

A SYSTEM OF NATIONAL ACCOUNTS



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**A System
of National Accounts**



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Chapter II*Page 18, paragraph 2.12, line 11: delete and other**Between pages 18 and 19, table 2.1, row 53, column 32, insert 29**Page 29, table 2.14 (a), figure for item 11: for 51 read —51***Chapter III***Page 50, line immediately preceding formula 3.22:**for $[I - B(I + D_1 \widehat{C}_2 i)^{-1} D_1]^{-1} e$* *read $[I - B(I + D_1 C_2 - C_2' i)^{-1} D_1]^{-1} e$* *Page 50, paragraph 3.91, line 3:**for $S \equiv (I + D_1 C_2 - C_2' i)^{-1}$* *read $S \equiv (I + D_1 C_2 - C_2' i)^{-1} D_1$* **Chapter IV***Page 54, paragraph 4.20:**Line 10: for —1, 9, 1 and 6 respectively read —1, 9, 6 and 1 respectively**Penultimate line: for output read inputs**Page 70, formula 4.56:**for $q_1' [F_0' + A_1 I (I - A_0')^{-1} F_0'] r_0$
read $q_1' [F_0' + A_1 (I - A_0')^{-1} F_0'] r_0$* **Chapter VI***Page 95, paragraph 6.11, line 8: after capital formation
insert or personal consumption**Page 108, table 6.1, item 8.2.1: after Jewellery, watches,
rings and precious stones, insert (D)**Page 118, table 6.4, right-hand column, line 7: for 1.11.2
read 1.11.4***Chapter VII***Page 120, paragraph 7.4, line 11: after factor incomes,
insert plus indirect taxes less subsidies***Page 126***Title of paragraph 7.48: for (4.51 and 4.52 respectively, as disbursement; 4.61 and 4.62 respectively, as receipt) read (4.61 and 4.62 respectively, as disbursement; 4.71 and 4.72 respectively, as receipt)**Title of paragraph 7.49: for (4.53 as disbursement; 4.63 as receipt) read (4.63 as disbursement; 4.73 as receipt)**Paragraph 7.49 third line: for 7.81 read 7.83**Paragraph 7.52, last sentence: for (See paragraphs 7.85 and 7.86 below.) read (See paragraphs 7.86 and 7.87 below.)**Page 131, paragraph 7.83, last line: for 6.127 read 6.128***Chapter VIII***Page 150, table 8.2, items 4.8, 4.9 and 4.10: delete second sentence in each case.**Page 159, account 5, item 5.8.2: for Current read Currency**Page 178, paragraph 8.114, line 6: for table 4 read table 5**Page 192, table 18**Item 17: for 3.4.6 read 3.4.6.1 i**Item 20: for 3.6.13 read 3.6.23***Chapter IX***Page 221, account 5:**for Gross investment read Gross accumulation**for Finance of gross investment read Finance of gross accumulation**Page 224, account 5:**Insert item 5.9.10**Proprietors' net additions to the accumulation of quasi-corporate enterprises*

Glossary

Page 230, Capital transactions account, line 3: after liabilities insert purchases less sales of intangible assets

Page 231, Commodities, line 5: after purchases abroad insert on current account

Page 235, Intermediate consumption of industries, line 6: delete land,

Page 235, Net worth, lines 2 and 3: for parties other than owners of the equity of the institutional unit read

other parties, including the owners of shares and other forms of capital participation in the institutional unit

Page 236, Private non-profit institutions serving enterprises, line 2: delete not

Index

Page 241

Left-hand column, line 2: for 5.48 read 5.24-5.34

Imputations: rent from owner-occupied dwellings: for 6.128 read 6.127

PREFACE

This report presents the new System of National Accounts (for short, SNA) which the fifteenth session of the Statistical Commission adopted for the use of national statistical authorities and in the international reporting of comparable national accounting data [resolution 1 (XV)]. The new system is a revision and extension of the SNA which was formulated in 1952 and issued in earlier versions of this publication.

The new SNA provides a comprehensive and detailed framework for the systematic and integrated recording of the flows and stocks of an economy. It brings together data ranging in degree of aggregation from the consolidated accounts of the nation of the old SNA to detailed input-output and flow-of-funds tables into an articulated, coherent system. The production account of the old SNA is disaggregated into input-output accounts in respect of industries and commodities and the flow "net lending or borrowing" is dismembered into the transactions in financial assets and liabilities of the institutional sectors and sub-sectors of an economy. The income and outlay and capital accounts of the nation are divided into the corresponding accounts for institutional sectors and sub-sectors; and balance sheet accounts for these categories of transactors, and the nation, are added to the accounts of the old SNA. The new system incorporates additional classifications in respect of the activities of government and private non-profit bodies and transfers of income so as to furnish much more adequate tabulations of data than the old SNA concerning the effects of these bodies on the economy, the provision of social and community services, and the redistribution of incomes. It also integrates constant-price data in respect of the supply and disposition of goods and services into the structure of the system.

These extensions in the SNA grew out of the work in national accounting carried out during the last fifteen years and the uses made of the national accounting data in economic and social analysis, planning and decision-making. The national and international experience gained in using the old SNA also led to clarifying and modifying certain definitions and classifications in the new system. The intensive efforts in recent years to bring the SNA and the System of Material Product Balances (MPS) closer together contributed to the modification of definitions and classifications in the new SNA. Where in the case of an important item, it was not feasible to reach full comparability between the new SNA and the developed MPS, sufficient detail is provided in the relevant classifications so that it will be possible to pass from one system to the other.

The new system, like the old SNA, is designed to provide international guidance to national statistical authorities who wish to improve, elaborate and extend

their national accounts and their systems of basic statistics. Since it integrates and links the definition and classifications of all flows and stocks into a coherent structure, the new SNA furnishes an excellent means for planning the gathering and compiling of the co-ordinated bodies of basic data required for purposes of economic and social analysis. The new SNA is also to serve as a basis for the reporting of comparable national accounting data to the United Nations and other international bodies, and for constructing co-ordinated international guidelines and standards in respect of more specialized bodies of economic, financial and other statistics. Thus, for example, the recently revised international recommendations concerning industrial statistics have been made consistent with the system; FAO, UNESCO and WHO are elaborating statistics in respect of agriculture, education and health, respectively, from the new SNA; and the Statistical Office of the United Nations is constructing systems of income distribution statistics and price and quantity index numbers in the framework of the new SNA and MPS.

The new SNA is intended to furnish goals for advancing national accounting and systems of basic statistics in the foreseeable future. It is recognized that it will take a number of countries many years before they can compile all the data of the full system. In the case of the developing countries, the chapter of this report which is devoted to discussing the ways in which they might adapt the full system to their own requirements and circumstances, includes a suggested order of priorities in which they might develop the standard accounts and tables of the system. In the case of other countries, broad orders of priority of compilation are discussed in the chapter on the standard accounts and tables. Expansion in the international reporting of the data of the new SNA will reflect the pace at which the national compilation of the standard accounts and tables progresses.

The objectives, structure and concepts of the new SNA, which are presented in the first four chapters of this report, are primarily intended to supply guidance concerning the framework in which countries may systematize, expand and use their national accounts and co-ordinated basic statistics. The concepts, problems and methods of input-output analysis of the data of the production, consumption expenditure and capital formation accounts of the system, and of coherent price and quantity index numbers in respect of these accounts, are also discussed in that portion of the report. The framework of the system is elaborated into full definitions and classifications and into standard accounts and tables in the next four chapters of this report. These definitions and classifications are designed to be adaptable by countries for use in their national

accounting and gathering and compiling aligned bodies of economic, financial and other statistics; and are basic to the international reporting of comparable national accounting data. The standard accounts and tables are intended as guidance to the compilation of the data of the system which should generally be useful for purposes of economic and social analysis and decision-making; and as the basis for the international reporting of data. The last chapter of this report suggests various ways in which developing countries might adapt and build the new SNA in the light of their own needs and circumstances.

While balance sheet accounts are an integral part of the new system, this report does not provide full definitions and classifications or standard accounts and tables in respect of these data. It does delineate how the balance sheet accounts are integrated into the framework of the new SNA; and describes the structure and concepts of these accounts. Detailed proposals in respect of the definitions, classifications and standard compilations of balance sheet statistics will be founded on these concepts; and will be the subject of international discussions during the next year or two. When the Statistical Commission adopts detailed international guidelines in respect of the balance-sheet accounts of the new system, they will be issued as an addendum to this publication. Aspects of national accounting and related topics in addition to those already mentioned, which should be the subject of future work, are the extension of the new SNA into regional accounting, statistics of research and development which fit into the new system, and a coherent system of demographic, manpower, educational and other social statistics which is co-ordinated with the national accounts.

The new SNA is the result of international studies

and discussions carried on during the last four years or so. It reflects the practice, experience and views of the statistical authorities of countries which vary in economic and social systems and differ in stage of economic and social development. It also takes into account the recommendations and experience of international agencies in respect of related areas of statistics. The new system was developed with the assistance and advice of an Expert Group convened by the Secretary-General. The members of the Expert Group were: Mr. O. Aukrust, Central Bureau of Statistics, Norway; Mr. B. Ferrán, Central Bank of Venezuela; Mr. Earl Hicks, Statistical Bureau, International Monetary Fund; Mr. George Jaszi, Office of Business Economics, United States; Mr. J. D. Mayer, National Institute of Statistics and Economic Studies, France; Professor M. D. McCarthy, first, Central Statistical Office, Ireland and later, The Economic and Social Research Institute, Ireland; Mrs. M. Mód, Central Statistical Office, Hungary; Mr. C. A. Oomens, Central Bureau of Statistics, Netherlands; Professor Richard Stone, Department of Applied Economics, University of Cambridge, England; and Dr. S. G. Tiwari, Central Statistical Organisation, India. Also participating in the Group were representatives from the statistical services of the Organisation for Economic Co-operation and Development and the European Economic Community. At the invitation of the Group, Professor Richard Stone acted as chairman of each of its three sessions.

The Secretariat, on behalf of the United Nations, wishes to express appreciation to these experts for the invaluable contribution which they have made to the development of national accounting internationally. A debt of gratitude is also due to the organizations with which the experts were associated for enabling them to participate in this valuable work.

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Chapter I

INTRODUCTION

The System of 1953

1.1. The original United Nations System of National Accounts and Supporting Tables (or SNA for short) was first published in 1953. It provided a coherent framework for recording and presenting the main flows relating to production, consumption, accumulation and external trade. This framework took the form of a set of six accounts sufficiently simple to be contained on two pages of the report. Further detail was relegated to a set of twelve supporting tables which took one (or more) of the entries in the accounting system and subdivided it in one or more ways. The original report was entirely concerned with flows expressed in current money terms and did not go into the problems of making estimates at constant prices. The main purpose of the work was to provide a uniform basis for reporting national income statistics, though it was also expected that it would be of help to countries wishing to undertake studies in this field.

1.2. The system of 1953 was essentially a step on the road to setting out clearly and concisely a framework within which the statistical information needed to analyse the economic process in all its many aspects could be organized and related. But, as its authors recognized, it was only a first step. "Thus", they wrote in chapter I, "if a start is made with a system of national accounts such as is described in this report, the production account could be subdivided so as to display the commodity flows between industries which are the central feature of input-output studies. In a similar way, by a suitable elaboration of the accounts, it would be possible to introduce all relevant financial flows into the same system. The accounting structure could then be completed by adding balance sheets for the different sectors of the economy. Finally it would be possible to express in constant prices the principal product flows and stocks in the system".

1.3. Any attempt to carry out this whole programme was thought, at the time, to be premature. Although some work had been done in each of the fields mentioned, it was insufficient, except in the case of the national accounts expressed in current money terms, to provide an acceptable basis for international standards. Since then the position has changed: an unprecedented amount of work has been done in all the fields referred to in the original report and much economic analysis has been based on this work; in addition a succession of international conferences, official and private, has helped to develop a general consensus of opinion on many matters of detail. As a result, it is now thought that the time has come to extend and revise the old SNA so as to provide a full and detailed treatment of stocks and flows in an economy.

Subsequent developments and the scope of the new system

1.4. The work of the last fifteen years which is relevant to this report has proceeded in two directions: the elaboration and extension of national accounting and the construction of disaggregated economic models. Each of these developments has helped to make possible the formulation of the new system and at the same time has made a new system necessary if international standards and international reporting are to keep pace with the work that is going on in a large and increasing number of countries.

1.5. Let us look first at what has been happening in the field of national accounting. Experience with the old SNA showed the need for clarifying concepts and definitions beyond what was possible by means of the minor amendments undertaken in the late nineteen-fifties. Although the general framework of the national accounts has not changed much, with the passage of time more and more detail has been added; simple aggregates have come to be divided in various ways. These developments have largely been undertaken to meet the growing needs of economic analysis and, in the absence of a comprehensive and detailed framework, have resulted in a tendency for new material to take variant forms in different parts of the world. More attention has been given to estimates at constant prices and, in particular, to expressing the main product flows and their components in these terms. In addition, the last few years have seen intensive efforts to bring the SNA and the MPS (the system of material product balances) closer together. This has been achieved in part by clarifying conceptual differences between the two systems, in part by modifying definitions and classifications so as to improve comparability and in part by providing sufficient detail in each system to make reclassification possible at a number of important points.

1.6. The statistical endeavour which these developments have brought about has not been restricted to producing more and better standard tables on the lines of the old SNA; it has also been directed to opening up new areas of statistical tabulation. In particular, great emphasis has been placed on the subdivision of the production account into industries and other producers and on tracing the product flows between these industries; there are few countries nowadays that have not constructed at least one input-output table. The attempt to integrate such tables into a system of national accounts leads to a whole range of problems that did not arise under the old SNA but which are treated in some detail here.

1.7. Input-output is not the only area in which the national accounts have been extended; a considerable, though smaller, amount of effort has been put into separating out the many financial sectors of the economic system and into examining in detail their issue (and redemption) of different kinds of financial liability and their acquisition of different kinds of financial asset. In addition to input-output tables, which show the product flows between different groups of producing units, a number of countries have also prepared flow-of-funds tables which show the flows of financial claims that enable the surplus saving of some groups of financing units to provide the external funds needed by sectors whose capital expenditure exceeds their saving.

1.8. The third area mentioned in the report of 1953, namely the construction of national and sector balance sheets, has so far received only a limited amount of attention from official statisticians although the subject is on the agenda for international discussion in the near future. Several countries have already made partial studies and in a few cases complete systems of sector balance sheets have been set up. The taxonomic problems involved have much in common with those encountered in constructing flow-of-funds tables and the experience gained in the countries that have tried to establish sector balance sheets enables the statistical and other practical problems to be fairly fully described.

1.9. Since all these extensions are nothing more than the elaboration of some part of a system of national accounts, mere tidiness of mind would suggest that eventually a common framework, an extended system of accounts and balances, should be devised to accommodate them all. But apart from tidiness of mind there is another factor that has stimulated a systematic approach.

1.10. This other factor is the second development mentioned earlier: the construction of disaggregated models as an aid to economic analysis and policy. The highly aggregated econometric models which started to be built about a generation ago took as their principal variables the main aggregates in the national accounts: output, consumption, saving, investment and so on. For many purposes of both analysis and policy, however, it is not sufficient to work with aggregates alone; it is also necessary to look at many aspects of an economic system in greater detail. As a result, economic models are now built in which the main aggregates are subdivided, or disaggregated. Where this is done many of the problems which arise in building aggregated models are exacerbated and some new ones are added. In the first place, it is as necessary as it ever was to be clear about the arithmetic and accounting identities which connect the variables but, as there are now many more of them, the problem is somewhat enlarged. In the second place, as soon as aggregates are subdivided, it becomes necessary to classify their components in different ways according to the point of view that is relevant in different parts of the analysis. Thus the goods and services bought by private consumers are usually grouped together on the lines of a shopping-list whereas those bought by public authorities are usually grouped together under various purposes: education, health and so on. These classifications, which relate to the two main branches of consumption, differ

from one another and they also differ from a classification of the products of industries. In order to analyse consumption it is necessary to work with the appropriate consumer categories; and in order to analyse the industrial implications of particular consumption levels it is necessary to convert the demands of consumers into categories of products. In the third place, general economic and accounting principles are not sufficient to resolve all taxonomic problems, as is largely the case with the main aggregates; in addition, the needs of particular forms of analysis, for example input-output analysis, contribute to the choice of solution.

1.11. The principal technical consequence of all these developments is that it becomes necessary to maintain coherence in a much enlarged system of related concepts. Experience shows that a framework of balancing accounts continues to provide a satisfactory solution. To make this possible, however, certain requirements must be met of which the more important are the following.

1.12. The concept of account must be extended in various ways. In addition to the accounts of transactors, the accounts proper one might say, it is necessary to introduce another form of balancing statement or account which shows how alternative classifications are related to one another. A familiar example of this second type of account is the so-called dummy account which can be used to collect together income arising in the various industries and to allocate it among the institutional sectors that finally receive it. The same technique can be applied wherever the elements of one classification are to be transformed into those of another. An example is the transformation of government consumption for a particular purpose, such as education or health, into the various products, labour services and so on of which it is composed.

1.13. While a great variety of classifications can be introduced into an accounting system by the means just described, care must be taken to restrict the number of classifications that interact together in any part of the system. For example, in analysing government consumption it is necessary to work with a purpose classification but in analysing the industrial implications of this consumption it is necessary to work with a classification of the characteristic products of industries. It is not, however, necessary to subdivide these products further according, say, to the legal form of organization of the units in which they are made. In the new system, the interaction of classifications is limited to pairwise interaction; almost all useful information can be represented in this way and severe statistical difficulties set in if higher interactions are to be recorded.

1.14. The complexity of the new system requires a suitable form of presentation if it is to be possible to grasp the system as a whole without losing sight of its components. In presenting the new system a set of accounts would not be convenient; it would require a fairly large book to contain the whole set of accounts and the structure of the system would be completely lost. Experience shows that a matrix, with component submatrices, enables a large system to be written down compactly while at the same time the position of every element in the system is clear. The use of matrices is simply a means of communicating the structure of the system to someone who wants to understand it in detail;

for most users, the main contents of the system can readily be presented in standard accounts and tables, as is done in chapter VIII below.

Methods of presentation

1.15. Before an attempt is made to present a sketch of the new system (a detailed presentation is given in the next chapter), it seems desirable to exemplify the method of presentation that will be adopted and show how this method is related to various alternatives with which some readers may be more familiar.

1.16. In doing this a very simple system will be chosen, namely one consisting of four accounts for the nation relating respectively to production, consumption, accumulation and external transactions. At this stage, many points of detail will be ignored. The presentation and extensions of the accounting structure in this and the following sections will be illustrated numerically so that the connexions between the various forms of presentation of the simple system and between

these and the various extensions introduced can easily be traced.

1.17. In this example, the four accounts contain ten entries and are so familiar that no further introduction is needed. The four methods of presentation, (a) straightforward accounts, (b) balance statements, (c) matrices and (d) equations, can be set out as follows.

Straightforward Accounts

1.18. These accounts are balancing statements with outgoings on one side and incomings on the other. This form is clear and familiar. But it is not at all concise: every transaction must be written down twice, once as an outgoing and once as an incoming; and the description of each transaction must likewise be written down twice, once in the account of the payer and once in the account of the receiver.

