultural services are such activities as the provision of agricultural machinery with drivers, activities that are aimed at improving the growth potential of agricultural products and protecting the crop from disease and insects, harvesting services, preparation of crops for markets including cleaning, drying and packaging, landscape planning in connection with plantation, and so on.

74. Some of these activities are carried out in many transition countries by ordinary agricultural farms as an integral part of the process of production of agricultural goods. If that is the case, they should be regarded as ancillary activities for which no output is imputed. However, if agricultural services are provided on a contractual basis they should be added to the output of agriculture. In many countries in transition, the latter normally include seeding and spraying by aircraft, artificial insemination, herd testing, and so forth. Also, agricultural services, for example, operation of irrigation systems for agricultural purposes, testing stations services and so forth, are often provided in transition economies by budgetary government organizations free of charge. Output of these services is to be included in the measurement of output of agriculture. Since this output is non-market, it has to be valued at costs and allocated to final consumption expenditure of general government rather than to intermediate consumption of producers of agricultural goods who may benefit from the services.

75. It should be noted that while the bulk of agricultural output is likely to be recorded in the production account of either non-financial corporations or households, non-market output of agricultural services should be recorded in the production account of general government. Bearing in mind certain peculiarities in measuring and allocation of output of agricultural services, it might be advantageous to compile a separate production account for agricultural services.

76. Output of agriculture is valued in accordance with the general principles discussed above. Broadly speaking, it is computed as a sum of sales, changes in inventories of finished but unsold goods and changes in work-in-progress. In conditions of high inflation, it is essential to remove holding gain from estimates of changes in inventories of finished goods and work-in-progress.

77. Calculation of the change in work-in-progress is essential in agriculture. The former CPEs accumulated a certain experience in this area. However, valuation of this flow in conditions of high inflation may present certain problems. Generally speaking, the change in work-in-progress may be estimated as the difference between additions to work-in-progress during the accounting period valued at prices that existed at the moment the additions took place, less withdrawals during the same period valued at prices that existed at the

moment of withdrawal. It is desirable to compute changes in work-in-progress on a quarterly basis and obtain annual figures by summing up quarterly totals. In business accounts that provide primary data for estimation of work-in-progress it is normally valued at cost. The SNA, however, recommends the valuation of work-in-progress at prices including a corresponding part of operating surplus. To arrive at this valuation of work-in-progress, it is suggested that the ratio of operating surplus to costs of finished goods be applied. In practice, computation of the change in work-in-progress will have to be achieved on the basis of a simplified approach, that is to say as the difference between the values of the work-in-progress, at the end and at the beginning of the accounting period, converted into average prices of this period. The method of valuation of inventories in average prices of the period is described in chapter II (sect. A.3).

2. Output of construction and the treatment of capital repairs

78. Output of construction refers to the volume of construction work, and renovation of buildings and structures, carried out both on a contractual and on an own-account basis. It includes, in particular:

(a) Value of construction and installation work;

(b) Value of geologic exploration and drilling work;

(c) Value of projecting work pertaining to specific construction projects;

(d) Value of irrigation and melioration work; value of work on improvement of land;

(e) Capital repair of buildings and structures;

(f) Current repairs of buildings carried out on a contractual basis;

(g) Value of dwellings constructed on own account.

79. It is important to note that, when calculating the output of construction, the value of work carried out by a subcontractor for the main contractor counts as intermediate consumption for the main contractor. This treatment is different from past MPS practice in which the deliveries of services between sub- and main contractors were consolidated; this does not affect value added, though. Experience with SNA implementation suggests, however, that it is necessary to carry out the consolidation accurately. It is therefore easier in practice to apply the SNA recommendations than it was to follow MPS practices in the past.

80. Capital repairs are defined in the SNA in paragraphs 10.45-10.50. In dealing with the treatment of repairs, it should be noted that the construction industry covers in principle new capital construction, capital repairs and current repairs. Capital repairs are treated as construction output and as part of capital formation; current repairs should be identified as construction output and treated as intermediate consumption. In implementing the SNA recommendations on this point, it should be taken into account that in transition countries current repairs are often carried out as an ancillary activity by the owners of buildings or of other assets that need repair.

81. In some former CPEs, depreciation rates officially established by the Government include an allowance for capital repairs. In other countries, the established rates of depreciation do not explicitly contain the allowances on capital repairs, but they may be still included implicitly. On the other hand, there is evidence that in some transition countries the distinction between current and capital repairs is dropped in business accounts; in those countries, all repairs are treated as current and included in cost of production. For example, a decision to include the expenses on all types of repairs in production cost was made by the Government of the Russian Federation in 1991 and is still valid. Under these circumstances, it is essential to identify outlays on capital repairs and reallocate them from intermediate consumption to capital formation. The reallocation of capital repair expenses to gross fixed capital formation should also be taken into account in adjusting the consumption of fixed capital figures because capital repairs included in gross fixed capital formation should also be depreciated. On the other hand, in other countries, such as Hungary, business accounts do identify capital repairs separately and in those instances there is no need for special treatment.

82. Some countries in transition that recently carried out a revaluation of stocks of fixed assets may find themselves in a better position to compute the consumption of fixed capital. With the help of the perpetual inventory method (PIM) and annual data on gross fixed capital formation and price changes, they will be able to estimate the implicit rates of depreciation by comparing the latest valuation of the stocks of fixed assets with that of an earlier record. Users of the official data on valuation of stocks of fixed assets, even those obtained through revaluation of assets, should be aware, however, that official valuations may not necessarily coincide with valuations of fixed assets recommended in the SNA.

3. Computation and allocation of output of research and development

83. In countries in transition, the units that are engaged in research and development (R and D) activities can be assembled within the following groups:

(a) Budgetary units owned or controlled by the Government;

(b) Self-financing units owned or controlled by the Government;

(c) Private institutions;

(d) Establishments of the enterprises or organizations whose principal activity is other than R and D.

84. In addition, R and D services can be produced as a secondary output of the establishments (enterprises) whose principal output is not R and D services.

85. The output of the budgetary units that finance their expenses mainly from state budget allocations should be valued at cost including consumption of fixed capital. The output of these units after the deduction of sales at prices that are not economically meaningful should be allocated to the final consumption expenditure of general government.

86. The output of self-financing units owned by the Government should be valued at basic or producer's prices and allocated to the intermediate consumption of the units that purchased the services in question. As noted above, it is important to make a distinction between so-called pseudo-self-financing units and genuine self-financing units; in the former case, the output is to be taken as equal to costs and allocated to the final consumption expenditure of general government. The output of private institutions is market output and should be valued accordingly. Some units engaged in R and D activities may have a status of non-commercial entity but in practice they may sell their output on the market. This output should be valued at basic or producer's prices.

87. Establishments producing R and D that belong to enterprises whose main activity is other than R and D, for example, research units of industrial enterprises, may be identified as separate establishments if they sell their services, or deliver their services to other establishments of the same enterprise. If sold to other enterprises, the output is to be valued at basic or producer's prices, and included in intermediate consumption of the enterprises purchasing those services. However, if delivered to other establishments of the same enterprise, for practical reasons output will have to be taken as equal to costs and some conventions may have to be adopted to allocate this output, if the enterprise consists of several establishments.

88. R and D services that constitute a secondary output of the establishments whose principal output is other than R and D are, as a rule, market output. This output is allocated to the users together with the principal output of the establishment. However, in some cases when input-output tables are built on a commodity-by-commodity basis, it will be necessary to reallocate secondary output from the industries where it is actually produced to the industry where it is characteristic output.

89. It should be noted that some research institutions may license other

producers to make use of the results of the research by selling patents and licences. The patent is regarded as a non-produced intangible asset. However, the payments are treated as payments for services rendered by the owner (SNA, paras. 6.146, 10.8 and 10.130).

90. It should be noted that, in some countries in transition such as the Russian Federation and other CIS member countries, some expenses of enterprises on R and D are financed from centralized funds managed by ministries and not included in the costs of production, which are the starting-point for the calculation of intermediate consumption. The R and D funds with the ministries are created with the help of contributions made by the enterprises to these funds. The centralized R and D arrangement is devised in order to stimulate R and D activities by enterprises and to distribute those activities more evenly among different types of output and producers. While the contributions are recorded as part of the cost of production, they cannot be regarded as the actual expenses on R and D. Therefore special adjustments to intermediate consumption should be made so as to take into account the actual expenses on R and D financed from the centralized funds of the ministries. The reports of centralized funds financing R and D are submitted to ministries and can be used to obtain the necessary data. On the other hand, the contributions of the enterprises to the centralized funds should be treated either as other taxes on production or as other transfers, and the flow from the centralized funds to the enterprises will have to be recorded respectively as other subsidies linked to production or as other transfers. The choice between the two options will have an impact on the distribution of primary incomes between the sectors. Given the purpose of the arrangement, the second option, which is to treat the flows as other current transfers, might be the more convenient one.

4. Valuation of output of housing services

91. In principle, gross output of housing can be computed by multiplying the number of dwellings (classified by category) by the relevant rental values. This method will neglect, however, a diversity in institutional arrangements that exists in the housing industry in many countries in transition. Housing services were in the past and still continue to be a subsidized activity in many countries in transition. In the past the problem of valuation of housing services arose on a limited scale because those services were considered to be the result of an activity in the non-material sphere. The problem arose largely for those countries that took part in the International Comparison Programme (ICP) or compiled figures on total consumption of the population. In the former case, consumption of housing services was valued at cost, and in the latter case the valuation methods differed from country to country. The 1993 SNA provides a conceptual basis for the valuation of subsidized activities in general and this also applies to housing services. Nevertheless, some additional clarifications might be useful in view of the importance of these services.

92. Valuation of output of housing services in countries in transition depends very much on the way the services are organized, financed and rendered to users. There are many differences in this respect between countries in transition and even within each country. For example, according to estimates of the World Bank, in the former Czechoslovakia in 1988 25 per cent of all housing units were state-owned, 20 per cent were cooperatives, 46 per cent were privately owned and about 9 per cent belonged to enterprises. There are differences in treatment (dealt with below) depending on whether housing units are (a) owned by local government, (b) owned by enterprises, organizations or government agencies, (c) owned by cooperatives, (d) privately owned or (e) dwellings of owner- occupiers.

93. In most transition economies, the rent paid for houses owned by local government covers up to 30-40 per cent of the cost. There is some reason to believe that in the near future this percentage will increase noticeably, and there is already some evidence of this in some transition economies. Under these circumstances, the housing units in question should be treated as market producers and should be allocated to non-financial corporations. Their output should be valued preferably at basic prices (or, alternatively, at producer's prices); consumption of these services is equal to the actual rent paid for the services. The valuation at basic prices implies that subsidies are to be added to rents. Such valuation will ensure a more realistic measure of value added in the sector. To illustrate this, consider the numerical example in table 1.11 which assumes that the cost of housing services is 80, of which intermediate consumption is 30, compensation of employees is 45, consumption of fixed capital is 5, and rent paid is 40; as a consequence there is a subsidy of 40. Valuation at basic prices of output is 80 and of value added 50, and valuation at producer's prices of output is 40 and of value added 10. Thus, at producer's prices there is no discrepancy between the valuation of output and consumption of the services, while at basic prices, a discrepancy arises and the taxes on products (less subsidies) should be added to derive GDP at market prices, as was explained above (sect. A.2).

Table 1.11. Illustrative example of valuation of housing services at basic and producer's prices

		Valuation at basic prices	Valuation at producer's prices
1.	Output	80	40
2.	Intermediate consumption	30	30
3.	Value added, gross	50	10

4.	Consumption of fixed capital	5	5
5.	Compensation of employees	45	45
6.	Taxes on products, less subsidies	0	-40
7.	Operating surplus	0	0

94. In the case of state-owned dwellings and apartment buildings in some countries, the rent paid by the tenants is practically a nominal payment. For example, in China most people living in state-owned dwellings pay only one tenth of the cost, including maintenance, current repair and depreciation (see World Bank, report on "China, statistical system in transition" (1992)). Under such an arrangement, the housing services should be regarded as non-market services and their output should be valued at cost. The actual rent paid by the tenants should be allocated to final consumption expenditure of households and the difference between output valued at cost and actual rent paid should be treated as final consumption expenditure of general government. Ultimately, however, the full cost of housing services would be included in the actual final consumption of households. This is to be achieved through social transfer in kind from government to the households.

95. In Hungary, the output of government housing units is regarded as non-market and valued at cost. The rent paid by the tenants, which continues to be low, is treated as sales of services at economically insignificant prices. These payments are deducted to arrive at final consumption expenditure of general government.

96. Another case occurs when housing units belong to enterprises. When, in those circumstances, rent is a nominal payment, the producers of housing services have to be treated as non-market and their output should be valued at cost. The treatment of housing services in this case should be similar to treatment of social and cultural services provided by enterprises to their employees, in other words, separate units of non-profit institutions serving households (NPISHs) should be imputed, as will be explained in chapter IV (sect. C.2).

97. Housing units owned by cooperatives should be regarded as market producers and their output should be valued at basic or producer's prices. The cooperatives should be allocated to the sector of non-financial corporations.

98. The output of privately owned dwellings that are rented out is taken to be equal to the actual rent paid for the service. The number of such dwellings is growing steadily in countries in transition as privatization of public property progresses.

99. If the housing units are owned by a budgetary institution, for example, the ministry of finance, they are likely to be allocated to the general government sector and considered producers of non-market services because the rent paid by the tenants covers only a small fraction of costs. In this case, the payment of rent will be recorded as final consumption expenditure of households whereas the balance will be recorded as final consumption expenditure of general government. If, however, these units provide market services they should be allocated to the sector of non-financial corporations and valued at basic prices (or at producer's prices).

100. Finally, the housing services produced by owner-occupiers are to be valued at prices for similar dwellings. In practice, however, there may be practical difficulties in implementing this approach. In many transition economies, a considerable part of dwellings occupied by owners is located in rural or semi-rural areas and it is therefore difficult to find appropriate comparable market rents for imputation. Under these circumstances, the cost approach should be used. To compute the value of the housing services provided by owner-occupiers, an estimate has to be made of consumption of fixed capital, expenses on current repairs, insurance and taxes on buildings.

101. The imputed value of housing services produced by owner-occupiers includes in principle the services furnished to maintain vacation homes (for example, dachas in the Russian Federation), irrespective of the duration of their occupancy. In illustration of this, table 1.12 shows the production account of housing services in the Russian Federation for 1994.

Table 1.12. Production account of housing services, Russian Federation, 1994

(Thousands of billions of roubles

Uses		Resources	
Intermediate consumption	6.3	Output in basic prices	19.2
of which		of which	
Public housing units	2.2	Public housing units	5.2
Dwelling cooperatives	0.1	Dwelling cooperatives	0.2
Housing units of enterprises	3.7	Housing units of enterprises	9.8
Owner-occupied dwellings	0.3	Owner-occupied dwellings	4.0
Gross value added	12.9		
of which			
Public housing units	3.0		
Dwelling cooperatives	0.1		
Housing units of enterprises	6.1		
Owner-occupied dwellings	3.7		

102. It is important to note that the process of privatization of dwellings (see chap. V, sect. A.2), which is under way in countries in transition, has led to a proliferation of real estate agencies that are engaged in purchases and sales of both existing and new apartments and houses owned by households. These real estate agencies practically did not exist in the former CPEs and there are therefore no references to their activities in the MPS. As under the new conditions they are becoming increasingly important in money terms, it is essential to calculate the output of these real estate agencies. Their output may consist of a number of components such as brokerage fees for arranging sales and purchases of real estate, and fees received when arranging mortgages and insurance, appraisement and so forth.

103. In many countries in transition, it is a common practice for budgetary units engaged in production of non-market services to rent out a part of their premises (or equipment) in order to earn additional income. It is preferable to

isolate this activity as a separate market establishment. In this case, the output of the activity will be allocated to the industry producing housing services and taken as equal to payment of rent. If, however, isolation of the establishment is not feasible, the payment of rent is to be treated as a secondary market output of the principal establishment.

5. Estimation and allocation of output of health services

104. Some explanatory notes might be useful with respect to estimation and allocation of output of health services, which are still partly functioning in ways that were predominant in the past, but at the same time new systems of health services are emerging that are very different from those of the past. The explanations below focus on output of health services; they are closely related however, to the details presented in chapter IV (particularly sects. B and C) on the accounting treatment of social transfers.

105. In many countries in transition, there exists a formidable public-health system which provides medical services free and finances the cost from state budget allocations. At the same time, public-health institutions are increasingly charging patients for selected services, for example, for better accommodations at hospitals, and so on. These charges constitute sales of services at economically insignificant prices or secondary market output, depending on whether the prices that are charged are nominal or market prices. Thus, output of public medical institutions is taken as equal to costs, including imputed consumption of fixed capital. The sales of secondary market output have to be deducted from the total costs to arrive at the non-market output allocated to final consumption expenditure of general government. At the next stage, these non-market services will be shown as social transfers in kind from general government to households so as to arrive at adjusted disposable income and actual final consumption of households. In some cases, it is possible to isolate market establishments from the budgetary units and value their output at the actual prices received by them for their services. Being here referred to are some budgetary hospitals that may have separate market subdivisions.

106. The share of output of market health institutions, both public and private, has been growing in transition economies. The output of those institutions is equal to the payments for their services. In many countries in transition, the payments are made mostly by households, by enterprises on their behalf, and increasingly by the Government in the case of compulsory schemes. As for payments made directly by households, they are allocated directly to final consumption expenditure of households. If the payments are made by enterprises, they should be regarded as payments by an unfunded social insurance scheme. This implies that the actual payments should be treated as social benefits, matched by imputed social contributions. The latter are paid by households and received by them as part of compensation of employees. The imputed social

contribution and the social benefit should be matched by an equal payment by households for services. In the case of compulsory medical insurance, the payments should be regarded as social benefits, and there is no need to make any imputations for unfunded contributions.

107. Still another case exists where selected health-oriented services are paid for partially by households and partially from a social security fund. Such arrangements exist in many transition economies for financing expenses of sanatoriums, vacation centres, and so forth. In this case, a part of the output of the service is allocated to final consumption expenditure of households, and the part that is financed by a social security fund is allocated first to final consumption expenditure of general government, and then as a social transfer in kind to households and finally recorded as actual final consumption expenditure of households. In some countries in transition, the expenses on maintenance of sanatoriums are financed from the funds of trade unions. Treatment is similar in this case - in other words, the part of the value of the service paid by households is treated as final consumption expenditure of households, and the payments made from the funds of trade unions are treated as final consumption expenditure of NPISHs and then recorded as social transfer in kind to households.

108. To illustrate the above, table 1.13 presents a production account of government health services for the Russian Federation in 1994.

Table 1.13. Production account of general government health services, Russian Federation, 1994

(Billions of roubles)

Intermediate consumption	7 388	Output	15 850
Consumption of fixed capital	1 673		
Value added, net	6 789		

II. SNA CONCEPTS IN EXTENDED INPUT-OUTPUT (I-O) ANALYSIS

109. The present chapter discusses the concepts of production analysis and their measurement in an extended form. It is based on the supply and use tables (SUTs) which constitute the input-output (i-o) framework of the SNA, and also the so-called asset accounts of the SNA which include data on the stocks of produced and non-produced non-financial assets and the changes therein, including gross capital formation. The i-o framework is described in detail in SNA chapter XV (particularly table 15.1) and the asset accounts are presented in SNA chapter II (table 2.7 and paras. 2.232-2.234). The extended i-o framework includes not only production accounts data on output, intermediate consumption and value added, but also data on final uses in consumption, capital formation and exports minus imports. The extension of the i-o framework to asset accounts not only presents data on capital formation as part of the traditional i-o analysis, but also shows how capital formation adds to the stocks of produced and also non-produced non-financial assets. By introducing data on stocks in the analytical framework of this chapter, the static i-o analysis can be extended to a dynamic i-o analysis.

110. The supply and use framework dealt with in this chapter is similar to the type of instrument that was extensively used in CPEs in the past, even including some elements of the asset accounts. National accountants in transition economies therefore have much experience in the compilation of the data sets discussed here. However, they should be aware of the changes that were introduced in the 1993 SNA, and of the 1993 SNA as compared with the previous System and also with the MPS which was used by countries in transition in the past. The changes in the concepts and in the framework within which they are defined would of course change the analysis as well.

111. The concepts and the analysis based thereon are altered, particularly because of two major innovations in the SNA. The first is the introduction of asset accounts and the explicit definition of a so-called asset boundary, which includes not only produced assets used in production, but also non-produced and particularly natural assets. This issue is dealt with below. The second is the introduction of an alternative concept of consumption, called actual consumption of households, which captures not only consumption of households for which they pay but also household consumption of so-called individual goods and services that are paid for by the government (or by NPISHs). The latter issue is dealt with in chapter IV where social benefits provided by government and also by enterprises are discussed (sects. B and C).

112. The present chapter is divided into three sections: section A, dealing with asset accounts, which discusses the concepts and measurement in transition economies of capital formation, changes in inventories and other capital concepts; section B, which deals with the concept of consumption expenditure and the new concept of actual consumption and their measurement in the practice of

transition economies; and, finally, section C, which presents more details on concepts and practices with regard to exports and imports.

A. Issues in the compilation of asset accounts

113. The present section deals with the common elements of capital and asset accounts, namely, gross fixed capital formation, changes in inventories, acquisitions less disposal of valuables and acquisitions less disposal of non-produced non-financial assets, and capital transfers as well. The first four categories of capital outlays are the main categories of a more detailed classification that is presented in table 2.1.

Table 2.1. Classification of capital outlays

P.5	Gross capital formation
P.51	Gross fixed capital formation (acquisition less disposal)
P.511	Gross fixed capital formation (tangible fixed assets)
P.512	Gross fixed capital formation (intangible fixed assets)
P.513	Additions to the value of non-produced non-financial assets (major improvements of land and other non-produced assets, cost of transfer of non-produced non-financial assets)
P.52	Changes in inventories
P.53	Acquisition less disposal of valuables
K.	Acquisition less disposal of non-produced non-financial assets
K.21	Land, subsoil assets (tangible assets)
K.22	Other intangible assets (patents, concessions, and so on)

114. The asset accounts of the 1993 SNA are highly relevant to transition countries, not only because of their analytical role in extended i-o analysis, but also because of the capacity of their compilation to be based on past experiences of former CPEs in the compilation of balances of fixed assets in the framework of the MPS. Thus, it may be feasible in the foreseeable future for the majority of countries in transition to compile these accounts for produced assets. Some countries may be able to extend the coverage in the near future to

some categories of non-produced non-financial assets as well, covering, for instance, tangible non-produced assets such as land and mineral deposits, or even intangible non-produced assets. For example, in the Russian Federation instructions for bookkeeping have been recently introduced by the Ministry of Finance that clearly define the procedures for the accounting of stocks and flows of non-produced intangible assets such as patents, licences, goodwill, and so forth.

115. Considering the experience of the former CPEs in compiling these type of statistics within the framework of the MPS, it is suggested that countries in transition compile asset accounts for the economy as a whole, starting first with accounts for produced assets. At a later stage, the compilation of asset accounts for non-produced assets could be initiated, at least for important natural resources such as minerals and timber. The extension of such compilation to natural resources would provide an opening to environmental satellite accounting. At a much later stage, the asset accounts could be transformed into accumulation accounts and balance sheets for sectors that might also include financial assets and liabilities. Such an extension of the accounts would be less relevant for the extended i-o analyses dealt with in this chapter, but would offer considerable support for the analyses of the effects of privatization and related issues that are suggested in chapter V (sect. A).

116. Nominal holding gains/losses on produced and non-produced assets (K.11) which are an important element of asset accounts (table 2.7 in the SNA) are not discussed in this Handbook, but in a parallel Handbook prepared by OECD, dealing with national accounting under inflationary circumstances.[2] The holding gains/losses are computed as the difference between the monetary value of assets at the end of the accounting period and their monetary value at the beginning of the period, not including any qualitative or quantitative changes in the assets (the SNA, para. 12.69). The measurement of nominal holding gains/losses is particularly important in circumstances of high inflation, when revaluations of assets may become, in monetary terms, equally important as, or even more important than, gross capital formation and other volume changes in assets. To obtain the value of stocks of fixed (produced) assets at current replacement prices rather than at historic cost as was done in MPS practices in the past, use may be made of revaluations of fixed assets which are periodically carried out in some countries. For example, the latest revaluation of stocks of fixed assets in the Russian Federation was carried out in 1992 and the next one was scheduled for 1994. In some instances, these revaluations can only be used, after a careful review which should determine whether the revaluations accurately reflect the actual price changes of the assets. In cases where no direct information is available on the stocks of assets and the revaluations thereof, the application of the perpetual inventory method (PIM), in which data on gross fixed capital formation, depreciation rates and price changes are used, may have to be introduced. Practical experience with the PIM in the former German Democratic Republic is encouraging in this respect. For more detail, reference is made to the OECD Handbook mentioned above.

1. Gross fixed capital formation

117. "Gross fixed capital formation is measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non-produced assets realized by the productive activity of institutional units" (para. 10.33 of the SNA). Thus, gross fixed capital formation includes the value of new or existing capital goods purchased or acquired through barter, produced on own account or acquired as a result of capital transfers in kind received by resident producers and other units in the country during the accounting period.

118. Disposals of fixed assets that are treated as negative capital formation are defined to include (a) the value of existing fixed assets sold, (b) the value of existing fixed assets surrendered in barter and (c) the value of fixed assets surrendered as capital transfers in kind (see para. 10.34 of the SNA). Disposals do not include the demolishing of buildings and other structures and the scrapping of other fixed assets. If the value of the fixed assets before scrapping or demolishing exceeds the depreciated value of the assets (para. 12.33 of the SNA), the difference should be recorded under Other volume changes in non-financial assets n.e.c. (K.9) (see the SNA, paras. 12.41-12.44). As a consequence, the capital losses due to scrapping and demolishing of existing assets do not affect either gross or net fixed capital formation (nor do they affect the change in inventories). It is worth noting that the SNA treatment of scrapping and demolishing of fixed assets differs from that in past MPS practice, by which capital losses due to scrapping and demolishing of fixed assets were deducted from gross additions to stocks of fixed assets to arrive at net fixed capital formation (see annex, on SNA links to MPS concepts and practices, following chap. VI).

119. The main types of fixed assets included in fixed capital formation are identified in paragraph 10.34 of the SNA. Gross fixed capital formation includes in particular:

(a) Capital repairs, major renovations, reconstructions or extensions that significantly change characteristics of capital goods, their size, capacity or normal service life;

(b) Capital goods and services incorporated into the land to improve it or prepare it for productive use (clearing, draining, planting, drilling and so on);

(c) Changes in livestock for milking, breeding and draught;

(d) Transfer costs that are incurred when ownership of existing capital goods, land or natural assets is transferred (agents' or lawyers' fees).

120. Purchases of dwellings by households are included in gross fixed capital formation irrespective of whether the dwellings are rented out or occupied by the owners. Gross fixed capital formation also includes construction of military facilities that can be converted to civilian uses such as airfields, docks, roads, hospitals and so forth.

121. The 1993 SNA has expanded the scope of gross fixed capital formation to also include capital outlays on intangible assets. These cover capitalized outlays on mineral exploration, acquisition of software including databases that enterprises expect to use for more than one year and output of artistic and literary work sold on the market irrespective of whether it is produced by employees or by self-employed workers.

122. Gross fixed capital formation of embassies, consulates and other diplomatic institutions is attributed to gross fixed capital formation of the home country and not to the country where they are located. Gross fixed capital formation of international organizations is excluded from capital formation of the country where they are located, because international organizations are not considered to be resident units of the country in question.

123. Unfinished construction in respect of which a change of ownership has taken place between the producer and purchaser is allocated to fixed capital formation of the purchaser. This change of ownership is deemed to have taken place at the end of the accounting period if the contract of sale was agreed in advance or, in the absence of such a contract, when a sale/purchase transaction occurred. Unfinished construction produced on own account is allocated to gross fixed capital formation. In all other cases, that is, when a contract of sale is not agreed in advance and a change of ownership has not taken place, unfinished construction is allocated to change in inventories of the producer. For more details, the reader is referred to the SNA (paras. 6.74 and 10.110).

124. Large construction projects by foreign-owned or -controlled companies which reflected a rather common type of international assistance and cooperation among the former CPEs should be recorded as capital formation of the country where the construction takes place because the construction company is a resident of that country. Value added originating in this construction should be included in GDP of the country where construction takes place. Materials and equipment brought by the donor country should be shown as imports of the country recipient, and their use should be recorded as intermediate consumption and capital formation respectively. The imports of equipment should be reflected not only in capital formation, but also in capital transfers receivable, inasmuch as the equipment has been provided free or almost free of charge by the donor country.

125. It is important to note that there are two types of costs of ownership transfer in the System. The first type refers to transfer costs incurred in connection with transactions in existing produced assets. The transfer costs

are included in the value of the goods when purchased by the buyer - that is, when added to capital formation, final consumption or exports - but excluded when the sale of existing produced goods is recorded as negative capital formation of the seller. Thus, transactions in existing produced goods will affect GDP only to the extent that transfer costs are involved; the reason is that on the resource side of the goods and services account the transfer costs are counted as output. Gross capital formation will be affected not only by the transfer cost, but also by the extent to which capital goods are sold and used as consumption goods or exported. Thus, when the sale of existing fixed assets occurs between residents of the country and is not accompanied by the transformation of the fixed assets into consumer goods, gross fixed capital formation at the national level is equal to the transfer costs. If fixed assets are transformed into consumer goods or sold abroad, there is negative gross fixed capital formation which will be matched by positive figures on final consumption expenditure and exports. The second type of costs of ownership transfer refers to transactions in land and other non-produced non-financial assets. Since by definition acquisitions less disposal of non-produced non-financial assets cannot be included in fixed capital formation, the transfer costs related to those assets are shown as a separate heading under gross fixed capital formation.

126. Gross fixed capital formation is valued at purchaser's prices, including outlays directly connected with acquiring the assets, such as transport and installation charges, fees to architects and other technical consultants, outlays on site clearance, legal costs and taxes. Capital goods produced on own account should be valued in principle at market prices; however, in practice comparable market prices are often unavailable and capital goods may have to be valued at cost.

2. Consumption of fixed capital

127. In the accounts of the SNA (for example, in the integrated economic accounts (IEAs) of table 2.8 or in the sectoral accounts presented in annex V of the System), the main flows are shown both on a gross and on a net basis, that is, before and after consumption of fixed capital is deducted. In practice, however, the estimates of fixed capital valued at replacement prices as required in the SNA may be difficult to obtain in many transition economies. For this reason, during the transition period it might be advantageous to focus on the gross basis when deriving balancing items. It should be noted in this context, however, that estimation of domestic product on a gross basis does not eliminate the need for estimation of consumption of fixed capital in the general government sector, as output of non-market services by government is normally taken to be equal to costs, including consumption of fixed assets.

128. Data on consumption of fixed capital are contained in the statistical reports submitted by enterprises. These data normally refer to depreciation

allowances computed by the enterprises on the basis of average depreciation rates applied to historic values of stocks of fixed assets. These values need to be adjusted to convert them into current replacement values. The imputed data on consumption of fixed capital in non-market branches of the general government are estimated in statistical offices on the basis of information on the value of stocks of fixed capital and average depreciation rates. As was discussed above, the estimates should be converted to replacement values.

129. Data on consumption of fixed capital appear in many balances of the MPS, but all originate in the balance of fixed assets. It should be recalled that in the SNA, consumption of fixed capital is defined to include normal predictable losses of fixed assets. In the MPS, there is no breakdown of losses into normal and extraordinary losses of capital. Some indications needed to achieve this breakdown may be found in the records of insurance companies; normal losses can be taken to be equal to the sum of the claims due.

130. The PIM should in principle be used to obtain estimates of the consumption of fixed capital as defined in the SNA. Revaluations of fixed assets which are periodically held in countries in transition may provide a good starting point for the use of the PIM.

3. Change in inventories

131. Change in inventories refers to the changes in (a) inventories of products that are held by the units that produced them prior to their being further processed, sold and delivered to other units or used in other ways and (b) inventories of products acquired from other units that are intended to be used for intermediate consumption or for resale without further processing (the SNA, paras. 10.96-10.117). Separate calculations should be made for (a) inventories of finished goods, (b) inventories of raw materials and other intermediate consumption goods, (c) work-in-progress and (d) inventories of goods held for resale by retailers, wholesalers and so forth.

132. The change in inventories applies to all producers including producers of non-market general government services (the SNA, paras. 10.7 and 10.96-10.115). Included in particular are changes in inventories of the following items:

(a) Materials and supplies;

(b) Energy products;

(c) Small tools and implements;

(d) Work-in-progress, including a part of unfinished construction;

(e) Animals for slaughter, chicken and poultry, and other animals (except

those included in fixed capital formation);

(f) Seeds and fodder;

(g) Finished but unsold goods;

(h) Goods for resale.

133. The SNA recommends that all additions to inventories and all withdrawals from inventories be valued continuously as they occur, that is to say, at the prices that exist when the goods are added to or withdrawn from the inventories. If this so-called perpetual inventory method is used, the change in inventories is valued consistently with the requirements of the valuation of output (see chap. I, sect. A.2), which should be at prices that prevail when the goods are produced. A holding gain is then derived by deducting from the change in inventories between the end and the beginning of the period, the excess of additions to, over withdrawals from, inventories.

134. This SNA treatment should be kept in mind when processing data contained in statistical reports or in business accounts. If data on sale of goods are used as a point of departure for the estimation of output, adjustments for changes in the inventories of finished but unsold goods should be introduced. The latter should be valued in such a way as to remove holding gain/loss from the measurement of output. In conditions of high inflation, the change in inventories of finished but unsold goods should be estimated as the difference between the value of goods added to inventories and valued at prices existing at that time, and the value of goods withdrawn from the inventories valued at prices existing at the moment of withdrawal. The quantitative importance of identifying holding gains and losses was illustrated when GDP data were compiled for the CIS countries, and the holding gain during 1992 on inventories for at least one CIS country was estimated to be almost 40 per cent of GDP.

135. The above is illustrated in table 2.2 with two simple numerical examples. In the first example it is assumed that 100 units of a product are valued at 5 when they are produced in period 1 and at 8 when they are sold in period 2. In period 1, the value of output is 500, the value of sales 0 and the change in inventories 500. Between period 1 and period 2, the value of each unit in inventories increases by 3. This results in a holding gain of 300 in total; it is the amount by which the value of the inventories increases owing solely to a price change. In period 2, the value of output is 0, the value of sales is 800 and the change in inventories is -800. At the end of period 2, as at the beginning of period 1, the value of inventories is 0. In both periods, output = sales + changes in inventories.

Table 2.2. Two illustrative examples of annual changes in inventories and their valuation

	Quantities			Values		
	Output (+) or sales (-)	Inventories at end of period	Price	Output (+) or sales (-)	Inventories at end of period	Holding gains (+) or losses (-)
			Example 1			
Period 0		0			0	
Period 1	100	100	5	500	500	
Period 2	-100	0	8	-800	0	300
			Example 2			
Period 0		0			0	
Period 1	100	100	5	500	500	
Period 2	-90	10	8	-720	80	300

136. In the second example, it is assumed that only 90 units are sold in period 2. In that case, output in period 2 is still 0, sales are 720 (=90 x 8) and change in inventories is -720. The value of inventories at the end of period 1 is 500. There is still a holding gain of 300 between period 1 and period 2. The value of the inventories at the end of period 2 can be calculated either as 500 (value at end of period 1) + 300 (holding gain) - 720 (changes in inventories) = 80 or as quantities of units held in inventories at the end of period 2 multiplied by a given price (= 10 x 8).

137. In the two previous examples, it is assumed either that output is produced and added to inventories or that there is no output and all sales are withdrawn from the inventories. In practice, there may be additions to and withdrawals from inventories during the same period, and this also gives rise to holding gains and losses. This is illustrated in table 2.3, which shows data for each month of a given year. The change in inventories over the whole year is the sum of the additions less the sum of the withdrawals valued at prices existing at the moments of addition and withdrawal of goods respectively, or -280. This is very different from the difference between the values of the closing and opening stocks of inventories at the beginning and end of the year (500 - 400 = +100). The difference between these magnitudes can be regarded as holding gain (380 = 100 -(-280)). As in the simple example above, the holding gain (loss) in each period is equal to the stock of inventories at the end of the previous period times the increase (decrease) in price between the present and previous periods. The value of the stock of inventories at the end of the period can be calculated as either (a) the stock at the end of the previous period plus

holding gains or losses plus additions to the stocks less withdrawals from stocks or (b) the quantity in stock at the end of the period times that period's price. The table also shows how information should be processed to derive changes in inventories. The stock data are first divided by prices to give volume measures. Changes in volume are then calculated for each month and converted back into value terms by multiplying by prices.

Table 2.3. Illustrative computation of changes in inventories using monthly data

	Quantities			Values		
	Additions (+) or withdrawals (-)	Inventories at end of period	Price	Additions (+) or withdrawals (-)	Inventories at end of period	Holding gain (+) or loss (-)
December		20	20		400	
January	5	25	22	110	550	40
February	-15	10	24	-360	240	50
March	0	10	25	0	250	10
April	10	20	26	260	520	10
May	-15	5	28	-420	140	40
June	0	5	30	0	150	10
July	40	45	16	640	720	-70
August	-15	30	18	-270	540	90
September	0	30	18	0	540	0
October	0	30	20	0	600	60
November	-10	20	24	-240	480	120
December	0	20	25	0	500	20
Total	0 (= 55-55)		23	-280 (= 1 010-1 290)		380

138. The example in the table thus shows that even if there is no overall change in the volume of inventories between the beginning and end of the period, there may be significant changes in inventories over time during the period, because of additions to and withdrawals from inventories that take place at different prices during the period. This gives rise to holding gains and losses, which

are higher, the higher the level of inflation. Under those circumstances, it is important to work with data for short periods, say quarters or even months, as has been done in the table.

139. In practice, data may not be available for following the above procedure and in those circumstances simplified methods may need to be applied. For example, data on the change of inventories may be computed as the change in inventories between the end and the beginning of the period, each converted into average prices of the period; or a more sophisticated method may be applied if data on price indices are available from surveys on a monthly basis, and information is available on the average value of goods stored and the average period of storage, and thus crude measures of price change during the period of storage of unsold goods can be derived. These measures can then be used to estimate the holding gains to be removed from the output. For example, if the average level of inventories of unsold goods was 100, the average duration of storage was three months, and the average monthly price index was 105, then the average price change per quarter would be 115, the average change in value of goods during their storage would be 15, and the holding gain for the year would be 60 (= 4 x 15).

140. Based on the above, the Statistical Committee of CIS proposed the following formula:

$$S = Sn\ (Ip/Ipn) - So\ (Ip/Ipo)$$

where *S* = change in inventories valued in average prices of the accounting period; *Sn* = stocks of inventories at the end of the period as shown in business accounts; *So* = stocks of inventories at the beginning of the period as shown in business accounts; *Ip* = average index of prices of goods added to stocks of inventories during the accounting period as compared with the prices of the base period; *Ipn* = average index of prices of goods stored at the beginning of the period as compared with prices of the base period; and *Ipo* = average index of prices of goods stored at the end of the accounting period as compared with prices of the base period.

141. The formula relies on the assumption that data on price indices are available on a monthly basis for a relatively detailed breakdown of inventories by product groups. It is also assumed that the average period of storage of goods (by major product groups) is determined with the help of small surveys or estimated on the basis of consultations with experts. Such information is essential in order to estimate the average index of prices of goods stored at the beginning of the period as compared with the prices of the base period (*Ipn*) and the average index of prices of goods stored at the end of the accounting period as compared with the prices of the base period (*Ipo*). For example, if the average period is two months and comprises November and December, then *Ipn* will be the average of price indices for November and December as compared with the price index of the base period, say, December. The average index of prices

of goods added to inventories during the accounting period (*Ip*) is also computed relative to the price level in the base period (December).

142. Intermediate consumption should be measured in the national accounts at prices that existed when the intermediate goods were used in production. In practice, however, data are generally available on purchases of intermediate goods rather than on their actual use in production. Therefore, the data on purchases have to be adjusted for changes in prices, particularly in countries in transition where rates of inflation are rather high. If intermediate consumption of goods was not adjusted and thus valued at historic costs, value added would include holding gains on inventories. For example, in the Russian Federation in 1992 prior to the liberalization of prices, enterprises accumulated considerable stocks of intermediate goods at relatively low prices; during the first quarter of 1992, they used these goods in production and valued them in their business accounts at the prices that they had actually paid. As a result, they had considerable profits and value added.

143. Adjusted intermediate consumption can be computed by multiplying intermediate consumption figures derived from the reports of enterprises by a price index that reflects the change in prices of intermediate goods during an average period of storage. The price index *Ip* is computed as follows (with the asterisk sign "*" denoting multiplication):

$$Ip = [^{nth}\ \text{root}(I_1 * I_2 * I_3 *...* I_n)\ ]^m$$

where $m = 12/(C/R)$ and $n = 12 - (m-1)$; and I_1, I_2, I_3, ..., I_n = chained monthly price indices, computed for major product groups of intermediate consumption; *m* = average period of storage of intermediate goods (expressed in number of months), computed for major product groups of intermediate consumption; *n* = number of months; *C* = intermediate consumption as reported by enterprises, for major product groups of intermediate consumption; and *R* = average annual stock of intermediate products, for major product groups of intermediate consumption.

144. Based on the above index formulas, the number (*n*) of chained monthly price indices to be included in the calculation of the average price index (*Ip*) is determined by the average period of storage of intermediate goods (*m*). Thus, if the average period of storage *m* = 2, then it is assumed that intermediate consumption in January includes goods added to stocks in November. This implies that in the calculation of Ip_1, that is, the average price index for period 1, the following chained monthly price indices should be taken into account: $I_{\text{December,0/November,0}}$, $I_{\text{January,1/December,0}}$, ..., $I_{\text{December,1/November,1}}$. The calculation of the adjusted intermediate consumption requires obtaining data on stocks of intermediate products for which monthly price indices are available, so that an average period of storage (*R*) can be calculated for each product group. The adjustment made in intermediate consumption should correspond to the component of holding gains/losses that is included in changes in inventories, as was explained above.

145. The output of trade enterprises is calculated as the value of goods sold less the cost of those goods. As for intermediate consumption, the value of the goods sold should be based on the goods actually sold and not on the goods purchased in the period for resale. This latter figure must be adjusted for changes in inventories of goods for resale, and should be at current prices, so that the value of output of the trade enterprise does not include the holding gain on the goods withdrawn from the inventories. Also, this adjustment is important in countries in transition, when inflation rates are high.

146. The valuation of changes in work-in-progress is similar to the valuation of changes in inventories of intermediate goods. There are, however, some differences. When market prices are not available, work-in-progress may be measured by the sum of costs plus an estimated share of operating surplus (not profit) proportional to the share of costs incurred during the accounting period.

147. The examples presented above do not imply that all changes in the value of inventories due to price increases should be treated as holding gains to be removed from the output. This approach does not apply when for instance the quantity of the opening stock is, say, 20, the price per unit is 10, and all products are withdrawn during the same accounting period, also at a price of 10. Subsequently, the inventories are replenished, again with 20 units, but now at a price of 15. In this case, change in inventories is 100 (= -20 x 10 plus 20 x 15). This corresponds to the change in inventories estimated as the difference between the closing and opening stocks valued at the prices of 10 and 15 respectively. There is no holding gain despite the fact that opening and closing stocks of goods are valued differently. This is a consequence of the SNA procedure that "permits value added produced at one set of prices to be added to value added produced at higher prices later in the same accounting period".[2]

4. Acquisitions less disposal of valuables

148. In the SNA, saving is used for consumption, capital formation or net lending or borrowing. Net lending or borrowing is explained entirely by financial assets and liabilities. However, there are some assets that are non-financial but still held as stores of wealth - not for use in a production process. These assets are called valuables.

149. Acquisitions less disposal of valuables consist of purchases of jewellery, paintings and similar expensive items capable of storing value. The SNA defines valuables as "assets that are not used primarily for production or consumption, that do not deteriorate over time under normal conditions and that are acquired and held primarily as stores of value" (para. 10.116). Purchases of valuables can be made both by households and by corporations. This, the treatment of valuables in the 1993 SNA is different from that in the 1968 SNA, in which acquisitions less disposal of valuables were not shown as a separate item of capital formation but allocated among other categories; for example, purchases of valuables by households were treated as final consumption.

150. There is evidence that in countries in transition transactions in valuables are becoming more important. They include investments by private companies in paintings, and also purchases of gold by private investors. Transactions in gold, particularly, are becoming more and more common in many countries in transition at the present time. According to a Financial Times article of 24 February 1993, about 30 per cent of gold in China, which emerged recently as the world's largest gold-consuming country, was purchased by private investors in order to store the value. Another example is the Russian Federation which is one of the major producers of gold in the world; the Russian Government decided recently to sell a part of its monetary gold to resident investors.

151. The sale of monetary gold to private investors implies the demonetization of gold which will be reflected in other changes in assets accounts (not in the financial account). At the same time, the purchase of the demonetized gold by resident investors will be recorded under the heading of net acquisition of valuables. In 1993 the Government of the Russian Federation decided to allow private banks to purchase a part of the output of gold. This transaction is also to be recorded under acquisition of valuables, because the gold assets of private banks are not part of monetary gold as defined in the SNA; such gold is thus not a financial asset in the SNA sense.

5. Acquisitions less disposals of non-produced non-financial assets

152. Acquisitions less disposal of land consist of purchases of land, excluding the value of the buildings and structures on it. When it is difficult to isolate the value of buildings purchased together with the land, the whole transaction is treated as fixed capital formation, unless it is clear that the value of the land exceeds the value of the buildings; in the latter case, the whole transaction is treated as a purchase of land.

153. Purchases of land are recorded after deduction of sales of land. Purchases of land by foreigners are treated as purchases by a notional resident unit. From this it follows that the purchases less sales of land recorded in the

capital account for the total economy are generally equal to zero ("except when the boundary of the economic territory is itself changed by the purchase or sale of land, for example, the purchase of land by a foreign Government that increases the size of its enclave" (the SNA, para. 10.123)). In many former CPEs and in all republics of the former Soviet Union, sales of land were prohibited; however, at present, transactions in land are becoming more and more important.

154. Purchases of other non-produced assets consist of acquisitions less disposals of tangible as well as intangible non-produced assets. Purchases of tangible non-produced assets include acquisitions less disposals of subsoil assets, including known deposits of gas, oil, coal, ores and various minerals over which ownership rights pass from one institutional unit to another. Acquisitions less disposals of intangible non-produced assets cover patents, trade marks, concession rights, and so forth.

6. Treatment of capital and recurrent losses

155. The treatment of capital losses has been clarified in the 1993 SNA. Gross fixed capital formation is estimated in the SNA without making any deduction for consumption of fixed capital and without taking into account extraordinary losses, as was done in past MPS practices (see annex, on SNA-MPS links).