1.19. An accounting presentation of the four accounts of the nation is set out in table 1.1. This example is intentionally simplified and the terminology

Table 1.1. The four accounts of the nation

1. PRODUCTION

(Domestic Product Account)

Outgoings		Incomings	
1. Gross income payments (value added) (9)	255	3. Sales of consumption goods (6)	210
2. Purchases of imports (18)	54	4. Sales of capital goods (12)	47
TOTAL	309	5. Sales of exports (16)	52
		TOTAL	309

2. CONSUMPTION

(Income and Outlay Account)

Outgoings		Incomings	
6 Purchases of consumption goods (3)	210	9. Gross income receipts from domestic production (1)	255
7. Saving (15)	27	10. less Provisions for the consumption of fixed capital (13)	-19
8. Net current transfers abroad (19)	4	11. Net distributed factor incomes from abroad (17)	5
TOTAL	241	TOTAL	241

3. ACCUMULATION

(Capital Transactions Account)

Outgoings		Incomings	
12. Purchases of capital goods (4)	47	15. Saving (7)	27
13. less Provisions for the consumption of fixed capital (10)	-19		
14. Net lending abroad (20)	-1		
TOTAL	27	TOTAL	27

Table 1.1 continues

Table 1.1. The four accounts of the nation (*continued*)

4. THE REST OF THE WORLD

(Balance of Payments Account)

<i>Outgoings</i>		<i>Incomings</i>	
16. Purchases of exports (5)	52	18. Sales of imports (2)	54
17. Net distributed factor income payments (11)	5	19. Net current transfers (8)	4
TOTAL	57	20. Net borrowing (14)	-1
		TOTAL	57

adopted is designed to bring out the nature of transactions as seen from different points of view. Thus item 3 in the first account is described as "sales of consumption goods" while its contra-entry, item 6 in the second account, is described as "purchases of consumption goods". However, the relationship of this simple example to the new system will soon become apparent.

1.20. In this example, all the transactions in a national economy have been reduced to a small number of aggregates. But in order to represent the system by means of accounts it has been necessary to

show each entry and its description twice. In the present case this does not matter very much because there are only four accounts and ten entries. The position is very different if we are dealing with several hundred accounts and several thousand entries.

BALANCE STATEMENTS

1.21. These statements permit a single description of each entry but still require each entry to appear in two places. In this form, the accounting system just described would be shown as in table 1.2.

Table 1.2. A balance statement of the four accounts of the nation

<i>Outgoings</i>				<i>Incomings</i>			
<i>Production</i>	<i>Consumption</i>	<i>Accumulation</i>	<i>The rest of the world</i>	<i>Production</i>	<i>Consumption</i>	<i>Accumulation</i>	<i>The rest of the world</i>
1	2	3	4	1	2	3	4
54	210	47	52	Consumption goods	210		
255				Capital goods	47		
				Exports	52		
				Imports			54
				Gross income from domestic production			
				Provisions for the consumption of fixed capital			
				Net distributed factor incomes from abroad			
				Net current transfers abroad			
				Saving			
				Net lending abroad			
309	241	27	57	TOTAL	309	241	27
							57

1.22. This form of presentation is probably not as familiar to most people as is the accounting form set out in paragraph 1.19. It is more economical of space than table 1.1 and it is perfectly clear. It is, however, possible to produce a third form of presentation which, if even less familiar, is equally clear and considerably more concise.

MATRICES

1.23. Matrices permit each transaction to be represented by a single entry and the nature of the transaction to be inferred from its position. In this form of presentation, each account is represented by a row and column pair and the convention is followed that

incomings are shown in the rows and outgoings are shown in the columns. Thus, in matrix form, the simple system appears as in table 1.3.

Table 1.3. The four accounts of the nation in matrix form

	<i>I</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Total</i>
1. Production		210	47	52	309
2. Consumption	255		-19	5	241
3. Accumulation		27			27
4. The Rest of the World	54	4	-1		57
TOTAL	309	241	27	57	

1.24. This presentation, though less familiar than the two preceding ones, is equally clear and far more concise. It has, moreover, a further great advantage in that it need not be changed even if the categories employed are all subdivided. In the example, each entry is a single number: Total expenditure on consumption goods = 210; total saving = 27; and so on. But the moment we subdivide production to show the output in different industries and subdivide consumption to show the use of products in different consuming sectors, consumption can no longer be represented by a single number but requires a rectangular array of numbers (a matrix) with as many rows as there are industries and as many columns as there are consuming sectors. In this array the entry in the j th row and the k th column represents the output of industry j consumed directly by consuming sector k : the textile products consumed directly by private households, let us say. Once this is understood the little matrix of the national accounts with its four rows and four columns and its ten non-zero entries can be used to represent an altogether more detailed system. Each entry can be interpreted as a matrix (or submatrix as it is usually called with reference to the main matrix). Thus the little matrix can represent a big matrix on the understanding that although each category is divided into subcategories we do not need to specify these subcategories in our representation. If there are q producers, r consumers, s accumulators and t categories into which the rest of the world is divided, then, if the pattern of their transactions is as given in the little matrix, this matrix, without any addition, will represent the whole

system of transactions however many elements there may be in each of the classifications. In this way the mind is freed from the absorption of unnecessary detail and is available for worthier tasks. By following a concise, economical notation, a good notation as mathematicians would say, we can see the wood and at the same time retain the trees.

1.25. But this is not the only advantage of a matrix presentation. If we follow an accounting presentation we naturally think of accounts (the row and column pairs in the matrix) as relating to transactors. But, as we have seen, this idea is lacking in generality. In describing an economic system we are not only interested in the interactions between transactors but also in the interactions between the categories they use in describing what they are doing. For example, consumers buy goods and services, let us say clothing, and this item in the consumers' budget puts demands on the products of the textile, clothing and rubber industries and on the transport and distributive activities associated with these demands. This change of classification, from a consumers' classification to an industrial classification of products can equally be represented as an account: a category, expenditure on clothing let us say, receives money from the income and outlay account of consumers and spends it on the various industrial products which contribute directly to providing clothing. In this case the account, the balancing row and column, relates not to a transactor but to a good and represents the fact that what is spent on that good is equal to the elements which make up that expenditure classified from a different point of view.

1.26. Let us now see what would happen to the little matrix of four rows and four columns if, in addition to production, consumption, accumulation and the rest of the world, we recognized a fifth category, consumers' goods and services. If we add this category as a fifth row and column, the result is as shown in table 1.4.

1.27. If we compare this matrix with the earlier one, we can see that if we think only of aggregates and, in particular, of total consumers' expenditure, then the fifth account is entirely redundant and we have added nothing useful to table 1.3. If, however, we think of the entry in row 1 and column 5 of table 1.4 as a submatrix, with industrial products in the rows and consumers' goods and services in the columns, and if we think of the entry in row 5 and column 2 of the same table also as a submatrix, with consumers' goods and services in the rows and consuming sectors in the

Table 1.4. An extension of the national accounts in matrix form

	<i>I</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>Total</i>
1. Production			47	52	210	309
2. Consumption	255		-19	5		241
3. Accumulation		27				27
4. The rest of the world	54	4	-1			57
5. Consumers' goods and services		210				210
TOTAL	309	241	27	57	210	

columns, then the addition of a fifth row and column is not redundant at all. But the fifth row and column (and the component rows of the fifth row and the component columns of the fifth column) are also accounts, mathematically indistinguishable from the transactor accounts. Thus we can give accounts a significance which is not ordinarily associated with them: they are a means of representing categories and their intersection shows the interaction of one set of categories with another. This thought leads on to the fourth and final method of presentation we shall consider.

EQUATIONS

1.28. Equations of the simplest kind can be used to represent the equalities of outgoings and incomings. Thus the accounting system of table 1.3 can be expressed by four equations, three of which are independent, namely

$$255 + 54 = 210 + 47 + 52 \quad (1.1)$$

$$210 + 27 + 4 = 255 - 19 + 5 \quad (1.2)$$

$$47 - 19 - 1 = 27 \quad (1.3)$$

$$52 + 5 = 54 + 4 - 1 \quad (1.4)$$

1.29. The first of these equations shows that gross income payments (value added), 255, plus purchases of imports, 54, are equal to sales of consumption goods, 210, plus sales of capital goods, 47, plus sales of exports, 52. This equation is often written in the form

$$255 = 210 + 47 + (52 - 54) \quad (1.5)$$

which shows value added equal to sales of consumption and capital goods plus net exports.

1.30. The second equation shows that purchases of consumption goods, 210, plus saving, 27, plus net current transfers abroad, 4, are equal to gross income from domestic production, 255, less provisions for the consumption of fixed capital, -19, plus net distributed factor incomes from abroad, 5.

1.31. The third equation shows that purchases of capital goods, 47, less provisions for the consumption of fixed capital, -19, plus net lending abroad, -1, equals saving, 27, since capital transfers are not introduced into this example.

1.32. The fourth equation, which can be obtained by adding together the first three and cancelling out terms common to both sides, shows that purchases of exports, 52, plus net distributed factor income payments, 5, by the rest of the world are equal to the receipts of the rest of the world from sales of imports, 54, from current transfers, net, 4, and from borrowing, net, -1.

1.33. This form of presentation is familiar and clear, but it has two disadvantages. The more important of these is that it considers one account (or set of accounts or category) at a time and does not bring out the interaction of these accounts. The less important is that this method of presentation can only be reduced to a small number of equations, in any but highly aggregated cases, if the equations are written out in matrix form. These, too, suffer from the first defect.

METHODS OF PRESENTATION ADOPTED

1.34. In presenting the new system in this and the following chapter, use will be made of a combination of matrices and accounts. In the following two sections of this chapter, the simple numerical example of table 1.3 is extended to include opening and closing balance sheets and to introduce the main categories of the new system. This elaboration is carried out in terms of matrices. In the following chapter, the numerical example is further extended in matrix form so as to illustrate all the categories of the new system. As the role and treatment of each category is described, the entries in a representative row and column of the matrix are in many cases also set out in the form of an account. This is done wherever it is helpful in providing a link between the conceptual scheme and the detailed standard accounts of chapter VIII and also in the case of national and sector balance sheets which are not spelled out in detail in that chapter.

The introduction of balance sheets

1.35. So far, only transactions (flows) have been accounted for; assets and liabilities (stocks) have been ignored. At the highly aggregated level of the national accounts, it is a simple matter to account for stocks by extending table 1.3 to include opening and closing balance sheets.

1.36. Reduced to its simplest terms a balance sheet shows for a sector or set of sectors such as a national economy: (i) the written-down value of tangible assets held plus the excess of financial claims held as assets over financial claims issued as liabilities; and (ii) the net worth of the sector. At any point of time, these two amounts are equal. The entries in the opening and closing balance sheets of a period are connected as follows. Net assets at the end of a period are equal to net assets at the beginning plus net investment at home and abroad in the period plus revaluations needed to adjust assets previously acquired or liabilities previously issued to the prices holding at the closing date. Similarly, net worth at the close of a period is equal to net worth at the beginning plus the new saving available in the period (which will all come from national sources if, as in this chapter, capital transfers are ignored), plus revaluations as before. Since net worth can only be revalued by applying to it the revaluation calculated from the price movements of tangible assets and financial claims and since saving is equal to net investment, it can be seen that the opening and closing balance sheets are linked by revaluations and the entries in the capital transactions account.

1.37. The extension of the national accounts in this way is set out in table 1.5.

1.38. In this table, the entries in the transaction accounts of table 1.3 (apart from the account totals) are reproduced unchanged in the inner rectangle and the information on net assets, net worth and revaluations is shown in rows and columns 1, 6 and 7 which surround this inner rectangle. Opening net assets appear in row 1 and column 4, the revaluation of net assets appears in row 6 and column 4 and closing net assets appear in row 7 and column 4. In a similar way,

Table 1.5. The national accounts, including balance sheets, in matrix form

	<i>I</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1 Opening assets, net				693			
2 Production			210	47	52		
3 Consumption		255		-19	5		
4 Accumulation	693		27			44	764
5 The rest of the world		54	4	-1			
6 Revaluations				44			
7 Closing assets, net				764			

Note: In the columns net assets are balanced by net worth.

opening net worth appears in row 4 and column 1, the revaluation of net worth appears in row 4 and column 6 and closing net worth appears in row 4 and column 7.

1.39. Table 1.5 shows the relationship of the balance sheet to the transaction accounts when the system is presented in a highly consolidated, net form. Minor changes are needed if financial claims issued are shown under the heading of liabilities so that holdings of financial claims are recorded on a gross basis and if the economy is divided into a number of sectors. The resulting complications are illustrated below.

A diagrammatic presentation

1.40. At this point, before more detail is introduced into the system, it may be useful to provide a diagrammatic presentation of the flows and stocks shown in

table 1.5. This is done in diagrams 1.1 and 1.2 below, which make use of the familiar apparatus of boxes linked together by arrows, with indications of the nature and size of the flows and stocks represented.

1.41. Diagram 1.1 is restricted to the information contained in the inner rectangle of table 1.5, that is to say to the flows connecting the four accounts of the nation.

1.42. The four boxes in this diagram represent the four accounts of the nation and the arrows represent flows between them as set out in table 1.5. The fact that each account balances is reflected in the diagram by the equality of the total inflow and total outflow at each box.

1.43. The introduction into the diagram of the remaining information contained in table 1.5 is shown in diagram 1.2. Here, the four accounts are partitioned into two subsets: accumulation on the one hand and

Diagram 1.1. The four accounts of the nation

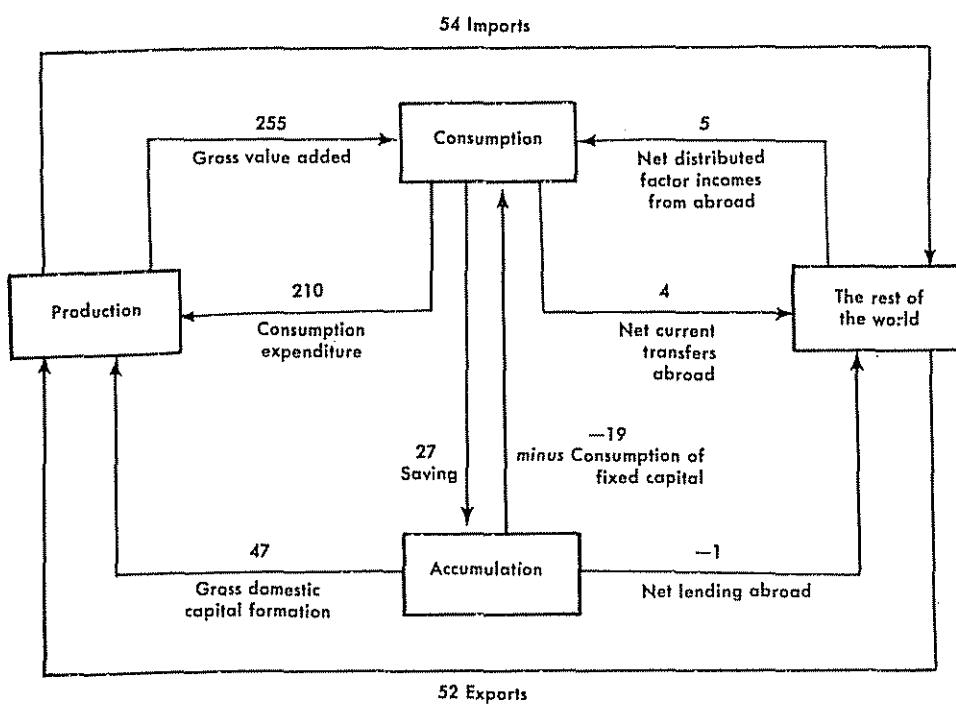
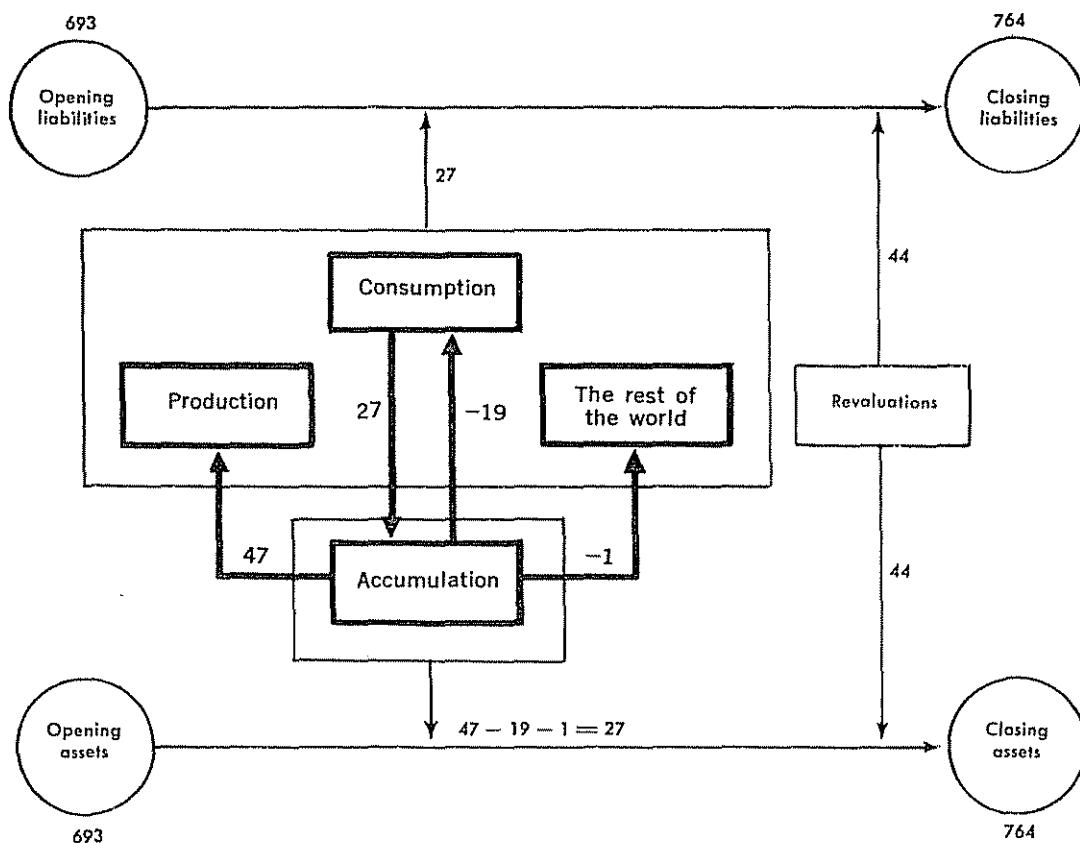


Diagram 1.2. The connexions between opening and closing assets and liabilities



the remaining three accounts on the other hand. This partitioning is represented by enclosing the two subsets in larger boxes. For simplicity, the accounts for production, consumption and the rest of the world are consolidated; and this is represented by leaving out all the arrows that do not have one terminal in the account for accumulation.

1.44. Opening and closing net assets and liabilities (net worth in this example) are represented by circles linked together by arrows running horizontally from the beginning to the end of the period. These horizontal lines are touched by arrows which carry in the modifications during the period which arise either from the flows shown in the accounts or from revaluations made in the period. Thus, from the accounts, opening net worth is increased by 27 units which represent saving, the flow from consumption to accumulation in the accounts; and, as a consequence of revaluations, opening net worth is further increased by 44 units, making 71 units in all. Similarly, from the accounts, opening net assets are increased by $47 - 19 - 1 = 27$ units which represent gross domestic capital formation (the flow of 47 units from accumulation to production) less provisions for the consumption of fixed capital (the negative flow of -19 units from accumulation to consumption) plus net lending abroad (the negative flow of -1 unit from accumulation to the rest of the world); and, as a consequence of revaluations, opening net assets are further increased by 44 units, making 71 units in all, as before. Thus on each side of the balance sheet the flows and revaluations of the period

equal the difference between the opening and closing entries: $764 - 693 = 71$.

Elaborating the basic system

1.45. Additional detail can be introduced into the basic system of table 1.5 by the simple process of subdividing the seven separate headings shown in the table into categories and subcategories. For example, if financial claims are to be shown gross, then rows 1, 6 and 7 must be divided in two with separate rows for financial assets and net tangible assets; and the corresponding columns must also be divided in two with separate columns for financial liabilities and net worth. The rows and columns for financial assets and liabilities can also be subdivided to show holdings and issues of different financial claims. This process is attended with certain consequences. Thus, as soon as any subdivision is made, it has to be remembered that national economies are not closed and that a consolidated balance sheet for the rest of the world must be introduced in order, for example, that financial claims held as assets shall be equal in value to financial claims issued as liabilities.

1.46. A second example can be taken from production. In table 1.5, row and column 2 show respectively the revenue accruing to production from sales of products to various forms of final buyer and the costs, including profit, associated with this production. But for various reasons, analytical as well as statistical, it may be desired to show separately information relating

to *commodities* produced and to the *industries* and other *activities* in which they are made. Since the terms in italics are of great importance and since they are used here in somewhat special senses, it seems desirable, at this early stage, to provide short definitions. Thus: *commodities* are goods and services normally intended for sale on the market at a price that covers their cost of production; *industries* are productive units which produce nothing but commodities; and *activities* consist of industries together with the producers of government services and the producers of private non-profit services to households. The separate information required will appear in the system if production (row and column 2 of table 1.5) is divided into two rows and columns, one relating to commodities and one relating to activities. Once this is done, it is no contradiction of the principle of consolidation to enter in the extended system not only the total value of commodities used as intermediate input by activities but also the total value of commodities produced by activities. Once this stage has been reached, it is only another step to introduce full commodity and activity detail by subdividing the rows and columns for commodities and activities according to commodity and activity classifications.

1.47. An elaboration of table 1.5 which incorporates the above examples and carries the description of accounts and balance sheets substantially closer to the new SNA, is set out in table 1.6.

1.48. If this table is compared with table 1.5, it can be seen that the fourth account of table 1.5, relating to accumulation, has been divided into four

and each of the remaining accounts of that table has been divided into two. As before, the extended flow accounts are enclosed in an inner rectangle; also the groups of accounts forming the accounts of the nation are separated from other groups by bold lines.

1.49. Let us first consider the content of table 1.6 and then turn to its precise connexion with table 1.5. In doing this it may be convenient to begin with the flow accounts and end with the balance sheets.

PRODUCTION

Commodities

1.50. Row and column 3 relate to commodities (goods and services normally intended for sale on the market at a price that covers their cost of production) whether these are produced in domestic activities or imported. Row 3 shows the uses of commodities in the period to which the accounts relate. Thus, 245 represents intermediate input into activities, 166 represents private consumption, 6 represents the increase in stocks, 41 represents gross fixed capital formation and 50 represents exports. The sources of these commodities appear in column 3. Thus, 443 represents domestic production and 65 represents imports, valued at the cost to resident buyers. Of the total of 65, 51 represents sums paid to foreign suppliers and 14 represents import duties.

Activities

1.51. Row and column 4 relate to activities whether or not the main purpose of these activities is to

Table 1.6. A primary disaggregation of the national accounts, including balance sheets

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Opening assets	1	Financial claims									1,249		165				
	2	Net tangible assets									661						
Production	3	Commodities			245	166		6	41			50					
	4	Activities			443		44										
Consumption	5	Consumer goods/purposes						210				2					
	6	Income and outlay			14	241					-19	13					
Accumulation	7	Increase in stocks									6						
	8	Fixed capital formation									41						
	9	Financial claims									58	18					
	10	Capital finance	1,217	693				27		59			-23	44	1,253	764	
The rest of the world	11	Current transactions			51	1	2	12									
	12	Capital transactions	197	-32						17	1	0	-2	214	-33		
Revaluations	13	Financial claims									-21	-2					
	14	Net tangible assets									42						
Closing assets	15	Financial claims									1,286	181					
	16	Net tangible assets									731						

Note: In the columns: opening and closing assets are balanced by opening and closing liabilities; and net tangible assets are balanced by net worth

produce commodities. The reason for widening the scope of productive activity in this way is to give explicit recognition to the productive services performed by government departments and private non-profit bodies. The production of commodities which, with trivial exceptions, takes place in industries, has already been seen to be 443 in this example, and the production of unmarketed services (mainly government services) is shown as 44. The cost structure of all this activity is shown in column 4 where 245 represents the value of commodity input, 1 represents direct expenditures abroad in the provision of government services, and 241 represents all other costs: incomes to the factors of production, provisions for the consumption of fixed capital and indirect taxes less subsidies. Thus the gross domestic product in this example is $14 + 241 = 255$.

CONSUMPTION

Consumer goods/purposes

1.52. Row and column 5 relate to expenditures for the purposes of consumption by the private and public sectors of the economy. The total of this expenditure is shown in row 5 as $210 + 2 = 212$. In column 5 this total is shown divided between expenditure on commodities, 166, by private households and individuals, expenditure on their own services, 44, by government departments and private non-profit institutions and direct expenditures abroad, 2. The separation of direct expenditures abroad from imports and of direct foreign expenditures in domestic territory from exports is a point at which table 1.6 differs from table 1.5, and we shall return to this question at the end of this section. The usefulness of this account hardly becomes apparent until consumer goods and government and other purposes are further subdivided, but it is introduced here to provide a link between table 1.5 and the more detailed tables of the new SNA which are set out in the next chapter.

Income and outlay

1.53. Row and column 6 relate to the income and outlay of the economy. As has already been seen, the sum of the first two entries in row 6, namely $14 + 241 = 255$, represents the gross domestic product. From this are subtracted provisions for the consumption of fixed capital, 19, giving the net domestic product. The final entry, 13, in this row relates to gross receipts of distributed factor income and current transfers from abroad. This total is shown in column 6 divided between three categories of outlay: consumption expenditures, 210, saving, 27, and gross payments of distributed factor income and current transfers to the rest of the world, 12. The gross treatment of flows to and from abroad is a second point at which table 1.6 differs from table 1.5.

ACCUMULATION

Increase in stocks

1.54. Row and column 7 connect stockbuilding seen from two points of view and the reason for the account hardly becomes apparent until the system is further disaggregated. In a disaggregated system the two en-

tries would not be single numbers but submatrices. The submatrix at the intersection of row 3 and column 7 would have commodities in the rows and activities in the columns. The rows would show how the additions to the stocks of the various commodities were distributed over activities; and the columns would show how the additions to stocks of the various activities were distributed over commodities. By contrast, the submatrix at the intersection of row 7 and column 10 would have activities in the rows and institutional sectors in the columns. The rows would show how the addition to stock of a particular activity was distributed over sectors and the columns would show how the additions to stocks of the various sectors were distributed over activities.

Fixed capital formation

1.55. Row and column 8 relate to fixed capital formation. What has just been said about row and column 7 is relevant in this case too.

Financial claims

1.56. Row and column 9 relate to financial claims of all kinds: currency, deposits, securities, mortgages, trade credit and so on. Row 9 shows the acquisition of claims by resident sectors, 58, and by the rest of the world, net, 18; and column 9 shows the issue of new financial claims, net, by resident sectors, 59, and by the rest of the world, net, 17.

Capital finance

1.57. Row and column 10 contain the transactions which, together with revaluations, connect the opening and closing balance sheets of the nation. On the liabilities side there are two items: saving, 27, and new issues of financial claims as liabilities, net, 59. On the assets side the entries can also be reduced to two: net capital formation in fixed assets and stocks, $41 - 19 + 6 = 28$, and new acquisitions of financial claims as assets, net, 58. It can readily be seen that the acquisition less the issue of financial claims, $58 - 59 = -1$, is equal to net lending abroad, so that the entries in row and column 10 are only another way of expressing the familiar identity: saving equals investment at home plus foreign investment.

THE REST OF THE WORLD

Current transactions

1.58. Row and column 11 relate to the current transactions which the rest of the world has with the economy under study. Row 11 shows the rest of the world's incomings from the sale of commodity imports, 51, from direct expenditures abroad, $1 + 2 = 3$, and from receipts of distributed factor income and current transfers, 12; and column 11 shows the rest of the world's outgoings on the purchase of commodity exports, 50, on direct expenditures on domestic territory, 2, on payments of distributed factor income and current transfers, 13, and on lending, net, 1. This last item, which is shown as transferred to the capital transactions account of the rest of the world, can be seen to equal the balance of current transactions (the balance of

payments on current account), since capital transfers are not introduced into this example.

Capital transactions

1.59. Row and column 12 relate to the capital transactions which the rest of the world has with the economy under study. Apart from the balance of 1 transferred from the current account, the row shows a net issue of financial claims as liabilities of 17. The column shows a net acquisition of financial claims as assets of 18. This gross treatment of financial claims is a third point at which table 1.6 differs from table 1.5. In terms of row 12, the entry of 1 plays a role in connecting the opening and closing balance sheets of the rest of the world comparable to that played by saving in row 10; indeed, it represents that part of the saving of the rest of the world which is lent, net, to the economy under study.

BALANCE SHEETS AND REVALUATIONS

1.60. This brings us to balance sheets and revaluations. In table 1.6, financial assets and net tangible assets are shown separately and so are financial liabilities and net worth. In contrast with table 1.5, this table provides not only a balance sheet for all the resident sectors but also a consolidated balance sheet for the rest of the world. As we have seen, this is necessary in order to obtain a complete accounting, an equality of row and column sums at every point in the system. Although for any sector, total assets are necessarily equal to total liabilities (including net worth) this is not true of any particular category unless the economy under study is closed. This can be seen in the numerical example of table 1.6. Financial claims held as assets by the economy under study at the beginning of the period amounted to 1,249; whereas the corresponding total of financial claims issued as liabilities amounted to 1,217. If the entries in the consolidated opening balance sheet of the rest of the world are added in, an equality of financial assets and liabilities is obtained: $1,249 + 165 = 1,217 + 197 = 1,414$. It is not very difficult to see why this equality should hold. The total of financial claims, 1,414, is made up of two parts: all financial claims issued by the economy under study; and those financial claims issued by the rest of the world which are held as assets by the economy under study. This total of financial claims issued as liabilities must be held somewhere in the world as assets; either in the economy under study or in the rest of the world.

1.61. Against this background the entries in table 1.6 relating to balance sheets and revaluations can be described as follows.

Opening assets and liabilities — financial claims

1.62. Row and column 1 relate to financial claims held as assets and issued as liabilities at the beginning of the period. The claims included in this row and column are all claims issued by the economy under study plus all claims issued by the rest of the world and held by the economy under study. From table 1.6 it can be deduced that, in this example, the economy's holding of its own claims is $1,217 - 165 = 1,052$.

Opening assets and liabilities — net tangible assets and net worth

1.63. Row and column 2 relate to net tangible assets and net worth at the beginning of the period. Tangible assets are restricted in table 1.6 to the domestic tangible assets of the economy under study and all holdings of assets in other countries are treated as financial claims. Tangible assets are valued at written-down replacement cost. Net worth measures the excess of assets, tangible and financial, over liabilities. The figure of —32 shown in table 1.6 as the opening net worth of the rest of the world indicates that the economy under study holds foreign claims in the rest of the world in an amount 32 units larger than the rest of the world's holdings of claims on the economy under study.

Revaluations — financial claims

1.64. Row and column 13 relate to the revaluation of holdings and issues of financial claims in order to bring them to a common basis of current values. By elaborating the system it is possible to introduce other values, for example values at the time of issue and values at the time of acquisition, but the problems to which this would give rise will not be discussed at this stage of the report.

Revaluations — net tangible assets and net worth

1.65. Row 14 relates to the revaluation of net tangible assets so as to bring the stock existing at the end of the period on to a basis of current written-down replacement cost. Column 14 relates to the revaluation of net worth and the figures are a consequence of the revaluation of claims and tangible assets.

Closing assets and liabilities — financial claims

1.66. Row and column 15 relate to financial claims held as assets and issued as liabilities at the end of the period. For the economy under study, closing financial assets are linked to opening financial assets by the entries in rows 9 and 13: $1,286 = 1,249 + 58 - 21$. Similarly, closing financial liabilities are linked to opening financial liabilities by the entries in columns 9 and 13: $1,253 = 1,217 + 59 - 23$.

Closing assets and liabilities — net tangible assets and net worth

1.67. Row and column 16 relate to net tangible assets and net worth at the end of the period. For the economy under study, closing tangible assets are linked to opening tangible assets by the entries in rows 6, 7, 8 and 14: $731 = 661 - 19 + 6 + 41 + 42$. Similarly, closing net worth is linked to opening net worth by the entries in columns 6 and 14: $764 = 693 + 27 + 44$.

THE FOUR ACCOUNTS FOR THE NATION

1.68. This completes the description of table 1.6; it remains only to show the relationship of this table to table 1.5. The first step is to consolidate the entries in the inner rectangle of table 1.6 to give the entries in the four national accounts. When this is done, it

will be seen that all the flows between production, consumption and accumulation are identical with those shown in table 1.5 while all the flows in which the rest of the world is involved differ from those shown in table 1.5. The reason for these differences lies in the particular grouping and netting of the highly aggregated flows in table 1.5 and the incomplete stage in the disaggregation of these flows represented by table 1.6. First, in table 1.5 but not in table 1.6, direct expenditures abroad by foreign visitors are routed through the production account: they appear in commodity imports and exports. Second, in table 1.5, the net flow of distributed factor incomes is shown as a payment by the rest of the world and the net flow of current transfers is shown as a receipt by the rest of the world; whereas, in table 1.6, these two kinds of flow are added together and the gross inflow and outflow are shown in the two positions just referred to. Finally, in table 1.5, the issue of financial claims by the rest of the world is shown after deduction of the acquisition of financial claims by the rest of the world and the two accounts for the rest of the world are consolidated; whereas, in table 1.6, the issues and acquisitions of financial claims are shown separately and the rest of the world is represented by two accounts. Thus the differences are not fundamental and, when we get into the following chapter, we shall see the precise form which the national accounts take when the system is fully disaggregated.

1.69. In this and the two sections that preceded it, an attempt has been made first to illustrate various methods of presenting a system of national accounts and second, having decided on the most convenient form of presentation, to extend the system first to include a national balance sheet and then to represent the stocks and flows in an economy in greater detail. Table 1.6 presents a half-way house between the simplified accounts of the nation and the new SNA which, it is hoped, will be found sufficiently detailed as an introduction. Before going on to describe the new system in detail, something will be said about the uses and purposes of this system, about the extent to which its different elements are covered in this report and about the foreseeable problems that it leaves over for solution in the future.

The uses of the new system

1.70. By providing a consistent statistical picture of the development of an economic system, a series of national accounts are useful, indeed indispensable, in describing and analysing economic change and so contribute to many forms of economic decision-making. The report of 1953 spelled out some of the uses of national accounting data in connexion with public policy and emphasized the role of simple kinds of analysis and even inspection of the figures as an aid to decision-making. What was said then remains true today, but the present report does represent a shift of emphasis. The much enlarged scope of the new system enables a wider range of problems to be studied and the experience of the last fifteen years in economic model-building has led to a greater appreciation of the value of more complex kinds of analysis.

1.71. The report of 1953 drew attention to the

fact "that national accounts, in the widest sense of the word, provide an excellent means of appraising any actual or proposed scheme for the collection of economic statistics since a place for virtually all these statistics is provided systematically somewhere in these accounts". Much the same could be said of the national accounts as a source of information for economic analysis and policy. Indeed, it may be illuminating to fill in the matrix depicted in table 1.5 with the names of the branches of analysis and policy to which the various submatrices mainly contribute. In doing this the leading diagonal cells of the inner matrix (the intersection of incomings and outgoings of production, and so on) can be filled in since, as is illustrated in table 1.6, these cells cease to be empty when the system is disaggregated. This exercise is suggestive rather than rigorous because in practice it may not be possible to obtain the degree of separation of topics that is indicated in table 1.7 below.

1.72. In addition to uses that are served by information largely concentrated in a particular submatrix, there are other uses that require the information in several submatrices or even in all of them. Thus an analysis of cost structures, including the cost structures of government activities, can be based on the activity columns contained in column 2 of table 1.7 and a sales analysis of commodities can be based on the commodity rows contained in row 2 of that table. Elementary applications of input-output analysis, such as the calculation of indirect requirements, the expression of the price of a commodity as the sum of primary inputs per unit of output absorbed directly or indirectly in different productive uses or the expression of the supply of a commodity as the sum of the amounts absorbed directly or indirectly in the various commodity purchases by each category of final buyer, call for most of the information in row and column 2 of table 1.7. The analysis of productivity, that is to say of the relationship of output to inputs and, in particular of net output to primary inputs, calls for much of the information in column 2 together with information on the stock of tangible assets employed in the various industries, indicated in column 4, and on the labour employed in these industries. Finally, the building of a model of the whole economy calls for the complete range of information contained in the matrix.

1.73. But the amount of information actually involved depends on the extent to which and on the way in which the matrix is consolidated. For example, a highly aggregated model of the multiplier-accelerator type calls for no more information than is contained in the consolidated national accounts. Between this and large-scale models, in which every aspect of economic life is represented in detail, an immense amount of variation is possible. The complete system can be aggregated in such a way that product flows are treated fully but financing flows are treated only in outline; or conversely. Again, the aggregation can be carried out in such a way as to highlight the elements in the economic process, capital formation, saving, foreign balances and reserves, monetary and fiscal instruments, let us say, that are likely to be important in studying and remedying economic instability. Thus a great variety of models can be built within a common framework and each model can be rendered complete,

Table 1.7. Areas of economic analysis and policy in relation to the national accounts

1	2	3	4	5	6	7
1			Studies of national wealth; analysis of productivity			
2	Input-output analysis; analysis of productivity	Consumers' demand analysis; studies of govt. spending	Models of stockbuilding and fixed capital formation; investment policy	Export demand analysis		
3	Production functions; analysis of productivity; analysis of factor shares	Distribution and redistribution of income; fiscal policy	Depreciation analysis; investment allowances	Studies of the return on foreign investment; double taxation policy		
4	Studies of net worth	Analysis of saving behaviour	Monetary policy and liquidity preference	International finance and liquidity; long-term foreign aid policy	Studies of capital gains and losses; capital gains tax policy	Studies of net worth
5	Import demand analysis	Short-term foreign aid policy	International finance and liquidity; long-term foreign aid policy	Analysis of balance of trade payments		
6			Capital revaluations			
7			Studies of national wealth; analysis of productivity			

however summarily are treated the aspects of the economic process with which it is not primarily concerned. The importance of this last consideration in reaching unbiased results has repeatedly been emphasized in econometric literature.

1.74. The uses that have been described, which cover the whole range from simple tabulation to complex model-building, can fairly be called substantive; they are concerned with increasing our ability to understand the working of economic systems and to take beneficial decisions about them. But there are other, instrumental, uses which are concerned with our ability to collect and process information. One instrumental use has already been quoted from the earlier report: the use of a national accounting framework to check the coverage and consistency of a statistical reporting system. The increasing use of computers, whose efficient operation demands an exact understanding of the simple connexions between innumerable bits of information, sets a rising premium on a coherent framework in which every bit is seen to have its place.

The purposes of the new system

1.75. The purposes of the new system are very similar to those of the old one: to provide guidance for the development of statistics in individual countries; and to provide a basis for country reporting, as repre-

sented in recent years by the entries in the *Yearbook of National Accounts Statistics* and in the publications concerning these statistics of other international organizations. The only difference is that the wider scope of the new system increases the range of information over which guidance is provided and standardized reporting is made possible.

1.76. The scope of the new system is such that a source of misunderstanding must be removed at the outset. While the new system provides a target for statistical development just as, in its day, the old system did, it is not to be supposed that this target will everywhere be reached quickly or that the order of priorities in the development of statistics will be the same in all countries. Accordingly, as we have seen, the new system is designed to provide explicit links between complex representations of an economy and the simple, familiar four national accounts; indeed, by consolidation the new system can be reduced to these four accounts. This consolidation can be regarded as the highest that holds any practical interest. But all imaginable intermediate consolidations are also possible, and this means that a statistical system can be developed along one or more of the directions suggested in this report without losing touch with the basic system of four national accounts which, by now, is available year by year and, in some cases, quarter by quarter for a large number of countries. Thus all countries that organize their statistical work on the

lines suggested here can be compared at a high level of aggregation and those that have developed this work in particular directions, by constructing, for example, an input-output table, can be compared at a lower level of aggregation. The adoption of a common framework thus makes possible as much comparability as can be achieved with the actual levels of statistical development in different countries; but the existence of a comprehensive framework does not imply that any country should be able to provide the complete set of figures that it contains.