156. A distinction is made in the SNA between normal or recurrent and extraordinary or capital losses of stocks and fixed assets. Normal losses affect value added through either negative adjustments to output or inclusion of the losses in intermediate consumption or consumption of fixed capital. Extraordinary losses are treated in the SNA as capital losses and thus do not affect value added; depending on their nature, they are included as "catastrophic losses" (K.7) or as "other volume changes in non-financial assets n.e.c." (K.9). The treatments mentioned apply in the following specific instances:

- Normal recurrent losses of output that include regular predictable losses due to spoilage of goods in the course of storage and transportation or accidents are not actually counted as output, as the latter is taken to be equal to the sum of sales and change in inventories of finished but unsold goods;
- Normal losses of intermediate goods are in principle included in intermediate consumption in the SNA. For example, part of the losses of seeds due to unfavourable weather conditions is included in intermediate consumption and another part is included in material input;

- Normal losses of fixed assets, for instance, due to fires or other accidents are covered by the estimates of consumption of fixed capital

in the SNA. Thus, they affect value added, net. In some country practices, the figures on normal losses of fixed assets are derived from the records of insurance companies and explicitly added to depreciation allowances;

- Extraordinary losses of fixed assets due to major calamities, such as floods, earthquakes, major industrial accidents and even political events, are treated as other changes in volume of assets;

- Extraordinary losses of inventories are recorded in the SNA in the same way as extraordinary losses of fixed assets, that is to say, they are treated as other changes in volume of assets;

- Abandoned construction is recorded as other changes in volume of assets (the SNA, para. 12.46);

- Any difference between the allowances included in consumption of fixed capital for normal damage and actual losses in fixed assets should be recorded as other changes in assets.

157. It is important to note here that the above discussion of capital and recurrent losses does not apply to the treatment of unsuccessful mineral exploration and drilling. Those expenditures are treated as part of gross output with gross capital formation as destination, with the resulting intangible asset gradually depreciated over time.

158. In the above presentation, reference is made to the recording of some losses in the account for other volume changes of the SNA. However, this account is used to record not only losses but also some other changes in assets. There are three categories of other volume changes that may be particularly relevant to countries in transition. K.3 denotes the economic appearance of non-produced assets. In the case of produced assets, it includes, as economic appearance, increases in the holdings of non-monetary gold as a result of the demonetization of monetary gold and also the first market valuation of, for instance, historic monuments. The economic appearance less disappearance of non-produced assets includes new finds of mineral reserves less depletion of mineral reserves, and also the first economic use (economic appearance) of land that was previously not valued in the market. Item K.12 denotes changes in classifications and structure of the assets. K.9 (Other volume changes in non-financial assets n.e.c.) denotes, inter alia, changes in assets due to unforeseen obsolescence resulting in differences between allowances included in consumption of fixed capital for normal damage and actual losses, and also degradation of fixed assets not accounted for in consumption of fixed capital.

B. Issues in the measurement of consumption

1. Final consumption of households

159. Final consumption expenditure is dealt with below separately for households and for general government and NPISHs. In the case of households, this chapter deals with the conceptual and practical scope of household final consumption expenditures, and their valuation and classification. Similar issues are dealt with in the case of government and NPISHs.

(a) Coverage

160. Final consumption expenditure of households entails expenditure by resident households on so-called individual consumption goods and services, which are purchased by a household and used to satisfy the needs and wants of members of that household. It includes those goods and services that households purchase on the market, obtain in kind from own production, or receive in kind as remuneration for work done. The acquisition of these goods and services is financed from disposable income of households. As will be explained in detail below, final consumption expenditure of households does not include the value of individual goods and services furnished to the households by general government and NPISHs in the form of social transfers in kind.

161. Final consumption expenditure is defined to include expenditure by the residents of the country both on the economic territory of the country and abroad. Thus, this concept differs from the territorial concept used in the MPS, which includes expenditure by both residents and non-residents on the territory of the country but excludes the purchases of goods and services by residents abroad.

162. The term "individual goods and services" refers to goods and services that satisfy the following criteria:

(a) It must be possible to identify the individual household or person that consumes the good or service;

(b) It must be possible to observe the delivery of the good or service to that particular household or person and to record the time at which the delivery occurred;

(c) The household must consent to the delivery of the good or service and take the action necessary to obtain the good or service;

(d) The good or service must be such that it can be acquired by only one household or person, or possibly by small, restricted groups of households or persons, and used by only that one household, person or group for the satisfaction of its personal needs or wants;

(e) The acquisition of the good or service by one household, person or restricted group does not lead to the satisfaction of the needs and wants of other members of the community.

163. It follows from the above that final consumption expenditure of households includes only a part of individual goods and services. It does not include such individual services as free education, health, culture, and so on, provided by general government and NPISHs. As will be explained below (sect. B.2), these goods and services furnished in kind to households by general government and NPISHs are treated as social transfers in kind and as actual final consumption of households.

164. The main items of final consumption expenditure of households consist of the purchases of consumption goods and services. These include purchases of all consumption goods irrespective of their durability and services. Purchases of houses, however, are treated as gross fixed capital formation and purchases of valuables capable of storing wealth are allocated as a separate heading to capital formation.

165. Purchases of existing goods, are included at the full price paid by the buyers. At the same time, the amount paid is to be recorded as negative expenditure on the part of the seller. The latter treatment is different from that in the MPS which includes in consumption expenditure of the buyers only the transfer cost and not the value of the purchased good itself.

166. In addition to purchases of consumption goods and services, final consumption expenditure of households also includes the following imputed expenditures which are particularly relevant for countries in transition:

(a) Consumption goods and services received in kind by households as remuneration for work done. These goods and services are recorded at the same time as compensation of employees. However, not all items shown as compensation of employees in kind should be recorded as final consumption expenditure. For example, grain received by collective farmers as remuneration for their labour excludes in particular the part that is used as intermediate input for production on their personal plots. For further discussion of matters pertaining to the delimitation of remuneration in kind and intermediate consumption, the reader is referred to chapter IV of this publication dealing with social benefits (particularly, sect. A);

(b) Goods produced by unincorporated enterprises owned by households, which are used for own final consumption. These consist of not only unprocessed agricultural goods, but also processed agricultural goods such as vegetable oil, wine and so forth, as well as other types of products such as, inter alia, clothing, footwear, furniture and utensils that households produce for their own use; these items are to be included to the extent that they are included in the

measure of output;

(c) Goods and services received in kind as miscellaneous transfers from enterprises, including delivery of free food to children of employees in summer camps, purchases of tickets to theatres by enterprises for their employees, and so forth;

(d) Goods received as gifts from family members and friends abroad, net;

(e) Goods received as a result of barter transactions, which are common, for example, in member countries of CIS;

(f) Imputed value of housing services produced by owner-occupiers for own consumption;

(g) Domestic services produced by paid servants.

167. Households in transition countries may be engaged in numerous barter transactions with consumer goods that affect their final consumption expenditures. For example, households from rural areas exchange agricultural products for manufactured goods and so forth. For the country as a whole, barter transactions between residents do not change the amount of consumer goods and services but affect the structure of consumption expenditure of the groups of households. In many instances, barter transactions may take place between residents of different States, in which case they affect external transactions and increase or reduce the supply of consumer goods for domestic consumption. In some cases, barter transactions between households involve consumer goods and capital goods: for example, cars may be exchanged for apartments and so forth.

168. It should be emphasized that it is essential to make a distinction between expenditures by households in the capacity of consumers and expenditures associated with the activities of unincorporated enterprises owned by households. The first type of expenditures should be covered in final consumption expenditure of households, while similar expenditures associated with activities of unincorporated enterprises should be allocated to intermediate consumption or even capital formation. For example, expenditures of farmers on electricity might need to be subdivided between final and intermediate consumption. Identified below are a number of types of expenditure with respect to which this distinction should be kept in mind.

169. Purchases of consumer services include, among other things, payments of households for auxiliary financial services including currency exchange, consultancy services and so forth, as well as the relevant part of imputed output of financial intermediation allocated to households as consumers. Included also are the relevant part of output of casualty insurance allocated as services to households and all output of life insurance and pension funds. The casualty insurance output linked to activities of unincorporated enterprises

owned by households should not be included in final consumption, but attributed to intermediate consumption of the unincorporated enterprise. For example, intermediate consumption of producers of housing services for own consumption may include the use of casualty insurance services.

170. Purchases of consumer services include certain types of payments of households to general government for the provision of services by government. These include payments for licences to own vehicles, boats, aircraft; and payments for passports, certificates, permits and so forth. Payments for licences to hunt, shoot and fish should not be included in final consumption expenditure, but treated as taxes and recorded in the secondary distribution of income account.

171. Purchases of goods and services linked to maintenance of dwellings by owner-occupiers are treated as intermediate consumption. These include purchases of paints, wallpaper and so forth. Purchases of similar items by tenants are allocated to final consumption expenditure.

172. Expenditures of households linked to the maintenance of cars and consumer durables are treated as final consumption expenditure. Capital repairs of dwellings, however, are allocated to capital formation in all cases.

173. Expenses of employees financed by business trips allowances (hotels, transportation) are included in intermediate consumption of enterprises, as was explained above. In practice, it might be necessary to allocate all business trip-related expenses to intermediate consumption of enterprises.

174. Reimbursements of the expenses of employees on entertainment of guests of enterprises are allocated to intermediate consumption of the enterprises.

(b) Valuation, imputation and time of recording

175. Final consumption expenditure is valued at purchaser's prices. In countries in transition, the same goods are often furnished to consumers through different channels of distribution at different prices; for example, the goods can be purchased from state retail trade shops, cooperatives and private shops and in free markets. In some cases, the difference in prices reflects a difference in quality. For example, higher prices in free markets as a rule reflect higher quality of products. Whether it is the case or not, however, the purchases of goods and services are to be valued at actual prices paid by consumers. In other words, the products distributed to consumers through different channels have to be valued at the prices characteristic for the corresponding distribution channel.

176. Final consumption of goods and services received in kind has to be imputed. It is valued at the prices that were used for the valuation of output, that is, at either producer's or basic prices. In some cases - for example, that of

valuation of housing services produced and consumed by owner-occupiers, when there is no comparable market rent - the cost approach is to be used. If the cost approach is used, the output value should not include any interest or service charge that may be added when the products are sold on credit.

177. In accordance with the rules adopted in the System, consumption expenditure on goods has to be recorded at the time ownership of the goods is transferred from seller to buyer, and in the case of services at the time they are delivered. Expenditure on goods purchased on credit should be recorded at the time the good is delivered.

(c) Classifications

178. As was noted above, in many countries in transition consumer goods and services are delivered to households through different channels of distribution and at different prices. Normally, different sources of data are used to compile figures on purchases of goods from the different sources and the goods may be of different quality. Therefore, a classification of final consumption expenditure of households by main sources of acquisition of goods and services is useful from both an analytical and a statistical standpoint. Classification of final consumption expenditure of households by the purpose of the expenditure and according to type - that is, durable good, non-durable good or service - should also be introduced. Another important classification for presenting a breakdown of final consumption expenditure is the Central Product Classification (CPC).[10] Suggested classifications of final consumption expenditure of households classified by major sources of supply of goods and services and by purpose of the expenditure are presented in table 2.4.

Table 2.4. Classification of final consumption expenditures of households

By source of supply

Purchases in State-owned shops, outlets

Purchases in cooperative shops, outlets

Purchases in private shops

Purchases in goods at the outlets of the enterprises

Purchases of goods on the market

Purchases of goods from individuals who previously bought them in State-owned stores or brought them from abroad

Purchases of goods at special shops for foreign currency

Payments for services furnished by cooperative and private units
Payments for services furnished by individuals (doctors, teachers)

Payments of rent and payments for utilities

Goods and services received in kind for the work done

Goods received in kind from own production

Imputed rent for dwellings occupied by the owners

Other sources, n.e.c.

By purpose

Food, beverages and tobacco

Clothing and footwear

Gross rent, fuel and water

Furniture and household equipment

Transport and communication

Medical care and health expenses

Education and culture

Recreation and entertainment
Miscellaneous goods and services

179. Implementation of the purpose classification of final consumption expenditure may give rise to statistical difficulties with regard to purchases by residents abroad. In order to avoid these difficulties, only the main headings of the purpose classification - identifying only major categories such as bread and cereals, meat, fish, milk products and so on - may be used for such expenditures.

2. Final consumption of general government and non-profit institutions serving households (NPISHs)

180. Broadly speaking, this flow entails expenditure of general government on both individual and collective consumption goods and services. The expenditures are financed largely out of taxes or similar sources of revenue.

181. More specifically, final consumption expenditure of general government includes:

(a) Non-market general government services furnished to the community as a whole or its sections and to individuals;

(b) Non-market general government services furnished to enterprises;

(c) Purchases of market goods and services for direct delivery to households, for example, purchases of medicines for free distribution to certain groups of the population, or purchases of transportation services for free delivery to retired persons.

182. In countries in transition, item (c) accounts for a relatively small fraction of final consumption expenditure of general government. The non-market services that are referred to under (a) and (b) are valued in the SNA at cost, including imputed consumption of fixed capital. Receipts from incidental sales are not included in government final consumption expenditure. For example, partial payments by parents to their children's preschool institutions are treated as final consumption expenditure of households. The purchases of market goods and services are valued at purchaser's prices.

183. General government consumption expenditure should not include subsidies or grants paid by government to enterprises.

184. Final consumption expenditure of general government covers both expenditure on individual goods and services and expenditure on collective services. The general characteristics of individual goods and services were dealt with above (see sect. B.1 (a)).

185. Expenditure on collective consumption services is incurred by general government and constitutes an important component of final consumption expenditure of general government. Collective services are services provided for the benefit of the community as a whole or to a particular section of the community. These include general administration services, and services pertaining to defence and security, protection of the environment, and research and development. Collective services cannot be sold to individual households and do not satisfy personal needs or wants of households. Consumption of a collective service does not reduce the amount available to other members or sections of the community and also does not imply the explicit agreement or active participation of each member. Note that some individual consumption services are consumed by households collectively, for example, educational services provided during a lecture or cultural services provided during a theatre performance. However, such services differ in principle from collective services inasmuch as households have made a clear decision to consume the individual services collectively and benefit directly from them.

186. The distinction in practice between individual and collective consumption is based on the Classification of the Functions of Government (COFOG).[11] The following groups of government services, identified in COFOG, are attributed to individual services:

04. Education

05. Health

06. Social security and welfare

08.01. Sport and recreation

08.02. Culture

187. In addition, expenditures on individual services are included under the following subheadings of other COFOG groups, provided they are quantitatively significant:

07.11. Part of the provision of housing

07.31. Part of the collection of household refuse

12.12. Part of the operation of transport system

188. All purchases of market goods and services reflected in item (c) (para.73) above are to be treated as individual services, while the expenses of ministries of health, education and similar ministries are to be treated as expenses on collective services.

189. The relation between the measures of output of non-market government producers and their final consumption expenditure can be presented as follows (the SNA, paras. 9.75-9.89):

A. Output of government producers of non-market services

B. Receipts from sales of goods and services at prices that are not economically significant or from sales of a few goods and services at prices that are economically significant (sales of secondary market output)

C. Purchases of goods and services from market producers for further distribution to households without processing (plus)

D. Final consumption expenditure of general government (A - B + C)

190. In some cases the non-market output of general government might include own construction when in practice it was not feasible to isolate this activity as a separate establishment. In these cases such items are also to be deducted from the output to arrive at the estimates of final consumption expenditure.

191. To clarify the above, consider the numerical example presented in table 2.5. It demonstrates the type of data normally available for computation

of both output and final consumption expenditure of general government, and for subdividing the latter into consumption of individual goods and services and consumption of collective services. Thus the output of general government includes the following items: wages and salaries (620) + social contributions (197) + purchases of intermediate goods and services (361) + taxes on buildings and land (53) + consumption of fixed capital (99) = 1,330. In order to derive estimates of final consumption expenditure of general government, we have from output to deduct incidental sales (60) and to add goods and services provided free to households (15) as well as reimbursements to disabled persons (9). Thus the final consumption expenditure will amount to 1,294 (1,330 - 60 + 15 + 9). A similar approach is to be used to arrive at separate estimates of expenditure on individual goods and services and collective services. Thus, in the table, data presented in the columns for health care, education, culture and art are to be used to calculate the expenditures on individual goods and services, and the data in the columns for science, general administration and defence are to be used to compute expenditures on collective services.

Table 2.5. Computation of output and final consumption expenditure of general government

	Outlays of general government units							
	Health care	Social security	Education	Culture and art	Science	General administration	Defence	Total
Wages and salaries	80	40	220	30	110	80	60	620
Social contributions	24	13	73	10	33	24	20	197
Purchases of intermediate goods	60	20	70	15	140	20	36	361
Purchases of equipment	30	10	20	5	50	10	20	145
Capital construction	25	5	1	1	20	15	12	79
Social benefits		350	50					400
Taxes on buildings and land	5	3	11	1	8	17	8	53
Consumption of fixed capital	10	6	25	1	28	10	9	99
Payments by households for the services of general government	6		12	10	24	8		50
Goods and services provided free to		15						15

households			
Reimburse-ments to disabled persons for their expenses on purchases of cars and petrol	9		9

192. Final consumption expenditure of NPISHs is calculated in the same manner as final consumption expenditure of general government. As is shown in table 2.6, those expenditures include goods and services purchased by NPISHs as well as imputed consumption of fixed capital. In the expenditures of NPISHs are also included those of enterprises related to the provision of cultural and social services to their employees. This is further discussed in chapter IV (sect. C.2).

Table 2.6. Calculation of final consumption expenditure of NPISHs

A.	Current costs of the NPISHs (excluding capital investments, capital repairs and similar items) (plus)
B.	Consumption of fixed capital (imputed) (plus)
C.	Receipts from sales of goods and services at prices that are not economically significant or from sales of a few goods and services at prices that are economically significant (sales of secondary market output)
D.	Purchases of goods and services for direct distribution to households (plus)
E.	Final consumption expenditure of NPISHs (A + B - C + D)

C. Issues in the measurement of exports and imports of goods and services

193. The concept of exports (imports) is defined in the SNA to include sales, gifts or grants of goods and services from resident units to non-residents. The

treatment of exports and imports in the SNA is identical with that in the Balance of Payments Manual of IMF.

194. Broadly speaking, exports include (a) all new or existing goods that are sold or given away to the rest of the world and (b) all services provided by resident units to non-resident units. It follows that goods and services consumed by non-residents inside the economic territory of the country are included in exports. Symmetrically, imports include (a) all new or existing goods that are purchased or received as gifts, humanitarian assistance and so forth from the rest of the world and (b) all services provided by non-resident units to resident units. Goods and services purchased by resident units of the country outside its economic territory are treated as imports. Since territorial enclaves are a part of the economic territory of the country on behalf of which the activities in the enclave take place, the flows of goods between these enclaves and the resident units operating on the national territory of the country are not treated as exports or imports.

195. In principle, a distinction is made between exports and imports of goods on the one hand and services on the other. This distinction is essential from both an analytical and a statistical point of view. Exports and imports of goods are recorded in accounts at the time when the ownership of goods passes from residents to non-residents or vice versa. There are a few exceptions to this rule. One of them refers to goods that are sent abroad for processing but do not change ownership. In the SNA, a distinction is made between (a) goods sent abroad for processing that involves substantial physical change and (b) those sent abroad for other processing. Goods sent abroad for substantial processing are reclassified upon their return in a different three-digit group of CPC and are included on a gross basis under goods. Value of other processing is recorded under services. The topic of time of recording of external transactions and exceptions to the principal method is discussed in detail in chapter VI of the fifth edition of the Balance of Payments Manual (1993)[12] of IMF.

196. Data on exports and imports of goods rely on customs declarations which refer to flows of goods across frontiers. The definitions adopted in the System require certain adjustments to these customs data in order to include certain goods that do not cross the frontiers and exclude certain others that do cross the frontiers. The most important additions concern:

(a) Purchases of transportation equipment that does not necessarily cross the frontiers;

(b) Goods produced in international waters and delivered to non-residents abroad;

(c) Goods purchased and consumed by residents abroad.

197. On the other hand, the list of the most important exclusions includes:

(a) Goods in transit;

(b) Transportation equipment that leaves the country temporarily, that is to say, for less than a year without any change in ownership;

(c) Equipment and other goods that are sent abroad for maintenance, servicing or repair;

(d) Goods sent abroad for exhibition purposes only; equipment for orchestras and theatrical companies while on tour abroad;

(e) Goods rented under an operating lease that leave a country temporarily;

(f) Animals sent abroad for racing, showjumping and so on;

(g) Goods shipped to or from a country's own embassies, military bases and so on;

(h) Consignments refused by the consignee and returned to the sender.

198. Shipments between countries of gold that is not held as a financial asset nor as a component of foreign reserves by the central bank are treated as shipments of ordinary goods.

199. Exports and imports of services involve a variety of services, the most common among which are the following:

(a) Goods transportation services;

(b) Passenger transportation services;

(c) Insurance services;

(d) Communication services;

(e) Health and education services;

(f) Installation services;

(g) Business services.

200. Exports and imports of services do not include primary income - that is, compensation of employees and property income - paid to or received from the rest of the world.

1. Free-on-board valuation of imports and the treatment of transport services

201. Exports and imports of goods are valued at free-on-board (f.o.b.) prices. The use of f.o.b. prices with respect to valuation of imports means that costs of transportation and insurance of goods from the exporting country to the importing country are treated separately as imports of services when they are rendered by non-resident units.

202. The treatment of goods transportation services related to the imports and exports of goods requires special attention. The transportation cost up until the border of the exporting country (A) should always be included in the f.o.b value of exports (of A) and imports of the importing country (B). However, if the transport service is provided by a resident of B, import of a transport service should be imputed for A in addition, in order to avoid distorting its net earnings from exports minus imports. The transport services provided beyond the border of A should be treated as exports of transport services of A and corresponding imports of services by B only if the transport is carried out by a resident unit of A. If the transport services beyond the border of the exporting country are carried out by a resident unit of B, there should be no entries for exports and/or imports of transport services in either country. If transport services within the borders of a country (say, A) are carried out by another country (say, B), transport services are exported by B to A.

203. Consider the following example to clarify the above. Suppose A exports goods to B and transportation costs equal to 10 are incurred by the carrier of B in connection with delivery of goods up to the customs frontiers of A. They should be added to the value of exported goods (100) to arrive at their f.o.b. valuation (110). At the same time, imports of transportation services (10) should be recorded for A. If, however, transportation is carried out by the carrier of A, transportation costs are still to be added to the value of exported goods to arrive at the f.o.b. valuation (110), but there are no exports or imports of transportation services to be recorded in the accounts. Let it now be supposed that transportation of goods beyond the customs frontiers of A is carried out by the carrier of A. In this case, transportation costs (say, 40) will be recorded as exports of transportation services of A and as imports of these services by B. At the same time, imports of goods of B will be recorded at f.o.b. prices. If, however, transportation is carried out by the carrier of B, no entries pertaining to imports or exports of transportation services will be recorded in the accounts.

2. Exports and imports of other services

204. Exports and imports of insurance services are taken to be equal to estimated service charges paid out by non-residents to resident insurance companies and by resident units to non-resident insurance companies. In

practice, computation of these charges may pose a serious practical problem owing to the lack of relevant data, and simplified procedures might have to be used depending on the nature of the available information. For example, expenses of service charges to insurance premiums can be established with the help of small-scale sample surveys and applied to the amounts of insurance premiums paid to non-resident insurance companies or received by resident insurance companies from non-residents. The data on these services are also recorded in the balance of payments.

205. Recording of construction services deserves special attention because the treatment recommended in the SNA differs from the methods that were used in the recent past by the member countries of CMEA. The methodology of external trade statistics that was used in CMEA recommended that the value of entire construction projects carried out abroad be included partly in exports and partly in imports. As was noted above, the SNA includes a different treatment. The SNA recommends that non-resident construction enterprises engaged in production on the territory of a given country be regarded as notional quasi-corporations that are residents of the country where the construction is taking place. This means that the value of the construction should be treated as part of GDP of the given country and only deliveries of building materials and equipment received from or sent abroad treated as exports and imports. However, the installation of equipment abroad that normally does not involve a long period of time is treated in the SNA as exports and imports of services.

206. Table 2.7 illustrates, with the help of data for Belarus for 1990-1994 the main items of the goods and services account. Note that purchases of valuables were not estimated owing to lack of data.

Table 2.7. Goods and services account for Belarus, 1990-1994

	1990	1991	1992	1993	1994
	(billions of roubles)			(billions of Belarusian roubles)	
Resources					
Output at current prices	88.8	181.9	2 353	31 568	57 275
Imports	18.9	29.1	535	8 172	14 988
Taxes on products	8.3	10.7	147	1 633	2 780
Subsidies in products (-)	7.2	7.2	103	1 022	1 106
Uses					

Intermediate consumption	47.2	99.5	1 483	22 403	41 288
Final consumption expenditure	30.2	57.6	606	7 681	14 897
Gross capital formation	11.5	25.3	295	3 752	5 108
Exports	19.9	32.1	548	6 515	12 644
Total (supply = use)	108.8	214.5	2 932	40 351	73 937

3. Valuation of external trade and output of external trade monopolies

207. Exports and imports recorded in foreign currency values should be converted into domestic currencies with the help of exchange rates. In countries where a system of multiple exchange rates exists, an average exchange rate should be computed and used for this purpose. Efforts should be undertaken to establish the weights that correspond to relative share of external transactions where individual exchange rates are applied. Deviations of the individual rates from the average exchange rate (positive or negative) should be treated as taxes or subsidies.

208. The alternative approach suggested in the Balance of Payments Manual of IMF is to use for the conversion the principle rate which is the actual exchange rate applying to the largest part of the external transactions. Black market rates cannot be ignored in the context of a multiple rate regime and can be treated in different ways. For example, if there is one official rate and one black market rate, the two should be handled separately and the transactions should be converted at the exchange rate for each case.

209. Multiple exchange rates for different external transactions were an important phenomenon in CPEs and they have not entirely disappeared in transition economies. The SNA devotes considerable attention to the treatment of these conversions rates and the output and income measures that result from the differentials between different rates. For detailed information on this very complex issue, the reader is referred to the SNA (chap. XIX, annex A, and also paras. 14.77-14.84). The following material may provide general guidance.

210. In principle, external transactions should be converted to local currency on the basis of the exchange rate at which the transaction was carried out, and differences between the buying and selling rates of foreign currency should be treated as a service charge of banks or exchange rate dealers. However, if

there is a multiple exchange rate system in effect that is managed by the government or the central bank, the conversion rate to be used should be a so-called unitary rate which would exist in the absence of a multiple exchange rate system. The unitary rate is calculated as the weighted average of all official rates for external transactions. The implicit taxes/subsidies appear as global adjustments in the external account with counterpart entries under current and capital transfers in the central bank or government accounts. Generally black parallel or market rates should not be taken into account in the calculation of the unitary rate, except if there is a parallel market in which the government or the central bank actively interferes. In that case, the parallel market is an integral part of the multiple exchange rate system and should be taken into account in calculating the unitary rate. The difference between the unitary rate and the actual exchange rate would accrue to the central bank or the government and then be treated as a tax or subsidy, depending on whether the unitary rate is higher or lower than the actual exchange rate.

211. An export tax should be imputed when exporters of products are obliged to sell earned foreign currency to a government agency at an exchange rate which is lower than the average exchange rate. This tax is particularly relevant for those countries in transition where multiple exchange rates are a rather common phenomenon. For instance, in the Russian Federation in 1992, exporters were obliged to sell 40 per cent of the earned currency to the government at an exchange rate that was considerably lower than that of the market. To illustrate the accounting treatment, let us assume that a producer exporting his or her goods is required by law to sell to the government the foreign currency obtained as a result of the export at a conversion rate of, say, 100 domestic currency units per unit of foreign currency. If he or she had been allowed to sell the foreign currency on the currency market, he or she would have been able to convert at an average rate of, say, 150. The difference between these two rates (50 = 150 - 100) should be imputed as an export tax. Similarly, there may be subsidies to importers when the government allocates certain amounts of foreign currency to enterprises importing products. Thus, if an importer is able to acquire foreign currency at the low rate of 100 from the government, he or she receives an implicit subsidy (-50 = 100 - 150) which would have to be imputed. On the other hand, if the government sells to the importer foreign currency at a higher rate than the market rate of 150, say at 200, then an import tax (50 = 200 - 150) would have to be imputed. For further details on taxes and subsidies related to multiple exchange rates, the reader may refer to an IMF Working Paper.[13]

212. A special problem related to the measurement of external trade arises with regard to the treatment of the surplus of the external trade organizations resulting from exchange rate differentials. Such a surplus was due to peculiarities in the price system, which included relatively low subsidized prices of exported goods and relatively high domestic prices of imported goods. That surplus, which in the past was generally transferred to the state budget,

was in many instances very large, thereby constituting a considerable contribution to the state budget.

213. Although the SNA does not address this particular situation, its general spirit allows the following solution to be suggested. The excess of the operating surplus of external trade organizations over the normal rate of profit should be regarded as a tax on products and removed from the measurement of output of external trade organizations at basic values. The improvement in the price system will result in a diminishing of the surplus in question. More concretely, the tax should be computed by deducting the export and import duties from the value of the output of the external trade organizations, if those duties are included in the valuation of exports and imports in the organizations' accounts. The output is derived by adding up the costs and normal profits realized by the external trade organizations.

214. The same treatment cannot be used by countries where the external trade monopoly has been abolished and the right to export and import goods and services is given to independent private enterprises. The surplus earned by these units due to the price differential cannot be treated as an implicit tax, but should be regarded as output of the units in question. In the SNA, the value of the output of external as well as internal trade organizations is equal to the value of sales less the cost of the goods sold. To illustrate this, let us assume that a private company exports petroleum and imports computers, both at a price of 100. The computers, however, are sold in the domestic market at 1,000. The value of sales of the company is 1,100 - that is, 1,000 for computers and 100 for petroleum - and the cost of the goods purchased is 200 - that is, 100 for computers and 100 for petroleum. In this case, the output of the trade organization is 900 (= 1,100 - 200).

III. SECTORING TRANSITION ECONOMIES

215. In addition to the transition-related changes affecting valuation and the technological conditions of production dealt with in chapters I and II of this publication, there are also many institutional changes that should be captured in the accounts, as they affect the operation of production in the economy. Thus, privatization of production shifts production units and activities, capital and financial resources from the Government into private hands and leaves the Government with less direct control. Shifts of production units from the public to the private sector take place when large public corporations are privatized and/or sold to foreign-controlled enterprises, either entirely or partly. This results in an increasing shift in the generation of output and value added from public units to private units, in particular small private units that often operate in an informal - that is to say, a household - setting and have come into being because of the liberalization of the market.

216. These institutional aspects of production are extensively dealt with in chapter IV of the SNA, where the scope and classification of institutional sectors are discussed. Furthermore, the sectoring described in chapter IV is used in a large number of accounts and tables of the SNA, in particular the integrated economic accounts (IEAs) (table 2.8 of the SNA) presented in chapter II, the separate accounts for sectors presented at the beginning of chapters VI-XIII and in an integrated format in annex V, and also the cross-classification by industries and sectors (CCIS) of production items presented in chapter XV (table 15.3).

217. The present chapter deals with the characteristics of institutional units in transition economies, and the extent to which those characteristics satisfy the institutional sector criteria of the 1993 SNA, and determines whether and how those criteria need to be supplemented in order to serve as a guide for the allocation of institutional units to sectors in transition economies. The sections of this chapter may be described as follows: section A reviews the definitions of institutional units in the light of circumstances in transition countries, suggests alternatives for sectoring the economy based on the SNA, and discusses the links between institutional sectors and industries through a cross-classification by industries and sectors (CCIS) (which is incorporated in the 1993 SNA) of production account items; section B reviews the SNA distinctions between market and non-market producers and non-financial corporations and general government in the light of the special circumstances of transition economies; section C reviews the particular scope in countries in transition of the financial corporate sector; section D assesses the scope in practice of the household sector and deals in particular with the distinction between unincorporated and quasi-corporate private enterprises; section E deals with the scope of NPISHs and with how to distinguish those from the units to be included in the government and corporate sectors; and, finally, section F discusses the concept of residency and other aspects of the boundary of the

total economy.

218. The change in the ownership of production as a consequence of privatization results in a shift of production from the government sector and the public corporations subsector to the private corporations and household sectors. This and other changes in the sectoring of production can best be studied through the cross-classification by industries and sectors (CCIS) of data on production and capital formation and - in more advanced stages of national accounting - also data on the stocks of produced and non-produced capital goods. CCIS is the link between supply and use tables (SUTs) (see the introductory paragraphs of chap. II) based on a classification of establishment data on production by industries, and the integrated economic accounts (IEAs) which largely include data on income, capital and finance classified by institutional sectors. Countries in transition may implement CCIS by first compiling production accounts for industries with which they are most familiar and then reallocating the production accounts of industries to institutional sectors, with the help of additional information regarding the institutional character of groups of establishments. Table 3.1 shows for purposes of illustration a cross-classification of gross value added by sectors and industries for Belarus in 1993.

Table 3.1. Cross-classification of gross value added by sectors and economic activities in Belarus, 1993

(Millions of Belarusian roubles)

Sector/ economic activity	Non-financial corporations of which			Financial corporation (non-material production)	General government of which			Non-profit institutions serving households (non-material services)	Households of which			All sectors of which		
	Total	Material production	Non-material services		Total	Material production	Non-material services		Total	Material production	Non-material services	Total	Material production	Non-material services
Industry	2 924.2	2 924.2							7.4	7.4		2 931.6	2 931.6	
Agriculture	849.8	849.8			10.7	10.7			782.2	782.2		1 642.7	1 642.7	
Fishing														
Forestry	22.5	22.5			1	1			24.1	24.1		47.6	47.6	
Construction	731.6	731.6							34.5	34.5		766.1	766.1	
Transportation	825.9	656.5	169.4		111.7	111.7			0.3		0.3	937.9	768.2	169.7
Communication	109	37.2	71.8									109	37.2	71.8
Wholesale and retail trade	734.1	734.1							130.5	130.5		864.6	864.6	
Material supply	169.5	169.5										169.5	169.5	
Procurement	74.9	74.9										74.9	74.9	
Information and computing	13.4	13.4										13.4	13.4	

Sector/ economic activity	Non-financial corporations of which			Financial corporation (non-material production)	General government of which			Non-profit institutions serving households (non-material services)	Households of which			All sectors of which		
	Total	Material production	Non-material services		Total	Material production	Non-material services		Total	Material production	Non-material services	Total	Material production	Non-material services
services														
Real estate														
Business activities supporting market functions	6.9	6.9										6.9	6.9	
Mining and quarrying	10.3	10.3			1	1						11.3	11.3	
Other branches of material production	26	26										26	26	
Housing	46.8		46.8		6		6	74.9	14.1		14.1	141.8		141.8
Public utilities and other services	248.6		248.6		36.2		36.2		1		1	285.8		285.8
Health care and social work	21.4		21.4		241		241	59.2	0.3		0.3	321.9		321.9
Education	3.2		3.2		369.6		369.6	26.2	0.8		0.8	399.8		399.8
Culture and art	30		30		25.4		25.4	14.4	0.8		0.8	70.6		70.6
Science and scientific services	42.6		42.6		33.4		33.4					76		76
Banking and insurance				881.4	1.1		1.1					882.5		882.5

Sector/ economic activity	Non-financial corporations of which			Financial corporation (non-material production)	General government of which			Non-profit institutions serving households (non-material services)	Households of which			All sectors of which		
	Total	Material production	Non-material services		Total	Material production	Non-material services		Total	Material production	Non-material services	Total	Material production	Non-material services
Government administration and defence	0.4		0.4		229.3		229.3					229.7		229.7
Private non-profit institutions services								10.6				10.6		10.6
Total industries	6 891.1	6 256.9	634.2	881.4	1 066.4	124.4	942	185.3	996	978.7	17.3	10 020.2	7 360	2 660.2
Financial intermediation services indirectly measured (FISIM) adjustment												-855		
Total economy	6 891.1	6 256.9	634.2	881.4	1 066.4	124.4	942	185.3	996	978.7	17.3	9 165.2	7 360	2 660.2

A. Institutional units and sectors

219. The institutional unit is defined in the SNA (para. 4.2) as "an economic entity that is capable in its own right of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities". Institutional units are the centres of financial and economic decisions, are responsible by law for their actions, own property, enter into contracts, and must keep all accounts pertaining to all transactions, and they also have balance sheets. The concept of an institutional unit includes households because households are autonomous in their economic decisions, even though they do not compile accounts and balance sheets. According to the SNA, "there are two main types of units in the real world that may qualify as institutional units, namely persons or groups of persons in the form of households, and legal or social entities whose existence is recognized by law or society independently of the persons, or other entities, that may own or control them" (para. 4.3). The units other than households that do not keep a complete set of accounts are combined with the institutional units with which their partial accounts are integrated. The delineation of institutional units is essential for the analysis of all the behavioural aspects of relationships among economic agents: production, income and outlays, flows of funds, and so on.

220. The institutional sector is a fundamental concept of the System. Institutional sectors are the groupings of institutional units that are homogeneous in terms of their principal functions and the mode of their financing of expenses. "The sectors of the System group together similar kinds of institutional units. Corporations, NPIs, government units and households are intrinsically different from each other. Their economic objectives, functions and behaviour are also different" (the SNA, para. 4.17). Compilation of a set of integrated accounts for each institutional sector is important for analysis of the behaviour and interaction of the main types of economic agents and for a more refined analysis of the principal macroeconomic magnitudes.

221. Table 3.2 contains a summary description of the institutional sectors distinguished in the 1993 SNA. The SNA classification of sectors and subsectors is presented in the annex to the Handbook. On the whole, the descriptions are applicable to countries in transition. However, owing to the special features of transition economies at present and in order to bring out as clearly as possible the changes in those economies oriented towards a market economy, the actual application of those descriptions to conditions in the former CPEs requires considerable caution. In some instances, certain conventions and assumptions may be applied, the relevance of which is likely to diminish in the future. Application of the sector classification in countries in transition may require introduction of subsectors for the purpose of analysing the process of gradual transformation of the economy and expansion of the private sector. Presented below are some of the criteria that countries may follow when introducing subsectors.

222. Thus, the process of privatization, the introduction of foreign capital into countries with economies in transition and the related impacts of the reforms on the organization of those countries may require in particular a subclassification of non-financial as well as financial corporations that distinguishes among institutional units that are:

- Public;
- National private;
- Foreign-controlled.

Table 3.2. Characteristics of the institutional sectors in the SNA

Number	Institutional sector	Principal function	Source of finance
1	Non-financial corporations	Production of goods and services for sale with profit	Sale of goods and services
2	Financial corporations	Collection, conversion and distribution of funds, provision of auxiliary services	Interest received, liabilities incurred, contractual premiums
3	General government	Provision of non-market services, redistribution of income, wealth	Taxes, compulsory payments
4	Households	Consumption, production of goods and services	Income from employment, property, sale of output transfers
5	Non-profit institutions servicing households	Provision of non-market services to households	Voluntary contributions, donations, income from property

223. The SNA (paras. 4.26-4.30) uses two alternative control criteria to distinguish between public and private corporations. Their application presents some difficulties in the case of transition countries, however. First, ownership by the government, either directly or indirectly, of more than one half of the voting shares of a corporation or other evidence of ownership is in the SNA considered a sufficient condition as regards government control, to classify a corporation as public. Second, the SNA states that corporations may also be regarded as public without majority ownership, but with clear evidence of other types of government control. The latter criterion, however, is not an easy one to apply in the case of transition countries.[14]

224. Further subsectoring of the corporations might be useful for analysis of the process of transformation of the economy. For example, public corporations may be further subdivided into:

- Public corporations that are likely to retain this status in the foreseeable future;

- Public corporations selected for privatization;
- Public corporations that are in process of privatization;
- Public corporations owned jointly with foreign investors.

225. Introduction of these subsectors might be difficult to achieve in practice for all accounts, owing to the lack of primary data. However, a breakdown of at least output may be useful in order to properly assess the results of the policies aimed at transforming the economy.

226. A further breakdown of financial corporations may be used in order to analyse the developments towards a genuine financial system. In particular, it is important to identify the central bank as a subsector. On the other hand, the fine distinction made in the SNA between other depository institutions, other financial intermediaries (except insurance companies and pension funds), and financial auxiliaries may not yet be applicable or feasible in some countries in transition. A further aggregation may be considered, in which commercial banks and financial and credit institutions are aggregated into one category, called Other financial institutions. For instance, it may be appropriate to apply a type of subsectoring similar to one currently used in the Russian Federation, which distinguishes among:

- The central bank;
- Commercial banks;
- Financial and credit institutions (credit cooperatives, investment funds and so on);
- Insurance companies and pension funds.

227. Subsectoring of government activities might be very relevant for those transition economies that have implemented extensive political and fiscal decentralization programmes. Decentralization represents both a reaction from below to previously tight central political control and an attempt from above to further privatize the economy, in order to relieve the central government of an excessive fiscal burden. The aspirations and roles of subnational Governments are becoming stronger in most of the transition economies. In many of those economies, subnational Governments are likely to take over a wide range of expenditures, including social outlays that were previously financed either by the central government or by state enterprises. Significant changes may be expected in the system of taxation; a particular challenge lies in developing an intergovernment fiscal framework of grants, shared revenues and discretionary tax powers. If the conditions apply, it would be relevant to use the subsectoring presented in the SNA, which distinguishes among:

- Central government;
- State government;
- Local government;
- Social insurance.

228. The subsectors of the household sector are proposed for use on an optional basis primarily for analysis of income distribution and final consumption. Distinguished are households headed by:

- Employers;
- Own-account workers;
- Employees;
- Recipients of property income;
- Recipients of transfer income.

Some countries may find it necessary for practical reasons to combine in one group recipients of property incomes and recipients of transfers.

229. As will be explained in chapter IV (sect. C.2), subdivisions of enterprises providing cultural and social services to employees free or almost free are treated as notional NPISHs. In those instances where they are very important, it is suggested that they be treated as a separate subsector of NPISHs.

230. It must be emphasized that, in principle, the kind of economic activity in which an institutional unit is involved is not relevant for the allocation of units to institutional sectors. The main criterion as regards this allocation is rather the function of the institutional unit. For example, a public hospital is allocated to general government, whereas a private hospital is included with non-financial corporations. A private hospital may be a commercially operated one - that is, a market producer (see chap. I, sect. A.1) - or a so-called non-profit institution serving households (NPISH) - that is, a unit that is financed mainly from private funds. If the hospital is a non-profit institution but financed mainly from public funds, it should be considered a public hospital in the SNA sense. For more information on the distinction between NPISHs and the government sector, the reader is referred to the SNA, paragraphs 4.54-4.67.

B. Scope of non-financial corporations versus that of

general government; distinction between market and non-market units

231. The distinction between non-financial corporations as defined in the SNA (paras. 4.68-4.76) and the sector of general government is an essential one in the analysis of the SNA. However, this distinction is more difficult to make in countries in transition than in countries that have had market economies traditionally.

232. The sector of non-financial corporations is defined in the SNA to include: (a) corporations, in other words, legal entities set up for the production of goods and services for profit and legally owned by shareholders and (b) quasi-corporations, that is to say, unincorporated enterprises, owned by government or households that sell their output and behave as if they were entities separate from their owners. Quasi-corporations must keep all accounts and balance sheets, which, among other things, provide data on withdrawals of entrepreneurial income. All unincorporated enterprises, controlled by foreigners, are considered quasi-corporations by convention. A quasi-corporation is so defined irrespective of the size of the unit.

233. The sector of general government includes mainly institutional units engaged in rendering non-market services that have no operating surplus. These services are delivered to the community as a whole (collective services) and to individuals (individual services) free of charge or almost free of charge. Included also are (a) government units that sell output but are not autonomous and therefore cannot be regarded as quasi-corporations and (b) government units that furnish their services to other government bodies but do not recover their costs. Finally, non-profit institutions controlled and financed by government are included as well.

234. In general, the estimation of government production excludes the possibility of an operating surplus. In certain exceptional cases, however, some operating surplus may be generated within the general government sector as a result of the activities of units within general government that produce market output, but do not meet the criteria for qualifying as a quasi-corporation. However, to simplify sectorization and to avert the appearance of an operating surplus in the general government sector, some countries in transition may find it attractive to allocate government agencies engaged in the production of market goods and services, by convention, to the sector of corporations even though these establishments do not, strictly speaking, meet the requirements set forth in the definition of "quasi-corporation".

235. One of the serious practical problems encountered by countries in transition is how to make a clear distinction between general government and state-owned enterprises to be allocated to the corporate sector, because in many cases it is not easy to determine whether the enterprises in question are

autonomous (free from general government intervention) in making economic and financial decisions and whether their output is market output or not. It is well known that until recently, state-owned enterprises were not autonomous (free from government intervention) and were deprived of the right to make independent economic and financial decisions; central government agencies used to decide on their investments, allocate funds to them from the state budget and make other important decisions.

236. However, as economic reforms in transition economies progress, the fundamental distinction between business and government, characteristic for a typical market economy, is becoming more and more apparent. As a result of economic reforms, state-owned enterprises (SOEs) can now independently determine what and how to produce, and whom to sell to and at what price. They also have the freedom to decide about the allocation of retained earnings to various reserves and funds. As a result, enterprises owned by the Government are becoming more independent in their economic and financial decisions; they keep their own accounts and balance sheets, separate from those of the Government, and constitute relatively autonomous units. Thus, they are gradually acquiring the major characteristics of public quasi-corporations, even though they are not yet corporations in a legal sense.

237. In most instances, SOEs should be treated as non-financial corporations, even if SOEs have not yet acquired in all transition countries a status akin to that of companies in market economies. Still, many SOEs do not have a budget that is fully separate from that of the Government. For example, expenses on R and D and equipment are often included in the government budget and not in the budget of the SOEs. Also, in some former CPEs, there is still no bankruptcy law that recognizes SOEs as separate entities; and even if a bankruptcy law exists, such as the one that was introduced in China in 1986, its impact is small, because the Government continues to supplement losses incurred by SOEs on a regular basis instead of reorganizing their finances and making them more self-sufficient and competitive. The same applies to the situation in the Russian Federation and some other countries of CIS. Some former CPEs are more advanced in this respect. For example, Hungary's law on bankruptcy, adopted in 1993, encourages reorganization in lieu of liquidation when feasible, and real and financial restructuring to make surviving firms more competitive in the long run.

238. As is clear from the above, the distinction between market and non-market producers is the most important criterion for the allocation of institutional units to corporations and general government. Market producers are so defined as to include the producers who charge prices for their output that are economically significant and affect demand. These prices normally cover cost and ensure profit. The concept of economically significant prices thus defined is intentionally vague in order to ensure a degree of flexibility to individual countries in deciding which enterprises should be treated as market and which as non-market producers. However, in countries in transition where subsidization

is still relatively important and where there are many loss-making enterprises, drawing the above distinction may be particularly difficult.

239. As a general rule for countries in transition, it is recommended that all heavily subsidized public enterprises be included in the category of market producers, provided that their prices are economically significant from the point of view of cost and demand. If this general criterion does not give sufficient guidance in distinguishing between market and non-market producers, the following more detailed conventions may be adopted to deal with borderline cases:

- The main criterion would be for self-financing units to be regarded as market producers and budgetary units as non-market. Self-financing units can be considered quasi-corporations in the SNA sense, because they sell their output, keep all accounts and balance sheets and are relatively independent in terms of their economic and financial decisions. Budgetary units include those government units that provide free services to enterprises, for example, veterinary services, testing laboratories, roads maintenance, and so forth. Thus the commonly used distinction between self-financing and budgetary units (which is often made in classifications of public units in former CPEs) should be used as a first approximation of the market/non-market distinction of the SNA. This first criterion should not be blindly followed, however, as prices charged by some self-financing units may not be economically significant in the strict sense. If this is the case, three additional criteria should be applied to refine the distinction between market and non-market producers in transition economies;

- A first supplementary criterion: units engaged in the production of material goods should be allocated to market producers, unless the prices charged for their output are clearly nominal payments;

- A second supplementary but still important criterion: all units engaged in the provision of non-material services should be regarded as market producers if prices charged for their output cover at least 35-50 per cent of the cost and if the payments for the services are proportional to the volume and quality of services supplied to users;

- A third supplementary criterion, in cases of further doubt, may be used so as to reflect other major characteristics of quasi-corporations such as autonomy and possession of separate accounts.