1.77. The new system, while much more detailed than the old one, is in no sense a break with tradition. As will become apparent, it seeks to extend the old system in directions in which much experience has been gained in the last fifteen years and to push still further in directions in which some experience has been gained but not enough for a fully detailed treatment. An important feature of any attempt to set international standards in a rapidly developing field is that expression should be given to past experience and an indication should be given of useful directions for further development which cannot yet be spelled out in a generally acceptable manner.

1.78. This last consideration is reflected in the new system. The information needed for input-output and flow-of-funds analysis is treated in considerable detail; the information relating to holdings of assets and liabilities is treated more summarily. Information on the distribution and redistribution of income, though much discussed during the preparation of this report, is confined to flows between broad sectors and no attempt is made to integrate into the system detailed information relating to the distribution of personal income by, say, size or household composition. Regional accounting, though also considered while the report was being prepared, is not discussed at all. The reason for these omissions is that it was felt that more practical experience and discussion were desirable before an attempt to set standards was made.

1.79. The purpose of different parts of the new system can be stated as follows.

1.80. The general framework and its gradual elaboration, from the four simplified accounts of the nation in this chapter to the altogether more detailed system set out in the following chapter, is intended to provide guidance for countries wishing to extend their system of national accounts to provide for greater and greater detail. It should also be of assistance to countries in co-ordinating and systematizing their basic economic statistics, and in locating gaps in these statistics. As we have seen, some parts of this extended system are treated more fully than others and some topics which should, and in future doubtless will, be integrated into the system are not dealt with at all, mainly for lack of sufficient practical experience and discussion.

1.81. The general framework also provides a basis for the elaboration of detailed definitions and classifications and for the standard accounts and tables. The definitions and classifications, which are essential to the international reporting of comparable data, are designed to be adaptable for internal use by individual countries. The standard accounts and supporting tables are intended to indicate the data of the system which have

been found to be generally useful for economic analysis and which a number of countries may be in a position to compile in the foreseeable future.

1.82. In addition to providing guidance to countries in the compilation and publication of national accounting data, these accounts and tables will furnish the basis for devising a revised system of international reporting. The extent to which, and specific way in which, the various standard accounts and tables will be used in international reporting is not discussed in this report. The questions of the content and frequency of international reporting in respect of the various parts of the system, and of the appropriate time to introduce these reports, are to be the subject of other studies.

The new system and the future

1.83. Thus, in spite of its greater coverage compared with the Report of 1953, the new system leaves a number of topics over for further research and discussion. On some of these a good deal of work has already been done; on others there has been some discussion but little or no work; and on a third group there has only been a limited amount of discussion, though sufficient to indicate what may well turn out to be problem areas in the future. A list of these topics will help to put in perspective the stage of development of national accounting reached in this report.

1.84. In the first group, on which work has already been done, four items can be listed.

(a) National and sector balance sheets

1.85. Balance sheets form an integral part of the new SNA as described in this report but there remains a need: (i) to set out in detail the conceptual problems to which they give rise; (ii) to work out guide-lines for the compilation of balance sheet data; and (iii) to draw up standard balance sheets and balance-sheet tables. The balance sheets of the system relate to institutional sectors, and tangible assets are recorded on a net (written down) basis. There is also a need, in connexion with the analysis of production, for estimates of the gross stock of tangible assets classified by activity.

(b) Estimates at constant prices

1.86. This subject, which is as important in connexion with the MPS as it is in connexion with the SNA, is discussed in chapter IV below. The next stage is to work out guide-lines and standards in matters of detail, to set out the pros and cons of various methods and procedures in the light of the experience that has accumulated all over the world and to link the traditional index-numbers of quantities and prices with the system.

(c) Statistics of the distribution of income, consumption and wealth

1.87. The Statistical Office is engaged in preparing an integrated system of statistics of the distribution of income, consumption and wealth which at the *macro* level fits completely into the SNA (and also into the MPS) and at the *micro* level is complementary to these two systems. In this connexion guide-lines need to be worked out for isolating the components of public

consumption that need to be added to private consumption in order to represent the total consumption of the population.

(d) *The elaboration of parts of the system in detail*

1.88. Some of the specialized agencies of the United Nations are working on the further elaboration of parts of the system so as to provide a link between the SNA and detailed information relating to specific activities and sectors. Examples are work by FAO, WHO and UNESCO in connexion with agriculture, health and education.

1.89. In the second group, which so far has not got beyond the stage of preliminary discussions, two items can be listed.

(e) *Regional accounting*

1.90. Any system of national accounts could be subdivided by region and in recent years a number of countries have been engaged in the construction of regional accounts. This development gives rise to a number of conceptual problems which are only of minor importance, if they exist at all, at the national level and to many new problems of measurement. It would be helpful in due course to add a regional dimension to the SNA but, in view of the many other problems on which work is needed, this extension of the system does not have a high priority at present.

(f) *Human flows and stocks*

1.91. This subject was discussed in the course of formulating the new SNA but was eventually left over for future treatment. What was envisaged was the formulation of what may be called a population matrix. Such a matrix makes it possible to bring together in a coherent form demographic, educational, manpower and other social statistics which have a bearing on the economic and social characteristics of a population so that the changing structure of that population in terms of these characteristics can be measured. Just as the row and column pairs in the economic matrices set out in this report represent accounts which balance, so the same is true in population matrices because all who flow into a period, whether through survival from the preceding period or through birth or immigration in the period itself, must necessarily flow out of the period, either through death or emigration in the period itself or through survival into the following period. The economic and population matrices (or accounts) would have many areas in common, such as the distribution of the labour force over activities and the distribution of the population over different types of household and institution. Eventually it would be desirable to link the two systems, much as it was proposed above to link statistics of the distribution of income, consumption and wealth to the SNA.

1.92. Finally, in the third group, two general items can be listed though, up to now, relatively little discussion on them has taken place.

(g) *The functional classification of inputs*

1.93. In the new SNA intermediate inputs are classified by commodity and other inputs are classified by

the components of value added but no attempt is made to classify these inputs further. They may, however, perform a number of more or less distinct functions in addition to providing a basis for productive activity. Some may be used to maintain recreational and medical facilities which, in part at least, are of direct benefit to employees though they may also contribute to productiveness. Others may be used to maintain research and development facilities and it is not altogether clear that these should be regarded as current inputs at all since this year's research and development work can hardly be expected to contribute to this year's output unless this work can itself be regarded as output.

1.94. A first stage in dealing with this problem would be to assign the inputs already distinguished to different functional categories, such as current production, welfare or research and development, a task which in general would involve a further subdivision of these inputs. This would lead to a second stage at which it would be necessary to decide how to treat expenditure on the different categories. Thus, to take expenditures on inputs for welfare purposes as an example, three obvious possibilities present themselves: (i) they could simply be identified as a separate category of expenditure on inputs; (ii) they could be included among supplements to wages and salaries, in which case they would come to form part of private consumption expenditures; or (iii) they could be formed into a new category of industrial final consumption.

(h) *The boundary between current and capital expenditure*

1.95. Although there are no substantial changes in the concept of capital expenditure in the new SNA, various suggestions for extending the coverage of this concept were considered. First, there is the question of consumers' durable goods, expenditure on which continues to form part of private consumption expenditure although the major durables form separate categories in the classification of household goods and services. The introduction of balance sheets into the new SNA makes this treatment more awkward than it was under the old system since it means that an important element of personal wealth is not recorded although identical objects, such as cars, are recorded as wealth if they are owned by businesses or by the civilian branches of general government. Second, there is the question of expenditure on research and development, to which reference has already been made. This is an area in urgent need of clarification but this can only be done on the basis of experience which, though growing, is not yet very great. Third, there is the question of expenditure on education which, though segregated, is treated at present as current consumption. In many respects, however, its effects are more like those of capital expenditure in that it results in a more highly qualified population and so alters production possibilities in the future. Similar arguments could be advanced in respect of many forms of expenditure on health.

1.96. In the development of national accounting emphasis has been placed on the distinction between what can be observed and measured and what can only be inferred on the basis of some theory or convention. This distinction is an important one because

while it is almost always necessary to process data in order to obtain something useful for analysis it is possible to carry the processing to a point where the results are no longer data. For example the supply of a commodity may be allocated to users on the assumption that each user draws his supply from domestic production and imports in a common proportion. The result may be something quite different from what is obtained by observing the proportions in which different users actually make use of domestic production and imports, and it may be seriously misleading. While, as has been said, assumptions are almost always needed in processing data, it should be recognized that when they come to play a major role the result is no longer an observation but an inference.

1.97. At the same time the main purpose of making observations is to enable us to make inferences; all that is important is that we should not confuse the two. This point is exemplified in chapter III below which is concerned with the use of input and output tables, which contain observations, to construct input-output tables which are useful in analysis. The observational and analytical tables are linked by assumption and the role of observation and assumption is made quite plain.

1.98. Developments of the type exemplified by (g) and (h) above aim at providing an observational basis for new types of analysis. The accounts based on these developments would still represent objective facts modified as little as possible by the introduction of assumptions. But the analysis built on these accounts would come more to represent a system of imputations in which market prices were supplemented by shadow prices. It is too early to say how this tendency will develop but it is noteworthy that the experiments now being made by large institutions in the use of mathematical programming and cost-benefit analysis represent steps in the same direction.

The arrangement of the report

1.99. Following this introduction, the remainder of this report is arranged as follows.

1.100. The first four chapters deal with the structure and basic concepts of the system. Chapter II con-

tains a description of the structure of the new system illustrated by an extension of the numerical example begun in this chapter. Broad conceptual issues are discussed in chapter II but a more detailed treatment of many topics is postponed to later chapters of the report. Chapter III deals with the question of constructing input-output tables from the data contained in the system. This topic is separated from the general presentation in chapter II, partly because it gives rise to a number of special problems and partly because a certain amount of analysis is involved in constructing the various possible tables and in selecting from among these the one most likely to be appropriate for analytical purposes. Chapter IV discusses the concepts and problems of constructing a coherent set of price and quantity index numbers within the framework of the system. Much of the discussion of this chapter is also relevant to the compilation of the balances and tables of the MPS in terms of constant prices. Both chapters III and IV are illustrated by means of a further extension of the basic numerical example.

1.101. The next four chapters start from the basic concepts and structure of the system; and elaborate a full set of definitions and classifications, and standard accounts and tables. Chapters V, VI and VII deal in turn with the definition and classification of the transactors of the system, the flows of goods and services, and the transactions on the income and outlay and capital finance accounts. The standard accounts and tables are presented in chapter VIII. In addition to delineating the relationships between the accounts and supporting tables, the discussion of that chapter deals with the major uses to which the various accounts and tables might be put, and the orders of frequency and priority with which the data might be compiled.

1.102. The last chapter, chapter IX, of the report is devoted to a consideration of the full system of national accounts from the point of view of the developing countries. The chapter sets out some desirable modifications and supplementations in the classifications, accounts and tables of the full system in the light of the circumstances of these countries. It also includes suggestions as to the broad order of priorities in which developing countries might evolve the full system of national accounts.

Chapter II

THE STRUCTURE OF THE SYSTEM

The system as a whole

2.1. The purpose of this chapter is to describe the conceptual basis of the new system and to illustrate it by extending the numerical example used throughout the preceding chapter. The order that will be followed is first to present a bird's-eye view of the complete system by extending the matrix given in table 1.6 above to cover all the classes and sub-classes of the system. To keep the example manageable (it will in any case contain eighty-eight rows and columns) the elements shown in the different categories represent aggregations of the elements in the categories of the system itself. For example, in the matrix set out in table 2.1 the activity classification is reduced to nine elements (rows and columns 13 through 21), four for industries, three for producers of government services, one for domestic services and one for the producers of private non-profit services to households. In the full system (see table 5.2 in chapter V) the activity classification has thirty main items most of which have several subitems so that the total number of items in this classification alone is seventy. This amount of detail is useful for analytical purposes but, when repeated *mutatis mutandis* for all the other categories, would clearly be excessive in an illustrative example.

2.2. A glance at the headings of table 2.1 shows that the seven main headings (opening assets, production, ... closing assets) are repeated unchanged from table 1.6. Each of these main headings is subdivided in table 1.6 but the subdivision is carried much further in table 2.1. In the following description of the new system, the headings 2 through 5, which relate to flows, are considered first, and the remainder, 1, 6 and 7, which relate to opening and closing assets and liabilities and to revaluations, are considered second.

Production

2.3. In table 1.6, only two rows and columns were shown for production: one relating to commodities and one relating to activities. In table 2.1, the subdivision of production is carried further. The commodity account is first divided into two categories so as to show the value of commodities separated into two parts: the value before adding commodity taxes or subtracting commodity subsidies (basic value); and the value of the taxes and subsidies themselves. Each category is then divided into commodities (or commodity groups) defined as the characteristic products of the corresponding industry. The activity account is divided into three categories: industries, which produce commodities, the producers of government services, and the private services in the sense of domestic services and the pro-

ducers of private non-profit services to households. The last two categories do not, in most instances, attempt to market the services they produce but themselves meet the cost of these services, which, accordingly, are not regarded as commodities. Each category is then divided into activity groups on the lines of the standard industrial classification of all economic activities, care being taken so to arrange matters that, at the highest level of disaggregation, the kind of activity of government services and of private non-profit services can be identified at the same time with a classification by purpose.

2.4. Before examining each of these categories in detail, let us consider briefly some general issues that arise in classifying production flows.

2.5. First, a distinction is made between commodities and the industries (or, exceptionally, other activities) in which they are produced because it is impossible so to define the elements in the two classifications that there is a one-to-one correspondence between them. This fact is significant because what can be observed about sales structures usually relates to commodities and what can be observed about cost structures usually relates to industries. Thus in analysing the consequences for the productive system of variations in the demand for different commodities, we must recognise that, in general, we cannot observe the cost structures of individual commodities (or commodity groups). The nearest approximation we can find is usually the cost structure of the industry that produces the commodity in question as its characteristic product; but this industry may well produce small quantities of other commodities and several other industries may well produce some of its characteristic product. Since the connexion between demand and cost cannot, in general, be observed for individual commodities, any attempt to trace these connexions, which is the essence of inter-industry analysis, must rest partly on assumption. Various possibilities will be described and illustrated in the following chapter.

2.6. Second, where several conflicting assumptions are possible and where it is difficult to make a choice between them, it is desirable that the role of assumption should be reduced as far as possible. It is for this reason that the establishment rather than the enterprise is the unit to be grouped to form industries. In those countries which do not have the practice of setting up enterprises for specific purposes, it can be observed that the output of an establishment is almost always more homogeneous than the output of the enterprise of which it forms a part. Consequently, the grouping of establishments rather than enterprises to form industries will diminish the importance of uncharacteristic production

and so will diminish the role of assumptions in connecting demands and costs. Following this line of argument it might be supposed that establishments themselves should be divided with the object of further increasing the homogeneity of production. In principle this may be so, but in practice it will rarely be possible without the use of further assumptions in allocating costs to separate departments. In addition, by going too much into detail, there is always the danger of going beyond the commodities which are bought and sold to the technical processes which contribute to their production.

2.7. Finally, it may be asked why the producers of government services, domestic services and the producers of private non-profit services to households should be separated from industries, since the different types of activity are all designed to fit into a common classification of all economic activities. The reason is to be found partly in the differences in cost structure of activities organized in different ways and partly in the interest which attaches to the cost structures of non-industrial activities and, in particular, to the activities organized by government.

2.8. With this introduction, let us now look first at the accounts for commodities and then at the accounts for activities.

COMMODITIES (ROWS AND COLUMNS 5 THROUGH 12)

2.9. The first four of these rows and columns relate to the supply and disposal of commodities valued at producers' prices before charging commodity taxes or deducting commodity subsidies. The purpose of showing commodities valued in this way is to ensure that, as far as is practicable, a uniform valuation is obtained throughout each of the rows 5 through 8. This uniformity is important in input-output analysis. The second four rows and columns relate to commodity taxes and subsidies. When corresponding entries in the two sets of accounts are added together a commodity flow is obtained which, except in the case of imports, is expressed at the producer's market value, that is to say at the value at which the commodity leaves the producer before transport and distribution charges are added on. These charges are in all cases debited to the purchaser. Imports are valued c.i.f. and to these values customs duties are added in a separate set of entries.

2.10. A uniformity of valuation is important for purposes of input-output analysis because the demand for one unit of a commodity by any buyer of that commodity is assumed to stimulate the activity producing that commodity to the same extent. Clearly this will not happen if the valuations are different for different buyers. For example, in a country where tax forms four fifths of the value of a packet of cigarettes sold for domestic consumption but where tax is not charged on export sales of cigarettes, the effect on the tobacco industry of the sale of a packet for domestic consumption would appear five times as great as an export sale if actual values were used. This difficulty is avoided if both packets are valued uniformly and the taxes (or drawbacks) are shown separately where they arise. Similar considerations hold where appliances, such as cookers or refrigerators, are taxed when sold for household use but untaxed when sold for business

use; or when a group of commodities, such as petroleum products, is not subdivided and one of these products, such as gasoline, is highly taxed while another, such as fuel oil, is lowly taxed. Of course, at the level of aggregation of table 2.1 this whole issue is of little importance; but it becomes important in many countries at the much lower level of aggregation represented by the full system.

2.11. The treatment of commodities can now be described. In rows 5 through 8 we find the uses to which the supply of one group of commodities is put. The consumption by industry appears in columns 13 through 16; the consumption in government services, domestic services and private non-profit services appears in columns 17 through 21; the consumption by households appears in columns 22 through 24; the inputs into stockbuilding and into gross fixed capital formation appear in columns 56 through 68; and finally the inputs into exports, that is the values of commodities exported, appear in column 80. The sum of the entries in any row gives the total use of the commodity group in question.

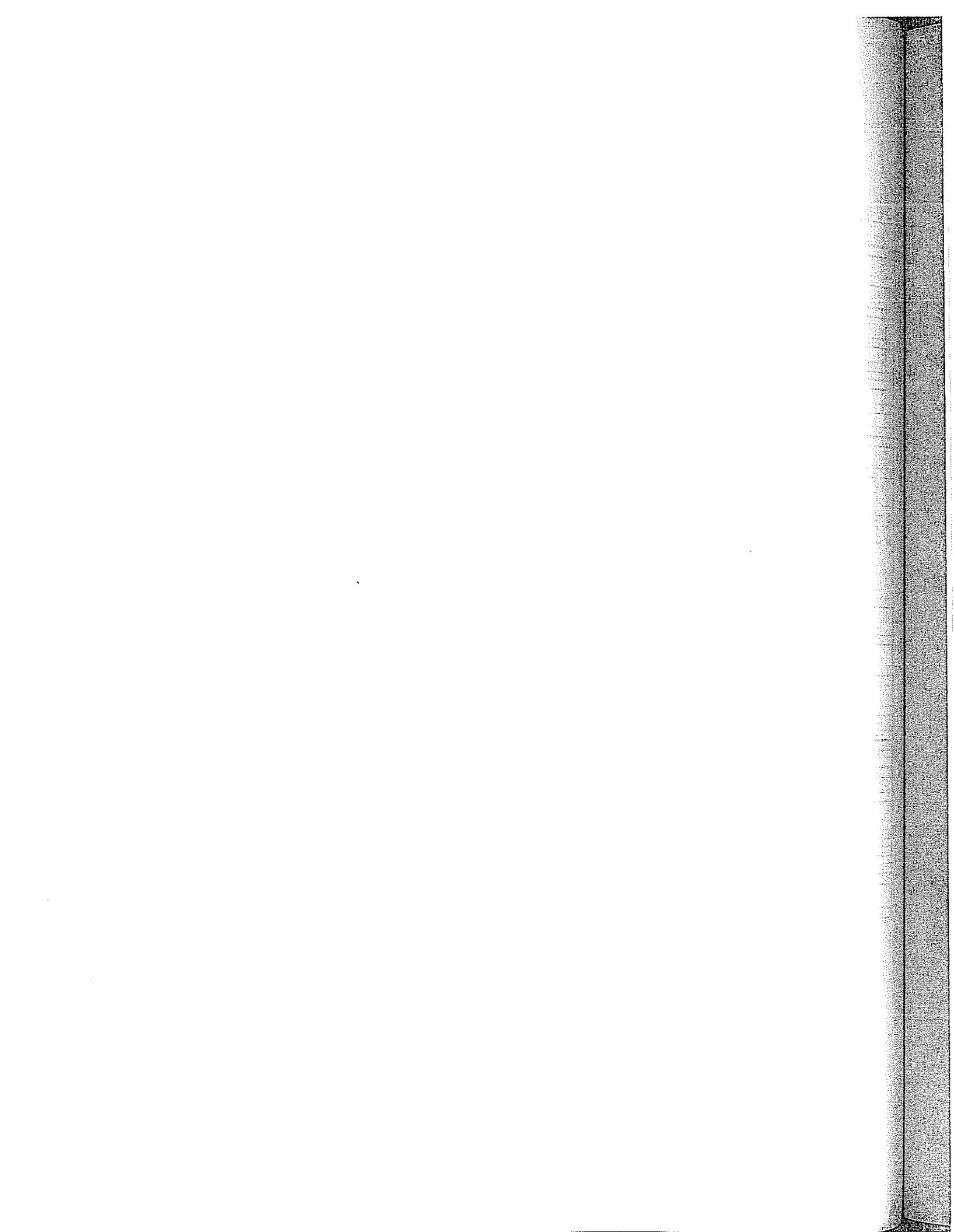
2.12. Correspondingly, in columns 5 through 8 we find the sources of the supply of one group of commodities. The outputs of domestic industries appear in rows 13 through 16; any commodities that were produced in the course of rendering government services and private non-profit services (for example reproductions produced by museums or firewood produced by the highway department in pruning the trees under its control) would appear in rows 17 through 19 and 21; and imports appear as the sum of the entries in rows 32 and 80, the former relating to protective and other import duties and the latter to the cost of the imports before these duties are added. The sum of protective import duties and the cost of imports represents the cost of imported commodities which in the case of competitive imports, most nearly corresponds to the basic value of the domestically produced article. In practice, it may be difficult to distinguish protective from other import duties and, for this reason, the distinction is not maintained in the standard accounts and tables of chapter VIII.