240. With regard to specific borderline cases, the following guidelines and conventions may be used in countries in transition:

- New types of industrial organizations commonly called "concerns" or "associations" have emerged in some former CPEs as a result of economic reforms. They have evolved from the former branch ministries. They portray themselves as industrial associations that seek to unite the whole chain of production from raw materials to final product and thus establish a complex of interrelated production activities. The main objective of these associations is to prevent the disruption of economic ties and control the price increases of products supplied within the scope of such associations. These associations should be treated as market non-profit institutions (NPIs) serving business and thus included in the corporate non-financial sector. Their output should be allocated to intermediate consumption of enterprises for the amount of the contributions that they make to these associations;

- Chambers of commerce, which are non-profit institutions serving business and financed by enterprises, are allocated to the sector of non-financial corporations;

- Government units engaged in the provision of agricultural services free or almost free of charge, such as irrigation services, amelioration services and so forth, should be allocated to the sector of general government;

- Pseudo-self-financing research units should be distinguished from the genuine ones in some countries in transition. The pseudo-units are officially classified as self-financing units, but in practice the major source of finance of their expenses is the state budget. Legally their income is linked to the completion of certain projects and assignments, but in practice it is often very difficult to establish such linkage, as the units in question behave and finance their expenses just like ordinary budgetary entities. Examples of such pseudo-self-financing units are the scientific institutions owned and controlled by ministries or government departments. They do not behave like enterprises and the sales of their services to government bodies are in many cases fictitious. They are found in countries like Poland,[15] and also in the Russian Federation and in some other CIS member countries;

- Public museums should be generally considered producers of non-market services, as their costs are largely covered by grants from the state budget. Therefore it is appropriate to allocate public museums to the general government sector;

- Public theatres that constitute a part of the national cultural heritage (for example, the National Opera in Poland and the Bolshoi in Russia), and are often highly subsidized from the state budget, and

whose principal functions are to promote culture, art and education as an important social objective of the government rather than to make a profit, should be allocated to the general government sector. On the other hand, some theatres and concert halls - both public and private ones - are run as commercial entities even though they may receive subsidies from the state budget: these should be allocated to the sector of corporations;

- Public libraries that may be engaged in the provision of consulting services to business, scientific institutions and government agencies on a commercial basis, but largely finance their costs from state budget allocations, should be allocated to the general government sector;

- Cooperative agricultural enterprises (collective farms) possess the main characteristics of quasi-corporations, as they generally keep all accounts and present balance sheets;

- Public housing units, normally owned by local government, are to be allocated to the sector of non-financial corporations unless the rent paid to these units constitutes a nominal charge, in which case they should be allocated to the general government sector. For example, in Romania rent paid by tenants of public housing units has been a nominal payment until recently and therefore these units should be allocated to general government rather than to the sector of non-financial corporations. If, however, in the future the status of these units is changed and they become predominantly market-oriented entities, changes in the sector classification should be introduced;

- Real estate agencies engaged in purchases and sales of houses and apartments are a new phenomenon in countries in transition. These units have to be allocated to the sector of non-financial corporations;

- Local government units providing communal services such as street cleaning, repair of roads, maintenance of parks, and so forth are allocated to the general government sector;

- Government producers of electricity, gas, heat and similar services sold to households should be allocated to non-financial corporations;

- Passenger transportation services might be delivered to households free of charge in some countries in transition. In those countries, they are financed out of special taxes paid by enterprises to the state budget. Under such an arrangement, the units engaged in the provision of transportation services should be allocated to the general government sector rather than to the sector of non-financial

corporations to which they normally belong. Such an arrangement was introduced, for example, in 1993 in some cities of the Russian Federation. As was mentioned in chapter II (sect. B.1 and 2), output of such units valued at cost is to be recorded as final consumption expenditure of general government and eventually as actual final consumption of households;

- Holding companies are allocated according to the principal activity of the group of companies they control. In some countries in transition, so-called industrial-financial groups were established recently; they are in fact holding companies and should be classified accordingly;

- Unincorporated units engaged in the production of goods and services on the territory of the given country but controlled by foreigners are treated as quasi-corporations. These may include foreign airline offices, and enterprises engaged in the construction of buildings, roads and so forth;

- Compulsory medical insurance is a new phenomenon in countries in transition; it is gradually introduced by the government to secure funds that will supplement financing from the state budget. The government agencies that are responsible for managing the funds that will be collected from the enterprises with the help of compulsory contributions should be allocated to general government. They should also regulate the activities of medical insurance organizations, which will be acting as an intermediary between the enterprises and medical institutions. It is appropriate to allocate these insurance companies to the sector of financial corporations even if they have an official status of non-commercial entity as is the case in the Russian Federation; despite their having this status, they operate as market producers.

C. Scope of financial corporations

241. The sector of financial corporations consists of institutional units, engaged in financial transactions on a commercial basis. These are institutions engaged primarily in financial intermediation but also in the provision of auxiliary financial services (for example, money exchange offices).

242. Financial intermediation is a growing phenomenon in transition economies, though it has not yet reached the stage where a comprehensive financial corporate sector has been established. It is important, however, to identify this sector separately, as it would permit analysing the growing importance of financial operations in the future.

243. The following guidelines and conventions may be used in countries in

transition with regard to specific borderline cases:

- The central bank is to be allocated to the sector of financial corporations;

- Units, other than government agencies, supervising financial markets (administering stock exchanges, for example) are to be included in the sector of financial corporations;

- Offices of brokers are to be included in the sector of financial corporations;

- Stock exchanges should be included in the sector of financial corporations but commodity exchanges should be included in the sector of non-financial corporations;

- Investment funds whose functions are similar to those of commercial banks have to be allocated to the sector of financial corporations. They are a relatively new type of institution in countries in transition, whose purpose is to accumulate free savings and privatization vouchers (checks) and to invest them in stocks issued by various corporations;

- A trust financial company is a new type of economic institution in countries in transition. These units are usually set up to manage privatization checks, securities, and reserves of insurance companies, as well as investment funds. They should be allocated to the sector of financial corporations;

- Private pension funds are a relatively new phenomenon in countries in transition. In some countries, they are at a very early stage of development, while in other countries in transition they practically do not exist. In principle, they can be established both by legal entities (for example, enterprises, banks and so on) and by individuals. Their major function is to supplement public pension schemes. In the Russian Federation, for example, private pension funds are obliged to invest through special companies that are set up to manage assets. As in all instances they act as financial intermediaries, that is to say, they collect contributions and invest them on behalf of the owners, they should be allocated to the sector of financial corporations, even if they have the legal status of non-profit institutions;

- State insurance companies including medical insurance companies are to be allocated to the sector of financial corporations even though in some countries in transition they have the status of non-commercial entities.

D. Households and the distinction between private unincorporated and quasi-corporate enterprises

244. The sector of households includes various households irrespective of their size and form. This sector includes the so-called institutional population, namely, persons who have been living for a long time in institutions such as hospitals and prisons. The sector also includes unincorporated enterprises owned by households that cannot be classed as quasi-corporations, for example, subsidiary plots of households, family-run shops, restaurants, farms and so forth. It is essential to remember that "unincorporated enterprises that are not quasi-corporations are not separate institutional units from their owners ..." (the SNA, para. 4.16 (b)).

245. Some practical problems arise in the allocation, between the sector of households and the sector of non-financial or financial corporations, of unincorporated enterprises owned by households. In general, larger unincorporated enterprises, owned by households, that keep all accounts and balance sheets are regarded as quasi-corporations and should be allocated to the sector of corporations, as it is possible to distinguish between the enterprises and their owners. However, small and often family-run business units such as farms, shops, restaurants and so forth should be allocated to the sector of households, as it is not easy to separate incomes and outlays of such enterprises from the incomes and expenditures of their owners.

246. The following guidelines and conventions may be used in countries in transition with regard to specific borderline cases:

- Subsidiary plots of households mainly engaged in own production of agricultural goods for own consumption and in own-account construction activities are to be allocated to the household sector alongside unincorporated private agricultural farms;

- Owner-occupiers of dwellings are to be considered owners of unincorporated enterprises engaged in the provision of housing services for own consumption; these units are to be allocated to the household sector;

- Individuals engaged in the provision of market goods and services (for example, repair of buildings and equipment, and services of doctors, teachers, lawyers, typists and so on) to households or other institutional units should be considered owners of unincorporated enterprises, to be allocated to the household sector;

- Individuals engaged in literary and artistic activities on own account are considered owners of unincorporated enterprises and those

enterprises are to be allocated to the household sector;

- Individuals engaged in financial services on own account, for example, persons buying and selling foreign currencies for profit, are considered owners of unincorporated enterprises and those enterprises are to be allocated to the household sector;

- Institutional units that lease property to others (lessors) are included, as a rule, in the sector of non-financial corporations, provided they possess, as a minimum, the characteristics of quasi-corporations. In some instances, however, the lessors are unincorporated enterprises owned by households and these should be allocated to the household sector.

247. The above examples provide guidance in individual cases. However, such guidance may be differently interpreted by countries with different statistical developments. For instance, if the statistical development of a transition country is further advanced, that country may find it more feasible and useful, from a policy-related point of view, to reallocate a greater number of privately owned farms, shops and repair shops, and so on to the quasi-corporate sector, than a country with a less advanced statistical development. In particular, it may be useful to make an attempt to identify as quasi-corporations (a) all unincorporated units that have a legal status, according to which they are obliged to register and report on their activity, even though they do not keep complete accounts and (b) those that are above a certain threshold size. Such flexibility of the SNA guidelines is in line with practices in market economies, where the scope of the household sector in terms of GDP varies considerably (United States of America, 0.2 per cent; Germany, 1.4 per cent; France, 23.3 per cent; and United Kingdom of Great Britain and Northern Ireland, 26.0 per cent).

E. Scope of non-profit institutions serving households versus that of corporate and government units

248. The sector of non-profit institutions serving households (NPISHs) includes (a) institutions engaged in the provision of non-market services to their own members (for example, political parties, trade unions, religious organizations, and so on) and (b) institutions engaged in charitable activities.

249. The following guidelines and conventions may be used in countries in transition with regard to specific borderline cases:

- Enterprise subdivisions engaged in the provision of cultural and social services to employees free of charge or almost free of charge, for example, hospitals, stadiums, recreational centres and rest-homes owned and financed by enterprises, are to be regarded by convention as

notional (quasi-) NPISHs, as they carry out the same functions as NPISHs. However, similar units owned by government budgetary agencies should be left in the general government sector. Matters pertaining to the estimation and allocation of output of the social and cultural services in question are discussed in detail in chapter IV (sect. C.2);

- Social organizations are included in the sector of NPISHs, unless they are controlled by government or even integrated with it. In the latter case, they should be allocated to the general government sector. For example, a political party under certain conditions can be integrated with government;

- In some countries in transition, certain entities receive the formal status of non-profit institutions which ensures certain privileges. For example, in the Russian Federation, the Supreme Soviet recently adopted (1992) legislation that provides for the establishment of non-profit institutions. These are defined as entities that do not have a profit motivation to benefit organizers or employees, but that may establish or acquire enterprises to pursue their objectives. These entities may serve business or households. When serving business, they should be allocated to the non-financial or financial corporations sector, and when serving households, they should be treated as part of the sector of NPISHs; in the former case they are financed, as a rule, with the contributions of the enterprises that control them, and in the latter case they are financed with the contributions of households, donations, property income and so forth. The enterprises established by these entities most likely belong to the sector of corporations. Some entities that have the official status of non-profit organizations may sell their output on the market and should therefore be allocated to the sector of corporations; this may apply in some countries in transition, such as the Russian Federation, where small private enterprises and organizations try to obtain the status of non-profit institutions in order to avoid paying taxes;

- Enterprises owned by social organizations, for example, printing offices and hotels owned by political parties or trade unions, should be allocated to the sector of non-financial corporations, provided that they sell their output, and keep all accounts and balance sheets;

- Associations of businessmen and entrepreneurs organized and financed by them to serve their interests should be allocated to the same sector as that to which the member enterprises are allocated; thus, associations of large non-financial or financial corporations should be allocated to the corporate sector and associations of small private businesses should be allocated to the household sector; the number of

such associations has been growing steadily in many countries in transition;

- Foundations are a new phenomenon in countries in transition. They are established in order partly to finance selected services satisfying the collective needs of society that are not properly taken care of by the government and partly to obtain tax benefits. In this respect, a distinction should be made between public foundations to be allocated to general government and other foundations to be allocated to NPISHs. Many such foundations were set up recently, for example, in Hungary.[16]

- Associations of producers are the entities set up by producers to promote their interests. These entities, which are also a new phenomenon in countries in transition, finance their expenses largely through the contributions of the producers. They should be allocated to the sector of corporations. For example, the Russian association of producers of lasers represents about 350 enterprises, institutions and individuals, whose main activities are the organization of exhibitions, the dissemination of information and so forth.

250. In principle, a distinction is to be made between the NPISHs that are market and those that are non-market producers. Market producers are allocated to the sector of corporations, and non-market producers serving business are also allocated to the sector of corporations. Non-market producers controlled and mainly financed by the government should be allocated to the general government sector; non-market producers serving households should be allocated to the sector of NPISHs.

F. Boundary of the total economy

251. The 1993 SNA definitions regarding the delimitation of the national economy as distinct from the rest of the world are generally applicable to countries in transition. They rely on the definition of residency. It should be noted, however, that in some countries the definition of residency adopted in official government documents pertaining to external economic relations differs from those of the SNA. Thus, in the Russian Federation the definition of residency used in some government documents includes affiliated offices of Russian enterprises and banks operating on the territory of other countries; on the other hand, similar units operating on Russian territory are not regarded as residents of the Russian Federation.

252. In principle, the total economy comprises all institutional units of a country that have their "centre of economic interest in the territory of that country" (the SNA, para. 4.15). An institutional unit "is said to have a centre of economic interest when there exists some location - dwelling, place of production or other premises - within the economic territory on, or from, which

it engages, and intends to continue to engage, in economic activities and transactions on a significant scale either indefinitely or over a finite but long period of time. In most cases, a long period of time may be interpreted as one year or more, although this is suggested only as a guideline and not as an inflexible rule" (ibid).

253. The economic territory of a country does not coincide with the geographical territory. It includes, in addition, airspace and territorial waters, the continental shelf in international waters over which the country has the exclusive right to extract raw materials, fuel and so forth, and any free zones including bonded warehouses and factories under customs control. It also includes territorial enclaves abroad, for example, diplomatic missions, and military bases on either a lease or an ownership basis. The economic territory of the country excludes, however, territorial enclaves of other countries or international organizations on its territory.

254. In practice, all producers of goods and services, operating on the territory of the country, are residents of this country. These include joint ventures, and foreign branches of corporations; unincorporated enterprises controlled by foreign units are considered notional quasi-corporation-residents of the country where they are located. Owners of land or buildings who are residents of foreign countries are treated as owners of notional resident units of the country where the property is located. The rents paid by tenants of buildings and land are regarded as being paid to nominal resident units, which in turn make transfers of property income to the rest of the world.

255. Large construction projects, carried out by the joint efforts of several countries, are treated, in principle, as resident units of the country where the construction is taking place, especially if the bulk of the labour and other resources are supplied locally and the project has a noticeable impact on income and expenditure in the locality. In this case, the value added, originating in construction, should be entirely included in GDP of the country where the construction is taking place. The materials that are brought from abroad for construction purposes will be recorded as imports for the country where the construction is taking place and as exports for the country that supplied the materials. If, however, construction is carried out on the common borders of the countries that are participants in a project and if they contribute approximately equally to the joint resources, the place of construction can be regarded as an enclave of the country participants concerned. In this case, value added is to be distributed among the countries in question proportionally to their shares in capital; the materials supplied by the country participants will not be recorded in this case either as exports or as imports.

256. Installation of equipment abroad is not treated as an activity of a notional quasi-corporation of the country when such installation takes place irrespective of the duration of work. Instead, exports and imports of installation services are recorded for the countries involved in this

transaction.

257. Resident households are mostly those that live during relatively long periods of time (a year or more) in a given country, maintain dwellings as a principal place of living, and have a predominant part of their consumption expenditure in the country in which they live. Some residents of a country may work abroad: diplomats, personnel of military bases, border workers, who regularly cross frontiers, crews of ships and aircraft working outside the given country and so on. Travellers and tourists are residents of the country where they normally live. Foreign students are residents of the country from which they come irrespective of the duration of their stay in a foreign country as long as they do not break their ties with their home country. Technical assistance staff, staying in a country less than one year are not residents of the country. Citizens hired by foreign diplomatic institutions are residents of their native country. Teams of workers sent to another country to carry out the installation of equipment are residents of the home country provided that the duration of their work is less than one year. Also, government agencies located on the territory of a country are resident units of the country, and the same convention applies to NPISHs.

258. Non-residents are not part of the total economy. Transactions of residents with non-residents are recorded in the rest of the world account. A distinction between residents and non-residents affects the relation between domestic product and national income, which are the two main aggregates of the SNA. Domestic product is a measure of the results of production by resident units of the country, whereas national income covers primary income received by the resident units of the country as remuneration for their services and resources (labour, land, capital) provided in connection with their participation in the production of the domestic product of the given country and of other countries.

IV. SOCIAL BENEFITS IN TRANSITION ECONOMIES

259. The present chapter deals with the accounting treatment of social benefits and supporting social contributions and how to best reflect the changes taking place in the nature of the institutions that provide social benefits, in the type of social benefits and the channels through which they are provided, and in the extent to which the recipients pay for these benefits. As social benefits generally supplement labour income, this chapter also deals with the scope of the SNA item called Compensation of employees.

260. Social benefits can be provided in a variety of forms, and the extent to which these are used in countries in transition depends on how far these countries have advanced in the direction of a market economy. This chapter discusses four different forms of social benefits, namely:

(a) Benefit payments such as pensions, welfare benefits, sick-leaves, allowances to the newborn, allowances for maternity leave, social relief to poor families and to families with many children and so on made by government and enterprises. These benefits are generally paid out in cash and either based or not based on contributions made by the individuals benefiting from them;

(b) Expenses incurred by the government on free health-care services, free education, and other free social services. These expenses resulted in free services provided to all or selected classes of the population;

(c) Selected goods and services sold at very low prices, generally below cost. These generally included food items, housing and transportation services and expenses on similar products that satisfied the most basic needs and thus benefited all classes of the population;

(d) Cultural, social and other services provided by enterprises as fringe benefits to their employees, to members of their family and, in some instances, to members of the local community. Many of the state-owned enterprises had or still have their own kindergartens, sanatoriums, vacation homes and children's camps which employees are entitled to use either free of charge or at a very low cost.

261. All four types of benefits currently exist in countries in transition. During the period when central planning was the predominant form of management of the economy, the main emphasis was on the provision of low- or no-cost benefits that are reflected in schemes (b), (c) and (d) above. As countries in transition advance towards a market economy, the type of benefits is generally shifting from those reflected in schemes (b), (c) and (d) to those set forth in scheme (a). This shift is occurring because Governments are aimed at reducing their deficits by receiving contributions towards the benefits they pay; also enterprises are shifting to benefit schemes supported by contributions in order

to reduce their cost of production to only those cost elements that are strictly connected with the production process.

262. The accounting treatment pursued in this chapter would make it possible to carry out analyses over time in order to determine whether social benefits have decreased or increased since the time of central planning and its move towards a more market-oriented economy, and/or what shifts have taken place in the form in which those benefits are being provided. The monitoring of these benefits is important for policy-making during the transition period, and for the adopting of such measures as will make the social transfers system more efficient and better targeted towards the most vulnerable groups of the population.

263. This chapter reviews the various formats in which social benefits are provided and how they are treated in the 1993 SNA. Section A deals with the scope of wages and salaries and in particular reviews the scope of wages and salaries in kind. Subsection B.1 reviews the scope of social security contributions; subsection B.2, social benefits other than social transfers in kind; and subsection B.3, social transfers in kind provided by government. Subsection B.4 discusses borderline cases involving subsidies and social benefits and transfers in kind; it repeats in a different context some of the examples of subsidies that were already dealt with in chapter I (sect. A.2) in terms of presenting the effects on production analysis. Section C deals with social transfers by enterprises to employees and others: subsection C.1 deals specifically with examples of social benefits in cash and in kind provided by enterprises, and subsection C.2 discusses the SNA treatment of accounting and provides some examples where cultural and social services are produced and supplied by the enterprises themselves. The chapter closes with a section D on taxes and current transfers, which constitute another means of redistributing income.

264. The three main accounts in which social benefits and the changes therein can be recorded and analysed are the allocation of primary income account, the secondary distribution of income account, and the redistribution of income in kind account, including the corresponding use of disposable income account and the use of adjusted disposable income account. The accounts apply to all resident sectors of the economy, the total economy and also the rest of the world. The five accounts are presented in tables 7.2, 8.1, 8.2, 9.1. and 9.2 of the SNA, and also form part of IEAs (table 2.8 of the SNA) to which reference was made in chapter III above.

A. Wages and salaries

265. Wages and salaries are defined on a gross basis, that is before any deduction of income taxes and social contributions is made by employees. Wages and salaries relate to payments in cash and in kind. In principle, the definitions of the new SNA pertaining to wages and salaries are applicable to

conditions in countries in transition. Wages and salaries in cash include the following types of payments often found in countries in transition:

(a) Amounts earned for work done or time worked according to established or agreed rates of pay;

(b) Bonuses for increases in productivity as well as bonuses linked to overall performance of enterprises;

(c) Bonuses for long service;

(d) Profit-sharing (in accordance with an agreement);

(e) Additional pay for work in particular conditions, for example, at night or during weekends, holidays and so on;

(f) Additional pay for work in distant regions of the country or in regions with harsh conditions;

(g) Allowances for working in hazardous circumstances;

(h) Allowances for working abroad;

(i) Cost-of-living allowances;

(j) Additional pay to employees for training beginners;

(k) Commissions and tips;

(l) Payment in compensation for injuries sustained while at work. Also included are amounts earned by the employees while away from work except during absence due to sickness, injury and so on;

(m) Pay for holidays and vacations, including compensation for unused vacations;

(n) Pay to employees while they undergo training or retraining.

266. Payments of enterprises to the self-employed for their services are not included in wages and salaries but are allocated to intermediate consumption; as regards these self-employed, the income they earn (after deduction of intermediate expenses) is to be classified as mixed income. It is worth noting in this context that in some countries in transition enterprises, in the attempt to avoid taxation of wages and salaries, often sign separate contracts with their employees for the performance of certain jobs and show the payments as purchases of services. Such a practice is rather common in the Russian Federation, for example. It is essential in principle, therefore, to make an

adjustment that would reallocate the intermediate consumption to wages; in practice, however, the complete information for such an adjustment may be missing.

267. Tips and gratuities received by employees are treated as wages and salaries because these flows constitute payments for the services rendered by the enterprise employing the worker; this flow is also included in the measure of output and value added of the employing enterprise. However, tips and gratuities are treated in the MPS as redistributive payments. In many countries in transition, these items are not included in statistics on wages and salaries. It is therefore essential to estimate and add them to wages and salaries, as defined in the SNA; such items may refer to the tips of taxi-drivers, waiters and so forth.

268. Wages and salaries may also encompass payments in kind, which would include goods and services furnished by employers to employees as remuneration for work done, provided the goods and services are of clear benefit to the employees and/or are of the type that employees would buy for themselves and use at their own discretion, that is to say, consume at a time and in a place chosen by the employees themselves, and so forth. The most common types of wages and salaries in kind in countries in transition are:

(a) Agricultural goods furnished by agricultural enterprises to their employees for work done;

(b) Provision of ordinary meals;

(c) Provision of uniforms that can be worn outside the job;

(d) Provision of housing services;

(e) Crèches for the children of employees;

(f) Transportation services provided to own employees as remuneration for their work;

(g) Services of vehicles provided for the personal use of employees.

269. In some countries in transition and above all in CIS member countries, enterprises had to use their output to remunerate employees because of the difficulties they experienced in obtaining cash (for example, in 1992 an enterprise in Minsk used the carpets from own production as a means of payment for the services of employees). In some countries in transition, enterprises often reward their employees by providing them with goods in kind in the form of "gifts" (consumer durables, apartments and so forth). These gifts are often excluded from the records and reports on wages in the attempt to avoid taxation; besides, the value of gifts is often underestimated. It is, however, essential

to estimate the market value of the gifts and include them in wages and salaries in kind. Data from the tax inspection agencies may provide the basis for the estimates in question.

270. If the products are provided at reduced prices, only the difference between the full and the reduced price has to be included in wages and salaries. Where food is provided to employees at reduced prices in enterprise canteens, the price reduction should be included in wages and salaries in kind. It should be noted that in some transition economies, this item is not treated as a component of wages and salaries but shown in statistical reports of enterprises among "other payments to employees".

271. It is worth noting that in business accounts goods and services provided by producers to their employees are often valued at cost. This may be acceptable only in respect of the valuation of purchased goods as long as they are valued at purchaser's prices. The provision of goods and services produced on own account is to be valued at basic prices (or at producer's prices) in order to ensure consistency with the valuation of output that is sold.

272. The expenses of producers on goods and services from which both employees and employers benefit are allocated to intermediate consumption. Such goods and services include, for example, provision of special clothing and footwear that can be used only at work, special meals required by special conditions of work, and maintenance of showers, medical units, washrooms and so on. Also included in intermediate consumption rather than in wages and salaries are some payments made in cash by enterprises to their employees; these cover, for example, reimbursements of purchases of tools, special clothing and so on; the reimbursement of the expenses of employees for social and cultural services provided to guests of the enterprise is also treated as intermediate consumption.

273. The cost of business-related travel should be subdivided in principle into (a) payments for hotels and transportation and (b) purchases of food and other consumer items. Only the second component should be allocated to wages and salaries, whereas the first has to be treated as intermediate consumption. Since, in practice, it is difficult to make the above subdivision, the SNA recommends allocating the whole amount of business-related travel costs to intermediate consumption. In the MPS, on the other hand, business-related travel costs in the material sphere are treated as a part of primary income of households which is the counterpart of compensation of employees in the SNA.

274. Provision of meals and uniforms to military personnel is allocated in principle to wages and salaries in kind unless these items are provided during combat missions or if they represent the type of products military personnel would not buy on their own. In such cases, these expenses would have to be allocated to intermediate consumption. In some cases, meals provided to military personnel are of such low quality that they can hardly qualify as

remuneration in kind, which, according to the SNA (para. 7.39), "consists of products that are not necessary for work and can be used by employees in their own time, and at their own discretion, for the satisfaction of their own needs or wants or those of other members of their households". In other words, employees would not buy such products if they were given a choice. Under these circumstances, it might be appropriate to allocate meals to intermediate consumption.

275. It is important to note that wages and salaries in kind within the System include voluntary payments made by employers to medical and other insurance companies for the benefit of their employees that are outside of any collective schemes. When accounting for these voluntary contributions by enterprises for the benefit of the employees, which were recently introduced in some transition countries, it should be borne in mind that such contributions are often financed out of profits and therefore not identified as cost in business accounting (see, for example, General principles of calculation of costs of production, approved in 1992 by the Russian Government). On the other hand, compulsory contributions that enterprises make to social security funds and medical insurance companies are excluded from wages and salaries in kind; as these contributions are similar in nature to other social security contributions, they should be treated as actual social contributions rather than as wages and salaries.

276. Wages in kind may also include the value of interest forgone by the employer when loans are provided at reduced rates. A survey of practices of countries in transition shows, however, that data recorded in business accounts do not normally include information that could be used to make imputations for the interest in question; in these instances, it might be difficult for national accountants to make such imputations because they lack information on the actual benefits received by the employees.

277. Expenses of enterprises on sport and recreation in countries in transition may be of two types: (a) expenses attributable to individuals including, for example, purchase of tickets to theatres and stadiums and (b) expenses that are difficult to attribute to individuals and the work they perform. The first type of expenses should be allocated to wages in kind. The second type include expenses of enterprises on maintenance of hospitals and cultural centres, and maintenance and renting of stadiums and other sporting facilities, to benefit their employees. This provision of social and cultural services at no cost to their employees is treated as current transfers from the enterprises to notional NPISHs. Such treatment is dealt with in more detail below (see sect. C.2). In practice, the distinction between the two types of expenses benefiting employees might be difficult to make and in those instances all such expenses may be allocated to one of the two categories after determining which is the prevailing type of expense.

278. There are some other payments made by enterprises to households that are not included in compensation of employees; for example, payments of enterprises

to their employees as reimbursement for maintenance, current repair and other expenses for personal cars used for official purposes are not treated as wages and salaries in kind, but as intermediate consumption of the enterprises. Payments made by enterprises to households as compensation for the demolition of dwellings or other damage inflicted on the property of households, either by employees or through some other cause, should also not be included as wages and salaries in kind, but rather treated as capital transfers.

B. Social contributions, benefits and transfers in kind

279. The present section deals with the following SNA categories: social contributions (D.61), and social benefits other than social transfers in kind (D.62) including social security benefits in cash (D.621), private funded social insurance benefits (D.622), unfunded employee social insurance benefits (D.623) and social assistance benefits in cash (D.624), as well as social transfers in kind (D.63). Social contributions are discussed in the SNA in paragraphs 8.67-8.74, social benefits are dealt with in paragraphs 8.75-8.83, and social transfers in kind in paragraphs 8.99-8.106. Attention is also paid to the distinction between social benefits and social transfers in kind on the one hand, and subsidies (D.3) on the other.

1. Social contributions

280. Social contributions are paid by employees that are members of households (the amount paid to the rest of the world may be ignored in the case of transition economies), and also by enterprises, government and NPISHs on behalf of their employees. Employers' social contributions are in fact made by employers but treated as if they were paid to employees as part of compensation of employees. In the context of the secondary distribution of income account, social contributions are seen as redistributive flows. On the other hand, social contributions are received by social security schemes (set up and controlled by the government) and by private insurance schemes, and also include imputed contributions to ordinary enterprises when they manage unfunded schemes. The three components correspond to actual and imputed social contributions by employers, and to compulsory and voluntary contributions by employees. Also included are contributions to social security funds and private insurance schemes made by employees without involvement and participation of employers, as well as by self-employed and non-employed persons.

281. Imputations of social contributions may be made for all sectors, but particularly for non-financial and financial corporations and government. In the case of employees of non-financial and financial corporations, imputed contributions are first included in compensation of employees paid by the enterprise; the employees then return the same amount to the enterprise, which is included as imputed revenue of enterprises (recorded as social contributions

received) and used to finance the social benefits paid out by the enterprise. When incorporating compensation of employees in the calculation of the cost of government services, imputation of social contributions may need to be made. In the past in former CPEs, actual contributions to social security funds covering employees of the government sector were as a rule considerably lower than in other sectors of those economies, and did not adequately match the benefits paid out. In cases where such conditions persist, the imputation can be made with the help of the rates established for market industries. These imputations are especially important in the military sector where social contributions are not made at all in some countries. The imputed social contributions in this sector can be taken as being equal to actual pensions and other social benefits paid out to military personnel.

282. In the recent past in most of the CPEs, social security funds were a part of the state budget and there was no close linkage between social contributions and social benefits. While economic reforms are changing this arrangement in many countries, those reforms are in many instances not yet complete. For example, in the former Czechoslovakia, as mentioned above, enterprises paid only a payroll tax and social benefits were paid out of the state budget. In the former USSR, social benefits were financed both from social contributions that had been transferred to the state budget and from other allocations from the state budget. In the Russian Federation in 1991-1992, some social benefits were paid out of a special fund that had been created by the Russian Supreme Soviet and was financed from the state budget. As regards cases in these countries and/or circumstances where it might be difficult to ensure a strict correspondence between contributions to social security schemes and social security benefits, the latter should be treated as social assistance grants rather than included as social security benefits, as is explained in subsection B.2 below.

283. In countries in transition, the larger part of social contributions encompasses compulsory contributions made by employers on behalf of their employees; however, private schemes are being introduced gradually. In some countries in transition, the employees must make contributions to social security schemes. Thus, in the Russian Federation employees must contribute 1 per cent of their gross wages to the pension fund.

284. Enterprises in some countries in transition make contributions to medical institutions on behalf of their employees. It is suggested that these contributions be treated as actual social contributions because they are similar to contributions to insurance companies. If, however, these contributions are made by employers outside of any collective scheme, the contributions in question are to be allocated to wages and salaries in kind.

2. Social benefits other than social transfers in kind

285. Social benefits are current transfers to households (both resident and non-resident) from social security schemes or similar arrangements to cover, wholly or partially, the expenses resulting from certain socially oriented risks or needs, such as unemployment, sickness, disability and so on. Social benefits as unrequited transfers should be distinguished from reimbursements by employers for work done included in wages and salaries. Social benefits can be provided by employers to employees without involving any third party; in that case, as was mentioned before, they are shown first as imputed social contributions and included in compensation of employees.

286. Social security benefits in cash are paid out from social security schemes and in countries in transition normally encompass:

(a) Sickness and invalidity benefits;

(b) Maternity allowances;

(c) Children and family allowances;

(d) Unemployment allowances;

(e) Retirement and survivors' pensions;

(f) Disability pensions;

(g) Pensions and allowances to persons injured in wars and to their families;

(h) Pensions to families of servicemen killed in wars;

(i) Death benefits;

(j) Allowances to families with low income and many children;

(k) Stipends to students;

(l) Other allowances and benefits.

287. Private social insurance benefits in cash encompass similar benefits from private schemes offered by insurance enterprises. These benefits are not yet quantitatively important in countries in transition but are likely to increase in the future. Excluded are the claims paid out by casualty insurance companies, which are not considered social benefits.

288. Education grants that enterprises provide to their employees or to members of their family are treated as imputed social contributions and unfunded social benefits; education grants to future employees which are becoming rather popular

in some countries in transition are to be allocated to miscellaneous transfers.

289. In most countries in transition, private social insurance benefits are quantitatively unimportant and in some of those countries such benefits practically do not exist. However, they are likely to increase within the foreseeable future.

290. Social benefits other than social transfers in kind (D.622) encompass current transfers that are payable in cash to households by government or NPISHs to meet the same needs as social security benefits but not made under a social security scheme. The social benefits referred to here are included in the secondary distribution of income account as benefits received by households and paid out by non-financial enterprises, by insurance enterprises (financial corporations), by social security schemes (general government) and by NPISHs as direct unfunded benefits to their employees. Social benefits recorded in the account do not include social transfers in kind. These are shown in the redistribution of income in kind account, which is discussed below.

291. The distinction between social assistance benefits and social security benefits might be difficult to make in those transition economies where all social benefits are paid out of the state budget or where the social security fund is not independent from the state budget. In this case, it is suggested that benefits not be treated as social assistance benefits in cash, but that all be allocated to social security benefits in cash (D.621) or to either of the two other categories of social benefits (D.622 or D.623).

292. Social assistance benefits in cash that are not based on any funding by social contributions are very important in transition economies. Such social benefits are paid by enterprises, government and NPISHs. They cover the unfunded additional pensions and various allowances (sick-leave pay, maternity leave pay and so on) that enterprises often pay to current and former employees to supplement the benefits paid out from social security funds. In the Russian Federation, for example, collective farms often pay unfunded pensions to their members to supplement relatively low pensions paid out from the social security fund. In the former USSR, the Government paid out unfunded pensions and other social benefits to military personnel. In some countries in transition, enterprises may be required to pay unfunded allowances to persons laid off by them. As noted above, in all such cases the social contribution should be imputed and included in compensation of employees.

293. In many countries in transition, government agencies often create so-called extrabudgetary funds in order to secure resources needed to finance certain specific types of outlays associated with special programmes or purposes. The most important examples of such extrabudgetary funds are well known: the social security fund, the pension fund, the employment fund and so on. There are, however, many other extrabudgetary funds that have emerged recently in countries in transition, above all, in the Russian Federation and other CIS member

countries, for example, the fund for development of education, the fund for protection of environment, the fund for maintenance of roads, the fund for development of agriculture and so forth. The resources of these funds are formed from different sources such as voluntary contributions and donations, fines and penalties but also from taxes. In some cases, extrabudgetary funds are merged with the state budget. The institutional units that pay contributions to extrabudgetary funds are mostly enterprises, and to a lesser extent households and NPISHs. Some payments into these extrabudgetary funds (donations, fines, penalties) have to be recorded in the secondary distribution of income account; but certain payments that take the form of taxes on production (as is the case, for example, with some payments to the fund for maintenance of roads in the Russian Federation) should be recorded in the allocation of primary income account. The payments from these funds can be recorded not only partially in the secondary distribution of income account as social benefits to households from the social security fund but also in the use of income account as current government expenditure on protection of environment and so forth and even in the capital account of general government.

294. As indicated above, social assistance benefits in cash are provided generally by government in countries in transition, sometimes by NPISHs - for instance, in the case of labour unions running sanatoriums or vacation homes - and occasionally by enterprises. This is quantitatively illustrated in table 4.1 with data from the Russian Federation showing the social benefits paid out to households in 1994.

Table 4.1. Social benefits paid out to households in the Russian Federation, 1994

(Billions of roubles)

1.	Pensions	34 219
2.	Sick pay, maternity, childbirth	4 292
3.	Allowances for raising children	4 391
4.	Unemployment allowances	506
5.	Other benefits	3 641
6.	Scholarships	810
7.	Total	47 859

3. Social transfers in kind provided by government

295. Social transfers in kind (D.63) include social benefits in kind (D.631) and also transfers of individual non-market goods and services (D.632). Social benefits in kind are further broken down by social security benefits, reimbursements (D.6311), other social security benefits in kind (D.6312) and social assistance benefits in kind (D.6313).

296. Social transfers in kind are defined so as to include individual goods or services provided as transfers in kind to resident households of a given country by government units (including social security funds) and NPISHs, whether purchased on the market or produced as non-market output. (For a description of the distinction between individual and collective services, the reader is referred to chapter II, section B.2.) The scope of social transfers in kind described in the SNA (paras. 8.99-8.100) implies that government purchases certain goods and services from business and provides them free to households. Thus, payments by government for goods or services should be regarded as social transfers in kind, if specific individuals or households benefit directly from the goods and services. Social benefits, on the other hand, if paid by the government, include, as described in the SNA (para. 8.77) all social benefits paid out to households in the form of cash. It is important to note that social transfers in kind refer to outlays of general government and NPISHs that were originally recorded as final consumption expenditure of these sectors on individual goods and services; they are not included in final consumption expenditure of households. However, the transfer in kind results in the incorporation of these expenditures in the category determined by another consumption concept of the household sector, namely actual final consumption of households (see the SNA, paras. 9.72-9.74, 9.90-9.92, 9.95-9.97).

297. For some of the countries in transition, the subdivision of social transfers in kind might be difficult to make in practice, owing to the lack of clear institutional arrangements, for example, the absence of medical insurance and so forth. Nevertheless, it is believed, that most countries in transition will be able to draw a distinction between (a) social benefits in kind and (b) individual goods and services provided in kind to households by general government and NPISHs.

298. In many countries in transition, the bulk of social transfers in kind will encompass the value of non-market individual services provided to households by general government and NPISHs, reduced by nominal payments by households. Referred to here are:

(a) Reimbursements by social security schemes of the approved expenditure by households on specified goods and services (hospital bills, expenditure on medicines, and so forth) (thus the amount of reimbursement is not treated as a current transfer in cash from the social security fund);

(b) Other social security benefits in kind (other than reimbursements), paid by social security schemes to the producers of goods and services (at purchaser's prices) after the deduction of nominal payments made by households;

(c) Social assistance benefits in kind that are similar in nature to social security benefits in kind but provided outside of social security schemes.

299. Broadly speaking, social benefits in kind encompass transfers in kind that correspond to risks covered by the social security system. Individual non-market goods and services provided in kind to households by general government and NPISHs encompass individual non-market services in such areas as education, health, culture, recreation and housing. All non-market services of NPISHs are regarded as individual by convention.

300. The following examples reflect the close relation between social transfers in kind and social benefits. If retired persons are given special passes for free transportation for which the government makes the payment, the payment should be treated as social transfers in kind. On the other hand, if an individual pays only a fraction of the price of a ticket to a sanatorium, the purchase of medicines or the services of a hospital, and the balance is paid by the government out of a social security fund, then the payment should be treated as a social benefit. Also included as social benefits is compensation paid by government to families with children under age 16. Such payments are made in some countries of CIS to compensate families for the high prices of consumer goods for children. As the above-mentioned payments clearly benefit specific groups of the population, they should not be treated as subsidies.

301. The most common example of reimbursements by social security funds that are to be treated as social transfers in kind in transition economies are reimbursements to disabled persons for their expenses on purchases of medicines, special cars and medical equipment.

302. Still another example of social benefits in kind relates to reimbursement from the social security fund for the expenditure of households on purchases of sanatorium vouchers. In some cases these sanatorium vouchers are purchased by social security agencies and transferred free or almost free to households that are not in a position to pay the full price.

303. In some countries in transition, sanatorium vouchers are often provided at considerably reduced prices by the trade unions that control and partially finance these institutions. The value of the vouchers provided by trade unions to households (less actual payment by households) is to be treated as an example of social transfers in kind from NPISHs. The sanatoriums controlled by trade unions are often independent institutional market units which can be allocated to the sector of non-financial corporations.

304. The distribution of free food to children, which exists in some countries in transition and is carried out by special outlets financed from the state budget, constitutes still another example of social transfers in kind from the government to households.

305. Another typical example of social transfers in kind in many countries in transition entails the provision of textbooks to pupils free of charge. Under the most common arrangement, public schools use budgetary allocations to finance purchases of textbooks for further free distribution among students. The value of those textbooks is to be recorded, first, as final consumption expenditure of general government; second as social transfer in kind to households; and, eventually, as actual final consumption of households. The result of the recording of the above transactions will of course be the same if the purchases of textbooks by schools are treated as intermediate consumption. The System, however, recommends that purchases of goods for further distribution without any processing be allocated to the final consumption expenditure of the units that made the purchases.

306. In some cases, it might be difficult in practice to make a distinction between social benefits in kind and in cash. For example, assistance provided in the Russian Federation from the employment fund may assume the form of transfers in cash, of payments to the enterprises that render services to the people or of reimbursements for the expenses of households for purchases of goods or services. The data needed for the subdivision of payments into benefits in cash and benefits in kind might not be available. To achieve this breakdown, a small-scale survey might be necessary.

4. Social benefits and social transfers in kind to be distinguished from subsidies

307. Chapter I (sect. A.2) deals with the concept of subsidies in the context of valuing goods and services at basic prices. The payment by government of subsidies aimed at reducing prices ultimately has also a social impact, particularly if this affects prices of goods and services satisfying basic needs. Therefore, it is necessary to deal with this topic again in the present context. The emphasis here will be on the concepts of social benefits other than social transfers in kind (D.62) and social transfers in kind (D.63) and on how to distinguish those from subsidies in the practice of transition countries. The distinction between these concepts is very important, as subsidies affect value added and GDP, while social benefits and social transfers in kind have an impact only on disposable income.

308. Drawing a distinction between subsidies and social benefits and social transfers in kind may be problematic in all countries, but it is particularly so in countries in transition because of the rapid changes in the system of subsidization and social protection. The distinction is important because it

has implications for measurement of GDP, as well as other analytical implications. As statistics have already shown, a decrease in subsidies is normally accompanied by an increase in social spending and in social benefits. For example, in Poland, the ratio of subsidies to GDP diminished from 16.6 per cent in 1989 to 4.8 per cent in 1993 and the ratio of social spending to GDP increased during the same period from 10 to 21 per cent.[17]

309. When defining social benefits other than social benefits in kind, the SNA (paras. 7.72 and 8.77) assumes that a link can be established between a government payment and the specific household unit that actually receives the payment. If the payment is received by a producer - even if a household benefits from it - it should be considered a subsidy unless it is a payment from a social security scheme. There are many examples in countries in transition where this distinction is difficult to make. They all concern payments by government to households or to enterprises that are generally public corporations, quasi-corporations or unincorporated government enterprises. Transfers between government agencies that belong to general government should never be regarded as being part of any of the three categories mentioned. They are always treated as current transfers, if the entities belong to different subsectors of the general government sector.

310. The distinction between social transfers in kind (D.63) and social benefits other than social transfers in kind (D.62), on the one hand, and subsidies on the other, is set forth in the following examples. If the expenses of a retired person on medicine are reimbursed from a social security fund, the payment should be treated as a social transfer in kind or, to be more precise, as a social benefit in kind (D.631). If, however, the government pays to drugstores certain amounts of money to make up for losses incurred owing to the sale of medicine to the general public at low prices in accordance with government policy, the payment should be treated as a subsidy. On the other hand, if an individual pays only a fraction of the price of a ticket to a sanatorium, of medicines or of the services of a hospital, and the balance is paid or reimbursed by the government out of a social security fund, the payment should be treated as a social benefit in kind. Compensation for the high prices of food paid by government to families with children under age 16, however, is treated as a social benefit other than a social benefit in kind. Such payments in cash are made in some CIS countries to compensate families for the high prices of consumer goods purchased for children.

311. The following example further clarifies the distinction between subsidies and social transfers. Suppose the cost of production of coal is 100 units per ton. If the government decides that coal should be sold to users at 50 units per ton and pays the difference to the producers of the coal, such a payment should be treated as a subsidy. If, in addition, the government pays 10 units per ton in cash to selected households because it believes that the market price is too high for those households, that payment from the budget is not a subsidy but a social benefit.

312. Still another example on this same topic entails payments made by the Government to the Moscow subway system. By government regulation, the subway system furnishes 46 categories of households with subway services free of charge or at a reduced price. The resulting losses are estimated and explicitly made up by the government in payments to the subway system. In this case, the government compensation to the subway system should be treated as a subsidy and not as a social transfer to households because the payment is made to the subway and not to the individual households or their members, even though some of them benefit from the arrangement. In other words, government payments to transport operators are to be treated as subsidies irrespective of whether those payments are designed to cover the operators' overall deficit (because they operate under constraints imposed by the government) or to allow transport operators to provide cheap fares to certain categories of users. It is worth noting that some countries treat payments to transport operators for the latter purpose as social benefits or other current transfers. Such a treatment is applied in practice in France.[18]

313. In many instances, the government, while obliging state-owned enterprises to provide goods and services to households at discounted prices, does not compensate directly for the resulting losses. In such cases, the net impact of the discounted prices is a reduction in operating surplus and no subsidy is recorded.

314. In some countries, budgetary units may receive payments from the state budget that are similar to subsidies paid to market producers. For instance, enterprises may receive a compensation for employing members of certain categories of the population. These payments are not made in order to lower the prices of products, but rather in order to provide social benefits to selected parts of the population that would otherwise not be employed. Thus, such payments should not be treated as subsidies, but as social benefits paid to households. There should be no entry for a receipt in the corporate sector.

315. Also, Governments may prefer to give tax concessions rather than make an outright expenditure. A typical example is the relief provided in some countries against income tax for the interest paid on mortgages taken out to purchase owner-occupied property. These payments should not be regarded as subsidies, as the mortgage-lending agencies actually receive full payment from the households that have taken out the mortgage. The reduced taxes should be regarded as income taxes paid to the government and no imputations for social transfers should be made.

316. According to the SNA, paragraph 7.72, "subsidies are not payable to final consumers, and current transfers that governments make directly to households as consumers are treated as social benefits", as was explained above. The SNA, therefore, does not include a concept of consumer subsidies. This was one of the important issues dealt with in the course of work on the 1993 SNA. At one

stage, there was a proposal to treat consumer subsidies as final consumption expenditure of general government. No agreement, however, could be reached on the extent and type of payments that should be considered subsidies that were mainly for the benefit of consumers and those that were mainly for the benefit of producers. Furthermore, some objected that treating consumer subsidies as final consumption expenditure of general government would lead to an increase in GDP that would be difficult to interpret. The SNA treatment is important, given the extent of the so-called consumer subsidies in the former CPEs. According to a World Bank report, subsidies are an issue of immense importance in Poland, where consumer subsidies represent some 10 per cent of GDP (1989). As was mentioned by Atkinson and Micklenwright,[19] the dividing line between consumer subsidies and producer subsidies may at times be difficult to draw. For instance, subsidies given to producers of tinned fruit could be regarded as consumer subsidies, but not as subsidies given to the manufacturers of tin. Moreover, the relative weights of producer and consumer subsidies vary across time and countries. For example, in Hungary and Poland in 1988 all subsidies represented about 15 per cent of GDP; but consumer subsidies in Hungary accounted for about one third, and in Poland for two thirds of all subsidies.

317. The distinction between subsidies and social transfers is becoming less problematic in more recent years as Governments in countries in transition have chosen to reduce subsidies to enterprises, and instead to pay direct social benefits to needy persons. For example, the 1993 decision of the Government of the Russian Federation to reduce grants to producers of housing services and, instead, to provide grants to households with low income will reduce subsidies to producers and increase social benefits. There are similar arrangements in other countries in transition, where local government bodies often choose to raise rents and to give grants to needy persons. Still, in some other countries, where the rent is a nominal payment and where public housing units are allocated to the general government sector, the financing of the housing services in question are carried out through transfers within the government.

318. In some countries in transition, such as the Russian Federation and other CIS member countries, local governments set up committees of social protection to provide social assistance to the neediest persons. The funds that the committees use to finance the programmes may come partly from social contributions, partly from the state budget and partly from donations. The focus is often on provision of assistance in kind because in conditions of high inflation benefits in cash seem less appropriate. Thus the committees establish special outlets of assistance in kind. The funds are used to provide to needy persons a variety of goods and services: medicines, food, tickets to sanatoriums, repair of dwellings, cars for the handicapped and so forth. Most of these grants should be classed as social transfers in kind. In some cases, however, assistance is provided in the form of subsidies to enterprises that sell their goods and services to certain groups of households at low prices. It is therefore essential to obtain data on these expenses by broad groups and allocate each group to the appropriate category of the SNA.

319. The provision of free medicines to selected groups of the population, for example, to retired or handicapped persons, which may seem similar to the distribution of free textbooks, may be treated differently depending on the way the process of the provision of the free medicines is organized and financed. Under some arrangements payments from the state budget to drugstores intended to cover their losses owing to provision of free medicines will apparently be treated as subsidies. Under different arrangements, however, payments to drugstores by government institutions can be treated as purchases of medicines for further distribution to households, in other words, as social transfers in kind. For example, in the Russian Federation, payments for medicines furnished by drugstores free of charge to handicapped persons are made by local medical institutions upon presentation of the prescriptions that were given by them to handicapped persons. These medical institutions are controlled and financed by the government. Under this arrangement, it is possible to identify the households that benefit from distribution of free medicines and the exact amount of the income they receive in kind. In practice, drugstores often include the value of free medicines in the records submitted to the statistical authorities under sales of their goods at full retail trade prices, as if the medicines were actually sold. These data are then used to derive the estimates of final consumption expenditure of households. Under these circumstances, the practical solution may consist in the treatment of the value of the free medicines as an example of social transfers in kind; this would imply that the final consumption expenditure of households derived from the record of drugstores on sales of their goods should be adjusted accordingly, that is, reduced by the value of the free medicines. The figures on actual final consumption of households will remain the same, however, because the decrease in final consumption expenditure of households will be matched by the increase in social transfers in kind from the government to households.

320. It should be emphasized that different treatments of payments for the provision of free medicines or some other similar socially oriented products (either as social transfers in kind or as subsidies) may affect the size and composition of GDP. Thus, if the payments in question are treated as subsidies, GDP size will be smaller compared with that in the case where payments are treated as social transfers in kind.

321. There are cases where specific categories of the population receive transportation services free or at reduced prices. For example, in some countries in transition retired persons are entitled to free transportation. The treatment of the flows involved depends very much on the actual arrangement. If, for example, government makes up the losses to transportation enterprises, the payment will be treated as a subsidy. If, however, government purchases transportation tickets for retired persons or reimburses their expenses for transportation, the payment should be treated as a social transfer in kind. Under certain arrangement, free rides of the retired person will result in a loss of income of the transportation enterprise that is not made up by the

government and not recorded either as subsidy or as social transfer.

322. In some cities of the Russian Federation, transportation services are provided free to the entire population. Under this arrangement, the units engaged in production of the services are to be regarded as non-market producers and their costs should be treated first as final consumption expenditure of general government, then as social transfer in kind to households and finally as a component of actual final consumption of households.

323. The above discussion is illustrated quantitatively with 1994 data for Belarus in table 4.2 which shows how adjusted disposable income of households, government and NPISHs is derived from the disposable income for those sectors.

Table 4.2. Derivation of adjusted disposable income from disposable income of households, government and NPISHs based on 1994 data of Belarus

(Billions of Belarusian roubles)

	General government	Households	NPISHs
Disposable income, gross	5 199	10 231	1 455
Social transfers, received		3 320	
Social transfers, paid	2 177		1 143
Adjusted disposable income, gross	3 022	13 551	312

C. Social benefits provided by enterprises to employees and others

324. In many transition economies, enterprises set up special funds to finance socially oriented expenses other than those mentioned above. Normally, the funds set aside by enterprises for social expenses can be identified in the records of the enterprises, that is, either in their business accounts or in the statistical records submitted by the enterprises to the statistical authorities. The composition of the items financed from these funds may differ from country to country but a survey of the countries' practices reveals a remarkable similarity in the way socially oriented expenses of the enterprises are defined and recorded in the business accounts in countries in transition. It is important to note, however, that the expenses financed from the social funds of

the enterprises are not homogeneous from the SNA point of view and in fact relate to different types of transactions which are treated differently in the System and recorded in different accounts. Thus, those expenses may relate to current and capital flows, compensation of employees, intermediate consumption, and social benefits and financial instruments.

1. Accounting treatment of social transfers in cash and in kind by enterprises

325. Table 4.3 contains a tentative list of items representing the socially oriented expenses of enterprises that are financed out of the social funds of, or form other sources available to, those enterprises; the second column of the table gives the category of transactions to which each item belongs according to the SNA; the third column of the table provides references to the SNA account under which each item should be recorded.

326. As may be seen from the table, the outlays of the enterprises that, in the records of the enterprises, can be regarded as socially oriented are to be allocated to different categories of the SNA and recorded in the different accounts: the production account, the generation of income account, the capital account and so forth. Many of the examples were already discussed in previous parts of this chapter.

Table 4.3. Socially oriented expenses of enterprises in transition economies, allocated to SNA accounts and transactions

	Item	SNA category to which item belongs	SNA account where item should be recorded
1.	Pensions paid to present and former employees	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
2.	Maternity-leave pay	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
3.	Compensation for injuries	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
4.	Vacation pay	Wages and salaries	Generation of income

	Item	SNA category to which item belongs	SNA account where item should be recorded
			account
5.	Direct contributions to hospitals	Actual social contributions	Generation of income account
6.	Education grants	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
7.	Purchases of sanatorium vouchers	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
8.	Non-compulsory contributions to medical insurance companies	Wages and salaries in kind	Generation of income account
9.	Payments to institutions for preschool children	Wages and salaries in kind	Generation of income account
10.	Subsidies to canteens of the enterprises	Wages and salaries	Generation of income account
11.	Occasional material assistance	Miscellaneous transfers	Secondary distribution of income account
12.	Assistance to families of dead employees	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
13.	Contributions to social security fund	Actual social contributions	Generation of income account
14.	Contributions to pension fund	Actual social contributions	Generation of income account
15.	Contributions to medical insurance companies (compulsory)	Actual social contributions	Generation of income account
16.	Contributions to employment fund	Actual social contributions	Generation of income account
17.	Contributions to private pension schemes	Actual social contributions	Generation of income account
18.	Allowances for high	Wages and salaries	Generation of income

	Item	SNA category to which item belongs	SNA account where item should be recorded
	prices of food		account
19.	Construction of cultural and social facilities	Gross capital formation	Capital account
20.	Provision of cultural and social services free of charge or almost free of charge	Social transfers in kind	Redistribution of income in kind account
21.	Allowances to persons laid off	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
22.	Expenses for training of personnel (maintenance of facilities, hiring of teachers, payments for lectures and so on)	Intermediate consumption	Production account
23.	Compensation of transportation costs from place of work to place of vacation	Wages and salaries	Generation of income account
24.	Maintenance of summer camps for children of employees	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income
25.	Subscriptions to newspapers and magazines	Wages and salaries in kind	Generation of income account
26.	Renting of sport facilities, purchases of sporting goods	Wages and salaries in kind	Generation of income account
27.	Fees paid on behalf of employees to sporting clubs	Wages and salaries in kind	Generation of income account
28.	Purchase of tickets to museums and theatres	Wages and salaries in kind	Generation of income account
29.	Compensation for damage of employee property	Capital transfers	Capital account
30.	Provision of loans to employees on favourable	Acquisition of financial assets	Financial account

Item	SNA category to which item belongs	SNA account where item should be recorded
conditions		
31. Payment provided to employees for study during vacation	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
32. Education grants to employees or members of their families	Imputed social contributions, unfunded social benefits	Generation of income account, secondary distribution of income account
33. Education grants to future employees	Miscellaneous transfers	Secondary distribution of income account
34. Payment for hotels and transportation during business trips	Intermediate consumption	Production account
35. Reimbursement of expenses of employees incurred on behalf of enterprises in entertaining guests	Intermediate consumption	Production account

2. Cultural and social services supplied by enterprises to employees and others

327. Enterprises in transition economies may provide social and cultural services to their employees free or almost free. Many state-owned enterprises had and still have their own kindergartens, nurseries, sanatoriums, hospitals, rest-homes, stadiums, recreation centres, vacation homes, children camps and so forth. Employees are entitled to use these facilities either free of charge or at a very low cost. The units that furnish these services normally finance their costs from allowances made out of enterprises' profits or the state budget. In some countries such as the Russian Federation, the Government encourages enterprises to provide social and cultural services by exempting from taxation the part of profits channelled to finance the costs of such services. The principal functions of these units do not differ very much between enterprises.

328. It should be noted that in some countries in transition the value of cultural and social services provided by enterprises to their employees free or almost free is not counted at all in the context of the calculation of GDP. For example, in a World Bank report on the development of statistical services in

China (1992), it is explained that the array of such services as education, health care, nursery care, social welfare and entertainment provided by Chinese enterprises to their employees are not identified separately. This may imply that if some or all of the cost is recorded as intermediate consumption, value added and final consumption expenditure and therefore GDP are underestimated.

329. The omission of these cultural and social services provided by enterprises from GDP reflects prevailing accounting practices of enterprises in all countries in transition: they opt not to include those services as part of their cost. Employing such a treatment in the national accounts would not only distort the analysis of the value added of the enterprise sector at the macrolevel, but would also omit an important element of the social benefit system from macro analysis. In order to avoid the two pitfalls, a special accounting treatment has been devised in the SNA. The SNA treatment that is described briefly below (see the SNA, paras. 19.30-19.35) can be applied in transition economies, because the data needed for it are generally available from the records of enterprises.

330. The SNA recommends that the units of enterprises that provide social services to employees as an extension of government policy, and not as part of a remuneration package, should be distinguished as NPISHs. Their output should be calculated as the sum of costs including imputed consumption of fixed capital, and the partial payments by employees and outsiders should be regarded as incidental sales. The provision of such services should be regarded as social transfers in kind to households from NPISHs, in order to distinguish between households' actual final consumption and final consumption expenditure. This option was adopted in the SNA after considering various alternative options during the SNA revision process.

331. An example presented in table 4.4 illustrates the proposed treatment. The table includes the relevant data of the accounts and sectors affected by the imputations; these include all accounts from the production account to the use of adjusted disposable income account of non-financial corporations, households and NPISHs. In the example, output of non-financial corporations is 1,000. Total intermediate cost is 700, of which 35 is intermediate consumption of the units producing the social and cultural services for employees. Total compensation of employees is 180, of which 13 is for employees employed by the units producing the social and cultural services. Furthermore, total consumption of fixed capital is 50, of which 2 is for fixed assets used by the units producing the social and cultural services. Thus, gross value added of non-financial corporations is 335 (= 1,000 - (700 - 35)) and net value added 287 (= 335 - (50 - 2)). Final consumption expenditure by households is 150 and, given that households receive compensation of employees to an amount of 180, household disposable income is 180 and household saving is 30. As the units producing the cultural and social services have an intermediate consumption of 35, a compensation of employees of 13, and a consumption of fixed capital of 2, the output of these units is 50, their gross value added is 15 and their net

value added is 13. The output (50), intermediate consumption (35), consumption of fixed capital (2) and gross value added (15) of the units producing the social and cultural services are presented as part of the production account of NPISHs. The output is delivered to final (individual) consumption expenditure in the use of disposable income account of NPISHs, which is matched by an imputed entry for social transfers (D.623, Unfunded employee social benefits) from non-financial corporations to NPISHs in the secondary distribution of income account. Subsequently, the cultural and social services included in consumption expenditure of NPISHs are transferred to actual final consumption of households in the use of adjusted disposable income account. Actual (individual) final consumption of households then increases to 200, which includes the final consumption expenditure of households (150) plus individual consumption expenditures by notional NPISHs (50). The inclusion of consumption of social and cultural services provided by enterprises to households in actual final consumption of households is matched by a further entry in the redistribution of income in kind account for Social assistance benefits in kind (D.6313) from NPISHs to households. The saving of households (30) remains unaffected by the accounting entries for the social and cultural services provided by enterprises.

332. In summary, the treatment of cultural and social services furnished by enterprises to their employees, as adopted in the SNA, implies the following steps:

- Subdivisions of the enterprises engaged in the provision of the services in question are treated as notional NPISHs and allocated to the subsector of NPISHs;

- Value of output of these units is taken as equal to the costs involved, that is, to the sum of purchases of goods and services for intermediate consumption, compensation of employees, taxes on production, consumption of fixed capital;

- Final consumption expenditure of the notional NPISHs in question is taken as equal to the value of output reduced by the amount of partial payments by employees; for example, amounts paid by employees to sanatoriums owned by enterprises will be recorded under the final consumption expenditure of households;

- Transfers in cash from enterprises to notional NPISHs are to be recorded in the secondary distribution of income accounts of enterprises and NPISHs;

- Social transfers in kind from NPISHs to households are to be recorded in the distribution of income in kind accounts of NPISHs and households; this will make it possible to arrive at the adjusted disposable income of households and their actual final consumption.

Table 4.4. SNA accounting treatment of cultural and social services

supplied by enterprises to employees and others

ACCOUNT I. PRODUCTION ACCOUNT

USES						RESOURCES			
S.1 Total Economy	S.15 Non-profit institutions serving households	S.14 Households	S.11 Non-financial corporations	Transactions and balancing items		S.11 Non-financial corporations	S.14 Households	8.15 Non-profit institutions serving households	S.1 Total economy
				P.1	Output	1 000		50	
				P.11	Market output	1 000			
				P.13	Other non-market output			50	
700	35		665	P.2	Intermediate consumption				
	15		335	B.1g/B.1*g	Value added, gross/Gross domestic product				
50	2		48	K.1	Consumption of fixed capital				
	13		287	B.1n/B.1*n	VALUE ADDED, NET/NET DOMESTIC PRODUCT				

ACCOUNT II.1.1. GENERATION OF INCOME ACCOUNT

				B.1g/B.1*g	Value added, gross/Gross domestic product	335		15	
				B.1n/B.1*n	VALUE ADDED, NET/NET DOMESTIC PRODUCT	287		13	
180	13		167	D.1	Compensation of employees				
	2		168	B.2g	Operating surplus, gross				
	0		120	B.2n	OPERATING SURPLUS, NET				

ACCOUNT II.1.2 ALLOCATION OF PRIMARY INCOME ACCOUNT

			0	B.2g	Operating surplus, gross	168		2	
			0	B.2n	OPERATING SURPLUS, NET	120		0	
				D.1	Compensation of employees		180		

	2	180	168	B.5g/B.5*g	Balance of primary incomes, gross/national income, gross			
	0	180	120	B.5n/B.5*n	BALANCE OF PRIMARY INCOMES, NET/NATIONAL INCOME, NET			

ACCOUNT II.2. SECONDARY DISTRIBUTION OF INCOME ACCOUNT

				B.5g/B.5*g	Balance of primary incomes, gross/national income, gross	168	180	2	
				B.5n/B.5*n	BALANCE OF PRIMARY INCOMES, NET/NATIONAL INCOME, NET	120	180	0	
				D.62	Social benefits other than social transfers in kind				
			50	D.623	Unfunded employee social benefits			50	
	52	180	118	B.6g	Disposable income, gross				
	51	180	70	B.6n	DISPOSABLE INCOME, NET				

ACCOUNT II.3. REDISTRIBUTION OF INCOME IN KIND ACCOUNT

				B.6g	Disposable income, gross	118	180	52	
				B.6n	DISPOSABLE INCOME, NET	70	180	50	
				D.63	Social transfers in kind				
				D.631	Social benefits in kind				
	50			D.6313	Social assistance benefits in kind		50		
	2	230	118	B.7g	Adjusted disposable income, gross				
	0	230	70	B.7n	ADJUSTED DISPOSABLE INCOME, NET				

ACCOUNT II.4.1. USE OF DISPOSABLE INCOME ACCOUNT

				B.6g	Disposable income, gross	118	180	52	
				B.6n	DISPOSABLE INCOME, NET	70	180	50	
				P.3	Final consumption expenditure				
	50	150		P.31	Individual consumption expenditure				
	2	30	118	B.8g	Saving, gross				
	0	30	70	B.8n	SAVING, NET				

ACCOUNT II.4.2. USE OF ADJUSTED DISPOSABLE INCOME ACCOUNT

				B.7g	Adjusted disposable income, gross	118	230	2	

				B.7n	ADJUSTED DISPOSABLE INCOME, NET	70	230	0	
				P.4	Actual final consumption				
		200		P.41	Actual individual consumption				
	2	30	118	B.8g	Saving, gross				
	0	30	70	B.8n	SAVING, NET				

333. It is not strictly necessary to allocate to notional NPISHs the units producing non-market social services that belong to government budgetary agencies, such as, for example, hospitals belonging to the ministry of finance. These units can be left in the general government sector. However, it is desirable to isolate them as separate establishments. The value of their services will be recorded first as final consumption expenditure of general government, and subsequently as a social transfer in kind to households; finally, the value will be reflected in adjusted disposable income and actual final consumption of households.

334. A survey of countries' practices shows that, in some countries in transition, the volume of cultural and social services rendered by enterprises to their employees free of charge is relatively small and data may not be available to treat the units engaged in the provision of the services in question as separate establishments. Under these circumstances, more simple and practical solutions may have to be adopted. One of the solutions would be not to separate the expenses on these services at all; they would remain included in the intermediate consumption and value added of the enterprises in question, and for the amount included in intermediate consumption they would not increase GDP. Such an approach implies that output of the services is taken as equal to zero by convention and related expenses are allocated to the costs of other types of output; this approach can be adopted if the value of the services in question is small. A more simple approach would be to identify the enterprises' expenses and to treat the services as the secondary output of the enterprises. At the same time, on the disposition side of the accounts, this output could be treated as wages and salaries in kind. This also implies that for the institutional sectors accounts no notional NPISHs should be established and there will be no need to apply this intricate treatment (that is, the treatment of the units engaged in the provision of the services in question as separate establishments) in the rest of the accounts.

335. It should be also noted that the role of these welfare services of enterprises is likely to diminish in the foreseeable future owing to the process of privatization. The most plausible development would be for the Government, once the enterprises are privatized, to have to assume the costs for the nurseries, housing and other social and cultural services spun off by those

privatized enterprises. The other possibility is that the privatized enterprises would have to transform the units in question into commercial entities. What will be the impact of these changes on the recording of the transactions in the accounts? In the case where the government took over control and financing of the costs involved, the change would lead to an increase in the output of government and government final consumption expenditure, but it would not affect the actual final consumption of households because the additional transfers in kind from the government to the households would be matched by a corresponding decrease in social transfers in kind from the notional NPISHs. In the case where the units in question were turned into market entities, the outcome for GDP and actual final consumption of households would be difficult to predict. If the privatized services were sold to households with profits (that is, including an operating surplus), final consumption expenditure of households might increase more than the decrease in social transfers in kind from notional NPISHs, and this would then also lead to an increase in actual final consumption of households. However, if demand for the privatized services fell more than the increase in prices due to the incorporation of profits, the total effect of price and demand changes on actual final consumption of households and GDP might be negative.

336. The provision of cultural and social services provided by enterprises may not be of great importance in all countries in transition or may become less important over time. Under those circumstances, the statistical efforts to separate the services in the manner described above might not be justified and simpler methods might be applied. Three cases may be distinguished in transition countries and in each case a different treatment may be applied. First, if the services are of minor importance they may be ignored and by implication the cost may remain included as part of intermediate consumption and compensation of employees of the enterprise in question. Second, if the services are of greater importance, they may be treated as wages and salaries in kind. Third, if the services to the employees of enterprises are provided by large public institutions (hospitals, stadiums, recreational housing and so on) and are large in value, and the sites at which those services are provided are separated geographically, they may be treated in the more complex manner described in this section.

D. Taxes and other current transfers

337. In the paragraphs below, the remaining current transfer flows that have also a redistributive effect, namely, taxes on income, wealth ad so forth, and other current transfers, are considered.

1. Current taxes on income, wealth and so forth

338. Current taxes on income, wealth and so forth, encompass taxes on personal

income of households, and profit of corporations, and taxes on wealth that are paid regularly. The taxes may include transactions reflected in the rest of the world account; for example, taxes paid out may include taxes payable by residents of the country to foreign Governments; on the other hand, taxes received may include the amounts received by the Government of the country from non-resident taxpayers. Taxes on personal income of households include not only taxes on income from employment but also taxes on other types of personal income (property income, pensions, income of unincorporated enterprises owned by households and so forth).

339. There might be considerable variation between countries in transition in respect of the types of personal income that are exempted from taxation. For example, in some countries all pensions are exempted. Introduction of income declarations into the practice of countries in transition is likely to simplify the computation of this type of taxes.

340. The most typical examples of current taxes on income and wealth payable by households in countries in transition (in the recent past and at the present time) include:

(a) Wage income tax which is a withholding tax on wages and salaries and other labour income, including dividends on the stocks of labour collectives, participation in profit, and so on;

(b) Tax on the income of the self-employed which is a withholding tax on the earnings from work on non-recurrent basis for enterprises, institutions and organizations;

(c) Tax on income from intellectual property which is a withholding tax on compensations for creation, publishing, performances and so on;

(d) Tax on adults without children;

(e) Tax on total personal income from all sources (labour, entrepreneurial activity, intellectual property, and so on). This tax is gradually introduced to replace all other types of personal income taxes.

341. There are possible variations in the systems of taxation of income of enterprises in transition countries. For example, in some countries, taxable income of enterprises is "gross income". This is defined as the excess of receipts from sales over costs excluding wages and salaries. This concept implies that the tax on income of enterprises includes the tax on payroll which is treated in the SNA as a tax on production. While this conceptual deficiency is recognized, it is nevertheless suggested that the whole tax on gross income be allocated to taxes on income.

342. In some transition countries, there is a wide range of tax exemptions and

deductions. For example, legislation in some countries permits the payments of taxes to be postponed up to five years on the basis of a credit plan. Thus in the Russian Federation, certain enterprises are allowed to reduce their payments of taxes by 10 per cent of their outlays on investment but have to repay the retained amount in five years with interest. This practice should be given proper treatment in line with the full accrual basis of recording taxes in the secondary distribution of income account. The increase in financial liabilities due to the postponement of the tax payment should be recorded in the financial account of enterprises, and the interest payable - that is, the interest that is accruing - in the allocation of primary income account.

343. In some cases, certain types of income are exempted for a specified period of time. For example, income obtained from the use of inventions is exempted in some countries for a period of up to three years. No imputations of taxes and subsidies are suggested in such cases.

344. Tax on the property of enterprises encompasses tax on the net wealth of the enterprises. There may be some variation between countries in the way that this tax is levied. It should be recalled, however, that the tax on the assets used in production (land, buildings, and so on) is allocated to other taxes on production. This also encompasses taxes on owner-occupied dwellings.

2. Other current transfers

345. Other current transfers include:

(a) Net casualty insurance premiums;

(b) Casualty insurance claims;

(c) Current transfers within the government;

(d) Current international cooperation;

(e) Miscellaneous current transfers.

346. These types of current transfers are quite common in most transition economies. As the transformation of the CPEs into market-oriented economies continues, the role of insurance transactions is likely to increase in the economic process. As mentioned above, the role of transfers within the government, which is important enough in the conditions of an administrative economy, will presumably also increase in the future because of the nature of the process of decentralization of power that is taking place in many countries of Central and Eastern Europe; as a result, the role of subnational Governments will increase and this may result in an increase in intergovernment grants and transfers. The other type of current transfers relevant for countries in

transition encompass transfers of resources within the framework of international cooperation. Many of those countries systematically receive economic assistance both from international organizations and from other countries. The independent States of CIS, as new members of international organizations, pay their contributions to the budgets of these organizations and receive some grants from them.

347. Net casualty insurance premiums encompass gross insurance premiums reduced by an estimated service charge recorded in the production account as the output of insurance companies. This output is allocated to either intermediate or final consumption, depending on whether the policy is purchased by producers of goods and services, including producers of housing services by owner-occupiers, or by households in their capacity as consumers. The premiums should include the payments intended to cover the risks of the current period. In other words, they encompass the premiums earned during the current period and not the premiums due for payment during the current period; the latter may partially cover the risks in future periods.

348. Casualty insurance claims encompass the amounts involved in the settlement of the claims that became due for payment during the accounting period. Some claims arise from damages or injuries that policyholders inflict upon the property or health of third parties; for example, insured drivers may cause damage to the vehicles of other persons.

349. Current transfers within the general government encompass current transfers between different levels of government or different subsectors of general government.

350. Current international cooperation includes current transfers between government and international organizations or between countries. It includes, for example, contributions to international organizations, and emergency assistance, including provision of goods in kind. Included also are payments by international organizations or foreign Governments intended to cover the salaries of technical assistance staff who are residents of the country in which they work.

351. Miscellaneous current transfers encompass other current transfers n.e.c. namely:

(a) Contributions and other transfers to NPISHs;

(b) Current transfers between households;

(c) Fines and penalties;

(d) Lotteries and gambling;

(e) Payment of compensation.

352. These payments are all relevant for countries in transition. For example, remittances between members of the same family living in different countries are likely to rise in the foreseeable future in many CIS member countries owing to reforms and changes in legislation permitting people to work abroad.

353. In some countries, certain fines are referred to as taxes in the national classifications; one example encompasses the payments for pollution that enterprises have to make to the state budget. As noted above, the enterprise may make some payments to their employees that should be allocated to miscellaneous current transfers.

V. PRIVATIZATION AND THE EMERGING FINANCIAL MARKET

354. The present chapter, which should be read in close conjunction with chapter III on sectoring transition economies, deals with the main cause of change in sectoring, namely, the privatization of public enterprises. It pays particular attention to the manner in which various formats of privatization should be dealt with in the accounts with a view to bringing out, in the analysis, specific aspects of privatization. This chapter also deals with some other financial implications of privatization. It thus discusses the scope and changing role and coverage of capital transfers in a transition economy. Furthermore, it pays attention to the increasing importance of property income in transition economies, which is due to the expansion of the financial system replacing the centrally controlled allocation of funds through capital transfers to enterprises and other parts of the economy. Finally, it gives examples of newly emerging financial instruments such as options.

355. This chapter comprises three sections. Section A deals with the various formats and the corresponding accounting treatment of privatization of enterprises, dwellings and other units. That section includes several examples from the practices of Poland and the Russian Federation. Section B discusses the scope of capital transfers and how to distinguish these from current transfers and financial transactions. The chapter concludes with a section (C) that deals with transactions in an emerging financial market, including a discussion of the scope of property income (subsection C.1) which in various formats is becoming more important in transition economies, of financial intermediation services indirectly measured (FISIM) (subsection C.2) and of the output of insurance services in transition economies (subsection C.3), and also presents examples of financial transactions that are emerging in transition countries (subsection C.4).

356. The accumulation account and the balance sheet are the accounts that are relevant for analysing the effects of privatization and the emerging financial market. They include the capital account, the financial account, the other changes in volume of assets account, the revaluation account, and the opening and closing balance sheets. These accounts are presented in tables 10.1, 11.1, 12.1, 12.2 and 13.1 of the SNA. No attention is paid in this chapter to nominal or real holding gains, as the effects of inflation are not dealt with in this Handbook. The subject is examined, however, in the OECD Handbook dealing with national accounting under circumstances of high inflation.[2]

A. Accounting for privatization

357. Privatization may entail the privatization of entire enterprises through a variety of means, the sale of all or part of the property of a state-owned enterprise (SOE) to the private sector, the privatization of the social assets

of enterprises including hospitals, sanatoriums, schools and so forth, and also the privatization of dwellings. The forms in which privatization is implemented include the following:

- Free distribution of vouchers and their subsequent exchange for shares or equity;
- Free distribution of shares or equity;
- Transformation of SOEs into corporations by issuing shares or equities that are either sold or distributed free;
- Termination of enterprises and sale of their assets;
- Sale of property;
- Restitution of property.

358. The treatment in the accounts of these different forms of privatization, explained below in detail, and may be summarized as follows: Privatization with the help of vouchers requires entries for securities other than shares (SNA item AF.3) in the other changes in volume of assets account of government when they are created, and in the financial account (F.3) of government and households when they are transferred by government to households. When enterprises that are being privatized create equities, this is recorded as shares and other equity (AF.5) in the other changes in volume of assets account, and when they are sold to households, either for money or for vouchers, this is recorded in the financial accounts of households and government as exchange of securities other than shares (F.3) or currency and deposits (F.2) for shares and other equity (F.5). In addition, when privatization is implemented with the help of vouchers, there are capital transfers (D.9) from government to households. Free distribution of shares or equities also requires entries of capital transfers in the capital account. Privatization through the transformation of SOEs into corporations and sale of their shares or equities are to be recorded as shares and other equity (F.5) in the financial accounts of government and households. The direct sale of fixed assets will be recorded in the capital accounts of seller and buyer as positive and negative gross fixed capital formation (P.51). Privatization of property through the sale of enterprises requires entries in the financial accounts of the sectors involved, namely as shares and other equity (F.5) and change in currency and deposits (F.2). The above transactions result in changes in the balance sheets of non-financial corporations, government and households for securities other than shares (AF.3), shares and other equity (AF.5) and fixed assets (AN.11).

359. In most countries in transition, restitution of public property to former owners has become a common practice during recent years. These transactions whether carried out in kind or in cash should be treated as capital transfers.

In some cases, they may occur between the residents of the country and the rest of the world.

1. Privatization of enterprises

360. At the early stage of economic reforms, the most common method of privatization is the free distribution of vouchers. These are special types of securities that are transferable and tradable in some transition countries; in other countries they are not tradable. Their appearance is to be shown in the other changes in volume of assets account. When they are distributed free, capital transfers from government to households should be recorded in the capital accounts of these sectors. This will result in an increase in household net lending and a decrease in government net lending as shown in the financial accounts of these sectors. The entries on acquisition of vouchers by households and disposal of vouchers by government will be recorded as changes in securities other than shares (F.3) in the financial accounts of these sectors. In those countries where the vouchers are tradable, their exchange into equities will be also recorded in the financial accounts of the household and government sectors. When the vouchers are redeemed and returned to the government they are destroyed; and their disappearance is recorded in the other changes in volume of assets account.

361. The example presented in table 5.1 is intended to clarify accounting of transactions and other flows, when SOEs are privatized with the help of vouchers:

(a) Consider an SOE with a value of fixed assets of 100. For simplicity's sake, it is assumed that it has no other assets. The government is the only owner of the SOE. This is reflected in the opening balance sheet, which shows a net worth of 100 for the government sector and no net worth for the non-financial corporations;

(b) The government decides to privatize the enterprise; and this is done through the issue of vouchers by the government, and is recorded as positive entries for securities other than shares (AF.3) on the asset and liability side of the other changes in volume of assets account of the government;

(c) The vouchers are distributed free to households. This results in entries of capital transfers (D.9) from government to households in the capital account, in positive net lending for households and in negative net lending for government, and is furthermore reflected in the financial account in the item securities other than shares (F.3), with a positive entry for households and a negative entry for the government sector;

(d) The vouchers are then converted by households into the shares of the SOE held by the government, through a payment with vouchers. This results, in

the financial accounts of households, in a positive entry for shares and other equity (F.5) and a negative entry for securities other than shares (F.3), and a reverse set of entries is needed in the financial account of the government, namely, a positive entry for securities other than shares (F.3) and a negative entry for shares and other equity (F.5);

(e) Once the vouchers are returned to the government, they have served their purpose and are eliminated. The elimination of the vouchers is presented as negative entries for securities other than shares (AF.3) on the asset and liability side of the government sector, in the other changes in volume of assets account;

(f) As a result, the closing balance sheets differ from the opening balance sheets in a number of respects. The government sector has lost its equity in the SOE and no entries appear any more in the closing balance sheet of this sector. The household sector, which had no entries in the opening balance sheet, now has an entry for shares and other equity (F.5) on the asset side and a positive net worth for the same amount. For the non-financial corporate sector, there is no change; the households, instead of the government, are now the owners of the shares and other equity (AF.5) in the non-financial corporation.

362. Privatization may also be carried out, without the use of vouchers, with the help of the direct sale of property. There are several possibilities and each has its own accounting treatment. Privatization may entail only the sale of fixed assets and in that case all transactions will be recorded in the capital account, that is, as positive gross fixed capital formation for the buyer and negative gross fixed capital formation for the seller. Also, the whole enterprise may be sold and in that case all transactions are on the asset side of the financial account, that is, with a positive entry for shares and other equity (F.5) and a negative entry for (for example) currency and deposits (AF.2) in the account of the buyer, and matching opposite entries for the same transaction categories in the account of the seller. A third possibility is that the SOE is transformed into a corporation and equities are issued in order to put this transformation into effect. In a manner similar to that connected with the use of vouchers (explained in the previous example), the issue of equities is recorded in the other changes in volume of assets account as shares and other equity (AF.5) on the asset as well as on the liability side of the account. The sale of equities will be recorded in the financial accounts in a manner similar to that explained in the previous example with vouchers.

363. Another example of privatization is where employees of an SOE receive a certain amount of equity free of charge and become co-owners of the enterprise, partly replacing the government as an owner. If there are no other transactions during the accounting period, there are capital transfers in kind from the government to the household sector, resulting in positive net lending in the capital account of households and negative net lending (= net borrowing) in the

capital account of government. In the financial account of households, this is matched by acquisition of financial assets (F.5, Shares and other equity) which is equal to incurrence of liabilities in the financial account of the government.

364. Termination of an SOE is another option of privatization. Its accounting treatment is illustrated in table 5.2 with the help of 100 unit entries. The example assumes that the assets of an SOE are purchased by an unincorporated enterprise that is owned by the household sector. The table reflects the following:

(a) In the opening balance sheet, the SOE (non-financial corporations) has fixed assets of 100, a liability in terms of shares and other equity (AF.5) to the government, and no net worth. The government sector which owns the SOE has in its balance sheet shares and other equity (AF.5) on the asset side of 100 and therefore a net worth of 100. The household sector in the opening balance sheet is assumed to have only currency and deposits (AF.2) of 100 and therefore also a net worth of 100;

(b) The termination of the SOE is recorded as shares and other equity (AF.5) in the other changes in volume of assets account, with a negative entry on the asset side of account for the government sector and also a negative entry on the liability side of the account for non-financial corporations. At the same time, the transfer of the fixed assets of the SOE to government ownership is recorded as changes in fixed assets (AN.11) in the other changes in volume of asset accounts, with a positive entry in the government sector account and a negative entry in the account for non-financial corporations;

(c) The sale of the assets from the government to the unincorporated enterprises included in the household sector is recorded in the capital account as gross fixed capital formation (P.51), with a positive entry for the household sector and a negative entry for the government sector. As the sale of the assets is paid for by households in cash or some other liquid financial instrument, the entries for capital formation in the capital account are matched by opposite changes in currency and deposits (F.2) in the financial accounts, with a positive entry for the government sector and a negative entry for the household sector. The entries in the capital and financial accounts are matched by positive net lending for the government sector and negative net lending for the household sector;

Table 5.1. SNA accounting treatment of privatization of a State-owned enterprise based on issuing of vouchers by the government and shares by the enterprise

CHANGES IN ASSETS/ASSETS						CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH			
III.1. CAPITAL ACCOUNT									
TOTAL	8.14 HOUSE-HOLDS	8.13 GENERAL GOVERN-MENT	8.11 NON-FINAN-CIAL CORPOR-ATIONS		TRANSACTIONS AND BALANCING ITEMS	8.11 NON-FINAN-CIAL CORPOR-ATIONS	8.13 GENERAL GOVERN-MENT	8.14 HOUSE-HOLDS	TOTAL
				B.8n	SAVING, NET				
				D.9	Capital transfers, receivable			100	100
				D.9	Capital transfers, payable		-100		-100
0	100	-100		B.9	NET LENDING (+)/ NET BORROWING (-)				
III.2. FINANCIAL ACCOUNT									
				B.9	NET LENDING (+)/ NET BORROWING		-100	100	
0	100-100	100-100		F.3	Securities other than shares				
0	100	-100		F.5	Shares and other equity				
III.3.1. OTHER CHANGES IN VOLUME OF ASSETS ACCOUNT									
				K.10	Other volume changes in financial assets and				

CHANGES IN ASSETS/ASSETS				CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH		
			liabilities n.e.c. of which			
0	100-100	AF.3	Securities other than shares		100-100	0
		AF.5	Shares and other equity			
		B.10.2	CHANGES IN NET WORTH DUE TO OTHER CHANGES IN VOLUME OF ASSETS	-100	100	0

CHANGES IN ASSETS/ASSETS						CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH			
IV. BALANCE SHEETS									
IV.1 OPENING BALANCE SHEET	100			100	AN.11	Fixed assets			
					AF.3	Securities other than shares			
	100		100		AF.5	Shares and other equity	100		100
					B.90	NET WORTH	0	100	100
IV.2 CHANGES IN BALANCE SHEET					AN.11	Fixed assets			
	0	0	0		AF.3	Securities other than shares		0	0
	0	100	-100		AF.5	Shares and other equity			
					B.10	CHANGES IN NET WORTH, TOTAL		-100	100	0
IV.3 CLOSING BALANCE SHEET	100			100	AN.11	Fixed assets			
					AF.3	Securities other than shares			
	100	100	0		AF.5	Shares and other equity	100		100
					B.90	NET WORTH	0	0	100	100

(d) As a result, the closing balance sheets for the three sectors have changed as compared with the opening balance sheets. There is no longer a closing balance sheet for the SOE (non-financial corporations). Instead, the household sector now owns fixed assets (AN.11) instead of currency and deposits (AF.2) as was the case in the opening balance sheet. Furthermore, the government sector has currency and deposits (F.2) and no longer any shares and other equity as was the case in the opening balance sheet. The net worth of the household and government sectors has not changed. Net government worth is

different from that in the previous example of privatization with the help of vouchers (table 5.1): in table 5.2, the net worth of the government is equal to 100 in the closing balance sheets; in table 5.1, its net worth is reduced to zero.

Table 5.2. SNA accounting treatment of the termination of a State-owned enterprise and the subsequent sale of its assets

CHANGES IN ASSETS/ASSETS						CHANGES IN LIABILITIES AND NET WORTH/ LIABILITIES AND NET WORTH			
TOTAL	8.14 HOUSE-HOLDS	8.13 GENERAL GOVERN-MENT	8.11 NON-FINAN-CIAL CORPOR-ATIONS	TRANSACTIONS AND BALANCING ITEMS		8.11 NON-FINAN-CIAL CORPOR-ATIONS	8.13 GENERAL GOVERN-MENT	8.14 HOUSE-HOLDS	TOTAL
III.1. CAPITAL ACCOUNT									
				B.8n	SAVING, NET				
0	100	-100		P.51	Gross fixed capital formation				
0	-100	100		B.9	NET LENDING (+)/NET BORROWING (-)				
III.2. FINANCIAL ACCOUNT									
				B.9	NET LENDING (+)/NET BORROWING (-)		100	-100	0
0	-100	100		F.2	Currency and deposits				
III.3.1. OTHER CHANGES IN VOLUME OF ASSETS ACCOUNT									
0		100	-100	K.12.1	Changes in sector classifi-cation and structure of which				
				AN.11	Fixed assets				
0		100	-100	K.10	Other volume changes in	-100			-100
-100		-100							

CHANGES IN ASSETS/ASSETS				CHANGES IN LIABILITIES AND NET WORTH/ LIABILITIES AND NET WORTH			
			financial assets and liabilities n.e.c. of which				
		AF.5	Shares and other equity	-100			-100
-100	100						
		B.10.2	CHANGES IN NET WORTH DUE TO OTHER CHANGES IN VOLUME OF ASSETS	0	0	0	0

	IV. BALANCE SHEETS								
IV.1	100			100	AN.11	Fixed assets			
OPENING									
BALANCE	100	100			AF.2	Currency and			
SHEET						deposits			
	100		100		AF.5	Shares and	100		100
						other			
						equity			
					B.90	NET WORTH	0	100	100	200
IV.2	0	100	0	-100	AN.11	Fixed assets			
CHANGES									
IN	0	-100	100		AF.2	Currency and			
BALANCE						deposits			
SHEET	-100		-100		AF.5	Shares and	100		100
						other			
						equity			
					B.10	CHANGES IN	0	0	0	0
						NET WORTH,			
						TOTAL			
IV.3	100	100			AN.11	Fixed assets			
CLOSING									
BALANCE	100	0	100		AF.2	Currency and			
SHEET						deposits			
	0		0		AF.5	Shares and			
						other			
						equity			
					B.90	NET WORTH		100	100	200

365. Treatment of sale of an enterprise - say, a small shop, owned by the state - to the private sector is clarified below with the help of the numerical example set forth in table 5.3, which shows all the entries needed in the financial accounts, other changes in volume of assets accounts and balance sheets of non-financial corporations, government and households. The example assumes that an enterprise originally allocated to the sector of non-financial corporations is sold to a household for 100. After privatization it is an unincorporated enterprise owned by the household sector. The sale of the enterprise is recorded in the financial accounts of non-financial corporations and households. Thus, a decrease in shares and other equity (F.5) and, say, an increase in currency and deposits (F.2) are registered in the account of the government sector; and reverse entries are registered in the financial account

of the household sector, that is to say, a decrease in currency and deposits (F.2) and an increase in shares and other equity (F.5). The reclassification of assets and liabilities of the enterprise from the non-financial corporate to the household sector is reflected in entries in the other changes in volume of assets account, namely, a reclassification of the fixed assets from the non-financial corporate sector to the household sector, and elimination in the household sector of shares and other equity on the asset and liability side, after the sale has been recorded in the financial account. As a result, the closing balance sheet shows fixed assets and net worth in the household sector, and currency and deposits and net worth in the government sector. On the other hand, as a result of entries in the other changes in volume of assets and financial accounts of the enterprise that was sold, there are no longer any entries in the closing balance sheet of the sector of non-financial corporations.

Table 5.3. SNA accounting treatment of privatization of a public enterprise through outright sale of its assets

CHANGES IN ASSETS/ASSETS						CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH			
III.2. FINANCIAL ACCOUNT									
TOTAL	8.14 HOUSE-HOLDS	8.13 GENERAL GOVERN-MENT	8.11 NON-FINAN-CIAL CORPOR-ATIONS		TRANSACTIONS AND BALANCING ITEMS	8.11 NON-FINAN-CIAL CORPOR-ATIONS	8.13 GENERAL GOVERN-MENT	8.14 HOUSE-HOLDS	TOTAL
				B.9	NET LENDING (+)/NET BORROWING(-)				
	-100	100		F.2	Currency and deposits				
	100	-100		F.5	Shares and other equity				
III.3.1. OTHER CHANGES IN VOLUME OF ASSETS ACCOUNT									
	100		-100	K.12.1	Changes in sector classifi-cation and structure of which				
				AN.11	Fixed assets				
	100		-100						
				K.10	Other volume				
	-100				changes in financial assets and liabilities n.e.c. of which	-100			
				AF.5	Shares and other				
	-100				equity	-100			
				B.10.2	CHANGES IN NET WORTH DUE TO OTHER CHANGES				

CHANGES IN ASSETS/ASSETS					CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH			
					IN VOLUME OF ASSETS			

IV. BALANCE SHEETS

IV.1 OPENING BALANCE SHEET	100	100	100	AN.11	Fixed assets			
				AF.2	Currency and deposits			
				AF.5	Shares and other equity	100		
				B.90	NET WORTH	0	100	100
IV.2 CHANGES IN BALANCE SHEET	100	-100	-100	AN.11	Fixed assets			
	-100	100		AF.2	Currency and deposits			
	0	-100		AF.5	Shares and other equity			
				B.10	CHANGES IN NET WORTH, TOTAL	-100	0	0
IV.3 CLOSING BALANCE SHEET	100	100		AN.11	Fixed assets			
				AF.2	Currency and deposits			
				AF.5	Shares and other equity			
				B.90	NET WORTH		100	100

366. Privatization of public enterprises is often is preceded by a revaluation of stocks recorded in their balance sheets. The revaluation reflects the impact of different factors such as the difference between the replacement and the original book value of the assets, obsolescence, the lack of market for the products and so forth. The change in valuation of the assets should be recorded as a holding loss (or gain) in the revaluation accounts. The same entry in the revaluation account is needed when those enterprises sell all or some of their assets at prices that are lower than the original book value registered in their balance sheets. The revaluation should not affect capital formation or GDP.

2. Privatization of dwellings

367. Privatization of dwellings can also be carried out in a number of different ways. A practice that frequently occurs in the Russian Federation is to privatize dwellings by giving them free of charge to households. In that case, positive and negative entries for capital formation and capital transfers in kind should be recorded in the capital accounts of households and government. The valuation of these entries should be based on the market value of the privatized dwellings.

368. In other instances, the households may have to pay for the privatized dwellings. For example, if the space of the privatized dwellings exceeds certain established norms, the household may have to pay for the difference. In this case, capital formation of households is valued in the same manner as before, that is, at the market price of the dwellings. However, the capital formation of households is only partly financed through capital transfers; and the payment for the extra space is financed through savings of the household sector.

369. The same treatment applies when dwellings are sold to households at a reduced price that is not economically significant. This is a practice that is rather common in Hungary. Also, in this case, the market price should be used in the valuation of a positive capital formation of the household sector and a negative capital formation of the government sector; and the difference between the market price and the nominal price of the dwelling will have to be shown as a capital transfer from the government to households. In some cases, households have to make a nominal registration payment which is to be treated as part of the transfer cost and thus included in capital formation.