2.13. As an example let us concentrate on row and column 6 which relates to the products of manufacturing and construction expressed at basic values. The column shows: 267 units (at row 14) of characteristic products of manufacturing and construction; 2 units (at rows 15 and 16) of these commodities produced by other domestic industries; and $1 + 29 = 30$ units (at rows 32 and 80) of imports of these commodities valued inclusive of protective import duties, that is duties which tend to raise the cost of the import in relation to the corresponding domestic cost. Import duties on the products of manufacturing and construction designed simply to offset similar duties on domestic production (5 in this example) appear at the intersection of row 32 and column 10. This distinction serves the purpose of ensuring that, as far as possible, basic values are independent not only of the purchaser but also of the source of supply. Row 6 shows the uses to which the products of manufacturing and construction are put. The entries of $8 + 118 + 11 + 8 = 145$ (at columns 13 through 16) represent intermediate inputs into industries; the entries of $7 + 3 + 1 = 11$

Table 2.1. An illustration of the complete system

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Opening assets		Financial assets	Currency and deposits	1																														
			Securities	2																														
			Other financial claims	3																														
		Net tangible assets	All categories	4																														
Production	Commodities	Commodities, basic value	Products of agriculture and mining	5																														
			Products of manufacturing and construction	6																														
			Services of trans., comm. and distribution	7																														
			Other commodities	8																														
		Net tangible assets	All categories	9																														
	Activities	Commodity taxes, net	Products of agriculture and mining	10																														
			Products of manufacturing and construction	11																														
			Services of trans., comm. and distribution	12																														
			Other commodities	13																														
		Net tangible assets	All categories	14																														
Consumption	Expenditure	Industries	Agriculture and mining	15																														
			Manufacturing and construction	16																														
			Transport, communications, distribution	17																														
			Other industries	18																														
		Net tangible assets	All categories	19																														
	Income and outlet	Household goods and services	Food, beverages, tobacco	20																														
			Clothing and household goods and services	21																														
			Other goods and services	22																														
		Government purposes	Public administration and defence	23																														
			Health, education, other social services	24																														
Accumulation	Increase in fixed capital	Purposes of private n-p bodies	Domestic services of household	25																														
			Prod. of private n-p services to households	26																														
			All purposes	27																														
		Value added	Compensation of employees	28																														
			Operating surplus	29																														
	Institutional sector of origin	Indirect taxes, net	Consumption of fixed capital	30																														
		Non-financial ent., corp. and quasi-corp.	31																															
		Financial institutions	32																															
		General government	33																															
		Households	34																															
Capital formation	Form of income	Private non-profit institutions	35																															
		Wages and salaries	36																															
		Employers' contributions	37																															
		Entrepreneurial income	38																															
		Operating surplus	39																															
	Institutional sector of receipt	Property income	40																															
		Direct taxes on income	41																															
		Corporation tax contributions	42																															
		Current transfers by enterprises	43																															
		Social security benefits	44																															
Revaluations	Capital transfers	Social assistance grants	45																															
		Other current transfers by government	46																															
		Current transfers by households	47																															
		Current transfers by the rest of the world	48																															
		All categories	49																															
	Closing assets	Industrial capital formation	50																															
		Land, mineral rights etc.	51																															
		Capital transfers	52																															
		All categories	53																															
		Financial assets	54																															
Net tangible assets	All categories	Securities	55																															
		Other financial claims	56																															
		All categories	57																															
		Net tangible assets	58																															
Financial assets	All categories	Currency and deposits	59																															
		Securities	60																															
		Other financial claims	61																															
		All categories	62																															

NOTE - In the columns 1 opening and closing assets are balanced by opening and closing liabilities;
and net tangible assets are balanced by net worth.



$T_{13\ 12}$	Compensations of employees and operating surpluses arising in institutional sectors classified by component forms of income. For example, compensation of employees is divided between wages and salaries on the one hand and employers' contributions to social security and private pension funds, etc. on the other.	$T_{23\ 27}$	The holdings of financial liabilities by the institutional sectors at the end of the period of account.
$T_{13\ 14}$	Current income transfers, including transfers of property income, paid out by the institutional sectors (as sectors of receipt).	$T_{23\ 28}$	The net worths of the institutional sectors at the end of the period of account.
$T_{13\ 24}$	Current income transfers, including transfers of property income, paid out by the rest of the world.	$T_{24\ 1}$	Financial liabilities issued by the rest of the world and held by the institutional sectors at the beginning of the period of account.
$T_{14\ 11}$	Indirect taxes, net, paid to general government	$T_{24\ 2}$	The net worth of the rest of the world at the beginning of the period of account arising from its relationships with the country under study; that is to say, the negative of the rest of the world's net indebtedness to that country.
$T_{14\ 13}$	Gross receipts of income by the institutional sectors (as sectors of receipt)	$T_{24\ 3}$	Imports of commodities reckoned at c.i.f. values.
$T_{15\ 20}$	Increases in stocks of industries	$T_{24\ 6}$	Direct expenditure abroad on goods and services by the producers of government services.
$T_{16\ 23}$	The finance provided by the capital finance account of general government, of the increase in stocks of producers of government services	$T_{24\ 8}$	Final consumption expenditure abroad by resident households.
$T_{17\ 20}$	Total gross fixed capital formation of industries	$T_{24\ 13}$	Gross receipts of income (whether distributed factor income or other current transfers) by the rest of the world from the country under study.
$T_{18\ 23}$	The finance, provided by the capital finance account of general government, of gross fixed capital formation undertaken by producers of government services	$T_{24\ 21}$	Net receipts of capital transfers by the rest of the world.
$T_{19\ 23}$	The finance, provided by the capital finance account of private non-profit institutions, of gross fixed capital formation undertaken by the producers of private non-profit services to households.	$T_{24\ 22}$	Net issues of financial liabilities, taken up by the country under study, by the rest of the world.
$T_{20\ 23}$	The finance, provided by the capital finance accounts of the institutional sectors, of gross industrial capital formation (in stocks, and fixed assets) and the net purchases by these sectors of land and intangible assets other than financial assets	$T_{24\ 24}$	The rest of the world's balance of payments on current account with the country under study.
$T_{22\ 23}$	Net acquisitions of financial assets by the institutional sectors	$T_{24\ 25}$	Revaluations of financial liabilities issued by the rest of the world and held by the country under study.
$T_{22\ 24}$	Net acquisitions of financial assets, issued by the country under study, by the rest of the world	$T_{24\ 26}$	Revaluation of the net worth of the rest of the world arising from its relationships with the country under study.
$T_{23\ 1}$	The holdings of financial liabilities by the institutional sectors at the beginning of the period of account.	$T_{24\ 27}$	Financial liabilities issued by the rest of the world and held by the institutional sectors at the end of the period of account.
$T_{23\ 2}$	The net worths of the institutional sectors at the beginning of the period of account.	$T_{24\ 28}$	The net worth of the rest of the world at the end of the period arising from its relationships with the country under study.
$T_{23\ 14}$	The saving of the institutional sectors.	$T_{25\ 23}$	Revaluations of financial assets held by the institutional sectors.
$T_{23\ 21}$	Net receipts of capital transfers by the institutional sectors	$T_{25\ 24}$	Revaluations of financial assets issued by the country under study and held by the rest of the world.
$T_{23\ 22}$	Net issues of financial liabilities by the institutional sectors.	$T_{26\ 23}$	Revaluations of net tangible assets held by the institutional sectors.
$T_{23\ 25}$	Revaluations of financial liabilities held by the institutional sectors.	$T_{27\ 23}$	The holdings of financial assets by the institutional sectors at the end of the period of account.
$T_{23\ 26}$	Revaluations of the net worths of the institutional sectors	$T_{27\ 24}$	The holdings of financial assets, issued by the country under study, by the rest of the world at the end of the period of account.
		$T_{28\ 23}$	The holdings of net tangible assets by the institutional sectors at the end of the period of account.

Chapter III

THE SYSTEM AS A BASIS FOR INPUT-OUTPUT ANALYSIS

The input-output data in the system

3.1. The input-output data contained in the system appear in the rows and columns relating to commodities and industries. In order to explain and illustrate how these data can be used for input-output analysis, a magnifying glass has been applied to the relevant parts of table 2.1, the number of commodities and industries has been increased from four to thirteen, the unit of measurement has been decreased one hundred-fold (so that what appeared as 1 in table 2.1 now appears as 100) and the results are set out in the form of the supporting tables relating to input-output given in chapter VIII below. The commodity data are set out in table 3.1 and the industry data are set out in table 3.2. The entries in these tables are measured at basic values.

The commodity table

3.2. Table 3.1 contains a rearrangement of the kind of information provided in rows and columns 5 through 8 of table 2.1. In both panels of the table the first eighteen columns relate to commodities and the final column relates to commodity taxes on all the preceding entries of each row. In the upper panel the rows relate to sources of supply: first come the thirteen domestic industry groups; then the services of general government and private non-profit institutions (which in this example do not produce any commodities); and, finally, the rest of the world, represented by imports c.i.f. and the import duties levied on them.

3.3. The thirteen rows and columns in the top left-hand part of the table indicate the extent of subsidiary production. Commodities, being defined as the characteristic products of industry groups, are naturally mainly produced in their own industry group and so this part of the table has a pronounced diagonal element. Nevertheless, as can be seen, every industry produces some commodities characteristic of other industries and every commodity except the products of agriculture, etc. and services is produced by at least one industry as subsidiary product. It is the existence of subsidiary production coupled with the fact that cost structures can only be measured in terms of commodity and other inputs into industries that calls for the introduction of assumptions before either a commodity \times commodity or an industry \times industry input-output table can be constructed.

3.4. In the lower panel, the rows relate to destinations of supply. The elements in these rows would appear in an enlarged table like table 2.1 as row sums

of the various submatrices strung out along rows 5 through 8. Thus, in table 2.1, transport, communications and distribution form a single commodity group. In table 2.1 the industrial intermediate use of this commodity is shown (at row 7, columns 13 through 16) as $1 + 13 + 9 + 2 = 25$; in table 3.1 it is shown in columns 11 and 12 (at the first row of the lower panel) as $1,668 + 845 = 2,513$ which, apart from rounding, is just one hundred times as large as the corresponding entry in table 2.1. Similarly, the use of this commodity for final consumption by households in the domestic market is shown in table 2.1 as $15 + 12 + 11 = 38$ and in table 3.1 as $981 + 2,800 = 3,781$. Such relationships hold throughout between the entries in tables 2.1 and 3.1. They may be obscured by rounding-off errors or by errors introduced into table 2.1 to compensate for rounding-off errors; but this is a problem that only arises in producing a numerical example which is balanced in each of two different units.

3.5. The only new feature in table 3.1 is the division of commodities into two categories: competitive and complementary. Competitive commodities are those for which there is a domestic industry and which may, therefore, be either home produced or imported. Complementary commodities, on the other hand, are those for which no domestic industry exists, so that if they are needed they can only be obtained as imports. In the example, complementary commodities appear in large quantities in five categories; such commodities as cotton, maize, oranges, rubber and tobacco under agriculture, forestry and fishing; crude petroleum and non-ferrous ores under mining; coffee and tea under food, beverages and tobacco; non-ferrous metals under basic metal industries; and wood-pulp under manufacturing n.e.c.

3.6. In input-output analysis it is necessary to distinguish between competitive and complementary commodities because if complementary commodities are needed they must be imported; they cannot be obtained however much domestic production may be stimulated. If the distinction is not made, the analysis will work as if any commodity would be obtained in given proportions from domestic production and imports quite independently of the final product mix. In general, this cannot be true. Different vectors of final demand will imply varying proportions of complementary imports. In a country which mines coal but not oil, the direct and indirect effects on the productive system of a final demand vector implying a given amount of mining products will depend on the proportions in which this required amount is made up of coal and of oil.

Table 3.1. Sources and destinations of commodity supplies

		Competitive commodities													Complementary commodities					Commodity taxes, net						
		Agriculture, forestry, fishing		Mining		Food, beverages, tobacco		Textiles, wearing apparel, leather		Rubber, chemicals, petroleum products		Basic metal industries		Metal products, machinery, equipment		Manufacturing, n.e.c.		Gas, electricity, water		Construction		Transport and communication		Distribution		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18							
Sources of supply	Agriculture, forestry, fishing...	1	1,695								16										—147 8 353 105 63 7 329 85 37 3 33 77 583					
	Mining	2	974	3							3	3	1													
	Food, beverages, tobacco.....	3		3,637		21				1	1	1														
	Textiles, wearing apparel, leather	4			2,907	5			2	5	1															
	Rubber, chemicals, petroleum products	5		1	69	8	2,917	1	9	20	61	1														
	Basic metal industries	6				12	2,639	58	6	54	1															
	Metal products, machinery, equipment	7				3	8	85	7,929	21	3	38														
	Manufacturing n.e.c.	8		4		6	7	1	18	2,983	8	17														
	Gas, electricity, water	9				109					1,187															
	Construction	10						1	6	13		3,151														
	Transport and communication..	11						1	3			3,313														
	Distribution	12			27	28						3,818														
	Services	13						5			1	4,920														
Destinations of supply	Producers of government services																									
	Producers of private non-profit services																									
	Import duties		25	1	26	21	17	3	41	20											1,288					
	Imports, c.i.f.		741	129	592	200	423	151	382	419		558	291	457	423	130	204	116								
	TOTAL		2,461	1,109	4,354	3,173	3,519	2,882	8,454	3,507	1,318	3,209	3,872	3,825	5,211	457	423	130	204	116	2,824					
Destinations of supply	Intermediate consumption, industries		942	867	819	1,463	2,495	2,478	3,336	2,352	707	1,000	1,668	845	1,340	316	423	204	116		1,613					
	Intermediate consumption, producers of government services		15	20	26	20	137			534	112	66	197	81	41	385										
	Intermediate consumption, producers of private non-profit services																				72					
	Final consumption in domestic market, households		1,434	192	3,266	1,257	333		796	621	459	312	981	2,800	2,862	141	130				1,159					
	Increase in inventories		28	—18	48	46	62	116	204	77	—1															
	Gross fixed capital formation			19					1,865	88	86	1,698	110	11	169											
	Exports		42	29	195	387	492	288	1,719	257	1	2	1,032	99	455						59					
	TOTAL		2,461	1,109	4,354	3,173	3,519	2,882	8,454	3,507	1,318	3,209	3,872	3,825	5,211	457	423	130	204	116	2,824					

The industry table

3.7. Table 3.2 contains a rearrangement of the kind of information provided in rows and columns 13 through 16 of table 2.1. In both panels of the table the columns relate to industries. In the upper panel the rows relate to the components of gross output at producers' values: basic values plus commodity taxes, net. As in the preceding table, the figures in this table are related to those in table 2.1. For example, the gross output at basic values of transport, communications and distribution is shown in table 2.1 as $1 + 71 = 72$ (at row 15, columns 6 and 7) and in table 3.2 as $3,317 + 3,873 = 7,190$ (in the first row, columns 11 and 12).

3.8. In the lower panel, the rows relate to the cost components of industrial outputs. The first thirteen of these rows relate to the intermediate inputs of competitive commodities without any separation of imports from domestic supplies. Again, the link with table 2.1 can easily be traced. For example, the input of transport, communication and distribution products into the corresponding group of industries is shown in table 2.1 as 9 (at row 7, column 15) and in table 3.2 as $670 + 98 + 55 + 89 = 912$ (at the intersections of rows and columns 11 and 12).

3.9. The following five rows (14 through 18) relate to intermediate inputs of complementary commodities. These entries can be compared with those in table 3.1: the sums of rows 14 through 18 of table 3.2 are equal to the corresponding column sums of table 3.1.

3.10. The next row relates to commodity taxes, net, and when the entries are added on to those higher up in the panel they provide estimates of total intermediate inputs into the various industries valued at producers' values.

3.11. The remaining four rows show the components of value added. In the table these rows are labelled "primary inputs" but this title is not wholly appropriate in all cases except to distinguish these costs from those of intermediate inputs.

3.12. Let us now turn to the question of constructing input-output tables on the basis of this information about commodities and industries.

Input-output tables

3.13. The square submatrix with thirteen rows and columns at the top left-hand corner of table 3.1 can be interpreted as an output matrix since in each row it shows the distribution by commodity of the output of one of the industries and in each column the distribution by industry of the output of one of the commodities. In a similar way the square submatrix of the same order at the top of the lower panel of table 3.2 can be interpreted as an input matrix since in each row it shows the distribution by industry of the input of one of the commodities and in each column the distribution by commodity of the input into one of the industries. In these statements the word commodity is restricted to competitive commodities.

3.14. These tables, together with information on net final demands, provide the basic data for input-

output analysis. The more numerous the industrial categories used the larger will the matrices become and the more detailed will be the analysis that can be based on them. There is one respect, however, in which square matrices do not exhibit the available data as fully as possible. In industrial statistics it is usual to record and distinguish more commodities than industries. By aggregating commodities into characteristic groups some information is needlessly suppressed and there would be advantages in constructing rectangular input tables with more rows than columns and rectangular output tables with correspondingly more columns than rows. In tables 3.1 and 3.2 this method is only followed to the extent that important complementary products are shown separately in columns 14 through 18 of table 3.1 and in rows 14 through 18 of table 3.2. Thus, while rectangular tables are not illustrated in this example, many, though not all, of the methods of constructing input-output tables described below apply to them as well as to the more traditional square tables.

3.15. The construction of an input-output table, which is necessarily square, from separate input and output tables involves transfers of inputs and outputs between categories. The object of these transfers is to show either the inputs of commodities into the production of commodities in a commodity \times commodity matrix or the inputs from industries into industries in an industry \times industry matrix. In deciding how to make the transfers, account must be taken of the fact that the products made in any particular industry may take different forms and be linked together in different ways. For example subsidiary products, such as aero-engines made by the motor-car industry, can be produced on a scale which is unrelated to the level of the industry's characteristic production. By-products, such as gas made by the coke industry, can be produced only on a scale which is fairly closely related to the industry's characteristic production or to some particular commodity which is one of the industry's characteristic products. Scrap and waste which arise in the course of productive activity can be regarded as a form of by-product. Joint products, such as milk and meat produced in the livestock industry, can be produced on a scale which depends on the demand for each product and, in many cases, in circumstances in which it is possible to vary the ratio of the two products in response to changing conditions of demand. In each case steps should be taken to reproduce the relationships of production in as realistic a manner as possible.