370. A somewhat different accounting treatment will be applied if the housing unit is not privatized as a whole, but only individual apartments. Some entries are now needed in the financial accounts and the other changes in volume of assets accounts of the sectors. The treatment, illustrated in table 5.4, is very similar to the one presented in table 5.3 dealing with the outright sale of a public enterprise. The table may be characterized as follows:

(a) It is assumed that all sectors start opening balance sheets with 100 unit entries and that apartments are sold at a value of 50 units;

(b) Thus, the opening balance sheet has entries for non-financial corporations on fixed assets (AN.11), shares and other equity (AF.5) and net worth (zero); for households, there are entries on currency and deposits (F.2) and net worth; and for the government sector, on shares and other equity (AF.5) in the corporation owning the apartments and also net worth;

(c) The sale of the apartments (50) is reflected in three accounts: in the capital account, there is a payment of capital transfers from the government to the household sector; in the financial account, there is recorded an exchange of currency and deposits (F.2) for shares and other equity (F.5) between households and government; and in the other changes in volume of assets account, part of the fixed assets are reclassified from the non-financial corporations sector to the household sector and at the same time shares that were purchased by the households from the government are eliminated on the asset and liability sides of the accounts of the two sectors;

(d) As a result of these entries, the closing balance sheet of all three sectors has changed as compared with their opening balance sheet. Thus, the closing balance sheet of the non-financial corporate sector owning the apartments shows only fixed assets and a net worth of 50. The government sector has still a net worth of 100, but it now consists of 50 for currency and deposits (F.2) and 50 for shares and other equity (AF.5). The same net worth is also maintained for households, but in this case it consists of 50 for fixed assets (AN.11) representing the apartments purchased, and 50 for currency and deposits (F.2).

371. It should be noted that the process of privatization results in a growing number of transactions involving existing apartments and houses. The sales of such dwellings have to be treated as any other transaction in existing goods. In other words, the purchases of existing dwellings should be recorded as positive gross fixed capital formation of the household purchasing the dwelling, including the transfer cost, and as negative capital formation of the household selling the dwelling. At the national level, gross fixed capital formation will include only transfer costs. In some cases, dwellings are sold to business units that convert them into offices. In this case, the transaction will be between the household sector and the sector of non-financial or financial corporations.

Table 5.4. SNA accounting treatment of the privatization of dwellings

CHANGES IN ASSETS/ASSETS						CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH			
III.1. CAPITAL ACCOUNT									
TOTAL	8.14 HOUSE-HOLDS	8.13 GENERAL GOVERN-MENT	8.11 NON-FINAN-CIAL CORPOR-ATIONS		TRANSACTIONS AND BALANCING ITEMS	8.11 NON-FINAN-CIAL CORPOR-ATIONS	8.13 GENERAL GOVERN-MENT	8.14 HOUSE-HOLDS	TOTAL
				B.8n	SAVING, NET				
				P.51	Gross fixed capital formation				
				D.9	Capital transfers, receivable			50	
				D.9	Capital transfers, payable		-50		
				B.9	NET LENDING (+)/NET BORROWING (-)		50	-50	
III.2. FINANCIAL ACCOUNT									
		-50	50	B.9	NET LENDING (+)/NET BORROWING (-)				
		-50	50	F.2	Currency and deposits				
		50	-50	F.5	Shares and other equity				
III.3.1. OTHER CHANGES IN VOLUME OF ASSETS ACCOUNT									

CHANGES IN ASSETS/ASSETS			CHANGES IN LIABILITIES AND NET WORTH/LIABILITIES AND NET WORTH
50	-50	K.12.1 Changes in sector classifi- cation and structure of which	
		AN.10 Fixed assets	
		K.10 Other volume changes in financial assets and liabilities n.e.c. of which	
		AF.5 Shares and other equity	
-50			-50
		B.10.2 CHANGES IN NET WORTH DUE TO OTHER CHANGES IN VOLUME OF ASSETS	

IV. BALANCE SHEETS								
IV.1			100	AN.11	Fixed assets			
OPENING								
BALANCE	100			F.2	Currency and			
SHEET					deposits			
		100		AF.5	Shares and	100		
					other equity			
				B.90	NET WORTH	0	100	100
IV.2	50		-50	AN.11	Fixed assets			
CHANGES								
IN	-50	50		F.2	Currency and			
BALANCE					deposits			
SHEET	0	-50		AF.5	Shares and	-50		
					other equity			
				B.10	CHANGES IN NET			
					WORTH, TOTAL			
IV.3	50		50	AN.11	Fixed assets			
CLOSING								
BALANCE	50	50		F.2	Currency and			
SHEET					deposits			
		50		AF.5	Shares and	50		
					other equity			
				B.90	NET WORTH	0	100	100

3. Examples of privatization in countries

372. The above may be illustrated with the help of a number of concrete country examples of privatization in the Russian Federation and Poland.

373. In the Russian Federation, the workers and managers of large enterprises can use their vouchers to purchase shares in their own enterprises. Most of the stock companies have chosen a privatization option that gives workers and managers a 51 per cent controlling share in the enterprise. A part of the 51 per cent of the shares is paid for by the vouchers. Therefore, the acquisition of this portion of equities can be treated in the financial account as exchange of vouchers for shares. The remaining 49 per cent of shares is sold at open auctions. Some will be paid for by vouchers and this transaction should be recorded in financial accounts. Another closed subscription option gives workers 25 per cent of a company's shares free of charge without voting rights,

with a further option to purchase, with voting rights, an additional 10 per cent (for workers) and 5 per cent (for managers), all at a price based on the book value. In this option, the transfer of the first 25 per cent of shares should be recorded as a capital transfer to households.

374. With the aim of aggregating shares and diversifying risks, several hundred investment funds are being set up in the Russian Federation and their number keeps growing rapidly. The fund accumulates vouchers of the population and in return give citizens shares of the fund itself. This transaction should also be recorded as exchange of vouchers for equities in the financial accounts. In the financial account of the investment fund, acquisition of equities of the privatized enterprises is to be shown. On the other hand, equities of the investment fund exchanged for vouchers will be recorded as incurrence of liabilities.

375. In the process of privatization, enterprises in the Russian Federation and some other CIS countries are trying to get rid of their social assets (hospitals, stadiums and so forth) in order to economize on the costs of social services. In many cases, these assets are transferred to the local Governments. These transactions can be recorded in the capital accounts of the sectors involved. Thus, there will be positive gross fixed capital formation of government and negative gross fixed capital formation of the corporations or notional NPISHs, depending on the allocation of the units using the social assets in the past, and capital transfers from the sector of corporations (or NPISHs) to general government.

376. Privatization in Poland is being carried out through a number of different procedures. The first method of privatization is one in which employees of enterprises acquire up to 20 per cent of shares for half the price and the rest of the shares are sold at the full market price. In this case, a change in ownership takes place and a state-owned enterprise (quasi-corporation) is transformed into a corporation. Under these circumstances, issuing of the equities will be shown in the other changes in assets account. The sales of shares to households will be recorded in the financial accounts of corporations and households. At the same time, a capital transfer (equal to the difference between the market value of shares distributed to the households and the reduced price they had to pay) will be recorded as having been paid by government to households. This capital transfer will be used by households to finance the acquisition of equities to be recorded in the financial account.

377. The second method of privatization in Poland is referred to as the "liquidation" method, in which fixed assets of the terminated enterprise are sold at auction. The following transactions should be recorded in the accumulation accounts. In the capital account of the seller, negative capital formation will be shown; and in the capital account of the buyer, positive fixed capital formation will be recorded. In the financial accounts of the buyer and seller, the entries pertaining to changes in financial assets (decrease and

increase in deposits) will match the entries on positive and negative lending as described above. Some entries reflecting termination of the enterprise and appearance of fixed assets will be made in the other changes in assets accounts of the termination enterprise and general government. The method of liquidation is used in many other countries in transition.

378. The third method of privatization in Poland is referred to as "mass privatization". This method implies that the enterprises issue shares and sell them to investment funds. The shares of these funds are then transferred free to households. In this case, the sale of shares to the investment funds will be recorded in the financial accounts of the seller and the buyer. In the capital account of the investment fund, capital transfers payable to households will be matched by negative net lending. In the financial account of the investment funds, the negative net lending is matched by a decrease in cash or deposits, and at the same time the shares transferred to households are matched by a corresponding item of incurrence of liabilities. In the capital account of households, the capital transfer receivable from the investment fund will be matched by net lending. In the financial account of households net lending will be matched by the acquisition of shares as increase in financial assets. Finally, in the consolidated financial account for the total economy, there will be entries on acquisition of shares by households and investment funds matched by the same amounts of changes in liabilities.

B. Identification and scope of capital transfers

379. While privatization leads to the recording of some capital transfers in the System, there are many other capital transfers to be recorded in the accounts for transition economies. Among the other capital transfers that are particularly relevant for countries in transition, to be discussed below, mention should be made of capital transfers resulting from the forgiveness of debt, capital transfers to cover exceptional losses of enterprises, capital transfers to finance the construction of dwellings of households, and so forth.

380. For capital transfers, the SNA classification (the SNA, annex V) includes three sub-items, namely investment grants, capital taxes, and other capital transfers. All three subcategories are usually associated with the acquisition or disposal of an asset. They could be provided in cash or in kind. Capital taxes generally are paid in cash, but there are instances in which capital taxes are paid in kind, for example, when transferring valuables (paintings, stately homes) to the State.

381. When capital transfers in kind occur, the entries for capital transfers should be accompanied by a negative entry recorded for gross fixed capital formation of the donor and a positive amount entered for gross fixed capital formation of the recipient sector. It is important to note that "whether the transfer is made in cash or in kind, it should result in a commensurate change

in the financial, or non-financial, assets shown in the balance sheets of one or both parties to the transaction" (the SNA, para. 10.132).

382. In situations when there are serious doubts whether transfer is capital or current it should be regarded as current. However, as is noted in the SNA paragraph 10.134, "the decision as to which way to classify a transfer has important consequences for the allocation of saving between sectors and subsectors, and possibly between the economy as a whole and the rest of the world". It is obvious that capital transfers paid by residents are not necessarily equal to capital transfers received by residents, because some capital transfers are paid to non-residents and some capital transfers are received from non-residents. It is also obvious that in the consolidated account for the total economy, capital transfers payable to and capital transfers receivable by residents of the country cancel out. Capital transfers for the total economy entail only capital transfers receivable from or payable to the rest of the world.

383. Investment grants are normally made by government to resident units to provide finance for acquisition of capital goods. Under certain circumstances, investment grants can be provided to non-residents; conversely, investment grants can be received by residents from the rest of the world. This means that recording of capital transfers may involve the rest of the world account. In other words, investment grants receivable are defined to include all investment grants received by resident units, including investment grants from the rest of the world; investment grants payable are defined to include all investment grants payable, including those payable to non-residents. The same approach is used for recording of other types of capital transfers.

384. Capital taxes include (a) inheritance taxes and debt duties and (b) other taxes levied occasionally by government on the wealth of institutional units.

385. Other capital transfers include:

- Cancellation of debts by mutual agreement of creditors and debtors;
- Occasional transfers by government to enterprises to cover losses accumulated over a period of several years;
- Transfers in kind whereby government transfers ownership of capital assets directly to other institutional units;
- Payments by general government or by the rest of the world to the owners of goods destroyed or damaged owing to wars, political upheavals, natural calamities;
- Miscellaneous capital transfers.

386. Most of the above-mentioned types of capital transfers are relevant for countries in transition and can be measured statistically. In the recent past, the bulk of the investment was financed in the CPEs with the help of investment grants furnished to the enterprises from the state budget. Though the situation is changing noticeably in this respect owing to the economic reforms that have introduced other sources of finance, the investment grants from the state budget still play a significant role in many transition economies. Also treated as capital transfers are the following payments from the state budget in some countries in transition; capital repairs of dwellings owned by war veterans; outlays on construction of dwellings for refugees; and expenditures made in order to deal with the consequences of various catastrophes (for example, the Chernobyl disaster).

387. Recently the Government of the Russian Federation introduced investment grants to households to finance construction or purchase of dwellings. These grants are given to needy persons and constitute unrequited payments from the government to households that result in a change of the assets of households. Therefore, they are to be treated as capital transfers. The provision of investment grants to households constitutes a change in the previous government policy in this area which consisted in the provision to households of apartments in state-owned buildings with highly subsidized rent.

388. Still another example of capital transfers is found in the practice of CIS member States when the government repays loans provided by the banks to institutional units engaged in construction of dwellings for persons forced to resettle. In this case, at a first stage a capital transfer from the government to banks should be recorded, and at a second stage capital transfers from the banks to the units that borrowed the money. Another option is to show the direct capital transfers from the government to the units that borrowed the money.

389. In some countries in transition and above all in CIS countries, state budget expenditures include outlays on "military conversion". These consist of grants to enterprises to facilitate the conversion of military production into civilian-oriented production. At least a part of these outlays are of a capital nature, for example, for the conversion of equipment and other types of fixed assets to civilian use. It is important to estimate this part and allocate it to capital transfers; the remaining part may be treated as other subsidies.

390. The value of the property of migrants (including the value of their personal effects) who have moved abroad is treated as capital transfer payable to or receivable from the rest of the world, (see para. 353 of the IMF Balance of Payments Manual, 5th ed.[12]). If, however, it is feasible to isolate the value of personal effects from that of the other items of movable property of migrants, it should be allocated to current transfers.

391. In many countries in transition, certain structures produced by groups of

households for own communal use may be transferred to general government to secure their proper maintenance (roads, pipelines and so forth). When such transactions occur, the entry on negative capital formation for the households sector should be matched by an entry for capital formation in the government sector and a capital transfer in kind from households to general government (see the SNA, para. 10.79). In 1992, the value of communal construction by households in Hungary was about 180 million dollars.

392. The concept of capital transfers may also be relevant to allocation of capital outlays by an SOE financed from the state budget. It is generally agreed[20] that the most appropriate solution would be to treat investment grants from the state budget to the SOE as capital transfers from the government to the corporations sector to which the SOE belongs. This implies that capital outlays financed by these grants will be included in gross fixed capital formation of the corporations sector that receives the grants.

393. An example of capital transfers received from the rest of the world is the provision by the Government of Germany of funds for the construction in the Russian Federation of dwellings for Russian military personnel previously stationed in Germany.

C. Transactions in an emerging financial market

394. The financial market in transition economies is still little developed. However, it is important that the changes taking place are captured in the national accounts. The present section deals with a number of selected transactions related to the financial market that might become increasingly important. The first type (discussed in sect. C.1) deals with property income. The emergence of a financial market will obviously result in a more prominent role of property income among the revenues of different sectors, and it is important to capture these changes over time by an adequate identification and classification of the property income flows. Subsequently, the use of FISIM (sect. C.2) and the output of insurance (sect. C.3) are examined in the context of transition economies, and, lastly (sect. C.4), two examples of financial transactions are presented and their accounting treatment is discussed.

1. Identification and scope of property income

395. Property income is defined in the System (para. 7.88) as "the income receivable by the owner of a financial asset or a tangible non-produced asset in return for providing funds to, or putting the tangible non-produced asset at the disposal of, another institutional unit". Thus, an important characteristic of property income is that it is linked to ownership of non-produced assets. Property income includes:

- Rent on land and royalties on subsoil deposits;
- Interest received by creditors;
- Dividends received by shareholders;
- Withdrawals of income from profits of quasi-corporations by their owners;
- Reinvested earnings on direct foreign investment;
- Imputed property income attributed to insurance policyholders.

396. Land rent is paid by the user to the owner of land for the right to use the land. Royalties are paid for the right to exploit mineral reserves. The treatment of rent on land and subsoil assets is in principle different from the treatment of payments made by institutional units in connection with the leasing of capital goods. The latter are described as rentals (see the SNA, para. 7.87) and regarded as payments for services and included in the measurement of output. It should be noted that rent on land is recorded on a net basis, that is, after deduction of taxes on land, which the owner of the land is required to pay. According to the convention adopted in the SNA, these taxes are treated as if they are paid not by the owner of the land but by the tenant.

397. The payments for the right to use forests are similar to rent on land. In some countries in transition, these payments have recently been introduced. For example, in the Russian Federation, government regulations specify the conditions for the leasing of forests, the payment involved and so forth. The payments for the use of forests which are, as a rule, the property of the State are made to the state budget; they have to be shown as property income receivable by the general government sector and payable by other sectors, largely by the non-financial corporations sector. It is worth noting that a part of payment can be retained by the lessee to finance outlays on maintenance and reproduction of forests. It is suggested that payment for the right to use forests on a net basis, that is, after deduction of the retained payment, be recorded.

398. Payments for the right to carry out geologic exploration and to extract minerals are classed as property income in the SNA. Payments for the right to build and use underground structures not associated with extraction of minerals are classed as other taxes on production. If, however, exploration of underground structures is carried out on the basis of a lease, the payment is allocated to intermediate consumption.

399. Rent and royalty payments in many transition countries are generally made to the government. They should be distinguished, however, from taxes paid to the government. In countries in transition, such a distinction is sometimes

difficult to make. In many of these countries, the owner of the land continues to be the government and government agencies have the right to provide land on their own conditions; state agricultural enterprises may rent out some of their land to households or to other enterprises. Also, in some transition countries, enterprises engaged in the extraction of minerals are obliged to make payments to the state budget at fixed rates depending on the volume of output. These payments should be regarded as taxes and not as royalties, because the relationship between the government and the enterprises in this case is not that between owner and tenant.

400. As in these and many other instances difficulties may be faced in establishing the borderline between property income paid to the government and taxes, certain conventions may have to be introduced. In principle, the payments of rent implies the existence of a contract that specifies the period of leasing. As economic reforms progress, however, a distinction between these flows is becoming clearer institutionally, with Governments introducing regulations that define more explicitly the nature of transactions dealing with taxes, property income, and so forth. For example, in the Russian Federation, proposals to reform the taxation system envisage the collection of revenues largely with the help of rental payments for the use of land, mineral deposits, and other non-produced assets. This implies that relationships between the owners and the users of the assets are being defined in a clearer manner.

401. Interest is property income that owners of financial assets (deposits, securities other than shares, loans, other accounts receivable) receive for lending those assets to other institutional units; interest is the amount of income that a debtor becomes liable to pay to the creditor over a given period of time without reducing the amount of the principal outstanding. In countries in transition, the bulk of interest is received and paid on loans and deposits. The other two important types of interest in countries in transition are:

- Interest on securities (bonds and bills);

- Interest on trade credits and other indebtedness.

402. Interest is recorded on a full accrual basis; in other words, the interest recorded in the allocation of primary income account should differ from actually paid interest. However, in practice, estimates of interest on a full accrual basis might be difficult to make. In that case, interest actually paid/received may have to be shown. It should be noted that, in some countries in transition, the repayment of loan and interest is made in kind. Such a practice exists, for example, in the Russian Federation. The loan made several years ago by households to government is repaid now and includes interest; the total payment is specified in terms of commodities, for example, cars. Under this arrangement, it is necessary to estimate the amount of interest.

403. Interest paid to and received from financial intermediaries is to be shown

together with an adjustment item that constitutes the amount of output of FISIM. The adjustment should be shown as a separate item, whereas the interest should be shown before the adjustment (see the SNA, annex III, particularly table A.III.3).

404. Interest paid to and received from the rest of the world, shown in the account, should include imputed interest on so-called compensatory transactions which are rather common in countries in transition. These transactions involve repayments of loan and interest by delivering goods in kind that are produced with help of the loan. These deliveries are recorded as exports and imports, but to the extent that they constitute payments of interest they should also be shown as imputed interest receivable from or payable to the rest of the world.

405. Withdrawals of income from quasi-corporations are conceptually similar to dividends. They refer to income withdrawn from quasi-corporations owned by general government and households. It is assumed that, in the accounts of quasi-corporations, the payments of income from the enterprises to the government can be identified. In many countries in transition in the recent past, the transfer of surplus of profit to the state budget was regulated by instructions, generally from ministries of finance, regarding the derivation of profit to be transferred to the state budget. Table 5.5 presents an example of how the profits transferred to the state budget are derived from the gross profits of an enterprise.

406. The surplus should be treated as withdrawal of income. In addition to this, the enterprises may be obliged to make contributions from their profit to the reserves of ministries or other similar government bodies. They are normally shown in the accounts of enterprises and should also be included in withdrawals of income from quasi-corporations.

Table 5.5. Derivation of profits transferred to the state budget

A. Profit, gross

B. Taxes on profits (minus)

C. Interest for credits (minus)

D. Allowances to various funds of the enterprise (minus)

E. Outlays of the enterprises financed out of profit (minus)

- Capital investment
- Free social and cultural services provided to employees

- Selected bonuses paid out of profit

- Other outlays

F. Surplus of profit to be transferred to the state budget (A-B-C-D-E = F).

407. In some countries in transition, the above-mentioned practice was formally abolished in the light of economic reforms. The Governments of many countries repeatedly stated that all government-owned enterprises would become financially independent commercial units. Despite these statements and legislation adopted in some countries in this area, several legal ambiguities remain regarding the property right. In some countries, ministries are instructed to ensure that the enterprises owned by government pay the "dividend" to the ministries as the representative of the owner of the capital used by those enterprises.

408. There are many circumstances in which enterprises sell their output at prices that are higher than those established and regulated by government. In these instances, the additional surplus of income is withdrawn to the state budget. These withdrawals should be treated as taxes on income rather than as property income.

409. It is worth noting that when practically all property of the country is in government hands, withdrawals of income by government are difficult to measure. As a consequence, the distinction between the balance of primary income of government and of quasi-corporations owned by the government is less meaningful.
410. Equally difficult practical problems are likely to arise with the identification of income withdrawn by households-owners from unincorporated enterprises that are classified as quasi-corporations. In those instances where no meaningful estimates can be made of withdrawal of income by households, a solution may be adopted in which the enterprises in question are allocated to the household sector. In this case, mixed income is to be recorded for these units.

411. Reinvested income of a direct foreign investment enterprise is a type of property income that is becoming increasingly important in countries in transition. Only several years ago, its quantitative importance was insignificant even in the most advanced Central European countries. For instance, in the beginning of the 1990s in Hungary, foreigners owned only about 2 per cent of the industrial assets of the country. However, the importance of direct investment is likely to grow rapidly in the foreseeable future in many countries in transition.

412. In the SNA, reinvested income of direct foreign investment enterprise is treated as if it were distributed to foreign direct investors and then reinvested by them. In other words, the System suggests two imputations: one

refers to a notional withdrawal of undistributed earnings and the other to a notional reinvestment. A direct investment enterprise may be:

- The unincorporated branch of a non-resident corporate or unincorporated enterprise;
- A corporation in which a single foreign investor owns sufficient shares to have an effective voice in its management;
- A direct investment enterprise (automatically) if a corporation is a subsidiary of a foreign corporation.

413. The reinvested income of direct foreign investment enterprises is computed as the sum of the operating surplus of the enterprises in question plus property income and current transfers receivable minus property income and current transfers payable. If the investor controls only a part of the capital of the enterprise, the reinvested income will include the part of the undistributed earning that is proportional to the share of the foreign investor in the capital.

414. It is important to note that reinvested income of direct foreign investment enterprises is not counted as national saving of the country where those enterprises are located. The increase in assets of the direct foreign investment enterprises due to the use of retained earnings will be shown as having been financed by the non-resident investor who controls or influences the enterprise in question. This will have to be recorded in the financial account of the direct investment enterprise as a liability and in the financial account of the rest of the world as an acquisition of financial assets, in both cases in the item called "Shares and other equity".

415. An illustrative example can help to clarify the treatment of reinvested income of direct foreign investment enterprises. (For a more detailed explanation, see the SNA, chap. XI (The financial account), category F.5, Shares and equity.) Suppose that the undistributed profits of a direct investment enterprise, which is a branch of a foreign corporation located within the territory of a given country, are equal to 100 and that this amount was used to purchase additional equipment. If there are no other transactions, property income paid out to the rest of the world (100) will be recorded on the uses side of the allocation of primary income account of the enterprise, and the balance of primary income of the enterprise will be equal to zero. Since there are no other transactions, saving of the direct foreign investment enterprise will also be equal to zero. A counterpart entry for property income received by the rest of the world (from the point of view of the total economy, -100) will be recorded on the resources side of the external account of primary incomes and current transfers of the rest of the world account. In the absence of other transactions, the current external balance (external counterpart of savings of the total economy) will be equal to -100. The capital account of the direct

foreign investment enterprise will show that gross fixed capital formation (100) is financed by net borrowing (100) recorded as the balancing item of the capital account. In the financial account of the enterprise in question, the borrowing will be matched by the recording of the incurrence of a liability, adding to the net equity of the enterprise. In the rest of the world account, there will be net lending of 100 in the capital account of the rest of the world, and an entry for acquisition of financial assets in the financial account of the rest of the world. Reverse entries will be made when investors in the country in question have direct investment enterprises abroad and "receive" reinvested earnings from the rest of the world. Thus, the difference between reinvested earnings receivable less earnings payable will affect the difference between the GDP and gross national income (GNI).

416. Imputed interest to insurance policyholders is the nominal interest that insurance companies receive from the investment of technical reserves that are the financial assets of the policyholders. The interest is then treated as being reinvested and added to the technical reserves. It is important to note that in some countries in transition government documents regulating activities of the insurance companies are rather vague and do not specify the procedures pertaining to the allocation of property income earned on investment of technical reserves.

2. Financial intermediation services indirectly measured (FISIM) and other output of financial intermediation services

417. Output of financial intermediation services except insurance services and pension funds consists of (a) output of financial intermediation services indirectly measured (FISIM) and (b) output of auxiliary financial services such as currency exchanges, consultations on investments matters and so forth. This topic is discussed in detail in the SNA, paragraphs 6.120-6.134, and more extensively in annex III of the SNA.

418. Measurement and valuation of auxiliary services do not pose serious problems, as their output is equal to the payments for the services. Thus, output of stock exchanges is equal to the commission fees. It may also include payments for other auxiliary services such as consultations and so on. The other example of rapidly growing output of auxiliary financial services in many countries in transition are so-called depositary services and currency exchange services.

419. The estimation of the output of FISIM, however, involves a complex procedure. The general formula of estimation of output of financial intermediation services is presented in table 5.6.

Table 5.6. Output of financial intermediation services

indirectly measured

$$G = P - Ps - R$$

where

G = output

P = total property income received

Ps = property income received from investment of own funds

R = interest paid out

420. In principle, property income, that is, interest and dividends, from investment of own funds is excluded from output because no financial intermediation is involved. In practice, however, separate data on property income from own and borrowed funds are often not available and can only be obtained with the help of estimation procedures that assume that information is available on financial assets. For example, on the basis of analysis of balance sheets of banks, estimates can be made of the share of own funds in all financial assets. In the absence of such data, recent ECE/OECD/Eurostat recommendations may be applied instead. In the calculation of FISIM, these include property income on investment of own capital of financial institutions, but exclude property income derived from securities. Thus, in the case of the Russian Federation, such treatment would exclude from FISIM the considerable income received by commercial banks on investment in government bonds, but would include the relatively small income from other investments of own capital.

421. In the 1968 SNA (para. 6.34), output of FISIM (known as imputed output of bank services) was allocated entirely to intermediate consumption of a notional industry the output of which by convention was taken as equal to zero. The 1993 SNA includes as one option non-allocation, as recommended in the 1968 SNA. However, for those countries that have sufficient statistical data, a second option is included in which the output of FISIM is distributed among uses, namely, intermediate consumption, final consumption of households and exports. This implies that estimates of imports of financial intermediation services might have also to be made so as to ensure overall consistency in the treatment of these flows. It is proposed that the allocation among different users should be made on the basis of the difference between interest paid or received and a "reference rate" that "represents the pure cost of borrowing funds - that is, a rate from which the risk premium has been eliminated to the greatest extent and which does not include any intermediation services" (the SNA, para. 6.128). The inter-bank lending rate is an example of such a reference rate.

422. Allocation of output of FISIM among users requires in principle detailed information on various flows of property income paid out and received by credit institutions and on the types of their assets. This information may be difficult to obtain in countries in transition and it is therefore suggested that they either use the first SNA option and not allocate the service charges,

as was done in the 1968 SNA, or, alternatively, apply a simplified procedure in which the output of FISIM is allocated proportionally on the basis of the total assets and liabilities of the various groups of users.

423. Central banks are included in principle in the financial corporations sector. Nevertheless, at least in some countries in transition, a question may arise as to whether the above procedures are applicable to the measurement of output of central banks because of the many peculiarities in the operation of central bank. In certain cases, the state banks may provide indirect financing to the state budget. Also, credits may be provided by the central banks to the government at artificially low interest rates. For example, in 1993 the Central Bank of the Russian Federation provided loans to the Government at the rate of 15 per cent while the interest rate in the market was 200 per cent. Also, the boundary between own funds of central banks and government assets is often not entirely clear-cut. There were cases in the not-so-distant past when the profits of the central banks were transferred to the state budgets. In Kazakstan, for example, 25 billion roubles were transferred to the Government in the first quarter of 1993 and 30 billion roubles in the second quarter of 1993 (as reported by IMF). According to official statistics in the Russian Federation in 1994, up to 80 per cent of the state budget deficit was financed through cheap credits of the Central Bank and allowances from its profits. Similar practices were reported in the Republic of Moldova, Armenia, and so forth. According to EBRD, progress in banking reforms in countries in transition is slower than in any other area; on a scale of 1 to 4, many countries reached only level 1 for the performance of their financial system, and not a single country advanced to level 4. It is furthermore worth noting that experimental estimation of the output of the central banks of some CIS countries on the basis of the principal method (that is, as the difference between interest paid and interest received) gives results that are difficult to interpret. For example, the output of banks measured in this manner accounted for 35 per cent of GDP in one of the CIS countries. Under such circumstances, it is suggested that countries in transition value output of central banks at cost.

424. In some former CPEs, commercial banks may borrow funds from the central banks at relatively high interest rates, and lend these funds to companies and firms at much lower rates. In order to support this practice, the government has to intervene and subsidize commercial banks. Such arrangements exist in the Russian Federation and some other member countries of CIS. For example, in 1992 the Russian central bank lent money to the commercial banks at an interest rate of 80 per cent. For their part, commercial banks lend funds to firms at much lower interest rates, of 30 per cent on the average; the commercial banks are compensated for the difference by the Ministry of Finance. These payments should be regarded as subsidies and added to the interest received by the banks in the calculation of imputed output of financial intermediaries at basic prices.

425. There is an item called "income from fluctuations of the exchange rates" in the financial statements of banks that are used to compute the output and related items. This income consists of gains and losses in the value of the reserves of foreign currencies of the banks that arise owing to the changes in exchange rates over time. For example, according to the financial statement of the Central Bank of the Russian Federation for 1992, this income was equal to 20 billion roubles which was about 5 per cent of the total net interest earned by the bank. This income should not, however, be included in the calculation of the gross output of banks. Instead, it should be treated as holding gains (losses) and shown in the other changes in assets account.

426. In some countries in transition, there are a variety of investment funds whose current activity consists of purchasing privatization vouchers from households in exchange for shares, and using the vouchers to invest in privatized enterprises. The output of this intermediation activity may be measured as the excess of dividends received by the investment over the dividends that have to be paid out to the owners of those shares. Frequently, however, investment funds purchase vouchers from households for cash and sell them later at higher prices. The difference between the purchase and the sales price of the vouchers should not be regarded as financial intermediation output, but treated as a holding gain. In general, financial institutions in many countries in transition make very large profits by buying securities at relatively low prices and selling them later at higher prices. This means that their profits may contain holding gains that should be removed from the measure of output and value added.

427. In countries in transition, the bulk of data needed for the estimation of intermediate consumption is contained in the business accounts of enterprises. On the whole those data meet the requirements of the SNA. There are, however, some differences. The most important among them refers to the treatment of expenses on financial services. While in business accounts the costs include actual interest paid by the enterprises for credit, intermediate consumption in the SNA includes a part of the output of FISIM. There are also differences in valuation. In business accounts, actual acquisition prices are used for valuation of goods and services purchased for production purposes. In the SNA, as noted above, it is suggested that prices that exist when goods are actually used in production be used. In practice, this means that some adjustments might be needed to achieve valuation of intermediate consumption as defined in the SNA. It is known, for example, that enterprises in the Russian Federation accumulated considerable stocks of supplies and materials prior to the liberalization of prices at the beginning of 1992. They showed productive consumption of these items at the original low costs. As a result, the measure of value added could be distorted unless upward adjustments were made to intermediate consumption figures originally computed on the basis of the reports of the enterprises on the costs of production.

3. Output of insurance, pension funds and lotteries

428. Output of both life and non-life insurance is defined in table 5.7. The formula reflects the manner in which insurance companies function in a market economy. In particular, it reflects the fact that competition of insurers may result in relatively low premiums and that the income from investment of technical reserves may influence the level of premiums. For more details on the treatment of insurance and pension funds, the reader is referred to paragraphs 6.135-6.146 and to annex IV of the 1993 SNA.

Table 5.7. Output of life and non-life insurance

$$G = P + I - C - D$$

where

G = output

P = gross premiums earned (equal to gross premiums receivable less the changes in reserves due to prepayments of premiums)

I = premium supplements (equal to net income from investment of technical reserves: that is, property income generated by these investments less any interest or other expenses incurred)

C = claims due during accounting period

D = change in actuarial reserves and reserves with profit insurance after eliminating holding gains (losses) included in the change of reserves

429. In the majority of CPEs, the insurance industry operates as a state monopoly with the government making up for any losses or collecting any net earnings. The insurers were obliged to deposit all reserves with the central bank and deprived of the freedom to invest the funds. Monopoly insurers were often regulated by appropriate government bodies with respect to the prices they could charge; in some cases, the state budget provided 100 per cent subsidies so that specific groups of insured could receive free coverage of certain types of risks.

430. In certain cases, the integration of monopolistic state insurance companies into the state budgetary system makes it even questionable to classify technical reserves of life and non-life insurance companies as assets of policyholders.

431. The economic reforms in transition economies have already changed the situation in many respects. It appears that at least in some transition

economies, however, state insurance companies still retain certain characteristics of the state monopolies described above. For example, in the Russian Federation, the state life insurance company continues to dominate the market and is still compelled to deposit funds in state credit institutions where interest rates are considerably lower than in commercial banks.

432. The lack of competition in the industry may result in relatively high premiums and unproportionately large profits (and operating surplus) which are transferred to the state budget, as was the case in the former USSR at the beginning of the 1990s. Also given the monopolistic conditions under which the state insurance companies operate, there may be no relation between the level of premiums and the income from the investment of reserves; thus, adding interest on reserves to premiums may result in an even larger operating surplus and may not be realistic in the circumstances under which insurance companies operate in transition economies. Besides, it might be difficult to separate property income earned on technical reserves from property income earned on the investment of own funds.

433. Under these circumstances, a careful analysis is essential in order to decide whether the above formula of estimating insurance output is appropriate or whether it is better to adopt simplified solutions. One approach would be to assume that output of life and non-life insurance is equal to the excess of the premiums over the claims due. Another possible solution is to attempt to split the large operating surplus of monopolistic insurance companies into (a) a normal operating surplus and (b) imputed tax on products. (The latter component is to be excluded from measurement of output at basic prices.)

434. However, as economic reforms progress, insurance companies gradually acquire characteristics typical of market-oriented entities which derive a considerable amount of their income from the investment of reserves. Thus, the methods of operation of private insurance companies that were introduced recently in the Russian Federation resemble those in market economies. For example, the companies are required to make contributions to technical reserves and allowed to invest these reserves. The income from these investments was relatively small at the beginning of the 1990s, but is likely to grow in the foreseeable future and should be taken into account in the calculation of gross output of insurance. On the other hand, contributions to insurance technical reserves are to be excluded from gross output.

435. In some countries the business accounts of insurance companies contain major data needed for the compilation of the output of insurance companies in accordance with SNA recommendations. It should be noted that in some CIS countries, a distinction is made, in business accounts of insurance companies, between ordinary and technical reserves. Ordinary reserves are not matched by any liabilities and are created from profits. Technical reserves are created on the basis of premiums; in some cases, the government regulations specify the rate of allocations to technical reserves as a percentage of the premiums. Only

technical reserves are taken into account in the calculation of output.

436. To illustrate the above, table 5.8 presents the format of a financial account recently introduced in the Russian Federation into the regular practices for the Russian Federation of insurance companies, and table 5.9 presents the component data for the Russian Federation for 1992-1994, from which estimates of output of insurance services are derived.

Table 5.8. Example of a financial account used by insurance companies in the Russian Federation

Income

(a) Insurance premiums

(b) Returns of the reserves

(c) Income from investment

(d) Income from other insurance activities

(e) Other income

(f) Total income

Outlays

(a) Insurance claims

(b) Additions to reserves

(c) Insurance premiums sent for reinsurance

(d) Allocations to special fund for financing the programmes intended for reducing accidents, casualties, and so on

(e) Operating expenditure

(f) Other expenditure

(g) Total expenditure

Profit

Table 5.9. Output of insurance service in the Russian Federation for 1992-1994

(Billions of roubles)

	1992	1993	1994
1. Insurance	104	158	7 955
2. Insurance claims	49	634	5 136
3. Change in	37	398	1 419
4. Interest accrued	5	[a]	[a]
5. Output	23	226	1 400

[a] Data unavailable.

437. It should be noted that during some extraordinary periods (for example, owing to natural calamities), the insurance claims may exceed insurance premiums. The negative balance may be covered from the technical reserves or, if they are not sufficient, from subsidies received from the state budget. In such circumstances, output of insurance valued at basic prices will not be negative, but will be either equal to zero or positive. Such a situation occurred recently in Uzbekistan (in 1990) when claims noticeably exceeded premiums. The difference was covered by the state budget and was treated as subsidies on products. As a result, output at basic prices was assumed to be equal to zero. The allocation of output of insurance services to users should, however, be made in purchaser's prices and not in basic prices, the negative magnitude resulting from the difference between premiums less claims being allocated to the relevant category of disposition. If, on the other hand, the excess of claims over premiums was covered from technical reserves, the zero output would lead to zero entry on the disposition side of the account.

438. As noted above, compulsory medical insurance was recently introduced in some countries in transition. However, the medical insurance companies in some countries have the status of non-commercial entities and are not allowed to invest reserves. Under these circumstances, the output of medical insurance companies should be taken as equal to the excess of insurance premiums over claims payable.

439. Output of non-life insurance has to be allocated among intermediate and final consumption of exports in proportion to premiums paid by the producers of goods and services, by households in their capacity as consumers, or by non-residents. A part of output of non-life insurance should be allocated to intermediate consumption of producers of housing services produced by owner-occupiers for own consumption, and to producers of agricultural goods for own-account consumption, in proportion to the premiums paid. Output of life insurance has to be allocated entirely to final consumption expenditure of households.

440. Output of pension funds that are established for specific groups of the population is estimated in the same manner as output of insurance companies. The pension funds constitute a voluntary decentralized retirement system as opposed to a compulsory national system. They are financed by contributions made by employees and/or employers. The reserves built up by these funds are regarded as belonging to employees.

441. The treatment of premiums and winnings of lotteries is similar to that of premiums and claims of insurance companies. State-run lotteries are an important source of income in transition countries and also in some other countries. Their treatment has not been fully elaborated in the 1993 SNA, and therefore the following suggestions should be considered as tentative.[21] State-owned lotteries may be regarded as fiscal monopolies. Lotteries provide a way of redistributing funds from one group of households to another. The output of

lottery corporations is a service charge that is calculated as the difference between premiums paid and winnings paid. The premiums net of the service charge and the winnings may be treated as transfers between households. Any property income received by lottery companies on the holdings of the stakes may be treated as imputed interest payments to stakeholders and as premium supplements, in the same way that interest is imputed to policyholders on insurance technical reserves.

4. Some examples of financial transactions

442. Most transactions related to privatization result in financial transactions, but there are other outcomes as well. For instance, in some countries in transition there is a practice of selling selected goods at prices that are much lower than regular market price; however, the goods are delivered much later (say, in a year or two). For example, in the Russian Federation, individuals can buy a car at 60 per cent of the regular market price on condition that the car is delivered in a year. According to the SNA, the payment for the car made by the households should be regarded as credit to producer. The output will be valued at the market price when the car is produced. When the car is delivered to households, its full value will be included in final consumption expenditure of households. In addition, the repayment of the loan will be shown in the financial accounts. The difference between the market value of the car and the initial payment for it will be recorded as imputed interest in kind payable to households. The above practice is similar to that in the former USSR in the late 1980s when the Government borrowed money from the population with the promise to repay the loan in kind (as cars, television sets, and so forth).

443. Similar issues arise in respect of valuation of output sold in the framework of so-called options. Increasing use is being made in some countries in transition of these so-called options when selling goods. Options are financial instruments that give the purchaser the right to buy goods in future at prices agreed upon when the option is purchased. This price may differ from the market price existing when the output was produced and sold. It is suggested that the output sold under the circumstances described above be valued at the market price existing when the goods were produced and not at the prices indicated in the option. However, this treatment implies a number of entries in the financial accounts of the System. Consider the following numerical example:

(a) Suppose that a household purchases an option for 20 from the enterprise and that this option gives the customer the right to buy a car for 100 in three months. When the time comes, the market price of the car is 130 and the customer is happy to buy the car. In the accounts, the output should be valued at the market price existing when the car was produced, that is, at 130. The same amount should be recorded in the use of income account of households as consumption expenditure. Some entries should be made in the financial account of the household and the enterprise because the transaction involves the

sale and purchase of an option and changes in deposits or cash; and the change in market value of the option should be treated as a holding gain/loss of a financial instrument and recorded in the revaluation account;

(b) First, consider the entries in the financial accounts. Assume for simplicity's sake that there is no intermediate consumption and that value added consists only of the operating surplus. Assume further that the final consumption expenditure of the household was financed from the saving of the previous period. Under these conditions, it can be shown in the financial account of the enterprise that net lending (130) is matched by an increase in currency and deposits (F.2 = 100+20) which correspond to payments for the car and the option and a decrease in stocks of options on the liability side of the account (F.3 = -10). This decrease is the result of two transactions: the first involves the incurrence of liability (sale of the option for 20) and the second the extinguishing of the option (which should be recorded at the market price which was equal to 30). The market price of the option increased because the market price of the car increased. In the financial account of the household, a negative entry on net lending (-130) is matched by a decrease in deposits (-120) which corresponds to payments for the car and option and a decrease in stocks of options (-10) shown on the asset side of the account. This latter decrease is a result of two transactions: the first, that of buying the option for 20, and the second, that of extinguishing this option valued at the market price (30), in other words, 20 - 30 = -10. A holding gain should be recorded in the revaluation account for households which would cancel the negative entry on change in stocks of options in the financial account, and a similar entry is needed in the revaluation account for liabilities of the enterprise.

444. Another phenomenon of a financial nature found in some transition countries is that of non-financial (and also financial) corporations' providing loans to their employees at low nominal rates of interest:

(a) The additional income that employees could earn if they deposited the funds with a bank, and thus received a higher interest rate than the one paid to the employer, should be regarded as wages and salaries in kind, which are to be computed as "the amount the employee would have to pay if average mortgage, or consumer loan, interest rates were charged *less* the amount of interest actually paid" (the SNA, para. 7.42). Enterprises provide these low interest loans to their employees, because in this way they will be able to show in their business accounts low amounts paid to employees as remuneration for their labour. Employees may either deposit the funds received as a result of the loan or, alternatively, use the funds to finance purchases of goods and services;

(b) If the employees do indeed deposit the money of the loan in an interest-bearing savings or similar account, they actually receive the interest differential, which should be treated as wages and salaries in kind received by households. The accounting entries in this case are based on the assumption

that the employer - and not the employee - deposits the funds of the loan with a bank and that out of the interest he or she receives, he or she pays to the household sector the interest differential as wages and salaries in kind. Thus, the loan provided by the employer to the households is recorded as an increase in a financial asset of the (non-financial or financial corporate) sector of the employer and at the same time as an increase in the liabilities of the financial corporate sector where the money is deposited. Correspondingly, the interest actually received by the households is attributed to the (non-financial or financial corporate) sector of the employer, and subsequently the latter sector pays the wages and salaries in kind to the household sector;

(c) On the other hand, if employees used the loan to finance purchases of goods and services, they would not actually receive interest; in this case, an interest receipt would have to be imputed on the basis of the SNA recommendation, and this would be equal to "the amount the employees would have to pay if average mortgage, or consumer loan, interest rates were charged". Thus, there would be a loan from the (non-financial or financial corporate) sector of the employer to the household sector, which would appear as the acquisition of a financial asset in the financial account of the sector of the employer and as a liability in the household sector. In addition, there would be an entry for wages and salaries in kind paid by the (non-financial or financial corporate) sector of the employer to the household sector and a reverse flow of imputed property income from the household sector to the sector of the employer;

(d) The above treatment may have an effect on GDP in two circumstances. If the employer is a financial intermediary, the amount of FISIM allocated to the household sector will be increased and this will augment GDP. If the employer is the central bank, and the output of the central bank is calculated on the basis of cost - as might be the case in most countries in transition (see sect. C.2 above) - the output and value added of the central bank will increase and so will GDP.

VI. REORIENTATION OF DATA SOURCES

445. The previous chapters have dealt with the conceptual challenges that national accounts must face in order to respond adequately to the policy and analytical needs of countries in transition. The present chapter reviews the data that are currently available to measure the concepts developed in the previous chapters, how these data are changing and how they should be further adapted so that the measurement of those concepts can be as reliable as possible. In broad terms, the data situation at present is as presented below.

446. This chapter is divided into six main sections on data sources that broadly correspond to the structure of the previous five chapters dealing with conceptual issues and their implementation. Section A presents a general overview of the current position of data development and the direction it should take in order to better serve the needs of the analyses discussed in the previous chapters. Section B presents the results of a survey of statistical sources in CIS countries. Section C describes in detail the data currently available for analysis of production, intermediate consumption and value added and indicates how these data should be further adapted in order to better serve present-day production analysis as discussed in chapter I. Section D deals with the data on final uses that serves the extended i-o analysis presented in chapter II. Section E is an assessment of the data sources on property income and transfers that are needed to serve the analysis of social contributions and benefits as considered in chapter IV and to analyse the effects of privatization and the emerging financial market as discussed in chapter V. Finally, section F deals in a more global manner with how the sectoral analyses and the compilation of integrated economic accounts (IEA), as discussed in chapter III, could be supported by the data sources presently available - but not often used extensively - and indicates how these data sources may have to change in the future.

A. Orientation of data development

447. The nature of available data is still largely determined by needs for data on output, intermediate consumption, value added and capital formation and other final uses, which were used in the detailed input-output tables and other forms of production analysis that were at the heart of the statistical process at the time when economies were centrally planned. The data used at that time were collected through an administrative process and used not only for statistical purposes but also for monitoring the achievement of the production targets that had been set centrally. The latter function, of course, is no longer performed, but many of the administrative data sources are still available; others, however, have been lost. In some instances, the lost data sources have been replaced by surveys and the survey orientation of the database of national accounts is increasing. Also, as was indicated in chapters I and II, the

conceptual requirements of production analysis have changed, and this poses new questions with respect to the data. The first most important change has of course been the enlargement of the production boundary to include not only material goods and services, but also non-material services. Furthermore, in order to study more effectively the transition process, there has been an increased emphasis on the distinction between market and non-market activities, the valuation of output in each and the corresponding identification of subsidies. Finally, asset accounts have been introduced that record not only capital formation - that is, changes in the stock of produced assets - but also the stocks of produced as well as non-produced assets.