3.16. While transferring outputs is a comparatively simple matter because the outputs of uncharacteristic products appear as the off-diagonal elements in the industry \times commodity submatrix of table 3.1, the transfer of inputs is much more difficult. In some cases it may be possible to supplement information on the input structure of industries of the kind shown in table 3.2: census returns may be regrouped to show the input structures in various industries of groups of establishments which are not much engaged in uncharacteristic production; data may be collected at a level below that of the establishment; engineering data may be available on inputs into certain commodities. But, as a rule, supplementary information of these kinds is incomplete and it is necessary to resort to some

Table 3.2. Industrial outputs and costs

		Industries												
		Agriculture, forestry, fishing	Mining	Food, beverages, tobacco	Textiles, wearing apparel, leather	Rubber, chemicals, petroleum products	Basic metal industries	Metal products, machinery, equipment	Manufacturing n.e.c.	Gas, electricity, water	Construction	Transport and communication	Distribution	Services
		1	2	3	4	5	6	7	8	9	10	11	12	13
Gross output at basic values.....		1,711	984	3,661	2,927	3,087	2,770	8,087	3,044	1,296	3,171	3,317	3,873	4,926
Commodity taxes, net.....		—147	8	353	105	63	7	329	85	37	3	33	77	583
Gross output at producers' prices.....		1,564	992	4,014	3,032	3,150	2,777	8,416	3,129	1,333	3,174	3,350	3,950	5,509
8E														
Competitive intermediate inputs	Agriculture, forestry, fishing.....	1	76	641	211	14								
	Mining	2	3	19	18	25	197	120	24	102	271	34	41	7
	Food, beverages, tobacco	3	281	473	4	18							32	7
	Textiles, wearing apparel, leather.....	4	8	6	12	1,116	64	4	59	69	1	8	16	84
	Rubber, chemicals, petroleum products.....	5	175	33	143	213	784	164	290	174	93	95	133	121
	Basic metal industries.....	6		28	7	2	24	812	1,353	17	14	202	15	3
	Metal products, machinery, equipment..	7	73	44	90	62	104	101	2,091	111	57	165	217	78
	Manufacturing n.e.c.	8	12	30	126	40	90	30	253	747	17	466	33	203
	Gas, electricity, water	9	12	21	26	28	88	119	98	59	85	7	7	84
	Construction	10	51	46	11	18	16	15	35	16	3	553	58	114
	Transport and communication.....	11	69	36	81	62	117	117	159	98	47	79	670	98
	Distribution	12	54	20	53	57	57	120	120	100	23	54	55	89
	Services	13	56	19	100	78	117	109	303	155	27	122	76	121
Complementary intermediate inputs	Agriculture, forestry, fishing	14		149	73	94								
	Mining	15				333	73	17						
	Food, beverages, tobacco	16						204						
	Basic metals	17												
	Manufacturing n.e.c.	18					19			97				
Commodity taxes, net.....		13	12	891	21	22	10	38	24	41	27	116	142	256
Primary inputs	Compensation of employees.....	341	570	436	675	464	475	2,493	895	295	1,061	1,353	1,616	2,073
	Operating surplus	367	50	343	172	370	232	592	305	105	256	151	984	1,369
	Consumption of fixed capital.....	120	50	61	70	95	65	162	71	217	42	344	122	412
	Indirect taxes, net.....	—147	8	353	105	63	7	329	85	37	3	33	77	583
TOTAL COSTS		1,564	992	4,014	3,032	3,150	2,777	8,416	3,129	1,333	3,174	3,350	3,950	5,509

extent to mechanical means of effecting transfers based on the application of mathematical methods. In practice the two means should be regarded as complementary rather than competitive; all that is important is that the mechanical means should be capable of absorbing such special information as happens to be available.

Transferring outputs and inputs

3.17. We have seen that transferring inputs is, generally speaking, more difficult than transferring outputs. Let us look at the input-output table that results from transferring outputs alone and then at the various methods available for transferring inputs as well.

TRANSFER OF OUTPUTS ALONE

3.18. In terms of tables 3.1 and 3.2 this method can be described as follows.

3.19. The first step is to convert the output matrix at the top left-hand corner of table 3.1 into a diagonal matrix by adding into the diagonal element situated at the intersection of each row j and column j the off-diagonal elements in that row and that column. For example in row 6, relating to the basic metal industries, the off-diagonal elements are $12 + 58 + 6 + 54 + 1 = 131$ and in the corresponding column these elements are $1 + 85 + 1 + 1 + 1 = 89$. Thus in place of the diagonal element 2,639 we have $2,639 + 131 + 89 = 2,859$ which can be interpreted either as the total production of basic metals plus the subsidiary production of the basic metal industries or as the total production of the basic metal industries plus the subsidiary production of basic metals by other industries.

3.20. When this operation has been carried out for each row and column pair, the submatrix is transformed into a diagonal matrix in which subsidiary production is duplicated since it appears in the diagonal element of the industry in which it is actually produced and again in the diagonal element of the industry in which it is a characteristic product.

3.21. The second step is to take all the off-diagonal elements in the submatrix under discussion and add them to the corresponding elements of the input matrix at the top of the lower panel of table 3.2. This means that each industry is deemed to acquire, and so record in its input structure, the output of its own characteristic commodity produced in other branches of industry.

3.22. The third step is to divide the columns reached at the second step by the corresponding outputs reached at the first step.

3.23. The input-output coefficient matrix obtained in this way cannot be said to relate either to commodities or to industries since, as we have seen, each output can be interpreted either as a commodity output plus the subsidiary production of the industry of which that commodity is the characteristic product or as an industry output plus the output of that industry's characteristic product by other industries. This equivocal situation arises because under this method the output of subsidiary products is transferred but the corresponding inputs are not.

TRANSFER OF INPUTS AND OUTPUTS

3.24. Let us first consider the assumptions that can be used as a basis for mathematical methods of transferring inputs and outputs. It is convenient to begin with two extreme cases which may be called respectively the assumption of a commodity technology and the assumption of an industry technology.

(a) *The assumption of a commodity technology.* This means that a commodity is assumed to have the same input structure in whichever industry it is produced. It is shown in the mathematical annex that effect can be given to this assumption by combining an input coefficient matrix with the inverse of an output coefficient matrix in which the elements represent the proportions of various commodities which are produced by each of the industries. This assumption can be used to form either a commodity \times commodity or an industry \times industry table but, since it involves the inverse of the output coefficient matrix, it is only applicable if the input and output matrices are square or can, by a suitable separation of different kinds of output such as by-products and ordinary subsidiary products, be reduced to this form.

(b) *The assumption of an industry technology.* This means that an industry is assumed to have the same input structure whatever its product mix. It is shown in the mathematical annex to this chapter that effect can be given to this assumption by combining an input coefficient matrix with an output coefficient matrix in which the elements represent the proportion of each commodity which is produced by the various industries: a market shares matrix as it may be called. This assumption can be used to form either a commodity \times commodity or an industry \times industry table and can be applied to rectangular as well as square matrices.

3.25. As has been said these are extreme assumptions and will only give the same results if there is no subsidiary production of any kind, that is to say if the problem they are designed to resolve does not exist. Experience shows that many of the coefficients to which they lead are not much affected by the assumption chosen, but each is capable of giving rise to entries which are manifestly absurd and even, in the case of assumption (a), negative. It is not difficult to see how such results can arise. For example, in many countries the motor-car industry makes products characteristic of the aircraft industry, but these are usually restricted to aero-engines. However, on assumption (a), these engines are transferred to aircraft with the input structure appropriate to aircraft. Since there are inputs into aircraft which are not used in making engines the transfer of these inputs from the motor-car industry will involve a corresponding negative input into the commodity motor-cars if the car industry does not itself make use of these inputs.

3.26. While mathematical methods can be brought to bear on this problem too, it can be resolved most effectively if the subsidiary production in question can be identified as aero-engines and if the input structure of these engines can somehow be estimated. This example shows one way in which mathematical and non-mathematical methods can fruitfully be combined.

3.27. Apart from this, there are many ways in which the assumptions can be combined to give a more realis-

tic model of the relationships of production. All of these involve separating out the elements of the output matrix into different subgroups, such as subsidiary products and by-products, and making appropriate assumptions about each subgroup. This kind of development of the basic assumptions is illustrated numerically below and is set out algebraically in the mathematical annex. The method turns out to have a wide variety of applications which can be accommodated within the linear structure of input-output analysis and does much to bridge the gap between mathematical adjustments which are often considered unduly rigid and adjustments calling for special knowledge which all too often are inapplicable because this knowledge does not exist.

The basis of valuation in input-output tables

3.28. One of the main uses of input-output analysis is to calculate the output vector associated with a given vector of final demand. The method proceeds first by adding together the demands for each commodity obtained from the components of final demand, such as private consumption expenditures, exports and so on, and then by working out the inputs needed directly and indirectly to meet these demands and adding them in too. The results take the form of gross output levels for each of the commodity groups.

3.29. If output levels are to be obtained in this way through the addition of components it is clearly desirable that these components, whether they represent intermediate or final demands, should be measured in as homogeneous a way as possible. Since they are usually measured in money terms, partly because physical measures are not available in many cases and partly because accounting constraints are important, it is necessary that their valuation should be as uniform as it can be made. From this point of view producers' values are to be preferred to purchasers' values since the latter include trade and transport charges on outputs as well as on inputs and these charges vary significantly between different types of buyer. Similarly, basic values are to be preferred to producers' values because the latter include commodity taxes on outputs which not only vary between types of buyer but may also be affected by the precise composition of purchases within a commodity group. To give examples: at purchasers' values, private consumers pay retail margins which do not arise in the case of business purchases; at producers' values, private consumers usually pay commodity taxes at a higher rate than do businesses while export sales are often subject to draw-back of taxes paid at all stages of the productive process; and, finally, if fuel oil and gasoline are both included in the commodity group petroleum products and if the rate of tax is low on fuel oil and high on gasoline, then a pound's worth of petroleum products at producers' values will represent a much smaller quantity in the case of road transport undertakings and private motorists than it does in the case of the general run of industrial users whose purchases are mainly of fuel oil.

3.30. The relationships between these different bases of value are set out in detail in the mathematical annex of the following chapter. It is shown there that

the basic values referred to above are approximate in the sense that commodity taxes are subtracted from the producers' value of outputs but not from the producers' value of inputs. This basis of value is recommended because it seems likely to remove most major sources of price heterogeneity while being much easier to construct than true measures of basic values.

3.31. While the use of basic rather than producers' values will modify the rows of the input matrix (and the columns of the output matrix) it will usually be found that the largest changes will occur between intermediate purchases on the one hand and the purchases of various classes of final buyer on the other.

The treatment of imports in input-output tables

3.32. As can be seen from table 3.1, imports appear at the intersections of a separate row with the columns for commodities. Commodities are divided into two main classes: competitive and complementary. As we have seen, supplies of competitive commodities may come either from domestic production or from imports. In the case of complementary commodities, they can only come from imports. The distinction is important because, if the competitive and complementary components of a given commodity group (such as mining products) were amalgamated, it would follow that a country with any kind of mining industry would be deemed to meet at least part of the demand for all mining products even if some of these products were not in fact produced in the country.

3.33. The composition of the two categories, competitive and complementary commodities, necessarily varies from country to country since, for example, some countries have coal mines but no oil wells while others have oil wells but no coal mines.

3.34. The main advantage of this method over the alternative of routing imports directly to users is that it calls for less information. In the case of complementary imports there is, of course, no difference; the row for each complementary import shows the distribution of this import over users. But, in the case of competitive commodities, what is distributed over users is the total supply, whether this comes from imports or domestic production. Although the sources of supply are normally known in the aggregate, they will often not be known for individual users; and it will not add anything to our knowledge of industrial structure if each user is assumed to draw its supply from foreign and domestic sources in a fixed, average proportion.

3.35. In table 3.1, import duties are divided into protective duties, which are shown at the intersection of the row for import duties and columns 1 to 13, and other import duties, which appear as the final entry in the row for import duties. The object of this distinction is to increase the uniformity of the valuation of imports in relation to the valuation of the corresponding domestically produced commodities. Protective duties are those which aim to put the domestic producer in a competitive position vis-à-vis foreign producers. Other import duties aim mainly at raising revenue or discouraging consumption and, in the case of competitive commodities, are usually matched by a corresponding excise duty on the domestically produced commo-

duty. While the distinction may be of value, protective duties are often small and present difficulties of definition. As a consequence, protective duties are not shown separately in the standard accounts and tables of chapter VIII in which all import duties are included in the category here termed other import duties.

Alternative matrices of input-output coefficients

3.36. As we have seen, matrices of input-output coefficients can differ in various ways: thus,

- (a) They can be based on a variety of procedures for transferring inputs and outputs;
- (b) They can relate either to inputs of commodities into commodities or to inputs of industry outputs into industry outputs; and
- (c) They can be expressed in basic values or in producers' values.

3.37. The data in tables 3.1 and 3.2 can be used to construct a variety of these matrices. As we shall see, there are advantages in constructing commodity \times commodity matrices expressed at basic values. Tables 3.3 through 3.7 set out five variants of such matrices.

3.38. Table 3.3 illustrates the consequences of transferring outputs alone in the manner described in paragraphs 3.18 through 3.23 above. Tables 3.4 and 3.5 illustrate the consequences of adopting the extreme assumptions of a commodity technology and an industry technology respectively. The form of these calculations is described in the mathematical annex to this chapter. Tables 3.6 and 3.7 illustrate the consequences of mixing these assumptions, treating by-products in one way and ordinary subsidiary products in the other. In each case four by-products are isolated. The first of these is in row 5, column 3 of table 3.1, where 30 units out of the total of 69 shown relate to animal feedstuffs produced by the chemical industry. The second is in row 5, column 9, where 45 of the 61 units relate to gas produced in the coke industry. The third is in row 6, column 9, where 47 of the 54 units relate to gas produced in the iron and steel industry. Finally, all the 109 units in row 9, column 5, relate to coke produced in the gas industry. The mixture of assumptions used in constructing each of these tables is set out in the mathematical annex. Broadly speaking, it is assumed in constructing table 3.6 that ordinary subsidiary products are made with the input structure of their characteristic commodity group whereas by-products are made with the input structure of the commodity group of which they are by-products; and, in constructing table 3.7, the opposite assumptions are made. As a consequence, table 3.6 is similar to table 3.4 except that a few elements are moved closer to those in table 3.5; and table 3.7 is similar to table 3.5 except that a few elements are moved closer to those in table 3.4. In each case the elements mainly affected are those in row 2, columns 5 and 9, rows 5 and 6, column 9 and row 7 column 6. Apart from this the two tables are not very different from one another and, indeed, the same can be said of all four tables, 3.4 through 3.7, in which inputs as well as outputs are transferred.

3.39. If we compare table 3.6, say, with table 3.3 in which only outputs are transferred, we shall again

find much similarity coupled with a number of instances of considerable divergence. Examples of this divergence are to be found in: row 2, column 5; row 5, columns 3 and 9; row 6, column 9; row 7, column 6; and row 9, column 5.

3.40. Despite the many similarities, the differences noted are sufficiently important to make a choice between the tables desirable. Within the limits of this example, there seems little doubt that table 3.6 makes the best use of the information set out in tables 3.1 and 3.2. Table 3.3 represents an unnecessarily crude use of these data in that it does not involve the transfer of inputs; tables 3.4 and 3.5 represent the use of extreme assumptions in making all transfers; and table 3.7, while it reflects a mixture of assumptions, makes use of what seems a rather implausible mixture compared with table 3.6.

3.41. These examples are only illustrations of the way in which input and output tables can be combined to yield input-output tables. As more and more is found out about the nature of different kinds of subsidiary production, it becomes possible to represent the relationships of production more and more accurately. Only simple possibilities in this direction are illustrated here.

3.42. Tables 3.3 through 3.7 are all commodity \times commodity tables. In each case it would be possible to produce a corresponding industry \times industry table. For purposes of comparison one such example is given, namely table 3.8, which is directly comparable with table 3.5 above. On the whole, tables 3.5 and 3.8 are not very different.

3.43. Finally, all the coefficient tables given up to now have been expressed at basic values. Table 3.9 is expressed at producers' values but it is otherwise directly comparable with table 3.8.

3.44. Again, there is a strong similarity between the two tables with a tendency for the entries in the basic value table to be a little higher than those in the producers' value table. This is, however, only a tendency; numerous exceptions can be found especially in the diagonal. As has been said, however, the main advantage in the use of basic values is likely to be found in the greater uniformity it introduces into the components of final demand than in the distortions it leads to in the coefficient matrix. We shall return to this point in a later section of this chapter after first considering the inverse matrices derivable from some of the coefficient matrices that have just been given.

The inverse matrix: some comparisons

3.45. The connecting link between final demands and outputs is the inverse of the matrix obtained by subtracting the input-output coefficient matrix from the unit matrix. The elements of this inverse matrix measure the total requirements, direct and indirect, for the commodity shown in the row needed to meet one unit of final demand for the commodity shown in the column. This matrix is sometimes called a matrix multiplier because it is the matrix analogue of the scalar multiplier used in the Keynesian theory of income determination. The inverse matrix associated with table 3.6 is shown in table 3.10.

Table 3.3. Commodity X commodity input-output coefficient matrix

*Direct requirements per 1,000 units of final demand calculated on the assumption that only outputs are transferred
(Basic values)*

	Agriculture, forestry, fishing	Mining	Food, beverages, tobacco	Textiles, wearing apparel, leather	Rubber, chemicals, petroleum products	Basic metal industries	Metal products, machinery, equipment	Manufacturing n.e.c.	Gas, electricity, water	Construction	Transport and communication	Distribution	Services
	1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture, forestry, fishing	1	44	171	71	4			5					
Mining	2	2	19	6	8	61	42	3	34	192	11	12	2
Food, beverages, tobacco	3	164	126	1	12			2	1		10	2	1
Textiles, wearing apparel, leather	4	5	6	3	376	21	1	7	24	2	2	5	3
Rubber, chemicals, petroleum products	5	102	35	56	74	241	58	36	62	107	30	40	15
Basic metal industries	6		28	2	1	11	284	72	8	48	63	5	1
Metal products, machinery, equipment	7	43	44	24	22	35	65	255	42	42	63	66	20
Manufacturing n.e.c.	8	7	34	33	16	30	11	33	239	17	150	10	52
Gas, electricity, water	9	7	22	7	9	61	42	12	19	60	2	2	14
Construction	10	30	47	3	6	5	5	5	9	2	171	18	29
Transport and communication	11	40	36	21	21	36	41	20	31	33	25	202	7
Distribution	12	32	20	21	28	18	42	15	32	16	17	16	9
Services	13	33	19	27	26	36	38	38	49	19	38	23	31

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Table 3.4. Commodity X commodity input-output coefficient matrix

Direct requirements per 1,000 units of final demand calculated on the assumption of a commodity technology

(Basic values)

	Agriculture, forestry, fishing	Mining	Food, beverages, tobacco	Textiles, wearing apparel, leather	Rubber, chemicals, petroleum products	Basic metal industries	Metal products, machinery, equipment	Manufacturing n.e.c.	Gas, electricity, water	Construction	Transport and communication	Distribution	Services
	1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture, forestry, fishing	1	45	-1	176	73							-2	
Mining	2	1	18	5	8	63	41	2	33	223	11	12	2
Food, beverages, tobacco	3	166		130	1	3			1		10	1	3
Textiles, wearing apparel, leather	4	4	6	3	384	21	1	7	22	-1	2	5	19
Rubber, chemicals, petroleum products	5	103	34	38	73	266	59	35	57	54	30	40	15
Basic metal industries	6		28	2	1	7	304	167	4	11	64	4	1
Metal products, machinery, equipment	7	43	45	24	21	33	31	263	35	45	52	65	20
Manufacturing n.e.c.	8	5	30	34	13	28	10	30	249	11	147	10	53
Gas, electricity, water	9	7	22	7	9	28	43	12	19	69	2	2	14
Construction	10	30	47	3	6	5	5	3	4	2	176	18	30
Transport and communication	11	40	36	22	21	38	43	19	32	36	25	202	7
Distribution	12	32	20	14	19	19	45	14	33	18	17	16	9
Services	13	33	19	27	27	38	40	37	51	19	39	23	12

Table 3.5. Commodity \times commodity input-output coefficient matrix

Direct requirements per 1,000 units of final demand calculated on the assumption of an industry technology
(Basic values)

	Agriculture, forestry, fishing	1	Mining	2	Food, beverages, tobacco	3	Textiles, wearing apparel, leather	4	Rubber, chemicals, petroleum products	5	Basic metal industries	6	Metal products, machinery, equipment	7	Manufacturing n.e.c.	8	Gas, electricity, water	9	Construction	10	Transport and communication	11	Distribution	12	Services	13
Agriculture, forestry, fishing	1	44		171		71		6		42		3		33		193		11		12		2		1		
Mining	2	2		19		6		9		68																
Food, beverages, tobacco	3	164				126		1		6																
Textiles, wearing apparel, leather	4	5		7		4		376		20		2		7		23		2		3		5		22		3
Rubber, chemicals, petroleum products	5	102		34		43		73		244		59		36		59		79		30		40		31		15
Basic metal industries	6					28		2		1		9		289		167		8		23		65		5		1
Metal products, machinery, equipment	7	43		45		25		22		35		43		256		38		44		54		66		20		29
Manufacturing n.e.c.	8	7		31		34		15		29		12		32		240		15		146		10		52		62
Gas, electricity, water	9	7		22		8		10		30		42		12		19		63		3		2		22		14
Construction	10	30		47		3		6		5		5		4		6		3		171		18		29		13
Transport and communication	11	40		36		22		21		38		41		20		32		37		25		202		25		7
Distribution	12	32		20		15		19		19		42		15		33		19		17		16		23		9
Services	13	33		19		27		27		37		39		37		50		22		39		23		31		12

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Table 3.6. Commodity \times commodity input-output coefficient matrix

Direct requirements per 1,000 units of final demand calculated on the assumption that $A = B [C_1^{-1} (I - \overset{\wedge}{D_2}) + D_2]$

(Basic values)

	Agriculture, forestry, fishing	1	Mining	2	Food, beverages, tobacco	3	Textiles, wearing apparel, leather	4	Rubber, chemicals, petroleum products	5	Basic metal industries	6	Metal products, machinery, equipment	7	Manufacturing n.e.c.	8	Gas, electricity, water	9	Construction	10	Transport and communication	11	Distribution	12	Services	13
Agriculture, forestry, fishing	1	45	-1	175		73		2		44		2		33		198		11		12		-2		2		
Mining	2	1		19		5		8		70															1	
Food, beverages, tobacco	3	166				129		1		4																
Textiles, wearing apparel, leather	4	4		6		3		384		19		1		7		22		1		2		5		19		3
Rubber, chemicals, petroleum products	5	103		34		40		73		254		59		35		57		77		30		40		31		15
Basic metal industries	6					28		2		1		7		299		167		4		21		64		4		1
Metal products, machinery, equipment	7	43		45		25		21		34		31		263		35		43		52		65		20		29
Manufacturing n.e.c.	8	5		30		34		13		27		10		30		249		13		147		10		53		62
Gas, electricity, water	9	7		22		7		9		30		44		12		19		64		2		2		22		14
Construction	10	30		47		3		6		5		5		3		4		3		176		18		30		13
Transport and communication	11	40		36		22		21		38		43		19		32		37		25		202		25		7
Distribution	12	32		20		15		19		19		44		14		33		19		17		16		23		9
Services	13	33		19		27		27		37		39		37		51		22		39		23		31		12

Table 3.7. Commodity \times commodity input-output coefficient matrixDirect requirements per 1,000 units of final demand calculated on the assumption that $A = B(I + D_1 C_2 - \hat{C}_2 i)^{-1} D_1$

(Basic values)

	Agriculture, forestry, fishing, mining, food, beverages, tobacco, textiles, wearing apparel, leather, rubber, chemicals, petroleum products, basic metal industries, metal products, machinery, equipment, manufacturing n.e.c., gas, electricity, water, construction, transport and communication, distribution, services												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture, forestry, fishing.....	1	44	172	71	4								
Mining	2	2	19	6	9	61	39	33	217	11	12	2	1
Food, beverages, tobacco.....	3	164	127	1	6			2			10	2	
Textiles, wearing apparel, leather.....	4	5	7	4	376	22	2	7	23	3	5	22	3
Rubber, chemicals, petroleum products.....	5	102	34	41	73	255	59	36	59	57	30	40	31
Basic metal industries.....	6		28	2	1	9	293	167	8	13	65	5	1
Metal products, machinery, equipment.....	7	43	45	25	22	34	43	256	38	45	54	66	20
Manufacturing n.e.c.....	8	7	31	34	15	30	12	32	240	13	146	10	52
Gas, electricity, water.....	9	7	22	7	10	28	42	12	19	68	3	2	22
Construction	10	30	47	3	6	5	5	4	6	3	171	18	29
Transport and communication.....	11	40	36	22	21	38	42	20	32	36	25	202	25
Distribution	12	32	20	15	19	19	43	15	33	18	17	16	23
Services	13	33	19	27	27	38	40	37	50	20	39	23	31

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Table 3.8. Industry \times industry input-output coefficient matrix

Direct requirements per 1,000 units of final demand calculated on the assumption of an industry technology

(Basic values)

	Agriculture, forestry, fishing, mining, food, beverages, tobacco, textiles, wearing apparel, leather, rubber, chemicals, petroleum products, basic metal industries, metal products, machinery, equipment, manufacturing n.e.c., gas, electricity, water, construction, transport and communication, distribution, services												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture, forestry, fishing.....	1	44	175	72	5			1		1			
Mining	2	2	19	5	9	64	43	3	34	208	11	12	2
Food, beverages, tobacco.....	3	160	126	2	7			2		1	10	2	1
Textiles, wearing apparel, leather.....	4	5	7	3	376	21	2	7	23	1	3	5	3
Rubber, chemicals, petroleum products.....	5	100	34	40	71	243	58	35	57	71	30	39	31
Basic metal industries.....	6	1	29	2	2	10	286	164	7	14	63	5	16
Metal products, machinery, equipment.....	7	43	46	25	22	35	45	261	38	44	56	65	2
Manufacturing n.e.c.....	8	7	30	34	14	29	11	31	239	14	144	10	29
Gas, electricity, water.....	9	10	21	8	11	35	41	12	19	62	3	52	60
Construction	10	29	46	3	6	5	5	5	6	3	172	3	14
Transport and communication.....	11	40	36	22	21	38	42	20	32	37	25	202	13
Distribution	12	33	20	15	23	19	43	15	33	18	17	17	9
Services	13	33	19	27	27	38	39	38	51	21	39	23	31

Table 3.9. Industry \times industry input-output coefficient matrix

Direct requirements per 1,000 units of final demand calculated on the assumption of an industry technology

(Producers' values \equiv basic values plus commodity taxes, net)

	Agriculture, forestry, fishing	Mining	Food, beverages, tobacco	Textiles, wearing apparel, leather	Rubber, chemi- cal products, petroleum products	Basic metal industries	Metal products, machinery, equipment	Manufacturing n.e.c.	Gas, electricity, water	Construction	Transport and communication	Distribution	Services
	1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture, forestry, fishing.....	1	39	146	70	5	1	1	1	1	1	1	1	1
Mining	2	2	27	5	8	42	3	33	203	11	12	2	1
Food, beverages, tobacco.....	3	175	118	2	7	2	2	1	1	10	2	2	1
Textiles, wearing apparel, leather.....	4	5	7	3	368	21	2	23	1	3	5	21	3
Rubber, chemicals, petroleum products.....	5	109	34	36	68	243	57	34	56	30	38	30	14
Basic metal industries.....	6	1	29	2	1	10	283	158	7	15	63	5	2
Metal products, machinery, equipment.....	7	47	46	23	21	34	44	253	38	43	56	65	20
Manufacturing n.e.c.....	8	8	30	31	14	29	11	30	240	14	144	10	59
Gas, electricity, water.....	9	11	21	7	11	34	40	12	19	85	3	3	12
Construction	10	32	46	3	6	5	5	4	6	3	173	17	28
Transport and communication.....	11	44	36	20	20	37	41	19	32	36	25	210	25
Distribution	12	36	20	14	22	18	42	14	33	18	17	16	42
Services	13	36	19	25	26	37	39	36	50	20	39	23	31

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Table 3.10. Commodity \times commodity inverse coefficient matrixDirect and indirect requirements per 1,000 units of final demand calculated on the assumption that $A \equiv B [C_1^{-1} (I - D_2^{\top} I) + D_2]$

(Basic values)

	Agriculture, forestry, fishing	Mining	Food, beverages, tobacco	Textiles, wearing apparel, leather	Rubber, chemi- cal products, petroleum products	Basic metal industries	Metal products, machinery, equipment	Manufacturing n.e.c	Gas, electricity, water	Construction	Transport and communication	Distribution	Services
	1	2	3	4	5	6	7	8	9	10	11	12	13
Agriculture, forestry, fishing.....	1	1,087	1	220	130	8	2	2	5	2	2	4	1
Mining	2	26	1,039	24	40	116	96	39	68	237	42	29	13
Food, beverages, tobacco.....	3	209	1	1,191	29	9	2	2	5	2	2	15	1
Textiles, wearing apparel, leather.....	4	21	19	17	1,637	51	16	26	58	15	22	18	12
Rubber, chemicals, petroleum products.....	5	187	76	117	203	1,381	150	116	135	147	101	91	39
Basic metal industries.....	6	33	72	27	30	46	1,461	340	38	71	146	44	20
Metal products, machinery, equipment.....	7	100	88	76	85	94	99	1,398	94	103	124	129	53
Manufacturing n.e.c.....	8	49	69	77	60	75	52	82	1,362	52	263	41	94
Gas, electricity, water.....	9	23	34	21	31	55	81	43	40	1,086	24	13	21
Construction	10	48	65	19	26	22	23	16	18	23	1,223	33	42
Transport and communication.....	11	82	65	61	73	86	103	68	76	79	71	1,270	47
Distribution	12	51	33	35	49	40	79	45	58	38	44	31	1,033
Services	13	63	39	57	70	71	80	81	89	48	81	46	1,024

3.46. As was the case with the coefficient matrix, the elements in this table relate to requirements per 1,000 units of final demand. The elements in the two matrices are therefore directly comparable and the excess of those in table 3.10 over those in table 3.6 measures indirect requirements plus, in the case of diagonal elements, the 1,000 units that have to be supplied. For example, in order to supply 1,000 units of commodity 1, a further 45 units of this commodity are needed directly and a further 42 units are needed indirectly; and, for the same purpose, 103 units of commodity 5 are needed directly and a further 84 units of this commodity are needed indirectly.

3.47. We saw in the preceding section that many of the elements in the various coefficient matrices were very much alike but that there were notable exceptions. Much the same is true of the corresponding inverse matrices and so, rather than reproduce all these matrices in full, it seems more illuminating to concentrate on some of the more important differences.

3.48. This is done in table 3.11 below. Each of the eleven rows relates to an element in the inverse matrix referred to by its row and column numbers; thus the first row relates to the element in row 2, column 9, that is to say to the direct and indirect requirements of mining products in the production of gas, electricity and water. The five columns relate to the inverse matrices obtained from tables 3.3 through 3.7.

Table 3.11. Selected items from the inverse matrices corresponding to tables 3.3 through 3.7

Direct and indirect requirements per 1,000 units of final demand

(Basic values)

Element	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7
2.9	235	261	231	237	254
5.3	143	115	120	117	119
5.8	147	136	136	135	137
5.9	195	114	149	147	118
6.8	52	38	46	38	46
6.9	115	57	74	71	60
7.6	164	99	120	99	120
7.8	111	94	100	94	100
7.10	152	124	131	124	131
9.5	100	53	54	55	52
12.4	64	49	49	49	49

3.49. If we look at the first row of table 3.11 we can see that the figure obtained from the mixed assumption of table 3.6 moves towards that obtained from the assumption of a pure industry technology (table 3.5) while the figure obtained from the mixed assumption of table 3.7 moves towards that obtained from the assumption of a pure commodity technology (table 3.4). This is largely accounted for by the production of gas as a by-product in coke ovens (included in group 5) and blast furnaces (included in group 6). In tables 3.5 and 3.6, this gas is assumed to have the input structures of groups 5 and 6 whereas in tables 3.4 and 3.7 it is assumed to have the input structure of group 9. There can be little doubt that in principle the first of these assumptions is to be preferred; as regards

the actual figures they are likely to be distorted by the excessive aggregation in this example and, in particular, by the inclusion of coke ovens, a small industry which uses a large quantity of coal, in group 5 which, on average, uses a relatively small quantity of coal. The results obtained from transferring outputs alone (table 3.3) are, in this case, similar to the preferred results, largely because of the considerable quantities of subsidiary products (largely by-products) which, on this method, are included in the output of group 9. As we shall see, this method tends to give somewhat erratic results.

3.50. Turning to rows 2 and 3, we can see that in these cases the choice of assumption makes relatively little difference as long as inputs as well as outputs are transferred. Row 4 illustrates a case in which it does make a difference but in which the failure to transfer inputs leads to a very high figure. This is the case of products of the chemical group required directly or indirectly by the gas, electricity and water group. The low figures based on tables 3.4 and 3.7 reflect the assumption that the by-product gas made by group 5 is made with the input structure of group 9, which makes little use of chemical inputs, rather than with the input structure of group 5 which makes a much greater use of chemical inputs. Tables 3.5 and 3.6 reflect the opposite assumption, namely, that by-product gas is made with the input structure of the characteristic output of the producing industry. The abnormal figure based on table 3.3 reflects the fact that the high figure for the output of group 9 is more than offset by the inclusion of coke oven gas as an input into that group.

3.51. Each of the remaining rows of table 3.11 can be interpreted in a similar way. Thus row 7 relates to metal products used in the production of basic metals. In this case the assumption of a commodity technology seems most appropriate; and this assumption leads to the smallest figure, only some 60 per cent of the figure based on table 3.3.

The effects of price heterogeneity

3.52. The following example makes use of the inverse matrices corresponding to tables 3.8 and 3.9, that is to say inverse matrices associated with industry \times industry coefficient matrices based on the assumption of an industry technology and expressed in terms of basic values and producers' values respectively. The important fact in this example is the difference in the basis of valuation: nothing more.

3.53. Table 3.12 sets out for a particular product group, food, beverages and tobacco, alternative estimates of direct and indirect requirements at basic values per 1,000 units of final demand valued at producers' values. In this table the figures in the third columns of the inverse matrices associated with tables 3.8 and 3.9 are reproduced in columns 1 and 4. If we work from table 3.8 we need to know the basic values which correspond to 1,000 units at producers' values of each kind of final demand. In the present case the figures are 872 units for domestic final demand and 1,652 units for export demand. The figures in the second and third columns show the differential effect

Table 3.12. Direct and indirect requirements at basic values per 1,000 units
of final demand at producers' values for food, beverages and tobacco

	From inverse associated with table 3.8			From inverse associated with table 3.9		
	Column 3	Requirements at basic values for		Column 3	Average ratio of basic to producers' values	Requirements at basic values for any final demand
		Domestic final demand	Exports			
	1	2	3	4	5	6
Agriculture, forestry, fishing	1	221	193	365	181	1 095
Mining	2	23	20	38	20	0.991
Food, beverages, tobacco	3	1,193	1,040	1,971	1,176	0.915
Textiles, wearing apparel, leather	4	17	15	28	15	0.966
Rubber, chemicals, petroleum products	5	115	100	190	103	0.980
Basic metal industries	6	26	23	43	22	0.997
Metal products, machinery, equipment	7	75	65	124	67	0.961
Manufacturing n.e.c.	8	77	67	127	69	0.973
Gas, electricity, water	9	21	18	35	19	0.973
Construction	10	19	17	31	17	0.999
Transport and communication	11	60	52	99	54	0.990
Distribution	12	35	31	58	32	0.980
Services	13	57	50	94	52	0.894

throughout the system of a given expenditure by these two types of final buyer. If we work from table 3.9 we cannot hope to find any differential effect but we can reduce the figures in the fourth column by removing commodity taxes from each requirement expressed at producers' values. The average ratios of basic to producers' values are shown in the fifth column and the result of the calculation is shown in the final column.

3.54. This table illustrates a number of points. In the first place, a comparison of columns 2 and 6 shows that the numbers are very similar. This suggests that similar results can be expected on either basis of valuation if (i) the ratio of producers' to basic values are similar for all buyers or (ii) a particular class of final buyer takes a large proportion of the total supply. In the second case the conclusion follows only for the large buyer, as can be seen by comparing columns 2 and 3. Drawbacks and remissions of tax on export sales mean that a given expenditure on exports buys more goods and includes less tax than a corresponding expenditure in the domestic market. Had the ratio of home to export sales been more nearly equal it is to be expected that the figures in columns 2 and 3 would have been more symmetrically distributed around those in column 6.

3.55. In the second place, if there are differences in the ratio of producers' to basic values, it is dangerous to use a matrix calculated at producers' values unless the shares of final buyers in each commodity supply are expected to remain approximately constant.

3.56. Finally, the table suggests another problem. If export sales are small, columns 2 or 6 should provide valid estimates of the direct and indirect requirements for sales in the domestic market. But if, in these circumstances, the composition of export sales is very different from the composition of sales to all final buyers, column 3 may provide a very poor estimate of the direct and indirect requirements for exports. This is a problem that can only be resolved through disaggregation.

Is there an ideal input-output table?

3.57. This is not an easy question to answer: partly because there are different and, in some degree, conflicting criteria of excellence; and partly because there are many purposes for which input-output tables may be wanted. As regards criteria, our first aim may be to construct a very accurate table but we may be checked in trying to realize this aim by the cost and difficulty of doing so. As regards purpose, we may not be capable of using a very detailed classification of commodities or industries and so the only advantage of a very large table would be an instrumental one: the aggregated results obtained from it are expected to be more reliable than those obtainable from a smaller table.

3.58. With such considerations in mind let us now examine the main decisions that have to be taken in constructing an input-output table.

THE SIZE OF THE TABLE

3.59. As has just been said a large table may be wanted either because the detailed calculations that can be made with it are capable of being used or for the instrumental purpose of improving on the results of a smaller table. While if great detail is needed there is nothing to be done but try to construct a large table, experience suggests that for instrumental uses the gains to be expected from large tables may be relatively small. However this may be, a limit is set on the size of the table that can be constructed by the detail in which information is available. While some more or less arbitrary estimation and adjustment is involved in all cases, it is obviously important that its role should be kept within bounds. Lack of human resources and inadequate computing facilities may also set limits to what can usefully be attempted, though the second of these factors is becoming less and less important. With notable exceptions, tables recently constructed have tended to distinguish some twenty-five branches whereas

those now under construction are somewhat larger, distinguishing some fifty to a hundred branches.

THE UNDERLYING INPUT AND OUTPUT TABLES

3.60. The basic data contained in the input and output tables should be set out as fully as possible. This will usually lead to rectangular tables with more commodities than industries.

THE BASIS OF VALUATION

3.61. Commodities should be valued in as homogeneous a manner as possible, allowance being made for the cost and difficulty of adjusting recorded values to achieve this end. The compromise suggested in this report is the use of producers' values less commodity taxes or what are here termed "basic values" (strictly "approximate basic values" as defined in the following chapter). The advantage of basic over producers' values must to some extent depend on the characteristics of the tax system. In general the effects of differential taxation within the input-output matrix are likely to be mainly associated with the excessive aggregation of commodities. What in many cases is much more important is the differential effect between producers and on the one hand private consumers (who typically pay higher commodity taxes) and on the other hand exporters (who typically pay lower commodity taxes and benefit from a drawback of taxes already paid by producers).