448. On the other hand, there are new demands for data, because economies are changing and new phenomena need to be addressed in policy-making and analysis. The new data requirements are expanding the production focus of the past to encompass the type of income and financial analyses that are needed to study the changes in economies due to privatization, changes in social benefits and an emerging financial system, as described in chapters IV and V. New data are required to serve the sectoral analyses of IEAs. Such data requirements are closely related to the development of new accounting systems in countries, as sectoral data in particular will have to be based on the accounting systems used by public and private enterprises, banks and insurance companies, and also government.

449. During the transition period, a combination of conventional and new sources of data will have to be used for the compilation of national accounts in the former CPEs. Conventional data sources may also be used in some countries for the continuing compilation of MPS balances (see the annex to the Handbook). Those conventional sources comprise, above all, reports and records submitted by enterprises and organizations to statistical authorities. Such reports and records will have to be modified, of course, to meet SNA requirements. Consolidated presentations of business accounts of enterprises were used in the past and are still available - though to a lesser extent - to the statistical offices of former CPEs. As a survey of country practices and their intentions shows, many statistical offices intend to preserve the bulk of this reporting system for the immediate future. In some countries, this system is likely to cover only large- and medium-sized SOEs, but in some other countries efforts are being undertaken to include even small private enterprises. It is clear, however, that the appearance of numerous new private enterprises has dealt a serious blow to the compulsory reporting system. For example, in Poland, owing to the rapid growth of private shops and similar units, it has become difficult, if not impossible, to rely on conventional retail trade statistics which in the recent past provided important inputs for the estimation of final consumption expenditure. A somewhat similar situation exists in the Russian Federation, where there is a common practice of reselling goods originally purchased by individuals in the state shops.

450. Thus, it is obvious that the data contained in the conventional sources

cannot radically solve all the problems of securing the primary data needed for the compilation of national accounts. Especially serious gaps remain in the information that is needed for the compilation of sector accounts. Therefore, efforts may be made to improve the quality of conventional sources. In the past, those sources focused on information in physical units. The sources should be adapted to focus on market-oriented categories such as sales, profits, assets and liabilities, net worth and so forth. Also, special efforts will have to be undertaken to develop new sources of data or to adapt the old sources to the new requirements. This may take some time. In some countries in transition, work has already started in this area. New business accounting systems are being introduced. New methods of data collection that rely on sample surveys are gradually replacing the old statistical reporting systems. Registers of the institutional units are being set up to serve as a basis for the organization of sample surveys and so forth. In many countries in transition, the changes in this area are rather slow.[22]

451. The new and modified bases should be developed primarily for the direct compilation of SNA data and to a lesser degree for the purpose of developing conversion tables with the help of which selected aggregates of the SNA could be derived from MPS aggregates in some countries. Thus, existing reporting systems that in the past were used primarily for compiling the MPS should be altered so that direct compilation of SNA aggregates would be feasible. The reporting system should make it possible, for example, to identify the main types of taxes on products, other taxes on production, current taxes on income and wealth, current and capital transfers, and financial transactions.

452. This chapter represents a one-time effort to take a picture of the data situation, which is changing continuously over time, with the changes being different in different countries. The chapter should therefore be regarded not as an exhaustive presentation in terms of the data sources mentioned, but rather as an illustration of the data situation in transition countries from which conclusions about future data developments could be derived.

B. Statistical sources in countries of the Commonwealth of Independent States (CIS)

453. The Statistical Committee of CIS established a list of statistical series that are currently being compiled by the statistical offices of CIS member countries for collection and dissemination. The list includes about 500 series on the most important aspects of economic development covered in the national accounts. Table 6.1 identifies the most important series that can be used directly for the compilation of national accounts. It is worth noting that these series are collected on the basis of both old and new sources of data.

454. It is important to note that the information collected from the various sources may be incomplete. This may occur because of a number of factors such

as underreporting of output and income due to tax evasion, and incomplete coverage in registers, sample surveys and so forth of production units based only on self-employed labour. As has been shown in practice, the numerous small private units that have recently emerged as a result of the privatization process often do not provide any reports or accounts to the statistical authorities. It is essential, however, to attempt to identify the major types of omissions and underreporting and introduce some adjustments. This topic is discussed in detail in the Guidebook to Statistics on the Hidden Economy,[23] and in the Inventory of National Practices in Estimating Hidden and Informal Economic Activities For National Accounts.[24]

Table 6.1. Series available for the compilation of national accounts in member States of the Commonwealth of Independent States (CIS)

	Description	Periodicity of collection
1.	Revenues of state budget	Monthly
2.	VAT	Monthly
3.	Excise taxes	Monthly
4.	Taxes on profits	Monthly
5.	Taxes on personal income of households	Monthly
6.	Non-tax revenues and fees	Monthly
7.	Profits of enterprises (by industries)	Annually
8.	Losses of enterprises (by industries)	Annually
9.	Number of loss-making enterprises	Annually
10.	Mid-year stocks of fixed assets (by industries)	Quarterly
11.	Mid-year stocks of inventories (by industries)	Quarterly
12.	Payments of enterprises to state budget (by industries)	Annually
13.	Insurance premiums	Annually
14.	Insurance claims	Annually
15.	Short-term loans and advances	Monthly
16.	Long-term loans	Monthly
17.	Payments of enterprises into extrabudgetary funds	Quarterly
18.	Money income of households	Monthly

	Description	Periodicity of collection
19.	Money expenditure of households	Monthly
20.	Savings of households	Monthly
21.	Deposits of households	Monthly
22.	Financial assets of enterprises	Quarterly
23.	Net material product	Annually
24.	Final material consumption	Annually
25.	Net fixed capital formation	Annually
26.	Losses of fixed assets	Annually
27.	Losses of inventories	Annually
28.	Consumption of fixed assets	Annually
29.	Consumption of food (by major commodities)	Annually
30.	Consumption of non-food major commodities	Annually
31.	Stocks of consumer durable goods	Annually
32.	Expenses on training of personnel	Annually
33.	Pensions and allowances	Annually
34.	Social benefits	Annually
35.	Funds of enterprises used to finance expenses for cultural and social purposes	Annually
36.	Output of industry	Monthly
37.	Volume index number of industrial output	Monthly
38.	Price index number of industrial output	Monthly
39.	Output of major industrial commodities in physical units	Monthly
40.	Number of industrial enterprises	Quarterly
41.	Number of joint ventures	Semi-annually
42.	Number of persons employed at joint ventures	Semi-annually
43.	Number of non-residents employed in joint ventures	Semi-annually
44.	Compensation of employees engaged in joint ventures	Semi-annually
45.	Costs of production	Annually
46.	Average earnings at industrial enterprises	Monthly

	Description	Periodicity of collection
47.	Profitability of industrial enterprises	Annually
48.	Indebtedness of enterprises	Annually
49.	Output of agriculture in constant prices	Annually
50.	Output of major agricultural commodities	Monthly
51.	Sales of major agricultural goods	Monthly
52.	Price index number of agricultural output	Quarterly
53.	Number of agricultural enterprises	Annually
54.	Number of private farms	Annually
55.	Production costs in agriculture	Annually
56.	Consumption of major agricultural goods	Annually
57.	Stocks of cattle	Annually
58.	Average prices of agricultural goods registered at markets in major towns of the country	Annually
59.	Capital investment by industries	Annually
60.	Composition of capital investment	Annually
61.	Fixed assets put into operation during the accounting period	Annually
62.	Value of dwellings put into operation during the accounting period	Annually
63.	Value of non-residential buildings put into operation during the accounting period	Annually
64.	Stocks of fixed assets by industries	Annually
65.	Retail trade sales	Monthly
66.	Retail trade sales by major commodity groups	Monthly
67.	Consumer price index number	Monthly
68.	Sales of services (by major groups)	Monthly
69.	Stocks of goods at enterprises of trade	Quarterly
70.	Number of persons employed at enterprises of trade	Quarterly
71.	Average earnings in trade	Quarterly
72.	Profits of trade enterprises	Quarterly

	Description	Periodicity of collection
73.	Number of passengers carried by all types of transportation	Quarterly
74.	Number of ton-kilometres	Quarterly
75.	Number of persons employed at enterprises of transport	Quarterly
76.	Average earnings in transportation	Quarterly
77.	Major types of output of communication in physical units	Quarterly
78.	Number of persons employed in communication	Quarterly
79.	Average earnings in communication	Quarterly
80.	Number of persons employed in economy (by industries)	Annually
81.	Number of employees by industries	Annually
82.	Compensation of employees by industries	Annually
83.	Number of persons with a second job	Annually
84.	Number of man-hours worked	Monthly
85.	Number of unemployed	Annually
86.	Compensation of employees	Monthly
87.	Composition of households	Quarterly
88.	Housing conditions	Annually
89.	Number of institutions for preschool children	Annually
90.	Purchases of bonds by households	Annually
91.	Exports	Monthly
92.	Imports	Monthly
93.	Imports of major commodities	Monthly
94.	Exports of major commodities	Monthly
95.	Exports of services	Annually
96.	Imports of services	Annually
97.	Index numbers of exports and imports	Monthly
98.	Exports of joint ventures	Quarterly
99.	Imports of joint ventures	Quarterly

	Description	Periodicity of collection
100.	Barter import transactions	Quarterly

C. Data sources for analysis of production, intermediate consumption and value added

455. In most countries in transition (despite the demise of central planning and the measures already undertaken to transform cumbersome and expensive statistical services and introduce market-oriented statistics), there still exists a rather wide and detailed statistical reporting system. In view of this fact, it is generally recognized[25] that for several years countries in transition will be needing a mixed system, that is to say, a good part of the existing system will have to be kept in place as new market-oriented statistics are gradually introduced. There is evidence confirming the fact that many countries have indeed chosen a gradual approach to redesigning their statistical services and adapting them to new requirements.

456. This means that, during a transition period, countries will have to use for the compilation of their national accounts not only the sources that are conventionally employed in the market economies such as censuses, administrative records and sample surveys but also the statistical reports of enterprises which were the backbone of the information system of CPEs in the past. These reports, used in the past, are still being used today for the compilation of MPS balances. Despite some noticeable reductions and modifications recently introduced into this reporting system in many transition economies, it continues to supply a considerable amount of data on public, cooperative and to some extent even private enterprises. The last-mentioned submit to the statistical authorities statistical reports and bookkeeping data included in business accounts dealing with the principal aspects of their activities. Given the detailed nature of these reports, they are particularly useful for the derivation of benchmark estimates but they are of course deficient in terms of their coverage of expanding private and other activities reflecting structural changes in the economy.

457. The introduction of new data sources such as periodic censuses, sample surveys and so forth is likely to result in a considerable reduction in the statistical information that becomes available. These changes in the statistical process are visible in many countries in transition, though perhaps not everywhere to the same extent. When in future the compulsory statistical reporting system is reduced or abolished, estimation procedures may be based to a larger extent on annual extrapolations of detailed benchmark data for previous years.

458. Recent experiences with technical cooperation activities in transition countries suggest that significant improvements can be realized within the existing compilation mechanisms if the following measures are taken. The various report forms submitted by enterprises might be gradually consolidated. The volume and nature of the information collected from enterprises might be changed and reduced, keeping in mind the needs of the national accounts. Data collection might be reduced in terms of its frequency, and made more survey-oriented. Additional sample surveys might be introduced to measure activities not covered in the present reporting system, namely, the new private sector activities.

459. A description is given below of the main sources of data that are currently available in many countries in transition and can be used for the compilation of output and intermediate consumption of the main industries.

1. Main data sources

460. Statistical reports submitted by industrial enterprises normally contain a sufficient amount of the data needed for the estimation of output of the units submitting the reports. In some countries, these data refer to so-called market output, that is to say, the output that is sold and/or intended for sale. The enterprises derive these output data by direct valuation of quantities at basic or producer's prices. They have to be adjusted for changes in work-in-progress. The major shortcoming of the data on market output is that they are arrived at with the help of price-list data and, as a result, do not accurately measure actual receipts from sales.

461. Statistical reports also often provide data on sales that are a more appropriate basis for the derivation of output figures because they are obtained on the basis of bookkeeping records and refer to actual receipts from sales of output. The data on sales have to be adjusted for changes in inventories of finished but unsold goods and changes in work-in-progress. The only limitation of data on sales is that they may exclude the value of bartered goods. It is therefore essential to confront figures on market output with the figures on sales that are shown in different sections of the statistical reports, and to identify possible discrepancies. It should also be noted that in some cases the data on sales shown in the records of enterprises refer to the amount of money actually received by the enterprises or deposited to their accounts, rather than to the change in ownership of goods shipped to customers, the value of work performed or services rendered when appropriate documents and accounts are submitted to buyers, as is required by the SNA.

462. There are normally two accounts compiled by enterprises, namely, "goods shipped" and "sales of output", which broadly correspond to the above-mentioned two approaches. It is clear that data shown in the goods shipped account are more appropriate for estimation of output in accordance with SNA requirements.

It is therefore essential that statistical reports submitted by enterprises refer to this type of data on sales. In some cases, adjustments might need to be made to the data on sales shown in the records of the enterprises so as to meet SNA requirements. However, changes in the underlying principles of accounting in business may require changes in these treatments in the future.

463. In the recent past, a reduced format of statistical reporting was introduced in many transition economies for cooperatives, private enterprises and joint ventures. This reduced format still makes it possible to obtain data on sales and other components of output.

464. In some countries in transition, new forms of statistical reports are being designed to secure information needed to compile national accounts. For example, Romania recently introduced special statistical reports for large government enterprises. These reports include three major sections: section I contains data on the commodity composition of the output of the enterprise; section II contains data on the commodity composition of intermediate consumption and its distribution by the industries to which the activities of the enterprise belong; and section III contains data on the major components of the value added, that is, compensation of employees, taxes on production, consumption of fixed assets, and so on. Thus, the data of these reports can be used to compile production and generation of income accounts both for industries and for institutional sectors.

465. The Statistical Committee of CIS suggested a special form of statistical reporting for CIS member countries consisting of four sections: output; current outlays; taxes and subsidies on production; and stocks of inventories. This form is designed to facilitate compilation of national accounts in CIS member countries and its underlying definitions are consistent with those of the SNA. In particular, it has been suggested that the value of goods shipped to buyers for which appropriate bills and accounts are submitted to customers should be shown under "sales".

466. In principle, valuation of output in statistical reports of enterprises is on the whole consistent with SNA valuation requirements. It is normally carried out either in producer's or in basic prices; in most cases, however, statistical reports use a valuation closer to basic prices and exclude taxes on products. However, as should be clear from the above, this does not mean that data on output shown in the statistical reports of enterprises meet all the requirements of the SNA. In particular, figures on output shown in the statistical reports may include holding gains (losses).

467. Intermediate consumption of industrial enterprises is derived on the basis of data contained in the sections of the statistical reports dealing with production costs. In many countries, there is a special section of the statistical report where production costs are classified by broad homogeneous elements such as remuneration of labour, consumption of raw materials and

supplies, consumption of energy and so forth. It is worth noting that in the past that section was used for the estimation of material input in the MPS balances and for this purpose certain items of costs have to be split between input of material goods and services and input of non-material services. For the compilation of production accounts, there is no need for such a breakdown. However, payments for non-material services are often hidden among other items of costs that include remuneration for the labour input. It is essential to identify these payments, which include expenses for business trips, transportation costs, lodging while in travel status, consultants' fees, training costs, geologic survey expenses, expenses on research and scientific services, and so forth. Small-scale surveys of enterprises might be needed to achieve this. It is also worth noting that costs of production shown in the reports of enterprises may exclude some outlays on R and D carried out by enterprises but financed from the centralized fund of branch ministries. Estimates of these outlays are essential in order to arrive at full production costs. In some cases, data on production costs, which are used as a point of departure for the calculation of intermediate consumption, include some taxes on production, for example, taxes for the use of roads and taxes on transport, among others. Such taxes have to be removed from these data in order to arrive at intermediate consumption. Finally, data on production costs shown in the reports of enterprises include outlays for payment to financial intermediaries which are not consistent with SNA requirements.

468. As mentioned above, data on input of goods and services contained in the reports of enterprises on costs of production refer as a rule to prices that were in fact paid by the enterprises rather than to prices that existed at the moment when the goods entered the production process, as the SNA recommends. This recommendation is particularly relevant for countries with high inflation rates. Thus, data on production costs shown in the records of enterprises provide only a starting-point for calculation of intermediate consumption as defined in the SNA, and valuation adjustments may be needed. The scheme in table 6.2 shows the steps needed to transform data on costs contained in statistical reports so as to arrive at estimates of intermediate consumption.

Table 6.2. Derivation of intermediate consumption as defined in the SNA from data on costs contained in statistical reports

A.	Material input (identified in the report)
B.	Payments for non-material services (hidden in the report among other items of costs), plus
C.	Some taxes on production which are sometimes combined with the material input, minus

D. Outlays on R and D that are not included in the report on production costs, plus

E. Payments of interest (if included in costs), minus

F. Relevant part of FISIM (plus) charge

G. Payments of premiums to insurance companies, minus

H. Relevant part of output of insurance allocated to intermediate consumption, plus

I. Outlays on business trips (hotels, transportation) which are normally shown in the report as item of wages and salaries, plus

J. Intermediate consumption as defined in the SNA (A+B-C+D-E+F-G+H+I)

469. In some countries in transition, detailed surveys of the production cost of industrial enterprises are carried out periodically to ensure the data needed for the compilation of input-output tables. Those surveys can be used for the derivation of benchmark figures of intermediate consumption by commodity groups as well as for the derivation of estimates of intermediate consumption of enterprises not covered by the statistical reporting system. In some countries, such as Germany, statistical authorities in the new federal territories carried out surveys of cost structure in order to secure more reliable estimates of value added. In countries of CIS, statistical authorities introduced a special report to be submitted by joint ventures and enterprises entirely owned by foreign capital (form 1-vet) that contains data on the major aspects of their activities: production, capital investments, labour and external transactions (exports and imports); the form also includes some data on assets and liabilities.

470. To deal with these and other issues in the future, it is obvious that other sources of data will have to be gradually developed and introduced. For example, industrial censuses carried out every 5-10 years provide detailed benchmark estimates on the main activities of enterprises that could be extrapolated so as to obtain figures for intervening years. Extrapolation could also rely on the less detailed data obtained from such small-scale sample surveys as might deal with employment, prices, sales, and so forth.

471. The introduction of registers of enterprises is important for keeping track of the main characteristics of industrial enterprises such as quantity of output, number of employees, production capacity, consumption of energy, and so on, and the changes therein. Registers are essential for planning censuses and sample surveys, and determining "raising factors" when only part of the universe is surveyed. In some countries in transition, efforts have been undertaken to set up a system for the registration of enterprises which could in principle be used as an instrument for obtaining the necessary data on output and

intermediate consumption, and as a mechanism essential for planning and organizing sample surveys. Poland is one of the former CPEs where progress with respect to the introduction of business registers has been especially visible.

472. The major sources of data needed for estimation of output and intermediate consumption of activities carried out by own-account workers and small unincorporated enterprises are:

- Sample surveys of households that provide data on income from different sources, on purchases of goods and services and so forth;
- Statistical reports of trade organizations engaged in the procurement of goods produced by individuals and small private business units;
- Income declarations submitted by individuals to tax inspection authorities;
- Sample surveys of agricultural farms carried out periodically in some countries in transition.

2. Data sources on output, intermediate consumption and value added by industries

473. The use of data from statistical reports and surveys was described above in general terms. In the sections below, more detailed information is provided for each industry on what type of data is included in the sources mentioned, what other special data sources are available and how the data are used in the national accounts compilation.

(a) Agriculture

474. Output of agriculture is normally estimated within the framework of supply and use tables compiled for all main agricultural goods or groups of agricultural goods. A wide range of statistical sources are available for compilation of these supply and use tables, namely:

- Current agricultural statistics on output in physical units;
- Annual statistical reports and records of agricultural enterprises that contain data on their principal activities;
- Reports and records of trade organizations on:

  Procurement of agricultural goods;

  Supply of intermediate goods to agriculture;

Sales of agricultural goods;

- Sample surveys of sales (quantity and prices) in free markets; as a rule such surveys are carried out on a monthly basis in towns and settlements; for example, sample surveys of sales in the free market carried out in the Russian Federation include about 300 towns;

- Family budget surveys that provide data on sales of output in the free market, purchases of goods in the free market, consumption of agricultural goods, purchases of intermediate goods, and so on;

- Sample surveys of production on personal plots of households and private farms;

- Censuses of livestock held by households.

475. The bulk of data on intermediate consumption in agriculture comes from statistical reports submitted by agricultural enterprises; these reports normally contain data on costs of production. In some cases, the elements of costs include expenses on both intermediate consumption and remuneration of labour. The subdivision can be achieved with the help of data obtained from small-scale sample surveys. These surveys are often carried out in the context of the preparation of data for the input-output tables. As noted above, output of agriculture is computed in most transition economies before own consumption of seeds and fodder is deducted; information with respect to excluding this own consumption from output and intermediate consumption can be obtained in the context of the supply and use tables, as was explained above. Information on intermediate consumption in personal plots of employees can be obtained from family budget surveys; data on some items of intermediate consumption are contained in the reports of retail trade organizations.

476. The importance of the reports of agricultural enterprises is likely to diminish rapidly in the foreseeable future in many countries in transition. For example, in the Russian Federation, compulsory statistical reporting is preserved only by relatively large enterprises such as collective and state farms, partnerships and cooperatives, and so forth. Data on output and other aspects of the activities of small producers will be collected with the help of sample surveys.

477. Economic censuses in agriculture can in principle be an important source of information for the compilation of many figures pertaining to agriculture. In the recent past, this source of information practically did not exist because agricultural enterprises furnished comprehensive statistical reports both to the statistical authorities and to government agencies. In some of the transition economies, efforts are now being undertaken to introduce censuses into practice. Thus, the Inter-State Statistical Committee of CIS recently worked out

recommendations with respect to many issues pertaining to the organization of agricultural censuses. The programme of censuses suggested by the Inter-State Statistical Committee of CIS includes, among other things, the following: agricultural land (classified by major categories); agricultural machinery; output both in physical units and in value terms; stocks of cattle (classified by major categories); sales of agricultural products (classified by commodity groups and channels of realization); and financial indicators (loans, credits/debts).

478. An agricultural census was carried out in the new federal territories of Germany for 1991. The census made it possible to obtain important data on production and its composition, as well as data on many other important aspects of the economic process in agriculture.

(b) Construction

479. Output of construction is traditionally compiled on the basis of statistical reports on capital investments and the value of fixed assets put into operation; these reports are submitted to statistical authorities by enterprises, organizations and institutions in their capacity as contractors. In some countries, efforts are being undertaken to improve and modify these reports in order to secure data for analysis of the investment activities of the enterprises. Thus, in the Russian Federation a new form of report has recently been introduced to collect data on capital investments and sources of finance in different branches of the economy.

480. In addition, reports of construction enterprises on the value of construction and installation work performed during the accounting period are often also available. In some countries, these reports are less complete and reliable and therefore it is essential to attempt to reconcile them with the reports on investments and find out the reasons for possible discrepancies. The reports of contractors on the costs of construction work are another source of data that is available in some countries such as the Russian Federation and other CIS member States. In some countries, construction enterprises report on a monthly basis on their income from building activity. Information on own construction and capital repairs is available from the reports submitted by industrial and agricultural enterprises. The data on construction of private dwellings both on a contractual basis and own-account can be derived from the records of local government bodies. As a rule, these data refer to a number of dwellings and their main characteristics (for example, total space, number of rooms, and so forth). In some countries in transition, surveys of construction of private houses are carried out on annual basis. The overall space of newly built houses is multiplied by the average price charged by specialized building enterprises. The information on construction of private houses can be obtained in principle from the records of insurance companies. However, the insured value of houses is often considerably less than actually market price and therefore adjustments should be introduced before these data are used. Surveys

on purchases of building materials by households can be used for extrapolation of benchmark figures. The reports by construction enterprises on costs make it possible to derive data on intermediate consumption.

481. A major difficulty in covering the construction industry is that construction activities are being increasingly carried out as informal activities by small-scale enterprises or single operators, and often as a secondary activity. These are difficult to cover with present reporting methods and would require additional surveys. Another difficulty that should be recognized is that construction activities carried out as part of current repairs are traditionally performed by the owners of buildings and other structures, in effect as an ancillary activity.

(c) Transport trade and communication

482. Output of transportation and communication as well as intermediate consumption is compiled on the basis of reports submitted by transportation and communication enterprises on the receipts from the sales of their services and their costs. Also normally available are data from the statistical reports of industrial and agricultural enterprises on the sales of their transportation services. For extrapolation purposes, data of current statistics on ton-kilometres and passenger kilometres can be used. The figures on passenger-kilometres and ton-kilometres can be aggregated by using average price per passenger-kilometre and average price per ton-kilometre as weights.

483. The estimation of output and intermediate consumption of trade is based on statistical reports submitted by trade enterprises on the sales of goods, costs and profits. In cases where only data on sales by products are available, the output can be computed on the basis of the average trade mark-ups established for each commodity group. The latter approach is especially appropriate for computation of the output of the trade activity of industrial and agricultural enterprises. The index number of the volume of sales may be used to extrapolate the benchmark estimates of trade margins. The output of small private and family-run shops and establishments can be estimated on the basis of data obtained from sample surveys (average annual sales, employment, and so forth).

484. The appearance of numerous private shops and similar units in many countries in transition considerably complicates the use of data on transport and retail trade contained in the records submitted by trade organizations and transportation enterprises to statistical authorities. To cover these units special surveys will have to be organized. Some countries in transition such as the Russian Federation, for example, intend to carry out, on a regular basis, censuses of all the units engaged in retail trade activity. In many countries in transition, above all in CIS member countries, it is a common practice when individuals purchase goods at state shops to resell them at a profit. It is essential to measure this phenomenon and obtain some estimates of the trade mark-up realized as a result of resale.

(d) Housing services

485. The main sources of data needed for estimating the output and intermediate consumption of housing services are as follows:

- Records of local government authorities on rent and the cost of housing units owned by local government;
- Reports of enterprises on the costs of housing services produced by units owned by enterprises;
- Data of the ministry of finance on subsidies provided to the housing sector;
- Records of local government bodies on a number of privately owned houses or dwellings in the locality;
- Data of the ministry of finance on taxes on income obtained by households from letting of their dwelling;
- Data of censuses of dwellings;
- Data of family budget surveys on expenses associated with the maintenance of dwellings occupied by the owners.

486. In some countries in transition, efforts are being undertaken to modify the content of the records on housing services in order to make them consistent with the changes in the mode of financing costs and other novelties in this area. Thus, in the Russian Federation it was recently decided by statistical authorities to include in these records a number of new indicators: value of fixed assets in this sector, production cost, housing subsidies provided to households, and so forth.

487. In some countries in transition, data on stocks of dwellings obtained with the help of censuses (some of them are carried out in conjunction with population censuses) may be used to derive estimates of the output of housing. In the conditions of countries in transition, however, this approach may result in rather crude estimates. In cases where output of housing services produced by owner-occupiers is valued at cost, the estimation of this output may require the use of data on purchases of goods and services used as input; some of these data may be found in retail trade statistics. In CIS countries, statisticians may use the special statistical report on repairs of dwellings. The data on taxes on dwellings can be obtained from the reports of the ministry of finance. The data on income from renting dwellings owned by households can be established on the basis of income declarations submitted to tax inspection agencies.

(e) Business, personal, recreational, social and domestic services

488. Output and intermediate consumption of market personal, recreational and social services are estimated on the basis of the statistical reports on sales and costs of these services submitted by the units engaged in the provision of the services. Some countries in transition such as the Russian Federation continue to collect a number of statistical reports on sales of services to households, for example, the report on sales of everyday personal services (N1-usługi), the report on the network of units engaged in the provision of everyday personal services (N1-byut) and so forth. The output of small private units can be estimated on the basis of special surveys on gross receipts from sales. In some cases, output figures can be obtained by multiplying average gross receipts (per employed) established from sample surveys by the number of employed in the establishment. In this case, the estimation has to be made separately for each group of establishments, for example, museums, theatres, barber shops, public baths, and so forth. In some countries, records of the ministry of finance on the taxes on the income earned by individuals (individual labour activity) are available and can be used for the computation of the output of self-employed persons engaged in recreational, social and personal services (private doctors, teachers, photographers, and so on). The practice shows that these data need adjustments for underreporting. The output of certain industries not covered by statistical reporting system can be estimated on the basis of tabulations on VAT returns. With respect to small private enterprises, cooperatives, restaurants, hotels, and various services to households, the main source of data is the wide range of sample surveys, and income tax returns.

489. Income declarations and tax records are often used for estimation of output of liberal professions. Output of domestic services can be estimated on the basis of employment data by applying average wages.

(f) Financial intermediation services

490. The bulk of data needed for the estimation of output and intermediate consumption of financial institutions is obtained from the records of central and large commercial banks. In countries of CIS, the major source of data for compilation of output and intermediate consumption of banks is the special statistical report called "On profits and losses" (form f.2) which is submitted by these units. Special surveys might be necessary to obtain information on activities of small private financial institutions, including small commercial banks, and investment companies. Output and intermediate consumption of insurance can be derived from the data contained in the records of state and commercial insurance companies that are submitted to statistical authorities. Special surveys may be needed to obtain data on small private insurance companies. In CIS countries, insurance companies submit to statistical authorities annexes to their balance sheets that show profits and losses, costs and distribution of profits. As a rule, reports of pension funds are available

for deriving figures on output (costs) and intermediate consumption.

(g) Non-market services of general government

491. Output and intermediate consumption of non-market services of general government such as health, education, general administration and so on can be estimated on the basis of records of ministries of finance or similar government agencies on revenues and outlays of the state budget. These data refer to budgetary allocations to finance the costs of the corresponding institutions and agencies; the adopted classifications of outlays normally distinguish the allocations for financing current expenditure and those for capital expenditure. In some countries, selected health services are financed partially from the social security insurance fund, for example, services of sanatoriums, holiday centre homes, and so forth. The subsidies to these services can be obtained from the records of the social security fund. Data on consumption of capital that are needed to value output of non-market services at cost are computed on the basis of information on stocks of fixed assets and average depreciation rates. These data were used in the past for compilation of different balances of the MPS. Since budgetary units do not make allowances for the consumption of fixed capital, the estimates of such consumption were made in past MPS practices on the basis of data on stocks of fixed assets and established rates of depreciation. These estimates, as noted above, do not meet SNA requirements and can be used only as a starting-point for the derivation of consumption of fixed capital, as defined in the SNA.

3. Data on value added components

492. The use of the main data sources is discussed below, separately for each of the components of value added, in the order in which they are included in the generation of income account.

(a) Wages and salaries

493. Data on wages and salaries are contained in the statistical reports submitted by public and cooperative enterprises as well as by collective farms (where they still exist). These sources are normally used in countries in transition for obtaining wage figures in the framework of both labour statistics and the MPS. As a rule, these data provide a good basis for distribution of wages and salaries by industries. It should be remembered, however, that the definitions of wages and salaries adopted in the statistical reports of the enterprises may differ from those suggested in the SNA. For example, in the statistical reports submitted by the enterprises of the member countries of the CIS selected bonuses are shown among "other payments to the employees" which also include some social benefits. Therefore, some processing of the data recorded in statistical reports might be necessary in order to have them comply with the SNA. Additional data needed for such processing can be obtained from

small-scale sample surveys.

494. In order to correctly derive compensation of employees from business accounting records and reports, one should take into account the practice of enterprises of hiding in such records and reports expenses for the compensation of employees in order to avoid taxation. They achieve this, for example, by signing separate contracts with their employees for the performing of certain jobs and allocating the expenses to purchases of services, in other words, to intermediate input, rather than to wages and salaries. Also, as noted above, data on wages shown in the records of enterprises may exclude gifts in kind from employers to employees for the purpose of avoiding taxation.

495. Benchmark estimates of wages and salaries in individual industries can be derived from data on the number of employees from censuses of population or establishments coupled with information on average wages and salaries obtained from various other sources: household income and expenditure surveys, data obtained from professional associations engaged in the collection of data on particular industries, and so forth. These data can then be extrapolated with the help of data on changes in the volume of employment and on trends in average wages and salaries; such information can be obtained from annual labour surveys.

496. The best source of data for compilation of value added components of non-market general government services are the accounts compiled at each level of government. It is normally necessary to introduce adjustments to these data to make them conform to the SNA classifications. Sometimes it is necessary to convert data relating to the fiscal year to a calendar year. In the many cases where no data are directly available from the accounts at each level of government, the only available source of data are the records of the ministry of finance on state budget revenues and outlays. For example, data on wages and salaries of general government institutions are normally available from the records of the ministry of finance or a similar government body on the allocation of funds to government institutions for the finance of their administrative costs.

497. To obtain data on wages and salaries paid out by small private enterprises not covered by a statistical reporting system, sample surveys need to be carried out.

498. In some countries where the social security system covers large segments of the population, the records of social security funds may provide satisfactory data on wages and salaries, since social contributions are as a rule proportional to wages. In some countries, data on wages and salaries are collected through labour-force or employment surveys.

499. In some countries, the reports of state banks on cash turnover contain data on the funds used for payments of wages and salaries. However, this source has some distinct limitations. First, it does not cover wages and salaries paid by

enterprises directly out of receipts from sales; second, it records payments of wages and salaries on a cash basis rather than on an accrual basis which is required in the SNA; third, it does not allow for a breakdown of data by industries which is essential for the compilation of the generation of income account for industries. Nevertheless, it is useful to attempt to reconcile the data obtained from these state bank reports on cash turnover with the data on wages and salaries obtained from other sources, such as the special reports on wages and salaries submitted by enterprises and organizations to the statistical authorities.

500. Since in some cases the allocation of wages and salaries to individual industries may present a practical problem, miscellaneous sources of data can be employed for this purpose. One type comprises periodic sample surveys of costs carried out to secure data for the compilation of input-output tables. In some instances, allocation can be made with the help of conventions; for example, allocation of wages among the different establishments of collective farms can be made on the basis of the assumption of the similarity of the cost structure of output produced by similar establishments. For some key sectors of the economy, such as manufacturing, construction and so on, periodic censuses or annual comprehensive surveys may provide the necessary data.

(b) Social contributions by employers

501. Actual social contributions can be derived from the records of social security funds. These data may not provide a breakdown by industries of social contributions, however. This information can be derived by applying average rates of contribution to data on wages and salaries. In many countries in transition, the rate of social contribution is similar for all industries. However, where there are variations in rates, the available information is sufficient as a rule for the purpose of applying the corresponding rates.

502. Data needed for the calculation of imputed social contributions are not as a rule shown separately and explicitly in the statistical reports of enterprises; they are normally shown together with other payments to employees. Separate information may be obtained with the help of small-scale surveys. The imputed social contributions in the military sector can normally be derived on the basis of published data on defence expenditures.

(c) Taxes and subsidies on production and imports

503. The main source of data on taxes and subsidies are the records of the ministry of finance or a similar government agency on the revenue and outlay of the state budget. In some cases, data on subsidies are contained in the administrative records of individual ministries and departments. For example, data on subsidies paid to transportation enterprises to compensate for the losses that arise in connection with the provision of free services to selected groups of the population can be found in the administrative reports of the

ministry of transportation.

504. In certain cases, the amount of subsidies can be estimated as the excess of the costs over the actual payments by consumers for the products. For example, this approach can be used for the estimation of subsidies in the housing sector. "Subsidies" to selected enterprises providing market health services may be obtained from the records of social security. As noted above, these payments are not treated as subsidies but as purchases of services by government and then as social transfers in kind.

505. Data on taxes and subsidies contained in administrative records do not always include information needed to allocate taxes and subsidies to corresponding industries. This allocation may in some cases involve adoption of certain conventions. For example, taxes on the use of fixed assets may be allocated among the industries proportionally to the stocks of fixed assets.

(d) Consumption of fixed capital

506. Data on consumption of fixed capital are contained in the statistical reports submitted by enterprises. These data normally refer to depreciation allowances computed by the enterprises on the basis of average depreciation rates applied to historic values of stocks of fixed assets. These values need to be adjusted to convert them into current replacement values. The imputed data on consumption of fixed capital in non-market branches of the general government are estimated in statistical offices on the basis of information on the value of stocks of fixed capital and average depreciation rates. As in the former case, the estimates should be converted to replacement values.

507. Data on consumption of fixed capital appear in many balances of the MPS, but all of those data originate in the balance of fixed assets. It should be recalled that in the SNA, consumption of fixed capital is defined to include normal predictable losses of fixed assets. In the MPS, there is no breakdown of losses into normal and extraordinary losses of capital. Some indications needed to achieve this breakdown may be found in the records of insurance companies; normal losses can be taken as equal to the sum of the claims due.

508. As indicated above, the perpetual inventory method (PIM) should be used in principle to obtain estimates of the consumption of fixed capital as defined in the SNA. The revaluations of fixed assets that are periodically held in countries in transition may provide a good starting-point for the use of the PIM.

D. Data sources on final uses

509. Below are presented the data sources that are available for independent estimates of capital formation and other elements of the asset accounts, final

consumption and also exports and imports. The present section should be read in conjunction with chapter II dealing with selected features and applications of I-O analysis based on the 1993 SNA that are relevant to countries in transition.

1. Data sources on capital formation and asset accounts

510. The main sources of data needed for compilation of asset accounts, in particular gross fixed capital formation and changes in inventories, are essentially the same as those that were used in the past in the MPS compilation. Countries can therefore use their past experiences to a large extent, though care should be taken in applying such SNA concepts as were explained above, instead of the MPS concepts. In particular, the bulk of the data needed for the calculation of stocks of fixed assets, gross fixed capital formation, and other changes therein, as defined in the SNA, are the same as those that were used in the past to compile the MPS balances of fixed assets, which are very close to the asset accounts in the SNA. The latest SNA additions in the form of fixed intangible assets, such as outlays on mineral exploration and purchases of computer software, are not covered in the conventional MPS asset balances and the supporting data sources. Data sources on capital transfers are not among those that were used in the conventional MPS compilations of the past.

511. Extension of the compilation of flow data on asset accounts that include data on stocks of produced and non-produced non-financial assets is likely to be difficult to apply in practice in many countries in transition, if not in the majority of them, at least at the early stages of the work. In most countries, there is no experience with regard to statistics on stocks of non-produced assets. For these reasons - as was suggested in the introduction (sect. C) and in chapter II (sect. A) - a two-stage approach is recommended. At the first stage, priority should be given to integration of statistics on produced assets, for which the core statistics already exist in many countries in transition, and in a second stage attention may be given to the incorporation of asset accounts for non-produced (non-financial) assets such as land, mineral reserves, forests, and so on.

(a) Data on gross fixed capital formation and asset accounts for produced fixed assets

512. An important source of data on investments and fixed assets put into operation is the reports of enterprises. Such reports are normally submitted to the statistical authorities by public enterprises and large private companies. In some countries in transition, enterprises submit to statistical authorities their business records and statistical reports on stocks of fixed assets, capital repairs and depreciation of fixed capital. The investments of small private enterprises can be compiled on the basis of sample surveys. Experience shows that business accounts of enterprises on investments have to be adjusted in order to remove items that are not included in capital formation as defined in the SNA. For example, expenses on training of staff of newly established enterprises are often included in investments in business accounts. On the other hand, capital repairs are often allocated in business accounts to current costs. Some inquiries might be necessary to obtain data needed for the adjustments in question.

513. The scheme in table 6.3 shows the adjustments made in countries of CIS in order to derive estimates of gross fixed capital formation from the data on capital investments submitted by enterprises to statistical offices in special statistical reports (form 2-ks). It should be noted that even in the past, statistical reports on fixed assets submitted to statistical authorities in former CPE countries were not complete. For example, in the former German Democratic Republic, data on fixed capital were not submitted by a number of special departments such as the ministry of internal affairs, the ministry of defence, the customs department and so forth; the value of capital formation in these units had to be estimated with the help of indirect data. This situation continues to exist in some countries in transition.

Table 6.3. Derivation of gross fixed capital formation from data on capital investments, based on CIS practices

A. Capital investment (as reported in form 2-ks)

B. Outlays that do not lead to the increase of value of fixed assets, but are included in capital investments (minus)

C. Increase in stocks of cattle allocated to fixed assets (plus)

D. Capital repair of fixed assets (plus)

E. Purchases of equipment by budgetary government units (plus)

F. Purchases of books for libraries (plus)

G. Purchases of computer software (plus)

H. Disposal of fixed assets (minus)

I. Outlays on mineral exploration (plus)

J. Purchases of tools and implements allocated to inventories (minus)

K. Expenses on acquisition of originals of literary and artistic works

L. Transfer costs (non-produced assets)

M. Gross fixed capital formation (A-B+C-D+E+G+I-H-J+K+L)

Note: Some expenditures on mineral exploration might be included in the capital investment shown in the records of the enterprises. They may include expenses on mineral exploration pertaining to specific construction projects. In this case, adjustment I should be defined accordingly.

514. Other countries might collect data on capital formation in some industries with the help of special surveys, such as surveys of computer centres to obtain data on purchases of computer software and establish ratios of purchases of software to the output of different industries. The surveys should ask about the use of capital goods, independent of whether they are leased or not. If capital formation data are not available for small establishments, adjustments are needed to inflate the data to encompass the universe, for example, on the basis of data on paid working days and wages and salaries, or by using the ratio of capital formation to the output of similar activities.

515. Another important source of information are the administrative records of government on the allocation and use of funds from the state budget for capital investment in public health, education, general administration services, and so forth. In some cases, government accounts do not provide a proper distinction between current and capital outlays; in some countries, this distinction is not made at all. It is essential, however, to ensure this breakdown of outlays. The most radical solution of the problem is the introduction of such a distinction into the government accounts. In the absence of such groupings, some approximate procedures can be used. For example, in the former USSR, the subdivision into current and capital outlays existed in the records of government on the state budget expenditure up to 1989. For calculation of figures for 1990, the subdivision was achieved with the help of ratios computed for 1989. Under certain conditions, the approximate estimates may distort the picture and small-scale sample surveys might be necessary to obtain more accurate figures.

516. Reports of construction enterprises on their output, income and costs are

another important source of data. Administrative records provide information on the construction of private houses, usually in rural and semi-rural areas. Data on own construction come from the estimates of output of construction. Data on the construction of private dwellings can be obtained from the records of insurance companies; however, the values shown in these records are often understated and need some adjustments.

517. In many instances, indirect methods are used to calculate fixed capital formation. The main indirect method is the so-called commodity flow approach. It is applied particularly to calculate investments in machinery and equipment. It combines production and external trade to arrive at estimates of fixed capital formation as the sum of production and imports reduced by exports. For selected types of machinery that are mainly imported, fixed capital formation may be taken to be equal to imports. A similar method may be used to compute investments in livestock. As noted above, the methods and classifications used in countries in transition make it possible to draw a distinction between the increase in the number of young animals to be treated as fixed capital formation and the raising of cattle for slaughter to be included in inventories.

518. For the compilation of stocks of fixed assets, indirect methods may also be used. In particular, the PIM may be applied to derive data on stocks of produced assets by type from data on gross fixed capital formation (see chap. II, sects. A.1 and 2).

(b) Data for the compilation of changes in inventories

519. Data on change in inventories are obtained from:

(a) The records of enterprises (balance sheets);

(b) Supply and use tables of agricultural goods;

(c) Administrative records, for example, data on state reserves;

(d) Household budget surveys.

520. In addition, the special form (2-ks) for statistical reporting suggested by the CIS Inter-State Statistical Committee (mentioned above) also contains data on stocks of inventories. In line with what was explained above, valuation adjustments are needed to adjust the change in inventories valued in business accounts at historic costs for compatibility with the SNA valuation of transactions at the moment the transaction takes place.

(c) Data on non-produced (non-financial) assets

521. Data on acquisition less disposals and also on stocks of non-produced (non-financial) assets are currently difficult to obtain in countries in

transition. Their availability would be mainly dependent on the introduction of new business accounting and reporting systems. There are plans to introduce new formats of business accounts both for financial and for non-financial institutions and enterprises. However, it may take considerable time to implement these plans, because their implementation will have to be synchronized with the transformation of the existing financial institutions into market-oriented ones. The incorporation and valuation of land and subsoil assets at market prices may present a serious practical problem for those countries in transition where sales of land and subsoil assets were prohibited by law in the not-so-distant past and where even at present these transactions are not too common despite changes in legislation.

522. It is also important to note that new business accounts introduced recently in some transition economies incorporate data on intangible assets, such as patents, licences, concessions, trade marks, leases, software, and so forth. Thus, for example, regulations approved recently by the Ministry of Finance of the Russian Federation, with regard to new business accounts, clearly define the scope of these assets and the rules of depreciation, whereby the value of intangible assets should be written off over 10 years if more accurate data on the service life of the intangible assets are not available. Data on intangible assets recorded in business accounts can be regarded, in principle, as a starting point for the compilation of stocks of intangible produced and non-produced assets and the changes therein including gross fixed capital formation. However, the scope and valuation of intangible assets in business accounts may deviate from the SNA standards and some adjustments may be needed to obtain the desired consistency.

2. Sources of data on consumption

523. A main source of data used to estimate final consumption expenditure of households in countries in transition continues to be statistics on retail sales. In many countries, they are collected from the reports of retail trade enterprises. Data on retail sales have normally to be reduced by the purchases of intermediate goods in order to arrive at final consumption expenditure. Purchases of items that are classed as valuables are also to be removed from retail trade statistics and allocated to capital formation. In some cases, adjustments are also needed on the purchases of goods by wholesale trade enterprises or organizations included in retail trade statistics. In other instances, data on retail sales in transition countries are often incomplete because they exclude important items such as purchases of consumer durables, payments for repair of goods, and so forth. In such instances, special adjustments, as given below, are needed to cope with the problem:

(a) Statistics on retail sales do not normally include purchases of consumer services, for example, households payments of sewerage fees, radio and television licences, school and hospital fees, and so forth; these can be

estimated from government records. Household expenditure on electricity, gas, water, telegraph, telephone and postal charges may be obtained from the reports of enterprises;

(b) Statistics on retail sales often do not include the sales of agricultural goods by collective farms and state agricultural farms. They may have to be estimated on the basis of reports of these enterprises. The estimates are often included in the supply and use tables of agricultural goods;

(c) Sales data usually do not cover the sales of goods by small private units. These can be estimated on the basis of data collected through sample surveys on average sales per employee and a number of employees engaged in such units. For example, this approach is used in Poland to cover sales by small units with five employees or less.

524. It should be noted that during the past several years the reliability of the data on sales submitted by state trade organizations diminished noticeably in a number of countries in transition and above all in CIS countries. State shops will often sell their goods to private units and find ways to hide these sales in their records. This requires certain adjustments for underreporting. On the other hand, many small private shops often provide no reports at all to statistical authorities. Some surveys might be necessary to estimate their sales. Data on the number of such shops could be used as a starting-point for the derivation of the estimates.

525. In some countries in transition, goods sold by state shops and included in retail trade statistics are resold by individuals with a considerable margin. It is essential to estimate this margin to arrive at accurate figures of final consumption expenditure at purchaser's prices.

526. Household expenditure surveys are another source used in many countries to compile figures on final consumption expenditure of households or on the distribution of such expenditure. This source of data has its own limitations; for example, some components such as insurance services, imputed housing services of owner-occupiers and so on included in final consumption expenditure of households cannot be estimated properly on the basis of expenditure surveys.

527. Data on purchases of cars, if not covered by sales statistics, can be estimated on the basis of government records showing registration of cars. The estimates of sales of cars may also be derived from data on production and external trade. Data on purchases of other selected durable goods are sometimes collected and published by professional associations.

528. Estimates of the consumption of certain types of consumer goods can be arrived at by using production statistics adjusted by net exports figures. Estimates of consumption of certain commodities can be derived from imports statistics.

529. Another possible source of data on sales are censuses and sample surveys of retail trade and other surveys. In particular, estimates of consumption of goods purchased in free markets are made on the basis of data collected from regular sample surveys of sales in free markets. In many countries in transition, purchases of agricultural goods in markets can be derived from the supply and use tables compiled for major agricultural commodities or groups of commodities. The schemes of such tables and estimation methods as are applied were discussed in chapter I dealing with the items of the production accounts. Household expenditure on restaurants, hotels and cafés may be obtained from surveys or censuses for benchmark years and extrapolated to a current year by data on sales taxes.

530. In some countries, the records of banks containing data on the cash transferred by retail trade organizations and enterprises to banks are used for the compilation of overall figures on purchases of goods and services by households. These data are adjusted by the amounts that retail trade organizations are allowed to retain for the payment of wages and other expenses; those amounts can be extracted from the reports of retail trade organizations. Adjustments are also needed on the purchases of goods by enterprises and organizations; they are excluded so as to arrive at purchases by households. Finally, some adjustments might be necessary to exclude that part of cash earned by retail trade organizations in previous periods but transferred in the given accounting period, and to add the part of cash earned during the accounting period but not yet transferred to banks. This source of data can be used in conjunction with other sources. Its main limitation is that it does not provide the breakdown of sales by commodity groups.

531. Estimates of own consumption of agricultural goods are obtained from the supply and use tables of agricultural goods for the compilation of which a variety of sources of data are used: current production statistics, small-scale sample surveys of personal plots of households and private farms, family budget surveys, censuses of livestock, records of procurement organizations, sample surveys of purchases of goods in the free market, and so on. These tables are used for the computation of the output of agriculture. Data on own consumption of goods obtained as a result of the processing of agricultural products, for example, wine, vegetable oil and so forth, are derived from family budget surveys. The sales of agricultural goods in free markets are also derived from supply and use tables.

532. Administrative records of local government often contain data on the rent paid by households for dwellings owned by the local government. Data on actual rent is estimated on the basis of data related to the average rent per square metre of dwelling. The latter is obtained from reports submitted by housing units to local authorities about the rents received from tenants. This approach makes it possible to cover those housing units that do not submit the reports. Data on consumption of housing services produced by owner-occupiers are obtained

as a result of estimating imputed output of housing services. Administrative records on the number of dwellings occupied by owners, together with information on comparable market rents per square metre, might be used to make these estimates. When the estimates are obtained on the basis of the cost approach, data on the purchase of goods used for the maintenance and upkeep of the dwellings are collected from sample surveys or family budget surveys and data on depreciation of fixed capital are obtained from the balances of fixed assets; the data on depreciation of fixed capital are not as a rule compiled in current replacement prices and therefore some adjustments might be needed to arrive at the valuation recommended in the SNA.

533. Records of insurance companies are the main source of data for estimating final consumption expenditure on insurance services. While the entire output of life insurance computed on the basis of these records should be allocated to the final consumption of households, output of non-life insurance has to be allocated between intermediate consumption of producers and final consumption and this may be done in proportion to the insurance premiums paid by different types of policyholders.

534. Data on the consumption of other services are obtained from a variety of sources. Reports of enterprises may include information on sales of consumer services. Partial payments of households to producers of non-market government services, such as payments to institutions for pre-schoolchildren, sanatoriums, holiday centres and so on, can be derived from the administrative records of the ministry of finance. Data on purchases of the services of private doctors, teachers, lawyers and so on are obtained from the records on tax returns; some adjustment might be necessary to take into account underreporting. Social security benefits in kind are estimated on the basis of the data contained in the records of social security funds.

535. Data on purchases of goods and services by residents abroad and by non-residents on the economic territory of the country are estimated in the context of the compilation of the balance of payments.

536. As noted above, households often obtain the same goods from different channels. The problems that arise in this connection may be overcome by combining information from the different sources. For example, data obtained from family budget surveys can secure computation of the shares of major channels. Using these shares, it is possible to arrive at estimates of the total consumption of a given class of commodities. If the budget survey indicates that 80 per cent of the consumption of milk comes from purchases in the state retail trade, then we can derive, using this coefficient, the figure for the total consumption of milk. The underlying assumption is that information on the relative importance of distribution channels is less vulnerable than the limitations of budget surveys. This assumption was tested successfully in the Netherlands for 1985 and 1986.

537. The estimates of fuel consumption can be derived on the basis of data on stocks of private cars and the average consumption of fuel per car.

538. Data needed to compile final consumption expenditure of general government come from the same sources that are used to calculate the output of non-market general government services: administrative records on the allocation of funds to various government departments and institutions engaged in the provision of non-market services, and records of the ministry of finance on state budget revenues and expenditures. As was noted above, in some instances government accounts do not make an adequate distinction between current and capital expenditure and some inquiries might be necessary. The most radical solution of the problem would be the introduction of such a distinction into government accounts. In addition, data are needed to assess incidental sales that are allocated to other uses. These data are as a rule available from administrative records and from the records of the ministry of finance on state budget revenues. To some extent, they can also be obtained from sample surveys of income and expenditure of households.

539. The statistical reports of enterprises in many countries in transition and above all in CIS member countries contain figures on the allocation from profits to the establishments of enterprises engaged in provision of cultural and social services to employees free or almost free; these data are sufficient for the derivation of the consumption of these services.

540. Special inquiries and sample surveys might be necessary to obtain data needed to estimate the final consumption expenditure of NPISHs. Nevertheless, some NPISHs do submit their records to the statistical authorities in some countries in transition.

541. Some countries in transition continue to compile the balance of money income and expenditure of the population which contains figures on purchases of goods and services by households. The estimates of these expenses are obtained for this balance essentially from the above sources of data. Thus, there should be a close correspondence between the figures on expenditures of households on purchases of goods and services contained in the money income and expenditure of the population and those in the use of income account.

3. Sources of data on exports and imports

542. Data on exports and imports of goods ("visibles") are obtained as a rule from external trade statistics. It should be recalled that in the recent past the external trade statistics of many countries in transition relied on the definitions and classifications worked out by the CMEA Standing Commission on Statistics and the latter deviated in a number of respects from the recommendations in this area of the United Nations and other international organizations. The above-mentioned treatment of large construction projects

abroad offers an important example of deviations between exports and imports in the SNA and the MPS, but not the only one. The other example involves the treatment of goods provided to other countries free in the context of technical and economic assistance. This item, contrary to SNA procedure, was not included in exports/imports in the CMEA recommendations on compilation of external trade statistics.[26]

543. There is evidence that, at present, many countries in transition are undertaking efforts to transform their external trade statistics in accordance with common international standards. In particular, custom statistics, which normally provide the bulk of data on exports and imports of goods, are being introduced in several transition countries. However, as long as these custom statistics do not yet cover a substantial portion of external trade transactions, other statistical sources may be used such as the reports of external trade organizations and associations submitted to the statistical authorities. The coverage of these sources may deteriorate gradually, however, as the liberalization of external trade implemented in many countries in transition makes it possible for enterprises to sell their output directly to purchasers abroad without involving specialized external trade organizations, as was the case in the recent past. As a result of this development, the records of external trade organizations may no longer cover all external transactions of resident units in the country.

544. In some countries, the statistical authorities also collect data from enterprises on the shipment of goods for exports; these data, collected with the help of special reporting forms, are valued at domestic prices which may deviate considerably from the prices actually earned from external trade. Thus, the compilation of external trade statistics may present a formidable task for some transition countries and a variety of sources of data will have to be used to obtain a coherent picture.

545. A particularly difficult problem that arises in countries of CIS is due to the lack of customs and customs statistics, which makes the monitoring of inter-State trade very difficult. The radical solution of this problem entails the introduction of customs statistics. Some countries of CIS, and above all the Russian Federation, are undertaking urgent measures to organize customs statistics but in some cases this may take a number of years. In the absence of such a source, they may rely on the estimates of inter-State trade published by the Inter-State Statistical Committee of CIS. These estimates represent exports/imports of the most important goods and are based on reports submitted by the enterprises that export goods. The coverage of the items included in such reports is gradually expanding. For some of the countries in transition, it is important to record the external flows of goods exported or imported by individuals who go abroad for shopping purposes (these shopping tours are organized for individuals by tourist agencies). Customs declarations where they exist are a source of data for such transactions, but as a rule relatively small shipments are not shown in declarations. In some countries, it might be

necessary to carry out special surveys to measure these flows of goods across the border.

546. Even more complex problems exist for many countries in transition as regards obtaining data on external trade of services. In many of these countries, the introduction of balance of payments that can be the source of data for services is in the very early stages. In these cases, special surveys of the enterprises involved in these transactions will have to be carried out.

E. Data sources on property income and transfers

547. Descriptions are presented below of the data sources for property income, and current and capital transfers.

1. Data sources on property income

548. Data on the interest received and paid by banks can be obtained from the records of both central and commercial banks. Data on the winnings of the holders of state bonds that are treated as interest are normally shown in the reports of the savings banks that pay out the winnings in question. Data on dividends can be derived from the reports of enterprises on the distribution of profits. In some cases, additional inquiries might be needed to obtain this information. Data on withdrawals from the profits of quasi-corporations owned by government can often be identified in the records of enterprises; they can also be derived from the records of ministries of finance on state budget revenues. Data on withdrawals from profits that are added to the funds of individual ministries can be obtained from the administrative records of those ministries.

549. Data for the measurement of rent on land paid to the government are normally contained in the report of the ministry of finance on the execution of the state budget. If land is owned by units other than the government, data on rent can be extracted from the income records of these units or from the income declarations submitted to tax inspection agencies.

550. In some countries in transition, data on the interest on bills can be obtained from special agencies that have been set up to keep track of bills. Data on various types of property income received by households can be derived from tabulations of personal income tax returns. Another important source of data on property income is family budget surveys or annual income sample surveys. Property income received from and paid to the rest of the world is recorded in the balance of payments, the compilation of which is normally the function of financial institutions such as the central bank or state banks.

551. In principle, accounts and records of joint ventures and enterprises solely

controlled by the foreign capital submitted to fiscal and statistical authorities contain the bulk of the data on reinvested income. The other source of data for this item is the balance of payments.

552. Estimates of income attributable to insurance policyholders can be extracted from the accounts and records of insurance companies in many countries in transition and above all in CIS member States.

2. Data sources on social and other current transfers

553. Data on current transfers such as taxes are normally available in government records, for example those of the ministry of finance on revenues of the state budget. Data on local taxes are obtained from the records of local government agencies. The classification of taxes used in government records normally makes it possible to allocate the taxes among sectors; however, in some cases certain inquiries might be necessary to split the taxes among the different groups of payers.

554. Data on certain types of taxes can be estimated on the basis of income series such as wages and salaries, and by applying average rates of taxation. Such an approach was used in the recent past in some countries in transition to compile the balance of money income and expenditure of households.

555. Data on social contributions and social security benefits can be obtained from the records of social security funds. For example in the Russian Federation, the annual report of the Ministry of Social Security is available. It should be noted that in many cases pensions are paid out through the post offices and the data on pensions shown in the records of social security funds include the amounts used to finance postage; therefore, these amounts have to be estimated and excluded from the figures shown in the records in order to arrive at estimates of the pensions. Data on unfunded social benefits are normally contained in the reports of enterprises; however, they may be combined with miscellaneous transfers and some inquiries might be necessary to isolate them.

556. Data on insurance premiums and claims are available from the records of insurance companies; those insurance companies that are controlled or owned by the state normally submit their records to the statistical authorities.

557. Premiums for certain types of insurance, such as passenger insurance on airlines, can be calculated on the basis of data with respect to the number of passengers and the average premium per passenger.

558. Some social organizations (for example, trade unions) normally submit reports to the statistical authorities on the contributions of their members and current transfers paid out to households; however, for many other NPISHs (in particular religious organizations), data on contributions can be established

only with the help of special surveys and inquiries. The Russian Statistical Office had to organize a special sample survey of religious organizations to establish their income, costs and transfers in order to compile the accounts of NPISHs. It is worth noting that, in the recent past in some countries in transition, the majority of social organizations submitted their records on income, costs and so forth to statistical offices. These data could be extrapolated with the help of series on the membership of organizations, changes in average wages, and so on.

559. The main sources of data on fines and penalties are administrative government records (for example, the records of ministries of internal affairs, but also those of enterprises on cost structure and distribution of profits).

560. Data on certain types of transfers (for example, scholarships paid out by enterprises to households) are sometimes collected from the records of state banks.

561. Data on transfers to the state budget of funds received by enterprises from the voluntary unpaid work of their employees are contained in the records on revenues of the state budget.

562. Data on current transfers received from and paid to the rest of the world are obtained as a rule from the balance of payments or from the records of state banks. Data on international assistance are available from the records of government agencies supervising this process.

563. The report on the budget of trade unions contains some data needed to estimate social transfers.

564. In principle, the bulk of the data needed for the compilation of the secondary distribution of income account can be extracted from the balance of money income and expenditure of households which many countries in transition, and above all the countries of CIS, continue to compile.

3. Data on capital transfers

565. Data on investment grants which are still the most important type of capital transfer in many transition economies are available from government records on state budget expenditure.

566. Data on the value of vouchers distributed to households and invested by them to acquire shares of enterprises are available from the administrative records of the government agencies responsible for the management of the privatization process. These data can be used to derive estimates of capital transfers from the government to households.

F. Data for integrated sector accounts

567. The present section gives a brief, general overview of the major sources of data existing in transition economies that are needed to compile the integrated accounts for institutional sectors of the integrated economic account (IEA). The integrated accounts provide for each sector an integrated description and analysis of all aspects of the economic activity performed by the institutional units that are allocated to the sector in question. In order for primary data to support such an analysis, they should ideally provide consistent and comprehensive information on all activities and the functions of the institutional (micro) units that are aggregated into sectors. For that reason, the description below of major data sources is organized by sectors. In discussing these sources, problems are identified that may be encountered in collecting the data for these sectors, and providing the comprehensive data required in the SNA for each sector.

1. Business accounting records

568. With regard to non-financial corporations, a distinction is useful between state-owned enterprises (SOEs), which still dominate the economy of many countries in transition, and private enterprises. In the recent past the SOEs controlled by relevant ministries and departments in many former CPEs submitted to the statistical authorities two major types of economic information: aggregated business accounts of the enterprise and statistical reports on major aspects of the economic performance of the enterprise. The aggregated business accounts were submitted by the enterprises both to the statistical authorities and to the branch ministries and departments to which they belonged. On the whole, these two sources of information were consistent and complementary; the business accounts served by and large as a basis for the compilation of statistical reports. However, certain types of statistical reports were compiled relatively independently of the business accounts and this led to certain discrepancies between corresponding magnitudes in the two sources. The most important discrepancy existed between the figure on output shown in the statistical reports and its components registered in the business accounts. The figure on output in the statistical reports was normally obtained by multiplying the quantities of goods produced by the relevant established prices registered in the price-lists. Since these prices were not necessarily the same prices as those actually paid and received for the output sold, the data from the statistical reports were not always consistent with the data on actual sales in the business accounts after adjustment for changes in inventories of produced but unsold goods. In principle, the statistical authorities were in a position to reconcile the two figures when the relevant balances of the MPS were compiled because they possessed both sources; in practice, however, this reconciliation was not always carried out.

569. The two sources of data have undergone noticeable changes during recent

years in many countries in transition and above all in CIS member States. First of all, in many countries aggregated business accounts are no longer submitted to the statistical authorities. Second, the quantity of compulsory statistical reports submitted by enterprises to the statistical offices has been noticeably reduced or there is an intention to reduce it in the foreseeable future. The discrepancies between statistical reports and business accounts have not disappeared. However, they are less obvious now because the statistical authorities have decreased access to the business accounts of enterprises. In many countries in transition, efforts are being undertaken to revise the old systems of business accounts and introduce new systems and plans of accounts that are more suitable for market-oriented economies. Some countries have decided to introduce the French system of business accounts, while others seem to be moving towards a British-oriented system; still others have not made up their minds and are continuing to study the documentation of the International Accounting Standards Committee. This Committee, which was set up by leading professional accounting organizations of the developed industrialized countries in 1973, released about 30 standards dealing with accounting of various items and with the different aspects of accounting: for example, accounting in a hyper-inflationary environment (1990) or accounting of joint ventures (1991). The international standards are only recommendations and have an alternative nature; for example, the standards dealing with the calculation of costs of sold output include seven alternative methods.

570. At the same time, however, in some countries in transition both state-owned and private enterprises including joint ventures are still obliged to submit to the statistical authorities business accounts as well as statistical reports. For example, in the Russian Federation all enterprises must submit to the Statistical Office, as well as to some other government bodies, the following types of business accounts: (a) financial results, (b) balance sheet and (c) annex to balance sheet. The bulk of the data contained in these records is essential for the compilation of national accounts. This is illustrated in table 6.4 which presents the information items included in the three sections of the reports used in the Russian Federation. It is obvious that such information can be used for the compilation of production and distribution of income accounts and is also indispensable for the compilation of accumulation accounts and the balance sheet for non-financial corporations.

Table 6.4. Data contained in business accounts submitted by enterprises in the Russian Federation to the statistical authorities

The report called "Financial results" contains the following items of information:

Proceeds from sale of goods and services

VAT

Excise Taxes

Operating expenses

Operating surplus

Income from property and similar income

Operating surplus plus income from Property

Section 3 of "Financial results" contains data on the following payments of enterprises to the state budget.

Tax on property

Tax on profit

Tax on land

Tax on use of mineral deposits

VAT

Excise taxes

Import duties

Export duties

Income tax

Other taxes, n.e.c.

Penalties

Section 4 of "Financial results" contains data on expenses of enterprises that are tax-exempt, namely:

Investments

Expenses on protection of the environment

Expenses on cultural and social services to employees of enterprises, expenses on charities and donations

The balance sheet and annex to the balance sheet contain data on

Stocks of assets and liabilities

Stocks and flows of fixed assets (by type)

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571. Whatever type of business accounts is used as a source of data for the compilation of national accounts, it should be clear from the very outset that

accounting requirements and methods used in business accounts do not always result in the type of data that are required by the SNA. There can, for example, be differences in the definition of cost, or in distinguishing between current and capital expenses. Thus in some countries in transition, a distinction between current and capital repairs is not made in business accounts. The definition of compensation for labour input adopted in business accounts is often not the same as that in national accounts. There are, furthermore, differences in the methods of valuation of some flows and stocks used in business and national accounts. For example, enterprises value their stocks at historic cost whereas in national accounts current replacement values are recommended for this purpose. Another important difference in valuation concerns the valuation of expenses on goods and services used up in the production process. While in the business accounts the prices that were actually paid are recommended for valuation, the SNA suggests that the prices that existed when the goods were used in the production process should be applied. In conditions of high inflation, there can be a noticeable difference between these two types of valuation which may affect the measures of value added and operating surplus. The enterprises may use methods of amortization of fixed capital that are not acceptable in national accounts; for example, enterprises are not infrequently allowed to use rapid rates of amortization of fixed capital. Thus, according to regulations issued by the Russian Government in 1993, small enterprises in the private sector are allowed to write off 50 per cent of the original value of fixed assets to the costs of production during the first year of exploitation of the assets.

572. Two conclusions may be drawn from the above. First of all, data recorded in the business accounts of enterprises may require considerable processing and rearrangement to meet national accounts requirements; in some cases they provide only raw material that needs a number of important adjustments before it can be entered in the national accounts. Second, it is both desirable and feasible to reduce the differences in the methods and definitions applied in business and national accounts. For example, it is feasible to minimize the differences in the definition of costs, labour input, capital expenses and so forth. It is feasible to harmonize classifications of taxes, of fixed assets and so forth. This possibility exists because the definitions and accounting rules for business accounts are established, as a rule, by the relevant government agencies such as the ministry of finance. The harmonization of concepts and definitions applied in business and national accounts will require the cooperation of the statistical authorities with those government bodies that are responsible for establishing rules for business accounts. In adapting business accounting rules, it is absolutely essential to move away from the measure of output expressed in terms of physical units which is multiplied thereafter by the relevant prices. Instead, the emphasis should be on the measures of actual sales, profit, assets and liabilities and so forth.

573. Despite the differences between business and national accounting, there is an important point of agreement between the two types of accounts - transactions

are recorded in both on an accrual basis rather than on a cash basis. Thus, in spite of the differences mentioned above, business accounts are the most appropriate source of data for the compilation of SNA accounts for non-financial corporations.

574. The bulk of data registered in business accounts are not channelled to any government agency, including statistical offices. Therefore, some ways should be found to collect these data. As was mentioned above, a part of the information is still submitted to statistical authorities in the form of obligatory statistical reports, even if the number of such reports has recently been reduced. It appears that in the immediate future enterprises in many former CPEs will continue sending in their statistical reports and statistical offices will be able to extract from them a great deal of the information needed for the compilation of national accounts. It is essential, therefore, to ensure closer links between business accounts and statistical reports, so as to reduce the major discrepancies between the two sources. Some countries such as member countries of CIS are making special efforts to retain the statistical reporting system on the activities of units engaged in the provision of services. For example, Russian statistical authorities collect records on the sales of different types of communal, everyday, personal and other services rendered to households.

575. On the other hand, the amount of data collected with the help of compulsory statistical reports is likely to diminish in the future and statistical authorities will have to resort to the methods that are normally used in market economies, that is, economic censuses, sample surveys and so forth. These methods are well known and need not be discussed here again. Many countries in transition have already undertaken important steps towards the reduction of the system of compulsory reporting and the introduction of new methods. Thus, the Statistical Committee of the Russian Federation has decided recently to organize censuses of all retail trade enterprises. The censuses will be carried out twice within the next five years starting from the year 1995, and later on, once every five years.

576. With respect to private enterprises, the general situation is not altogether different. The basic source of data for the compilation of national accounts is business accounts. At least in some countries in transition, the forms of the summary business accounts that enterprises have to submit to the government are the same irrespective of whether the enterprises are owned by the state, belong to the private sector or operate as joint ventures. Such an arrangement exists, for example, in the Russian Federation and in some other member countries of CIS. However, the amount of compulsory statistical reporting to the statistical authorities is usually less as compared with that carried out by SOEs. This means that the need for sample surveys is larger in this case.

577. Business accounts and statistical reports compiled by banks and other

financial institutions are an important source of data for the preparation of accounts for the financial corporate sector and also provide information for the compilation of a number of indicators for other sectors. For example, the report of the central bank on cash turnover was always used in many former CPEs for compilation of important MPS tables, particularly concerning money income and expenditure of households. This report, if available, can certainly be used for the preparation of national accounts based on the SNA. It contains the data, for example, on wages and salaries paid out to employees through the bank system; the latter account for up to 95 per cent of the total wage fund.

578. In several countries in transition, the reports by financial institutions do not meet the needs of analysis, auditing and compilation of national accounts. Therefore, in many of these countries there are plans to introduce new standards of business accounts for banks and other financial institutions, requiring the creation of a new accounting plan that will permit identification of key monetary items of accounts and a consolidated set of broad monetary aggregates. The IMF guidelines on money and banking statistics[27] that are currently being revised may be used as a basis for the development of those accounting plans and statistics. In this context it should be noted that, in the joint study of the economy of the former Soviet Union by IMF, OECD, the World Bank and EBRD,[6] it was concluded that there were serious gaps, deficiencies and uncertainties in the accounting system of the banks, and in the statistical reporting systems of the financial institutions of the country as well as in the fiscal accounts of the government and in budgetary statistics. It is believed that the conclusions of the report are still relevant. Those conclusions do not apply only to CIS countries, but may be equally applicable to other countries in transition.

2. Government records

579. In principle, government units included in this sector compile their own accounts including balance sheets which serve as a basis for the preparation of various administrative records and reports. Some of those are provided in consolidated form to statistical authorities by ministries and departments. These reports show, among other things, the use of funds allocated from the budget to respective ministries and departments. They include separate data both on current operational expenses and on capital outlays. That the data on current costs are normally classified by major components allows intermediate consumption and compensation of employees to be identified in principle. It is important to note that the government units included in this sector do not make depreciation allowances to measure wear and tear of fixed capital. Therefore the estimates of consumption of fixed assets have to be prepared in the statistical office on the basis of the data on the stocks of fixed capital and average depreciation rates. These estimates were already prepared in the context of compilation of the material balance of the MPS. The data contained in the reports of the ministries may refer to actual cash flows, that is, to

actual payments rather than to accrued magnitudes, as is suggested in the SNA. They may refer, for example, to wages actually paid out rather than to wages accrued and so forth. In such cases, some adjustment to the data on a cash basis may be needed to convert them to accrual magnitudes.

580. Another important source of data for compiling accounts for the general government sector is the report of the ministry of finance on the execution of the state budget which is available for statisticians. This report contains data on the use of funds allocated from the budget to ministries and departments and thus includes data for the estimation of output, intermediate consumption and the major components of value added. The report also contains data on taxes and non-tax revenues that are important for the compilation of accounts not only for general government but also for other sectors of the economy. In cases where the government accounts relate to a fiscal rather than to a calendar year, some adjustments may be needed to convert fiscal year data to a calendar year basis as required in national accounts.

581. As practice shows in some countries in transition there can be noticeable peculiarities in the classification of the state budget which are not consistent with the IMF recommendations in the Manual on Government Finance Statistics[28] (currently being revised) and the 1993 SNA requirements. Thus in the Russian Federation, there is no clear distinction between unrequited transfers and borrowing. The best way to solve the problems that arise in this case is to introduce international classifications and definitions.

582. Still another source of data that is important for the compilation of general government accounts is the consolidated report of the social insurance fund, which contains data on contributions to the fund and on social benefits paid out to households. This report is not only important for compiling government accounts, but also indispensable for compiling accounts for the households sector. In principle, the data on contributions to the social insurance fund contained in this report should be equal to the sum of similar data contained in the record of enterprises plus data on contributions made by government budgetary units plus data on contributions made by individuals (employed, self-employed and unemployed). In some countries in transition, there exists a pension fund with separate contributions to this fund being made by employees. The report of this fund on contributions and pensions paid out is normally available to statisticians.

583. A final comment on this subject concerns accounts compiled by local government units. Because local government units may be numerous and may follow different accounting procedures, it is often most practical to collect data from a relatively small stratified sample survey of all units. These surveys can be carried out by means of mailed questionnaires and field visits.

3. Household survey and other data on households

584. Among the most important sources of data for compiling accounts for households are family budget surveys. In a majority of countries in transition, family budget surveys are carried out annually in order to secure data on money income and expenditure, own final consumption, housing conditions and amenities. For example, in the former Czechoslovakia family budget surveys allowed information to be obtained on wages and salaries, money income received by the members of agricultural cooperatives, social benefits in cash, and other money income; they also allowed data to be obtained on savings and dissavings, and on loans and credits. Family budget surveys have a long history in the Russian Federation, where they were introduced in a simple format before the October Revolution, and also in Hungary, Poland and many other former CPEs.

585. Family budget surveys are indispensable for the estimation of the output of unincorporated enterprises owned by households (for example, the agricultural output of personal plots of households or small farms), the estimation of own consumption and own capital formation, the estimation of the sales and purchases of goods at farmers' markets, the estimation of price changes especially at farmers' markets, and the estimation of the stocks of consumer durables, as well as for the imputation of rent on dwellings occupied by owners.

586. It is important to note that many countries in transition are planning considerable revisions in the methodology of family budget surveys. The main objective of this revision is to take into account current changes in the organization of the economy, and the application of international classifications of income and expenditure of households. These changes will facilitate the use of family budget surveys for compilation of national accounts based on the SNA.

587. In some countries in transition, in addition to annual family budget surveys, statistical authorities carry out every three to five years so-called microcensuses, which cover a larger number of households than the annual sample surveys. For example, one microcensus was carried out to obtain more detailed information on the sociodemographic characteristics of the population and included questions on employment, source and level of income, housing conditions and so on. In some cases, microcensuses also allow data to be obtained on the stocks of consumer durables, rents and so forth. For example, the Russian Government had made a decision to carry out a microcensus in 1994. This census was to focus on sociodemographic characteristics of the population, but was also to include questions on employment, source and level of income, and housing conditions. The data collected with the help of this microcensus could be used to derive a number of indicators shown in households accounts.

588. Another source are periodic sample surveys on a wide range of topics pertaining to various aspects of economic activities of population. They provide valuable information, inter alia, on savings, taxes and costs incurred by owner-occupiers needed for the compilation of households accounts. For

example, in Hungary statistical authorities periodically carry out surveys of the income of the population that complement the data collected through budget surveys. In 1992, a number of CIS member countries carried out a sample survey on income and expenditure of families.

589. According to the legislation adopted in some CIS countries recently, farmers are obliged to keep certain accounts and records reflecting major flows and stocks. They must present some of these records to the taxation agency. For instance, in the Russian Federation, the most important documents that the farmers are expected to compile are a book on the property of the farm; a book on output and materials; a book on labour input; a book on economic transactions carried out with other economic units; and a register of financial results. The register is submitted to the taxation agency of the country. The register submitted by farm households includes income and expenditure information in detail. The register's data content is presented in table 6.5.

Table 6.5. Data content of the register on income and expenditure submitted by farm households in the Russian Federation to the tax authorities

Income

- Sales of agricultural goods
- Receipts for services rendered to other economic units
- Other income

  From property

  From renting assets

  From sales of capital assets

Expenditure

- Purchases of goods and services
- Wages of employed
- Consumption of fixed capital (depreciation)
- Payments of rent for buildings, machinery and so on
- Contributions to social insurance and compulsory payments to insurance companies
- Interest on short-term loans
- Repair of capital assets
- Other expenses

  Purchases of capital assets

  Interest on long-term loans

  Insurance premiums (non-compulsory)

Financial results

Of which

From non-agricultural activity

590. In some countries, government accounts on taxes paid by households provide input for the compilation of a number of important items distinguished in the accounts. The introduction of the system of income declaration will secure important pieces of information.

4. Administrative records on NPISHs

591. In the recent past, the statistical authorities of the former CPEs collected information from reports by major NPISH units on their principal activities. These reports allowed the contributions to these organizations, their output and expenditure and some other items essential for the compilation of national accounts to be estimated. However, at the present time, in the majority of countries in transition, many NPISHs do not submit their records to the statistical authorities and the only available source of data is sample surveys. For example, in 1992 the Statistical Committee of the Russian Federation carried out a sample survey of religious organizations in order to establish their incomes and expenditures and estimate their output and value added. The questionnaire that was used for this purpose included data items shown in table 6.6. Out of 284 registered organizations, questionnaires were received from 45. A similar sample survey was also carried out with respect to miscellaneous organizations such as associations, clubs and so forth.

Table 6.6. Data included in a Russian sample survey of religious organizations, 1992

Income
Of which
Members' contributions
Income from commercial activity
Income from donations
Income from property
Other incomes n.e.c.
Expenditure
Of which
Compensation of employees
Taxes
Payments for goods and services
Purchases of capital goods

5. Balance-of-payments records

592. The chief source of the data needed for the compilation of the rest of the world account, which records transactions of residents with non-residents, is the balance of payments (BOP). In fact, the rest of the world account constitutes an aggregated and slightly rearranged version of the balance of payments. One common problem of countries in transition is the lack of systematic and comprehensive information on transactions with the rest of the world. Though external trade statistics existed in the former CPEs, they have not been consistent with international standards and therefore require considerable adjustments. Liberalization of external trade has further complicated the process of collecting data: While in the past information on external trade was collected from a relatively limited number of external trade organizations, at present external transactions are carried out on an increasing scale by the very enterprises that are the producers of the goods. There are some particular problems of estimation of external trade in countries of CIS. Above all, they concern the estimation of the inter-State trade in conditions where customs borders between member States of CIS do not exist. Under these conditions, data on inter-State trade are collected from the special reports of the enterprises that export goods to other CIS States. This may change, however; the Russian authorities, for example, are at present taking steps to introduce customs borders, and thus it may become possible to compile customs statistics in the future.

593. Balance-of-payments statistics (as covered in the fifth edition of the IMF Balance of Payments Manual[12] were never compiled in the former CPEs and are only now being introduced into the regular practice of transition countries, with the assistance of IMF. The items of the balance of payments that require the special attention of countries in transition entail flows of income and services, reinvested earnings from direct foreign investment, and transactions in financial instruments. The careful estimation of primary incomes, mainly including compensation of employees and property income paid to non-residents, is essential for estimating national income.

594. As regards reviewing the sources of data used in different transition economies for the estimation of external flows, it appears that many of them do not provide comprehensive information and would therefore require considerable adjustments in order to achieve the comprehensive coverage required in the SNA. For example, in CIS member States one of the major sources of data on the external trade of goods was until recently statistical report N8-VES submitted to the statistical authorities by all the units engaged in external trade. Though the scope of the flows recorded in these reports is on the whole consistent with international standards, there are a number of adjustments needed in order to estimate missing items, in particular goods returned due to low quality, goods provided in the context of international assistance, goods confiscated by the customs offices, property of migrants leaving or entering the country, and so forth. There are also instances in which the classification of flows is not consistent with SNA standards, for example, with respect to goods sent abroad for repair. A further major problem is that not all units submit

the report to the statistical authorities. Therefore, it is essential to make estimates for the missing data or to attempt to obtain them from other sources. As was mentioned above, customs statistics are being introduced in many countries in transition and in CIS member States in particular. These statistics contain the bulk of the data needed to estimate exports and imports as defined in the SNA and balance of payments.

Notes

[1] Commission of the European Communities, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations, World Bank, System of National Accounts, 1993 (United Nations publication, Sales No. E.94.XVII.4).

[2] OECD, Handbook on Inflation Accounting, prepared by Peter Hill, OECD consultant, and scheduled to be published in 1996. Draft, June 1995.

[3] Report of ISWGNA on implementation of the System of National Accounts, 1993 (1993 SNA) (document E/CN.3/AC.1/1996/R.2, annex).

[4] International Standard Industrial Classification of All Economic Activities, Statistical Papers, Series M, No. 4, Rev.3 (United Nations publication, Sales No. E.90.XVII.11).

[5] A System of National Accounts, Studies in Methods, Series F, No. 2, Rev.3 (United Nations publication, Sales No. E.69.XVII.3).

[6] A Study of the Soviet Economy, a joint publication of IMF, the World Bank, OECD and the European Bank for Reconstruction and Development (EBRD) (Washington, D.C., 1991).

[7] See the report of the OECD/ECE meeting on national accounts, Paris, 9-12 May 1995.

[8] Statistical Office of the European Communities, European System of Integrated Economic Accounts (Luxembourg, Statistical Office of the European Communities, 1970).

[9] System of Economic Accounts for Food and Agriculture (Rome, FAO, 1996).

[10] Provisional Central Product Classification, Statistical Papers, Series M, No. 77 (United Nations publication, Sales No. E/91.XVII.7).

[11] Classification of the Functions of Government, Statistical Papers, Series M, No. 70 (United Nations publication, Sales No. E.80.XVII.17).

[12] Washington, D.C., IMF, 1993.

[13] IMF, Government Finance Statistics in the Countries of the Former Soviet Union, IMF Working Paper (Washington, D.C., IMF, 1995).

[14] Participants at the OECD/ECE meeting of national accounts experts (Paris, May 1995) suggested, therefore, that countries in transition might prefer to rely on the majority-of-ownership criterion as the sole deciding factor.

[15] L. Zienkovsky, "Experiences of implementing the SNA in Poland", paper prepared for the seminar on implementing the SNA in countries in transition organized by OECD and the United Nations (Minsk, 27-29 April 1993).

[16] J. Arvay, "Classification of institutional units by ownership", paper prepared for the seminar on implementing the SNA in countries in transition (Minsk, 27-29 April 1993).

[17] European Bank for Reconstruction and Development (EBRD), Transition Report, 1994 (London, EBRD).

[18] Institut national de la statistique et des études économiques, short note on the treatment of subsidies in the French national accounts, presented at the OECD/ECE meeting of national accounts experts (Paris, 9-12 May 1995).

[19] A. B. Atkinson and J. Micklenwright, Economic Transformation in Eastern Europe and Distribution of Income (Cambridge, United Kingdom, Cambridge University Press, 1992).

[20] This question was discussed at some length at the seminar on implementing the SNA in countries in transition (Minsk, 27-29 April 1993) and it was decided upon at that time.

[21] See Kevin W. O'Connor, "The treatment of lotteries in the 1993 SNA", SNA News and Notes (an informal service of ISWGNA prepared by the United Nations Statistics Division), issue 2 (July 1995).

[22] As is noted in the IMF Working Paper entitled A User's View on National Accounts in Russia (Washington, D.C., IMF, 1994), thought is being given to switching to a sample-based approach, but implementation is still embryonic. This also applies to many other CIS countries.

[23] New York, ECE Conference of European Statisticians, 1992.

[24] Geneva, ECE Conference of European Statisticians, 1992.

[25] See the report of the conference on statistics of Central and Eastern European countries, organized by OECD together with ECE (Paris, 10-12 September 1990).

[26] This topic is discussed in detail in the report entitled "Some lines of further development in the statistical methodology of the foreign trade of the CMEA member countries" (CES/654), prepared by the secretariat of the Council for Mutual Economic Assistance (CMEA) for the thirty-eighth plenary session of the Conference of European Statisticians, 1990.

[27] A Guide to Money and Banking Statistics in International Financial Statistics, draft (IMF, December 1984).

[28] Washington, D.C., IMF, 1986.

Annex

SNA-MPS LINKS

CONTENTS

ANNEX TABLES

CONTENTS (continued)

Page

Introduction

1. The chapters of the Handbook have been written on the assumption that readers are familiar with the 1993 SNA. However, some national accountants in countries with transition economies that were formerly CPEs may be more familiar with an earlier system of national accounting. This was the System of Balances of the National Economy (often called the Material Product System, or MPS),[a] which was used by the CPEs in the past. Also, many of the practices based on the SNA and suggested in this Handbook are close to the MPS practices of the past and use statistics that were previously used in an MPS context. It is for these reasons that an annex that explains the links between the SNA and MPS concepts and practices has been appended to this Handbook. Without suggesting that the MPS be used as a basis for compiling the SNA, the present annex could be useful as a guide for those who might otherwise have difficulties in understanding the SNA framework and concepts.

2. The main content of this discussion on SNA-MPS links is devoted to an explanation of SNA accounts and concepts in terms of the MPS accounts and concepts with which the national accountants of countries in transition are familiar. In some instances, conversion tables for MPS and SNA concepts are included. These are particularly useful for those countries that may wish to compile both the SNA and the MPS during the transition period. Also, SNA-MPS links will be identified when discussing data sources that serve both compilations.

3. In addition, the Handbook (chap. I, sect. A.1) proposes a systematic distinction between the flows of material goods and non-material services. This distinction is essential in terms of linking the data series of the past with those of the future and will also be of much help to those national accountants who continue parallel compilations of the SNA and the MPS.

4. To illustrate the links between the SNA and the MPS, data obtained from compilations of national accounts for the former USSR covering the years 1988-1990, carried out by the Inter-State Statistical Committee of the Commonwealth of Independent States in cooperation with OECD, are used. These compilations were based by and large on the most recent SNA standards. Some materials that show the derivation of selected SNA categories from corresponding MPS counterparts for the Baltic States are also used for illustrative purposes.[b]

5. The notes on SNA-MPS links are furthermore relevant to the guidance provided in the Handbook. It is true that the MPS differs considerably from the SNA and does not fit the structure and mechanisms of the market economy; however, there exist many similarities between the two systems in the way that the data are arranged and classified in order to reveal important macro characteristics of the economic process. Also, it should be borne in mind that MPS balances contain a considerable amount of data that after some limited rearrangement and reprocessing, could be used for the compilation of SNA

accounts.

6. The usefulness of this supplementary MPS links approach followed in the Handbook has been furthermore supported at various meetings of experts both at national and at international levels:

- Thus, in a Polish study[c] it was emphasized that comparative analysis of the two systems would help economists and statisticians to better understand the basic theoretical principles underlying the SNA;

- Also, in a paper prepared by the ECE secretariat[d] it was emphasized that the experience gained in past comparison projects between SNA and MPS countries could be seen as an extremely valuable starting point for introduction of the SNA in those MPS countries that had participated in such bilateral comparisons;

- The approach was also supported by experts from transition countries that had discontinued the use of the MPS. Pelley[e] notes that MPS balances are an aid in achieving an approximate specification of the contents of the indicators to be derived and refers to the categories of financial balance of the MPS when describing the problems associated with the introduction of national accounts into the practices of a country.

7. Also, the data links between the MPS and the SNA are not being entirely discontinued. Indeed, some countries - in particular CIS member countries - intend to continue the compilation of MPS aggregates and to derive estimates of GDP with the help of conversion tables. This was confirmed at the course on the practical aspects of the introduction of the SNA organized by Eurostat and the Inter-State Statistical Committee of CIS for statisticians from the former USSR (17-28 May 1993, Moscow). It is worth mentioning in this connection that:

- The questionnaire recently prepared (1993) by the World Bank to collect statistical data from the former republics of the Soviet Union includes, among others, tables that contain both SNA and MPS aggregates and also some tables in which SNA major aggregates are derived from the conversion of the relevant MPS categories;

- The Inter-State Statistical Committee of CIS released in 1994 a booklet[f] that not only contains experimental compilations of SNA major accounts and aggregates of the CIS countries for 1990-1993, but also includes estimates of net material product for the same countries and the same period.

8. This annex is divided into seven sections. Section A compares the accounting framework of the SNA and that of the MPS. Section B reviews the comparability of the establishment and institutional units of the SNA and

similar units that were used in the compilation of the MPS. Section C compares the concepts of output and value added and other aspects of the production accounts of the two systems and, more generally, reviews the comparability of the accounts and tables of the two systems. Sections D and E compare the concepts of capital formation and consumption, section F reviews the differences between the two systems in terms of the scope of external transactions, and, finally, section G takes a broad view of the differences between the main income concepts used in the SNA and those used in the MPS.

A. SNA links to Material Product System (MPS) accounts and tables

9. The equivalent accounts and tables of the MPS include the following:

Balances:

- Balance of production, final consumption and accumulation of the global product (material balance);
- Input-output table (which is a disaggregation of the material balance);
- Balance of production, primary distribution, redistribution and final use of national income (financial balance);
- Balance of labour force;
- Balance of national wealth.

Supporting tables dealing with selected aspects of the economic process:

- Balance of money income and expenditure of households;
- Balance of fixed assets at full original cost;
- Balance of fixed assets at residual cost.

Analytical tables not integrated with the main balances:

- Table on total consumption of the population;
- System of indicators of the income of households;
- System of indicators of non-material services.

10. The MPS balance of production, consumption and accumulation of social

global product (material balance), shown in table A.1 in its most aggregated form, is very similar to the goods and services account of the SNA. A more detailed version of this material balance, in which broad commodity groups are identified, is very similar to the supply and use table of the SNA. The main differences between the SNA and MPS balances are due to the more narrow definition of economic production in the MPS which covers only material goods and services. Therefore, understanding the relationship among the components of the supply and use table should not present serious problems to national accountants in countries in transition.

11. The financial balance as presented in table A.2 is the closest equivalent to the integrated economic account in the SNA. It consists of several sections dealing with different stages of the economic process, such as production, income distribution, disposition of income on final consumption and capital formation, and so on. The groups of units for which individual financial balances are compiled are omitted for the sake of simplification. The section of the financial balance showing output and material input is omitted for the same reason.

12. Broadly speaking, the financial balance can be rearranged in the format of the sector accounts suggested in the SNA. This would require, however, considerable reprocessing and reclassification of many items. For example, a clear distinction between current and capital redistributive flows would have to be introduced, the financial transactions would have to be clearly separated from the distributive transactions, and so forth. Such rearrangement is therefore not suggested as a practical solution. However, further review of the financial balance might suggest areas in the MPS that contain some blocks of data or data items needed for the compilation of SNA sector accounts.

Table A.1. Simplified scheme of the material balance of the Material Product System (MPS)

	Resources
1.	Output
2.	Trade and transportation charges
3.	Turnover tax and similar taxes on products, net
4.	Imports
5.	Total resources (1+2+3+4)
	Uses

6. Intermediate material consumption

   6.1 Intermediate consumption of goods and material services

   6.2 Consumption of fixed assets

7. Personal material consumption

   7.1 Consumption of goods and material services

   7.2 Consumption of fixed assets

8. Consumption in institutions of non-material sphere, providing individual services to households

   8.1 Consumption of goods and material services

   8.2 Consumption of fixed assets

9. Consumption in institutions of non-material sphere, providing services to the society as a whole

   9.1 Consumption of goods and material services

   9.2 Consumption of fixed assets

10. Net fixed capital formation

11. Change in stocks

12. Losses

13. Exports

14. Total uses (6+7+8+9+10+11+12+13)

Table A.2. Simplified scheme of the financial balance of the MPS

Resources

1. Primary income of households

Wages and salaries in the material sphere

Income from subsidiary plots of households

2. Primary income of enterprises of the material sphere

Contribution to social insurance

Taxes on products, net

Other primary income of enterprises

3. Total primary income (1+2)

4. Redistributive receipts

4.1 Wages and salaries in the non-material sphere

4.2 Sales of non-material services

4.3 Social benefits in cash

4.4 Other transfers (current and capital)

4.5 Interest

4.6 Insurance premiums

4.7 Financial transactions

5. Total resources (3+4)

Uses

6. Redistributive payments

6.1 Wages and salaries in the non-material sphere, paid out

6.2 Purchases of non-material services

6.3 Current taxes on income and wealth

6.4 Contribution to social insurance

6.5 Interest, paid out

6.6 Insurance claims

6.7 Financial transactions (acquisition of assets)

6.8 Other transfers, paid out (current and capital)

7. Final income used on

7.1 Final consumption expenditure

7.1.1 Personal material consumption

7.1.2 Other final consumption expenditure

7.1.2.1 Material consumption in units of the non-material sphere, providing individual services to households

7.1.2.2 Material consumption in units of the non-material sphere, providing collective services to a society as a whole

7.2 Net fixed capital formation

7.3 Change in stocks

7.4 Losses

8. Total uses (6+7)

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13. One of the important tables of the MPS is the balance of money income and expenditure of the population. This table is a disaggregation of the section of the financial balance dealing with households. It may be regarded as a counterpart of the income and outlay account in the 1968 SNA, but it also includes data on capital and financial transactions that are not always separated from income and expenditure transactions in the SNA sense. A distinction between current and capital flows is also blurred in this table and saving is defined as increase in the deposits and holdings of cash. Yet, the balance of money income and expenditure contains important information needed for the compilation of national accounts based on the SNA. It includes, for

example, on the resource side data on wages and salaries and other types of income of households, including social benefits in cash and other transfers (insurance claims and so forth). On the use side of the balance, data are recorded on the purchases of both goods and services that are essential for the compilation of data on final consumption expenditure of households. Also, on the use side of the balance are recorded data on current transfers paid out by households and on capital outlays such as purchases of houses. Thus, the balance contains a great deal of data needed for the compilation of national accounts based on the SNA. In some cases, the data in this balance may not even require any significant adjustments to ensure consistency with the definitions of the SNA. In other cases, these adjustments can be introduced relatively easily, for example, through a distinction between current and capital transfers, or separate identification of transactions in financial assets. For those countries in transition that intend to retain the MPS for some time, the balance of money income and expenditure of the population may provide valuable information for the compilation of national accounts based on the SNA, above all, for accounts for the household sector.

14. There exists the following approximate correspondence between the accounts of the SNA and the balances of the MPS (or sections thereof):

- The data contained in the production account of the SNA can be found both in the material and in the financial balances;

- The generation of income account of the SNA corresponds approximately to that section of the financial balance that deals with primary distribution of income (in the MPS sense);

- There is an approximate correspondence between the SNA primary and secondary distribution of income accounts and the section of the financial balance that shows redistributive receipts and payments;

- There is a rough correspondence between the use of income account of the SNA and the section of the financial balance where disposition of final incomes is recorded; contrary to the SNA, however, the financial balance does not show saving explicitly;

- Some flows recorded in the accumulation accounts of the SNA, are included in the financial balance of the MPS as items of disposition of final income; the MPS does not explicitly show sources of finance of capital outlays;

- There is an approximate correspondence between the financial account of the SNA and the section of the financial balance of the MPS where financial transactions are recorded;

- Some items shown in the balance sheets of the SNA are recorded in the

balance of national wealth of the MPS; these items relate largely to stocks of produced tangible assets.

15. Another module of the MPS is the system of indicators of non-material services (SINS), which was elaborated originally in the late 1970s within the framework of the CMEA Standing Commission on Statistics. The core of the SINS is the resource and use table of non-material services (both market and non-market). The SINS was devised to supplement material balance data and facilitate the transition from the MPS to the SNA, and compilation of gross domestic product (GDP) in CPEs in particular. Some CMEA member countries did introduce the SINS or its elements into their practices and used this table as a framework for the compilation of indicators pertaining to the non-material economy. However, the SINS was never fully integrated with the MPS and its many underlying definitions and classifications differ noticeably from the corresponding categories of the SNA. For this reason, SINS is not being considered further in this annex.

B. SNA links to units and groupings of units in the MPS

16. The MPS groupings of units differ from the institutional sectors in the SNA in several respects. Though the underlying sector criterion in both the SNA and the MPS is based on the function of the unit, the concept of function is understood differently in each system. In the MPS, the function is primarily defined in terms of the unit's participation in material production or involvement in the process of provision of non-material services, or in terms of whether non-material services satisfy individual or collective needs. The distinction between individual and collective needs is also important in the SNA, but used in the context not of production, but rather of consumption (see the SNA, paras. 9.41-9.44, 9.72-9.74 and 9.80-9.87).

17. The four major groupings of units distinguished in the financial balance of the MPS are identified in table A.3. In order to establish links with the SNA sector classification, each of the major MPS groupings presented in the table is further subdivided. Table A.4 shows the resulting links between the institutional sectors of the SNA and the MPS subgroupings.

18. The links of table A.4 disregard some minor deviations for the sake of simplicity. For instance, the general government sector is defined to include certain government enterprises that may produce material goods and services and are therefore included in category A of the MPS. However, as these enterprises are usually non-market and closely integrated with the government, they cannot be regarded as quasi-corporations in the SNA.

Table A.3. Groupings of units used in the MPS

A. Units engaged in material production

A.1 Unincorporated enterprises of households (for example, personal plots of employees)

A.2 Corporate and quasi-corporate units

B. Units engaged in the provision of non-material services satisfying collective needs

B.1 Budgetary government units

B.2 Financial corporations and quasi-corporations

B.3 Social organizations

B.4 Non-resident units (embassies, consulates, and so on)

C. Units engaged in the provision of non-material services satisfying individual needs

C.1 Budgetary government units

C.2 Self-financing government units

C.3 Private enterprises

C.4 Unincorporated production units owned by households

C.5 Social organizations

C.6 Establishments of the enterprises furnishing cultural and social services free or almost free of charge

D. Households

D.1 Residents

D.2 Non-residents

Table A.4. Bridge between sectors in the SNA and groupings in the MPS

Sector in the SNA	Relevant groupings identified in the MPS financial balance
Non-financial corporations	A.2 + C.2 + C.3
Financial corporations	B.2
General government	B.1 + C.1
Households	D.1 + A.1 + C.4
NPISHs	B.3 + C.5 +C.6

19. The groupings of units distinguished in the financial balance of the MPS are not aggregations of institutional units in the SNA sense, but they are defined as aggregations of similar establishments, as the MPS recommends using the same classification unit throughout the system. As Janos Arvay notes,[g] the advantage of the MPS is illusory because it is based on the false assumption that all economic units carry out one type of homogeneous activity. Finally, contrary to the SNA, the groupings of units in the MPS encompass resident as well as non-resident units.

20. Thus, the same type of unit - defined in a manner similar to that for the establishment in the SNA - is suggested in the MPS both for the analysis of production in the material balance and for the analysis of incomes and outlays in the financial balance. At the same time, the CMEA document on the MPS[h] does recognize other units; it uses for instance the term "economic unit" for an entity that is similar if not identical to an institutional unit in the SNA. Also, industrial classifications of former CPEs often refer to the enterprise as a unit of classification. This is particularly so in the case of the Classification of Branches of the National Economy (CBNE) worked out by CMEA.

21. In terms of the practical application of the MPS, CBNE and related classifications, however, the results may not be so very different from those derived from the application of the SNA. First, the problem of using an establishment for all balances is largely an academic one in MPS practice because the financial balance of the MPS has rarely been implemented in countries applying the MPS. Also, given the different circumstances of transition economies, enterprises are more homogeneous as units than in market economies. Furthermore, a more careful analysis of the explanatory notes to the CBNE and related classifications and of the actual practices of many CPEs shows that in fact the enterprise is as a rule subdivided into units that are similar, if not identical, to establishments. As a result, a typical industrial enterprise, say, in the Russian Federation, is normally subdivided into a number

of establishments:

- An industrial establishment that produces the main output;
- An establishment engaged in own construction activity;
- An establishment engaged in the provision of transportation services;
- An establishment engaged in the provision of cultural and social services to employees.

In those instances where an industrial enterprise includes a subsidiary for agricultural production, it is also generally feasible to isolate it as a separate agricultural establishment.

22. Institutional sectors as defined in the SNA are not distinguished in the MPS and the term "sector" is used primarily to denote the groupings of entities by type of ownership of the means of production (state, cooperative, private and so on). Nevertheless, as will be shown in detail later, in the financial balance of the MPS, groupings of the units that resemble institutional sectors, as defined in the SNA, are indeed distinguished.

23. As noted above, in the MPS, the concept of sector used in the different balances normally encompasses a grouping of units, homogeneous in terms of type of ownership of the means of production, as exemplified by the public sector, the private sector and so forth. At the same time, in the financial balance of the MPS, a distinction is made among the groupings of the units that resemble institutional sectors. These groupings combine those units that are homogeneous in terms of their function in material production. The units receive primary income originating in material production, as well as redistributive transfers, and dispose of income through the purchase of consumer and capital goods and through redistributive transfers. It should be noted, however, that the content of these flows, differs from that in the corresponding categories of the SNA.

C. Links between the production account and corresponding tables of the MPS

24. Despite the very important difference between the definition of production boundaries in the SNA and that in the MPS, it is in the production account that the divergences between the two systems of national accounting can be bridged relatively easily. The elements of the MPS balances dealing with production can be rearranged relative to the purpose of deriving the concepts of production accounts as defined in the SNA. The reason is that the differences between the corresponding indicators and aggregates of production accounts and balances primarily reflect differences in statistical methods, that is, differences in the way the data are interpreted, classified and aggregated, rather than

peculiarities in the organization of the economies themselves which are much more important with regard to income and capital finance statistics. That is why past studies of SNA/MPS links focused on the linkages of production-related aggregates. The main findings of these studies are described in numerous United Nations documents and publications and need not be recapitulated in detail here.

25. It should be recalled that though the MPS regards the production of non-material services as non-productive activities, this interpretation does not mean that non-material services are not recorded at all in the MPS. In fact, there are several tables in the MPS that contain information on non-material services covering items such as sales, costs and so forth. This information can of course not be added mechanically to the data on the production of material goods and services in order to arrive at the SNA aggregates of value added and gross domestic product, among others. The MPS information has to be rearranged and reprocessed, to meet the requirements of the definitions of the SNA, before being aggregated to the data on the production of material goods and services.

26. By presenting the SNA production account in the format of an MPS balance in table A.5, it can be shown in simple terms what steps need to be taken to compile SNA production accounts for industries, if the MPS balance of production, final consumption and accumulation of global product (material balance) is used as a starting point. In the table, it has been assumed for simplicity's sake that the output of market industries of the non-material sphere includes only market services, whereas the output of non-market industries of the non-material sphere includes only non-market services. The table demonstrates that:

(a) The material production flows registered in the material balance should be retained but rearranged; thus, the purchases of non-material services by producers of material goods and services, treated in the MPS as a component of net value added originating in the material sphere, should be reallocated to intermediate consumption;

(b) In order to cover production of non-material services, a distinction should be made between market and non-market services; this distinction is essential both for analytical and for statistical purposes; in principle, the MPS provides the data necessary for such a distinction: it contains separate data on sales of non-material services and on costs of non-market services.

Table A.5. SNA production account in MPS balance format

	Material sphere (industries)	Non-material sphere (industries)

		Market industries	Non-market industries
Market output			
Goods	P.11		
Services		P.12	
Non-market output			
Goods	P.21		
Services			P.22
Intermediate consumption			
Goods	G.1	G.2	G.3
Services	S.1	S.2	S.3
Value added, gross	V.1	V.2	V.3
Consumption of fixed capital	D.1	D.2	D.3
Value added, net	W.3	W.3	W.3

27. While many details concerning the coverage and valuation of output and intermediate consumption are disregarded in the table, the scheme can be used to establish the principal links with the MPS. For example, net material product can be derived by adding W.3 and S.1 (provided output is valued at producer's prices in the absence of the VAT, as is explained in chap. I, sect. A.2). It is worth noting that the above arrangement is used in practice by a number of countries. For example, in China it was used in the context of the compilation of the first official input-output table of the country for 1987.[i] A similar approach is used in some countries of CIS.

28. The distinction between material goods and services and non-material services may differ in terms of coverage among former CPEs, as unified definitions previously suggested in CMEA documents were never fully implemented by the countries concerned among which there were noticeable differences in this respect. It is believed, however, that the ISIC, Rev.3,[j] though conceptually speaking, it does not make a distinction between activities producing material goods including material services and activities producing non-material services, could in practice provide a satisfactory basis for such a distinction.

29. The definition of "establishment" as adopted in the SNA is similar to the definition of "classification unit" as used in the MPS except for some differences. The implementation of this concept should therefore pose no major problems for countries in transition. Drechsler[k] notes that the MPS makes a distinction as regards so-called accounting units that are homogeneous units

within enterprises, the functions of which are very similar to those of establishments in the SNA. The differences in terminology sometimes create the impression that in the MPS the classification unit is an enterprise rather than an establishment but this is not the case, as Drechsler points out. The treatment of ancillary activities of enterprises is the same in both systems of national accounting.

30. The definitions of output are similar in the SNA and the MPS, except that in the MPS output is of course restricted to the material sphere. Furthermore, there are some minor incidental differences in selected industries. Therefore, the data on the output of industries of the material sphere recorded in the material balance of the MPS can be used as a starting point for the compilation of the production account, as defined in the SNA. In the process of estimating the output of industries of the non-material sphere, it is necessary to make a distinction between market and non-market output; it is also useful to distinguish the output of financial intermediation services from that of insurance companies and pension funds. Furthermore, special attention should be paid to the valuation of output. While in the MPS, output is valued at producer's prices, including taxes on products, in the SNA the emphasis is on valuation at basic prices, which excludes all taxes on products less subsidies on products.

31. The scheme in table A.6a is intended to identify the main differences in the content and valuation of output between the SNA and the MPS. The scheme may also be used as a conversion table by those countries that are at an early stage in terms of the introduction of the SNA and will have to rely on simple procedures. It should be noted that in the table some incidental differences between the SNA and the MPS are disregarded for simplicity's sake. They do not, however, affect the measurement of value added because as a rule incidental differences in the definition of output are cancelled out by symmetric differences in the definition of intermediate consumption.

32. The counterpart of intermediate consumption in the MPS is material input. Broadly speaking, material input covers intermediate material consumption in the material sphere including consumption of capital. Thus, material input can be considered a starting point for the estimation of intermediate consumption.

Table A.6a. Derivation of output as defined in the SNA from output as defined in the MPS

A.	Gross output as defined in the MPS (at producer's prices)
B.	Taxes on products (turnover tax, sales tax) (minus)
C.	Subsidies on products (plus)
D.	Gross output of material industries as defined in the SNA (A-B+C)
E.	Gross output of non-material non-financial industries at basic prices (plus)
F.	Gross output of financial intermediation services, except insurance companies and pension funds (plus)
	(a) Imputed service charge of financial intermediation
	(b) Output of auxiliary financial services
G.	Gross output of insurance companies and pension funds (plus)
H.	Gross output of non-market services of general government (plus)
I.	Gross output of non-market services of NPISHs (plus)
J.	Gross output of housing services produced by owner-occupiers (plus)
K.	Domestic services (plus)
L.	Gross output of non-material industries as defined in the SNA (E+F+G+H+I+J+K)
M.	Gross output as defined in the SNA (D+L)

33. Table A.6b describes the major differences between material input and intermediate consumption. The scheme therein can also be used for MPS-SNA conversion purposes by those countries that are at the early stages of the introduction of the SNA. Table A.6c shows the linkage between net material product in the MPS and value added as defined in the SNA.

Table A.6b. Derivation of intermediate consumption as defined in the SNA from material input as defined in the MPS

A.	Material input as defined in the MPS
B.	Consumption of fixed capital used in the material sphere (minus)
C.	Value of non-material non-financial services, purchased by enterprises of the material sphere (plus)
D.	Expenses on business trips in the material sphere (plus)
E.	Expenses on public relations in the material sphere (plus)
F.	The part of the output of FISIM allocated to industries of the material sphere (plus)
G.	The part of the output of non-life insurance allocated to intermediate consumption of industries of the material sphere (plus)
H.	Losses of goods in transportation and storage (plus)
I.	Intermediate consumption of industries of the material sphere (A-B+C+D+E+F+G+H)
J.	Intermediate consumption of industries producing non-material non-financial services (plus)
K.	Intermediate consumption of financial intermediaries (plus)
L.	Intermediate consumption of insurance companies and pension funds (plus)
M.	Intermediate consumption of producers of non-market general government services (plus)
N.	Intermediate consumption of producers of non-market services of NPISHs (plus)
O.	Intermediate consumption of owner-occupiers of dwellings (plus)
P.	Intermediate consumption of industries of the non-material sphere (J+I+K+L+M+N+O)
R.	Intermediate consumption as defined in the SNA (I+P)

Table A.6c. Derivation of gross value added at basic prices as defined in the SNA from corresponding

A. Net material product/total value added in the material sphere

B. Taxes on material products (minus)

C. Subsidies on material products (plus)

D. Consumption of capital in the material sphere as defined in the SNA (plus)

E. Purchases of non-material non-financial services by industries of the material sphere (minus)

F. Output of FISIM allocated to industries of the material sphere (minus)

G. Payments for auxiliary financial services by industries of the material sphere (minus)

H. Output of insurance companies allocated to industries of the material sphere (minus)

I. Business travel expenses in the material sphere (minus)

K. Expenses on public relations in the material sphere (minus)

L. Losses of goods in the material sphere during transportation and storage (minus)

M. Gross value added at basic prices in the material sphere (A-B+C-E-F-G-H-I-K-L)

N. Gross value added at basic prices of industries of the non-material sphere of which:

   (a) Industries producing market non-financial services

   (b) Industries producing FISIM (other than insurance and pension funds)

   (c) Industries producing insurance services (including services of pension funds)

   (d) Producers of general government non-market services

   (e) Producers of non-market services of NPISHs

   (f) Housing services produced by owner-occupiers of dwellings

(g) Domestic services

(h) Producers of social and cultural services provided by enterprises to employees free of charge (if not included under item (e))

O. Total gross value added at basic prices as defined in the SNA (M+N)

D. SNA links to MPS concepts and practices in the compilation of capital formation

34. In the MPS, there is no exact counterpart of the capital account. There is no MPS balance that explicitly records the savings of institutional units and includes a clear-cut distinction between current and capital transfers. Thus, in the MPS there is no analysis of the sources of the finance of capital outlays. The latter (capital outlays) are recorded both in the material and in the financial balances but are restricted to outlays on produced tangible assets only. Net lending/net borrowing is not identified. However, the MPS does contain rather detailed data on fixed capital formation and change in inventories which are essential for building up the capital account as defined in the SNA. Those data are recorded in detailed balances of fixed assets that are included in the accounting framework of the MPS. They are compiled by many countries and normally used as an instrument for the calculation of net fixed capital formation which is an important component of final use of net material product.

35. In the MPS, the treatment of purchases of valuables is not described explicitly; however, one may assume that those purchases are allocated partially among the final consumption of households and the capital formation of enterprises and organizations. Important examples are purchases of expensive paintings.

1. Gross fixed capital formation

36. The MPS balances of fixed assets show the links between opening and closing stocks on the one hand and the relevant flows - fixed assets put into operation, capital repairs, losses and so forth - on the other. These balances can be used as a starting point for the compilation of gross fixed capital formation as defined in the SNA, but several amendments are needed which are explained below and itemized in the MPS-SNA conversion set forth in table A.7, which presents a derivation of gross fixed capital formation in the SNA from net fixed capital formation in the MPS.

Table A.7. Derivation of gross fixed capital formation as defined in the SNA from net fixed capital formation as defined in the MPS

A.	Net fixed capital formation as defined in the MPS
B.	Consumption of fixed capital (plus)
C.	Capital losses of fixed assets (plus)
D.	Capital outlays on mineral exploration (plus)
E.	Purchases of software (plus)
F.	Purchases of artistic and literary works (plus)
G.	Transfer costs (plus)
H.	Fixed capital formation by non-residents in the country (minus)
I.	Fixed capital formation by residents abroad (plus)
J.	Unfinished construction (plus)
K.	Outlays for military purposes except construction (minus)
L.	Gross fixed capital formation as defined in the SNA (A+B+C+D+E+F+G+H+I+J-K)

37. Consumption of fixed capital (B) is added because the emphasis in the MPS is on net fixed capital formation. However, data are available in the MPS to compute gross fixed capital formation; data on fixed assets put into operation and capital repairs are clearly identified in the balances of fixed assets.

38. Capital losses (C) are also deducted in order to arrive at net capital formation in the MPS, as net capital formation therein is computed net not only of the consumption of fixed capital but also of the losses due to major calamities and other unforeseen changes in volume of assets. Thus, all losses of fixed assets are treated in the MPS as a negative entry under fixed capital formation accompanied by a positive entry under a separate heading of the final use of the net material product called "losses". The losses of fixed assets that are treated in the MPS as capital losses do not affect the total of net material product because the negative and positive entries cancel each other out. Included in these capital losses are losses due to abandoned construction, which is defined as the value of abandoned construction reduced by the value of

scrap. As explained in this publication, extraordinary losses of fixed assets are treated in the SNA as part of other changes in volume of assets.

39. In the SNA, losses due to calamities and other non-predictable losses are recorded in the other changes in volume of assets account; only predictable losses are deducted as part of the consumption of fixed capital. Thus, if for instance two trucks are produced during the accounting period and one is destroyed by an earthquake during the same period, gross fixed capital formation in the SNA will include two trucks, while net capital formation in the MPS will include only one, as capital losses are deducted in the estimation of net fixed capital formation. In making the adjustments from the MPS to the SNA, one may assume for simplicity's sake that all losses recorded in the material balance of the MPS are extraordinary losses. If it is felt, however, that the consumption of fixed assets does not include allowances for normal losses, the MPS estimates of depreciation should be adjusted so that those estimates meet SNA requirements.

40. Another difference is that fixed capital formation in the MPS is restricted to tangible assets only, while in the SNA it includes intangible fixed assets as well. This is the reason why capital outlays on mineral exploration (D), purchases of software (E) and purchases of artistic and literary works (F) are added.

41. The cost of ownership transfer (G) is added, because in the MPS this item is not included in capital formation or at least there is no explicit reference to it within the text of the MPS. In the SNA, as was explained elsewhere in this publication, the cost of ownership transfer pertaining to fixed assets and other non-produced assets is included in gross fixed capital formation.

42. Another clarification is needed concerning the deduction in the table of fixed capital formation by non-residents in the country (H), and the addition of fixed capital formation by residents abroad (I). These adjustments are needed because capital outlays by non-resident diplomatic institutions in the geographical territory of the country and similar outlays by resident units located in the territory of another country are treated differently in both systems. Thus, in the MPS, fixed capital formation is computed on a territorial basis and includes capital formation by foreign embassies, consulates and so forth, but excludes capital formation abroad by diplomatic institutions, military bases and other residents. On the other hand, the SNA uses a resident concept and therefore includes in gross fixed capital formation of a country capital outlays by its embassies, consulates and so forth located abroad, but excludes such outlays by similar foreign diplomatic missions located in the territory of the country.

43. The value of unfinished construction is added because in the MPS unfinished construction is allocated to change in inventories, while in the 1993 SNA unfinished construction can be shown both as fixed capital formation and as

change in inventories (see chap. II, sect. A.3).

44. Outlays for military purposes (K) are deducted in the table, because such outlays in the SNA are allocated to the intermediate consumption of the units producing government services. An exception is made for outlays on military construction including the construction of airfields, docks, roads, hospitals and the like, which are used repeatedly in the production of goods and services and are similar to structures employed by civilian producers; they are treated as capital formation in the SNA. Though the MPS guidelines do not explicitly specify where military outlays are to be allocated, in MPS practices most were treated as fixed capital formation.

45. No adjustments have been included in the table with regard to major or capital repairs, as in principle they are included in both systems in gross capital formation. In the past, however, in many CPEs capital repairs were financed by special depreciation allowances reflected in the depreciation rates. At the present time, many countries in transition have changed the above practice. No special depreciation allowances for capital repairs are made in business accounts, but at the same time all repairs are regarded as current and therefore included as current costs. This may result in underestimation of value added and capital formation. Therefore special efforts are needed in such cases to split the outlays on repairs into current and capital repairs. The most effective approach is to introduce the distinction into the business accounts of enterprises.

2. Change in inventories

46. The scheme presented in table A.8 shows the interrelationship between the change in inventories as defined in the SNA and the corresponding category of the MPS.

Table A.8. Derivation of change in inventories as defined in the SNA, from corresponding items of the MPS

A.	Change in stocks, as defined in the MPS
B.	Relevant part of unfinished construction (minus)
C.	Change in stocks of ingots (minus)
D.	Price adjustment (minus)
E.	Change in inventories as defined in the SNA (A-B-C-D)

47. The MPS and SNA definitions of change in inventories are similar with a few exceptions. One is that in the MPS all unfinished construction is allocated to inventories and included in change in inventories. The other difference between the two systems concerns the treatment of ingots. While in the SNA they are treated as financial assets if they represent monetary gold, in the MPS they are allocated to inventories.

48. It should be noted that some transition countries treated unfinished construction as a separate item of the accumulation fund of net material product, that is, as being on a par with the change in inventories and net fixed capital formation. This practice was observed, for example, in the former Czechoslovakia. Data published in 1990 by the World Bank[1] show that, during the period 1986-1989, the average ratio of unfinished construction to net material product amounted to 0.8 per cent, while in 1980 it was equal to 2.5 per cent.

49. With regard to agricultural goods, losses during storage and transportation are not excluded from the output of agriculture in the MPS. Therefore, they have to be deducted in order to arrive at the measure of output and value added in agriculture, as defined in the SNA. In the MPS, extraordinary losses of inventories are explicitly recorded in the material balance under the separate heading of final use of net material product. The result, however, is the same as in SNA: since losses are excluded from the change in inventories and shown as a separate item of the final use of net material product, they do not affect the total net material product. Thus, if MPS data on agricultural output are used as a starting point for the derivation of agricultural output in the SNA, losses of agricultural goods need to be deducted.

E. SNA links to MPS concepts of consumption

50. In the MPS, the counterpart of final consumption expenditure of households is known as personal material consumption. The latter is restricted, however, to final consumption expenditure of the population on goods and material services, including consumption of fixed assets in the housing sector (public, private, cooperative and so forth). Personal material consumption in the MPS is more restricted than so-called consumption of population which is defined in the MPS as an additional analytical category including personal material consumption and material inputs of institutions of the non-material sphere serving the individual needs of households in the areas of education, health and so on. The other difference is that personal material consumption in the MPS concerns consumption expenditure in the territory of the country and excludes purchases of products by residents of the country abroad.

51. Table A.9 includes a scheme that can be used to derive final consumption expenditure of households as defined in the SNA from MPS data on personal material consumption. It should noted that the adjustments in the table with

regard to the coverage of (a) purchases by residents of the country abroad and (b) purchases by non-residents within the country are asymmetric. Category (a) includes both goods and services whereas category (b), in conformity with the MPS, includes only goods. It should also be noted that adjustment D pertaining to imputed output of financial intermediaries should be introduced only if imputed output is allocated to different users and not allocated to intermediate consumption of the notional sector. Finally, adjustment is needed if all business trip-related expenses are allocated to intermediate consumption of enterprises.

Table A.9. Derivation of final consumption expenditure of households from MPS data on personal material consumption

A. Personal material consumption (as defined in the MPS)

B. Purchases of non-material (non-financial) consumer services by households (plus)

C. Payments by households for financial auxiliary services (plus)

D. Relevant part of imputed output of financial intermediaries, allocated to households (plus)

E. Relevant part of output of casualty insurance companies, allocated to households (plus)

F. Output of life insurance companies and pension funds (plus)

G. Imputed output of housing services produced by owner-occupiers (plus)

H. Domestic services (plus)

I. Purchases of goods financed out of business travel allowances (if all such allowances are allocated to intermediate consumption) (minus)

J. Consumption of fixed capital in housing sector (minus)

K. Purchases of goods linked to maintenance of dwellings by owner-occupiers (minus)

L. Provision of non-material services in kind to certain groups of households, financed by miscellaneous transfers (plus)

M. Purchases of consumer goods and services by residents abroad (plus)

N. Purchases of consumer goods by non-residents in the given country (minus)

O. Final consumption expenditure of households, as defined in the SNA (A+B+C+D+E+F+G+H-I-J-K+L+M-N)

52. Purchases of non-material (non-financial) consumer services referred to under item B in the table include:

(a) Rent (actual) in respect of all dwellings, including rent paid for summer cottages, boarding-houses, hostels and so forth;

(b) Payments for stays in hotels, camping;

(c) Payments for communal services (sanitation and cleaning of territory, garbage disposal);

(d) Rental services (renting of consumer durables, cars, sport equipment and so on);

(e) Payments for transport and communication services (insofar as they are treated as non-material services);

(f) Payments for using garages (leaving cars in special parking-lots);

(g) Payments for medical services;

(h) Purchases of vouchers to sanatoriums, holidays homes and so on;

(i) Payments for educational services, including payments for services of teachers hired privately;

(j) Fees to institutions for pre-schoolchildren;

(k) Payments for entertainment and recreational services (purchases of tickets to cinemas, theatres, concert halls, museums, stadiums, planetariums and so on);

(l) Payments for personal care services (services of barber shops and beauty parlours, baths and massage parlours);

(m) Payments for package tours;

(n) Payments for other services n.e.c. (fees for legal services, charges

for newspaper notices and advertisements, payments for making copies of documents, charges for funeral services, payments for typing and stenographic services and so on).

53. Table A.10 illustrates with statistical data extracted from an Estonian national accounts publication[m] the derivation of final consumption expenditure as defined in the SNA from the corresponding data in the MPS. It should be noted that the table takes as the point of departure for the derivation of the SNA concept, personal material consumption as defined in the MPS. The latter does not include material inputs by institutions of the non-material sphere serving the individual needs of households in education, health and so on.

Table A.10. Consumption of households, Estonia, 1986-1990

(Millions of roubles)

		1986	1987	1988	1989	1990
1.	Consumption of households as defined in the MPS	2 886	2 999	3 122	3 312	4 119
2.	Non-material services purchased by households (plus)	707	801	930	1 147	1 571
3.	Expenditure for material goods and services during business trips	21	21	24	30	33
4.	Material expenditure by government on health, education and so on (minus)	109	114	126	122	147
5.	Consumption expenses abroad by residents (plus)	[a]	[a]	305	249	212
6.	Consumption expenses on material goods and services by non-residents in the territory of the country (minus)	[a]	[a]	118	23	79
7.	Final consumption expenditure of households as defined in the SNA	3 463	3 665	4 091	4 528	5 643

[a] Amount nil.

54. It is difficult to find in the MPS the exact counterpart of the SNA category of final consumption expenditure of general government. The closest counterpart is the concept referred to as "material consumption in institutions

of the non-material sphere". There are many important differences though, which relate in particular to differences between the SNA and the MPS in terms of the coverage of government. In the MPS, government covers all institutions of the non-material sphere (which may include institutional units such as financial institutions, insurance companies or other enterprises), which in the SNA are treated as part of corporations. Also included are social organizations including political parties, trade unions and so forth, which in the SNA are allocated to the sector of private non-profit institutions serving households.

55. The distinction made in the SNA between individual and collective services in government is very similar (but not identical) to the distinction made in the MPS between (a) material input of the units of the non-material sphere serving individuals and (b) material consumption of the units of the non-material sphere serving the community as a whole. However, the similarity between the distinctions used in the two systems hides important differences in the concepts concerned. The most important is the restriction of both MPS categories to the consumption of material goods and services. Furthermore, the second MPS category which covers collective material consumption includes material input by financial institutions, whereas in the SNA this input is allocated to intermediate consumption.

56. Table A.11 presents a scheme that may be used for the derivation, from categories that are identified in the MPS, of final consumption expenditure of general government on collective services. It should be noted that in the table purchases of weaponry, aircraft, tanks and similar items are not excluded from total outlays; they are in the SNA as intermediate cost of the production of government services and are thus included in final consumption expenditure of government. On the other hand, all outlays on construction including construction of such military facilities as airfields, docks and so forth are classed as capital expenditures and have to be excluded to arrive at final consumption expenditure of general government.

Table A.11. Calculation of final consumption expenditure of general government on collective services

	Departments of government			
	Public order	General public services	Defence	Other
1. Total outlays (from the records on the state budget expenditure of which)				
2. Purchases of equipment				

3.	Purchases of weaponry, tanks, aircraft and so on
4.	Construction
5.	Capital repairs
6.	Consumption of fixed capital
7.	Incidental sales
8.	Final consumption expenditure of general government on collective services (1-2-4-5+6-7)

57. The implications of the above are quantitatively summarized in three tables with the help of data for the former USSR (in billions of roubles). Table A.12a displays with 1990 data the use of income account by sectors; table A.12b presents, also for 1990, the allocation of adjusted disposable income between actual final consumption and saving; and table A.12c presents the total actual final consumption of households and government during the year 1990.

Table A.12a. Use of income account, former USSR, 1990

(Billions of roubles)

	Non-financial corporations	Financial corporations	General government	Households	NPISHs
Resources					
Gross disposable income	200.9	2.5	212.0	607.1	4.9
Total	200.9	2.5	212.0	607.1	4.9
Uses					
Final consumption expenditure					
Households				513.2	
Government			176.7		
NPISHs					7.6
Gross saving	200.0	2.5	35.3	93.9	-2.7
Total	200.9	2.5	212.0	607.1	4.9

Table A.12b. Adjusted disposable income and actual final consumption, former USSR, 1990

(Billions of roubles)

	Non-financial corporations	Financial corporations	General government	Households	NPISHs
Gross adjusted disposable income	200.9	2.4	144.2	682.5	-2.6
Actual final consumption			108.7	588.6	
Gross saving	200.9	2.4	35.5	93.9	-2.6

Table A.12c. Total actual final consumption, former USSR, 1990

(Billions of roubles)

		1988	1989	1990
1.	Final consumption expenditure of households	412.2	446.3	504.5
2.	Social transfers in kind	66.4	69.9	84.1
	Final consumption expenditure of general government on individual goods and services	55.2	57.4	67.9
	Final consumption expenditure of NPISHs on individual goods and services	11.2	12.5	16.2
3.	Actual final consumption of households (1+2)	478.6	516.2	588.6
4.	Actual final consumption of general government (final consumption expenditure of general government on collective services)	103.4	107.7	108.7
5.	Total actual final consumption (3+4)	582.0	623.9	697.3

58. When reviewing the three tables, it should be noted that, by definition, corporations do not have either final consumption expenditure or actual final consumption; their function is to produce goods and services and sell them on the market. It should also be noted that the negative saving of NPISHs (and in principle of any sector) means that final consumption expenditure exceeds disposable income. Negative saving also implies that the financial liabilities of the sector are likely to have increased or that consumption expenditure is being financed by liquidating financial assets, for example, by using the funds deposited in banks during previous periods to finance consumption during the current accounting period. Furthermore, it should be noted that actual final consumption of NPISHs is equal to zero because all final consumption expenditure of NPISHs is by convention regarded as expenditure on individual goods and services. Finally, total actual final consumption is equal to the total final consumption expenditure of all sectors.

F. Scope of external transactions in the SNA and the MPS

59. The scope and treatment of exports and imports and also other external transactions in the SNA differ in a number of respects from MPS practices. In view of this, several adjustments are needed not only when compiling imports and exports, but, more generally, when compiling the external transactions account. The main differences are listed below. All result in differences between the

product and income concepts in the two systems.

60. First, there are differences in the production boundary, which, of course, affect differences in exports and imports. Since the production of non-materials services is not within the scope of the MPS, they are recorded neither as exports nor as imports. Thus, while exports and imports as defined in the SNA include non-material services, exports and imports in the MPS do not.

61. Also, the residency concept of the SNA which determines the scope of external transactions was not used in the MPS. Instead, the MPS recording was based on a territorial concept. Thus, transactions carried out by embassies of foreign countries located within the territory of the countries were considered part of the scope of transactions in the country, and, inversely, transactions carried out by embassies and diplomatic missions representing the countries abroad were not included. This is contrary to the implications of the SNA residency concept, which includes as residents diplomatic missions representing the country abroad, but excludes foreign diplomatic missions located in the territory of the country.

62. Beyond the conceptual differences mentioned, the MPS practices in the past were much less comprehensive in general with regard to the recording of external transactions. Thus, purchases by residents abroad and by non-residents in the given country were not included in imports and exports respectively, and also gifts in kind were not included in imports and exports as defined in the MPS. In the SNA, these items should be reflected in imports and exports. The income concepts between the two systems are generally very different, because the MPS generally ignored payments to and from the rest of the world.

63. Valuation of external trade was a controversial topic in past MPS compilations. The difficulties arose particularly for those CPEs that used a modified formula to estimate external trade output, taking into account the peculiarities in their price system and exchange rates. The method that was used for this purpose is summarized in table A.13. Introduction of an adjustment factor *k* was designed to overcome the deficiency of official exchange rates. Its application does not contradict the SNA. In other respects, the formula given in the table is practically the same as that in the SNA. The improvement in the exchange rates system will abolish the need to use the correcting coefficient.

Table A.13. Valuation of external trade

$$G = (Id - Ed) - (Is - Es)k$$

where

G = output of external trade

Id and *Ed* = imports and exports in domestic prices

Is and *Es* = imports and exports in external trade prices, converted into domestic currency on the basis of official exchange rates

k = coefficient used to convert the excess of imports over exports into domestic currency (*k* = *Id*/*Is* if *Is* > *Es*; *k* = *Ed*/*Id* if *Es* > *Is*

G. SNA links to MPS income concepts

64. There are many more differences between the income concepts of the SNA and past MPS practices than between the production and final expenditure concepts of the two systems. The most important among them concerns the fact that in the MPS there is no clear distinction between different types of transactions recorded in the financial balance. Thus, purely redistributive transactions such as taxes, social benefits, contributions to social insurance and so on are combined in the MPS with such financial transactions as change in deposits, purchases of shares, bonds and so forth. Also, the treatment of income from property differs in the MPS from that in the SNA. The only type of property income distinguished in the MPS is interest. This is due to the fact that other types of property income practically did not exist in the former CPEs. Income from property (interest) is not regarded in the MPS as a component of the primary distribution of income but is treated as a redistributive payment. Still another peculiarity of the MPS is that the distinction between current and capital transfers which is important in the SNA is not made explicitly in the financial balance or any other table of the MPS. Also, the treatments in the two systems of holding gains (losses) and losses of fixed assets and stocks are different and this further affects the comparability of income aggregates. Furthermore, all transactions in the SNA are in principle on an accrual basis, while in the MPS the distinction between the accrual and the cash basis of registration is not established explicitly and is blurred in practice. In some tables of the MPS at least, such as the balance of money income and expenditure of the population, income flows are recorded on a cash basis.

65. One consequence of the lack of conceptual clarity in the financial balance of the MPS is that two important income concepts of the SNA, namely, that of primary and national income, and that of disposable income, have no clear-cut counterparts in the MPS.

1. Primary and national income concepts in the SNA and the MPS

66. In both the SNA and the MPS, the primary income concept is the sectoral parallel of that of national income for the economy as a whole; national income in either system is the aggregate of these primary incomes. However, the content of national income in the SNA differs considerably from that in the MPS, first because of differences in the production boundary related to the distinction between material and non-material production, and second (as was explained above), because national income in the SNA and national income in the MPS are calculated at different points in the sequence of accounts.

67. In the MPS, there is a recognized distinction between income flows and measures of output and net material product can be computed by using different methods; however, this is not properly reflected in the terminology and the term "net material product" is used to denote both concepts. From a quantitative

point of view, there is no analogue in the MPS of the SNA distinction between gross domestic product (GDP) and gross national income (GNI). The MPS, unlike the SNA, does not explicitly record the receipts of primary income by non-residents and does not include payments of primary income from non-residents. In the MPS, therefore, payments and receipts of primary incomes for the economy as a whole are always the same.

68. As a consequence of the above-mentioned peculiarities, the concept of primary income used in the MPS differs considerably from primary income as defined in the SNA. In the SNA, primary incomes are recorded for every institutional sector, including general government. In the MPS, primary incomes are restricted to incomes that originate in material production. For groupings of units (enterprises of the material sphere and population), they are calculated at an earlier stage in the sequence of accounts and exclude redistribution through receipts and payments of property income. Thus, in the MPS, primary income of the population is received by households largely in the form of compensation of employees and mixed income generated in material production. Primary incomes of enterprises producing material goods and services are received mainly in the form of operating surplus before the deduction of taxes on production and imports. Government is not regarded in the MPS as a recipient of primary income; taxes on production and imports remain included in primary incomes of enterprises to the extent that they pertain to goods and material services.

69. The schemes presented in table A.14 summarize the above by showing how national income and the primary incomes of individual sectors as defined in the SNA can be derived from similar concepts in the MPS. The first scheme deals with the derivation of national income in the SNA from that in the MPS, and the following five schemes present the link between primary income of individual sectors as defined in the SNA and the equivalent concepts in the MPS. It should be noted that some incidental differences between the SNA and the MPS in the treatment of selected items such as expenses for business travel, losses of stocks, and so forth are disregarded in the schemes in order to simplify them. Differences in the treatment of holding gains are also omitted for the same reason. Compensation of employees in the non-material sphere should include imputed social contributions which are not calculated in the MPS at all. In principle, the adjustment pertaining to the imputed social contribution in the material sphere is also needed but here disregarded for purposes of simplification.

Table A.14. Derivation of primary income in the SNA from primary income in the MPS

Total economy

A. National income as defined in the MPS

B. Compensation of employees engaged in the non-material sphere (plus)

C. Operating surplus/mixed income in the non-material sphere (plus)

D. Non-material services consumed by the industries of the material sphere (minus)

E. Taxes on production and imports pertaining to non-material services, net (plus)

F. Income from property received by the residents of the country from the rest of the world less the property income paid out to non-residents (plus)

G. Compensation of employees received by the residents of this country from the rest of the world less compensation of employees payable to non-residents (plus)

H. Net taxes on production and imports receivable by the government from the rest of the world less similar taxes payable by the residents of the countries to foreign countries (plus)

I. Net national income as defined in the SNA (A+B+C-D+E+F+G+H)

Non-financial corporations

A. Primary income of the enterprises as defined in the MPS

B. Operating surplus of enterprises of the non-material sphere (plus)

C. Taxes on production and imports in the material sphere (minus)

D. Non-material services purchased by enterprises of the material sphere (minus)

E. Contributions to social security fund by enterprises of the material sphere (minus)

F. Income from property receivable by enterprises, net (plus)

G. Balance of primary incomes of non-financial corporations (A+B-C-D-E+F)

Financial corporations

A. Primary income of financial institutions (does not exist in the MPS)

B. Operating surplus of financial institutions (plus)

C. Income from property receivable by financial institutions (plus)

D. Income from property payable by financial institutions (minus)

E. Balance of primary income of financial corporations as defined in the SNA (B+C-D)

Households

A. Primary income of the population as defined in the MPS

B. Compensation of employees in the non-material sphere (plus)

C. Mixed income in the non-material sphere (plus)

D. Operating surplus of owner-occupiers (plus)

E. Income from property received by resident households of the country (plus)

F. Income from property payable by resident households of the country (minus)

G. Compensation of employees payable to non-residents of the country (minus)

H. Compensation of employees receivable by residents of the country abroad (plus)

I. Balance of primary income of households as defined in the SNA (A+B+C+D+E-F-G+H)

General government

A. Primary income of general government (does not exist in the MPS)

B. Taxes on production and imports (plus)

C. Income from property receivable by general government (plus)

D. Income from property payable by general government (minus)

E. Operating surplus of units included in the general government sector (plus)

F. Balance of primary income of general government as defined in the SNA (B+C-D+E)

NPISHs

A. Primary income of NPISHs (does not exist in MPS)

B. Income from property received by NPISHs (plus)

C. Income from property paid out by NPISHs (minus)

D. Operating surplus of units allocated to NPISHs (plus)

E. Balance of primary income of NPISHs as defined in the SNA (B-C+D)

2. Final and total income in the MPS

70. A significant weakness of the MPS is that it does not define categories of disposable income and saving which are among the most important macroeconomic magnitudes in the SNA. There are, however, two income concepts that may be considered approximate counterparts of disposable income, namely final income and total income.

71. Final income is recorded in the MPS in the balance of production, primary distribution, redistribution and final use of national income (financial balance). It is calculated as the sum of primary income and redistributive receipts and reduced by redistributive payments. Thus, final income refers to income used to finance purchases of consumer and capital goods; purchases of non-material services are treated as redistributive payments. Final income reflects the MPS definitions of primary income and redistributive flow which differ significantly from the definitions of corresponding categories of the SNA. Final income does not explicitly include saving, but it does implicitly include that part of saving that finances capital formation. Since the MPS does not make a clear-cut distinction between current and capital redistributive flows, capital transfers affect final income, as defined in the MPS. In other words, capital formation included in final income as defined in the MPS is financed both from saving and from capital transfers.

72. Disposable income in the SNA (D) can be represented in a schematic manner in MPS terms as the sum of final consumption expenditure on material goods and services ($C1$), non-material services ($C2$), financial saving ($S1$) and non-financial saving ($S2$), that is, as

$$D = C1 + C2 + S1 + S2$$

Similarly, final income (F) of households as defined in the MPS can be represented as the sum of expenditure on material goods and services ($C1$), non-financial saving ($S2$) and the material input of the institutions of the non-material sphere serving individuals in education, health, recreation and so forth (M), that is, as

$$F = C1 + S2 + M$$

Thus, in order to derive final income in the MPS sense from disposable income in the SNA, it is necessary to deduct (from F) material input of the units of the non-material sphere serving individuals (M) and to add purchases of non-material services ($C2$) and non-financial saving ($S1$), as expressed below

$$D = F - M + C2 + S1$$

73. Another income concept suggested in the MPS is that of total income. This concept is closer to the concept of disposable income and includes in particular income used to purchase non-material services. However, total income still differs from disposable income in a number of respects, for example, it includes capital transfers. The main limitation of the concept of total income is that it has not been integrated into the conventional conceptual framework of the MPS and was not used in practice.[n]

Notes

[a] The discussion of the Material Product System (MPS) relies on Basic Methodological Principles Governing the Compilation of the System of Statistical Balances of the National Economy, Studies in Methods, Series F, No. 17/Rev.1 (United Nations publication, Sales No. 89.XVII.3). The topic of SNA/MPS links was dealt with in the past in numerous documents and publications of the United Nations including, most recently, documents prepared by the United Nations Statistics Division for an expert group meeting in Geneva, 16-18 May 1989, and a document prepared by the United Nations Statistics Division for the Expert Group Meeting on Reconciliation of SNA/MPS Standards in National Accounting, Moscow, 4-9 December 1989.

[b] These materials were prepared by the Statistical Office of the Baltic States and were made available to the participants in a training seminar on the SNA organized jointly by the statistical offices of Sweden and the Baltic States held in Tallinn, Estonia, 9-11 June 1992.

[c] Central Statistical Office of Poland, "Empirical and theoretical problems of introducing into Polish statistics the European System of Integrated Economic Accounts", paper prepared for the conference on statistics of the Central and

Eastern European countries, Paris, 10-12 September 1990.

[d] ECE, "Transition needs", paper prepared by the ECE secretariat for the joint ECE/World Bank workshops on transition problems in statistical offices (Geneva, 21-23 May 1990).

[e] Pelley, "Experience of implementing the SNA in the Czech and Slovak Federal Republic", paper prepared for the seminar on implementing the SNA in countries in transition (Minsk, 27-29 April 1993).

[f] CIS, National Accounts and Economic Balances of the CIS Member States.

[g] Janos Arvay, "The Material Product System (MPS)", paper presented at the twenty-second General Conference of the International Association for Research in Income and Wealth (IARIW).

[h] CMEA, Basic Methodological Principles Governing the Compilation of the Statistical Balance of the National Economy (Moscow, CMEA Standing Commission on Statistics, 1988).

[i] Statistical Office of China, "Linkage of the SNA and the MPS with the help of input-output tables", paper presented at the Expert Group Meeting on Reconciliation of SNA/MPS Standards in National Accounting, Moscow, 4-9 December 1989.

[j] International Standard Industrial Classification of All Economic Activities, Statistical Papers, Series M, No. 4, Rev.3 (United Nations publication, Sales No. E.90.XVII.11).

[k] L. Drechsler, "Differences in concepts and definitions between the System of National Accounts (SNA) and the system of balances of the national economy (MPS)", paper prepared for the Expert Group Meeting on Reconciliation of SNA/MPS Standards in National Accounting, Moscow, 4-9 December 1989.

[l] World Bank, Czechoslovakia: Transition to a Market Economy, A World Bank Country Study (Washington, D.C., World Bank, 1991).

[m] Statistical Board of Estonia, The National Accounts in Estonia (1992).

[n] These issues are discussed at some length in "Selected problems of the SNA/MPS relationship", paper prepared by the former Statistical Division of the United Nations Secretariat (January 1989). Statistics Division documents on SNA/MPS links include "National accounts and balances: links between the System of National Accounts (SNA) and the System of Balances of the National Economy (MPS)" (E/CN.543/1980, E/CN.3/1983/8 and E/CN.3/1985/6); and Comparisons of the System of National Accounts and the System of Balances of the National Economy; Part I: Conceptual Relationships (United Nations publication, Sales

No. E.77.XVII.6) and Part II: Conversion of Aggregates of SNA to MPS and Vice Versa for Selected Countries (United Nations publication, Sales No. E.77.XVII.15).

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