COMMODITY \times COMMODITY versus INDUSTRY \times INDUSTRY TABLES

3.62. Most applications of input-output analysis begin with a given final demand for commodities and work out the corresponding levels of commodity outputs taking into account the direct and indirect requirements of the productive system itself. For this purpose a commodity \times commodity table is the more appropriate. Other applications go on to examine the primary inputs into industries needed to sustain the calculated production levels. This can be done by transforming commodity outputs into industry outputs. With this sequence of calculations an industry \times industry table is unnecessary. Moreover, this sequence is the natural one since it is likely that industrial outputs adapt themselves to the demand for commodities and it seems rather forced to think of commodity outputs adapting themselves to the demand for the mixed output of industries.

TRANSFERS OF OUTPUIS AND INPUTS

3.63. We have seen that the procedure under which outputs alone are transferred is inferior to the procedure under which inputs are transferred as well because, in the first case, the resulting table is based on a duplication of uncharacteristic outputs and cannot be interpreted in either commodity \times commodity or industry \times industry terms.

MECHANICAL versus MANUAL METHODS OF MAKING TRANSFERS

3.64. If we had a separate cost structure for each commodity in our classification as made by each

industry in our classification, all transfers could be made by simple addition. In practice so much information is almost never available; indeed, in most countries, almost none of it is available. This being so, mechanical methods based on a mathematical model cannot be avoided.

ASSUMPTIONS BEHIND MECHANICAL METHODS

3.65. We have seen that there are two limiting assumptions, which have been called the assumption of a commodity technology and the assumption of an industry technology, that can be used in making transfers of inputs. In many cases these assumptions lead to similar results; but this is not always so. Rather than use either exclusively, it is better to mix them so as to reproduce as faithfully as possible the relationships of production.

SUMMARY

3.66. From what has been said it is clearly impossible to prescribe an input-output table that is ideal for all purposes in every country. However, for most purposes in most countries, a good prescription might run as follows. The table should be of medium size, with around fifty branches, based on rectangular input and output tables. Basic values provide a suitable means of valuation and, if only one table is to be constructed, a commodity \times commodity table is to be preferred to an industry \times industry table. Inputs should be transferred as well as outputs and, while special information should be used as far as possible in doing this, the mechanical methods, which in most countries will have to do nearly all the work, should be based on a mixture of assumptions, the precise mixture varying with the nature of industrial connexions in different countries.

ANNEX

Mathematical discussion

THE BASIS OF INPUT-OUTPUT CALCULATIONS

3.67. The information contained in tables 3.1 and 3.2 of this chapter can be rearranged schematically as in table 3.13 below.

Table 3.13. A schematic arrangement of input-output data

	U	e	q
V			g
	y'		η

q' g' η

3.68. In this table, the capital letters denote matrices, the small bold letters denote vectors and the small Greek letter denotes a scalar (a single number). Vectors are written as column vectors and row vectors are written as transposed column vectors by the attachment of a prime ('') superscript. In what follows, the interchange of rows and columns (transposition) in a matrix is also indicated by a prime superscript.

3.69. The first row and column relate to commodities. The row shows the absorption of commodities as intermediate input by industries (the elements of U) and by final buyers, net (the elements of e). The matrix U has commodities in the rows and industries in the columns. Its typical element, in row j and column k , say, represents the amount of commodity j used up in production by industry k . The row sums of this matrix represent the total industrial intermediate use of the various commodities; the column sums represent the intermediate use of all commodities by the various industries. The vector e has, again, commodities in the rows and a single column. Each element of this vector represents the net final use of a particular commodity; that is to say the use for private and government consumption, for capital formation and for net exports.

3.70. Since imports have been deducted in the row, the first column of the table shows the sources of commodities in the various domestic industries. The matrix V has industries in the rows and commodities in the columns. Its typical element, in row k and column j , say, represents the production of commodity j by industry k . This matrix is strongly diagonal because the overwhelming proportion of the output of most industries consists of their own characteristic products. It is not strictly diagonal, however, because many industries have a certain amount of subsidiary production.

3.71. The column vector, q , at the end of the first row has as elements the domestic output of each of the commodities; this vector is repeated as a row vector at the bottom of the first column.

3.72. The second row and column relate to industries. Whereas the column sums of V give the domestic output of the various commodities, the row sums of V give the domestic output of the various industries. These row totals are the elements of the vector, g , of industry outputs. The second column shows the costs that make up the value of these outputs; the column sums of U , which represent the cost of intermediate inputs, and the elements of the row vector y' , which represent the cost of primary inputs (value added).

3.73. The final row and column relate to everything else in the economy. They contain, in the row, the value added in each industry and, in the column, the net final expenditure on each commodity. These sums are necessarily equal and are represented by the symbol η . This product total is less than the domestic product because it does not contain product arising in government services and in the services of private non-profit institutions.

INPUT-OUTPUT RELATIONSHIPS

3.74. In terms of table 3.13, input-output analysis rests on six relationships, three of which are arithmetic identities and three of which are assumptions relating to the technical conditions of production.

3.75. The first relationship is

$$q = U i + e \quad (3.1)$$

where i denotes the unit column vector so that Ui denotes the row sums of U . Equation (3.1) states that the domestic production of each commodity is absorbed either as intermediate product or as final product, net.

3.76. The second relationship is

$$q = V' i \quad (3.2)$$

that is to say the output of each commodity is equal to the sum of the amounts made in each of the industries.

3.77. The third relationship is

$$g = V i \quad (3.3)$$

that is to say each industry's gross output is equal to the sum of its outputs of each commodity.

3.78. The fourth relationship is

$$U = B \hat{g} \quad (3.4)$$

where B is a matrix of coefficients of dimensions commodity \times industry and \hat{g} denotes a diagonal matrix with the elements of g in the diagonal. Equation (3.4) states that intermediate inputs of commodities are proportional to the industry outputs into which they enter.

3.79. The fifth relationship is

$$V' = C \hat{g} \quad (3.5)$$

where C is a matrix of coefficients of dimensions commodity \times industry. Equation (3.5) states that each industry makes commodities in its own fixed proportions.

3.80. The final relationship is

$$V = D \hat{q} \quad (3.6)$$

where D is a matrix of coefficients of dimensions industry \times commodity. Equation (3.6) states that commodities come in their own fixed proportions from the various industries.

TECHNOLOGY ASSUMPTIONS

3.81. The various assumptions that can be used in transferring inputs and outputs can be expressed as follows.

The assumption of a commodity technology

3.82. From (3.1), (3.2), (3.4) and (3.5) we can write

$$\begin{aligned} q &= U i + e \\ &= B g + e \\ &= B C^{-1} q + e \\ &= (I - B C^{-1})^{-1} e \end{aligned} \quad (3.7)$$

where I denotes the unit matrix, and

$$\begin{aligned} g &= C^{-1} (I - B C^{-1})^{-1} e \\ &= (I - C^{-1} B)^{-1} C^{-1} e \end{aligned} \quad (3.8)$$

3.83. Thus, if we denote the input-output coefficient matrix by A , we find that on this assumption: $A = B C^{-1}$ for a commodity \times commodity table; and that $A = C^{-1} B$ for an industry \times industry table. We also see from (3.8) that if we wish to analyse industry outputs we must convert the net final demand for commodities, e , into the net final demand for industry outputs, represented by $C^{-1} e$.

3.84. It will be noticed that both (3.7) and (3.8) involve the matrix inverse, C^{-1} . Since a matrix can only be inverted if it is square, it follows that the assumption of a commodity technology can only be used if the number of industries is equal to the number of commodities.

The assumption of an industry technology

3.85. From (3.1), (3.3), (3.4) and (3.6) we can write

$$\begin{aligned} q &= U i + e \\ &= B g + e \\ &= B D q + e \\ &= (I - B D)^{-1} e \end{aligned} \quad (3.9)$$

and

$$\begin{aligned} g &= D(I - B D)^{-1} e \\ &= (I - D B)^{-1} D e \end{aligned} \quad (3.10)$$

3.86. Again if we denote the input-output coefficient matrix by A , we find that on this assumption: $A = B D$ for a com-

modity \times commodity table; and that $A = D B$ for an industry \times industry table. By comparison with (3.7) and (3.8) we can see that the role played in them by C^{-1} is now played by D . Thus, on the assumption of an industry technology, it is no longer essential that the number of industries should be equal to the number of commodities.

Mixed assumptions

3.87. It is not necessary to rely wholly on the extreme assumptions described above; they can usefully be mixed as the following example illustrates. Suppose that the elements of V are divided into two parts, V_1 and V_2 , say, so that

$$V = V_1 + V_2 \quad (3.11)$$

The elements of V_1 are outputs which it seems reasonable to treat on the assumption of a commodity technology; those of V_2 the ones to be treated on the assumption of an industry technology. Many, if not most, ordinary subsidiary products are likely to come into V_1 ; by-products, in particular, are likely to come into V_2 . The formation of V_1 and V_2 may well involve splitting individual elements of V since these elements may contain a mixture of products not all of which are to be treated in the same way.

3.88. With this decomposition of V , it would seem reasonable to write

$$g_1 = V_1 i = C_1^{-1} q_1 \quad (3.12)$$

and

$$g_2 = V_2 i = D_2 q \quad (3.13)$$

from (3.13) we can write

$$\begin{aligned} g_2 &= V_2 i = \hat{D}_2 i \\ &= \hat{D}_2 i q \end{aligned} \quad (3.14)$$

where $\hat{D}_2 i$ denotes a diagonal matrix formed from the vector $D_2 i$. Since $q_1 = q - q_2$, a combination of (3.12), (3.13) and (3.14) leads to

$$\begin{aligned} g &= g_1 + g_2 \\ &= C_1^{-1} (q - \hat{D}_2 i q) + D_2 q \\ &= [C_1^{-1} (I - \hat{D}_2 i) + D_2] q \end{aligned} \quad (3.15)$$

which, when combined with the second row of (3.7) or (3.9), gives

$$\begin{aligned} q &= B [C_1^{-1} (I - \hat{D}_2 i) + D_2] q + e \\ &= (I - B [C_1^{-1} (I - \hat{D}_2 i) + D_2])^{-1} e \\ &= (I - B R)^{-1} e \end{aligned} \quad (3.16)$$

say. Since $g = R q$, it follows that

$$\begin{aligned} g &= R (I - B R)^{-1} e \\ &= (I - R B)^{-1} R e \end{aligned} \quad (3.17)$$

3.89. In this case the input-output coefficient matrix, A , for a commodity \times commodity table is given by $B R$ where $R = [C_1^{-1} (I - \hat{D}_2 i) + D_2]$. Since R involves the matrix inverse C_1^{-1} it follows that C_1 and D_2 must be square matrices of the same order.

3.90. Evidently, some care is needed in mixing assumptions. Thus, if V_1 is associated with ordinary subsidiary products, it might be thought that the assumption of fixed market shares should be used, in which case (3.12) would be replaced by

$$g_1 = V_1 i = D_1 q_1 \quad (3.18)$$

At the same time it might seem preferable to treat the by-products contained in V_2 as commodities linked to the outputs

of the producing industries, in which case (3.13) would be replaced by

$$g_2 = V_2 i = C_2 g \quad (3.19)$$

By forming from (3.19)

$$\begin{aligned} g_2 &= V_2 i = \hat{C}_2 i \\ &= \hat{C}_2 i g \end{aligned} \quad (3.20)$$

we can proceed as before and obtain

$$\begin{aligned} g &= g_1 + g_2 \\ &= D_1 q_1 + \hat{C}_2 i g \\ &= D_1 (q - C_2 g) + \hat{C}_2 i g \\ &= (I + D_1 C_2 - \hat{C}_2 i)^{-1} D_1 q \end{aligned} \quad (3.21)$$

whence

$$\begin{aligned} q &= B (I + D_1 C_2 - \hat{C}_2 i)^{-1} D_1 q + e \\ &= [I - B(I + D_1 C_2 - \hat{C}_2 i)^{-1} D_1]^{-1} e \\ &= (I - B S)^{-1} e \end{aligned} \quad (3.22)$$

say. Since $g = S q$, it follows that

$$\begin{aligned} g &= S(I - B S)^{-1} e \\ &= (I - S B)^{-1} S e \end{aligned} \quad (3.23)$$

3.91. In this case the input-output coefficient matrix, A , for a commodity \times commodity table is given by $B S$ where $S \equiv (I + D_1 C_2 - \hat{C}_2 i)^{-1}$. Apart from possible singularity, this expression can be formed even if D_1 and C_2 are not square matrices and so, also, can the expression $(I - B S)^{-1}$.

A COMPARISON OF THE ASSUMPTIONS

3.92. A comparison of (3.7) through (3.10) shows that, although they are superficially different, the differences can all be traced to uncharacteristic production, to off-diagonal elements in the output matrix V . If such production did not exist, V would be a diagonal matrix and we should find that $C = D = I$. In this case the four equations reduce to

$$q = g = (I - B)^{-1} e \quad (3.24)$$

so that $A = B$ and there is no distinction between commodity outputs and industry outputs.

3.93. Turning now to (3.16) and (3.17), we can see that if $V_2 = 0$ then $C_1 = C$ and $D_2 = 0$ in which case (3.16) and (3.17) reduce to (3.7) and (3.8). On the other hand if $V_1 = 0$ then $C_1 = 0$ and $D_2 = D$ in which case (3.12) cannot be formed, (3.13) is equal to a combination of (3.3) and (3.6), and (3.16) and (3.17) are replaced by (3.9) and (3.10). Exactly the opposite happens with (3.22) and (3.23). If $V_2 = 0$ then $D_1 = D$ and $C_2 = 0$ in which case (3.22) and (3.23) reduce to (3.9) and (3.10). But if $V_1 = 0$ then $D_1 = 0$ and $C_2 = C$, in which case (3.18) cannot be formed and (3.22) and (3.23) are replaced by (3.7) and (3.8). In spite of this symmetry in limiting cases, the models leading to (3.16) and (3.17) on the one hand and to (3.22) and (3.23) on the other are capable of giving substantially different results in practice, as can be seen by comparing tables 3.6 and 3.7 above.

3.94. The two models just compared represent only a very simple example of the method described on the assumption of mixed technologies in the preceding section. Reflection shows that much more complicated representations of the relationships of production can be put in the form that g is a certain transform of q or that q is a certain transform of g . In general it would seem preferable to work with the first of these transforms since, as has been said, it seems more reasonable to

suppose that industry outputs adapt themselves to the demand for commodities than to suppose that commodity outputs adapt themselves to the demands placed on industries

THE IMPORTANCE OF UNIFORM VALUATION

3.95. Emphasis has been placed in this report on the need for uniformity of valuation in the commodity accounts; and the concept of basic values (producers' prices less commodity taxes) has been introduced as a practical means of improving this uniformity. The importance of uniformity can be seen from a simple example. Consider an economy with two commodities each of which has two intermediate uses and two final uses. Suppose that the basic value of each commodity is the same in all its uses but that the commodity tax levied depends on use. The flow equation of the system can be written out in full as follows

$$\begin{aligned}
 & \left[\begin{array}{cc} b_1 + x_1 & 0 \\ 0 & b_2 + x_2 \end{array} \right] \left[\begin{array}{c} q_1 \\ q_2 \end{array} \right] \\
 = & \left[\begin{array}{cc} (b_1 + x_{11})a_{11} & (b_1 + x_{12})a_{12} \\ (b_2 + x_{21})a_{21} & (b_2 + x_{22})a_{22} \end{array} \right] \left[\begin{array}{c} q_1 \\ q_2 \end{array} \right] \\
 + & \left[\begin{array}{cc} b_1 + x_{13} & 0 \\ 0 & b_2 + x_{23} \end{array} \right] \left[\begin{array}{c} e_{13} \\ e_{23} \end{array} \right] \\
 + & \left[\begin{array}{cc} b_1 + x_{14} & 0 \\ 0 & b_2 + x_{24} \end{array} \right] \left[\begin{array}{c} e_{14} \\ e_{24} \end{array} \right] \quad (3.25)
 \end{aligned}$$

In (3.25), the b 's denote basic values, the x 's commodity taxes, the q 's commodity outputs, the a 's input-output coefficients and the e 's final uses. The first equation relates to commodity 1, the second to commodity 2.

3.96. These two equations connect four unknowns: q_1 and q_2 , the outputs of the two commodities; and x_1 and x_2 , the average commodity tax payable on each of these outputs. They can, however, be separated into two sets of equations: one in which valuation is made at basic values; and the other of which involves only commodity taxes. The first set can be written as

$$\begin{aligned}
 \hat{b} q &= \hat{b} A q + \hat{b} e \\
 &= \hat{b} A \hat{b}^{-1} \hat{b} q + \hat{b} e \\
 &= (I - \hat{b} A \hat{b}^{-1})^{-1} \hat{b} e \quad (3.26)
 \end{aligned}$$

or, premultiplying by \hat{b}^{-1}

$$q = (I - A)^{-1} e$$

where $e = e_3 + e_4$, the vector of total final uses of the two commodities.

3.97. The second set of equations can be written as

$$\hat{x} q = Z q + \hat{x}_3 e_3 + \hat{x}_4 e_4 \quad (3.27)$$

where

$$Z = \begin{bmatrix} x_{11}a_{11} & x_{12}a_{12} \\ x_{21}a_{21} & x_{22}a_{22} \end{bmatrix} \quad (3.28)$$

Thus

$$x = \hat{q}^{-1} (Z q + x_3 e_3 + x_4 e_4) \quad (3.29)$$

3.98. Thus we see that a system of the form of (3.25) can only be solved in terms of a uniform set of values, the b 's in the example; and that, once this has been done, we can calculate x_1 and x_2 , the average rates of tax

3.99. The use of market price data implies that $x_{jk} = x_j$; $j = 1, 2$ and $k = 1, \dots, 4$. This implication in turn implies two kinds of error. First, the typical input-output coefficient, a_{jk} say, $j = k = 1, 2$, is replaced by a_{jk}^* say, where

$$a_{jk}^* = (b_j + x_{jk} / b_j + x_j) a_{jk} \quad (3.30)$$

Since commodity tax rates on commodities used as intermediate inputs are usually less than the average rates on all uses, we should expect that as a rule $a_{jk}^* < a_{jk}$ and this expectation is borne out in the numerical example given. But there is also a second kind of error. The typical final demand quantity e_{jk} say, $j = 1, 2, k = 3, 4$, is replaced by e_{jk}^* say, where

$$e_{jk}^* = (b_j + x_{jk} / b_j + x_j) e_{jk} \quad (3.31)$$

For the reasons given above we should expect that $e_{jk}^* > e_{jk}$ for domestic consumers, and particularly for non-business domestic consumers. But in most cases it is likely that $e_{jk}^* < e_{jk}$ for export sales to the rest of the world.

3.100. The conclusion of this section is that the use of non-uniform values leads to erroneous results which it is impossible to interpret. In the mathematical appendix to the following chapter a distinction is drawn between true basic values and the approximate basic values used in the present system. The results reached in this section will be most closely approximated if true basic values are used; but the approximate values, producers' prices less commodity taxes, are likely to provide quite a good substitute for true basic values and a substantial improvement over basic values plus commodity taxes.

Chapter IV

THE SYSTEM AS A BASIS FOR QUANTITY AND PRICE COMPARISONS

Two types of comparisons

4.1. The construction year after year of a system of national accounts generates a time series of each of the elements of that system; for example, we may observe that the latest estimate of private consumption expenditure is twice as high as the corresponding estimate a decade ago. In itself this is not a very illuminating piece of information since, aside from institutional changes (such as the establishment of a national health service) which may shift expenditures from one institutional sector to another, the observed rise may largely reflect increases in the prices of consumption goods and services and may only in small part reflect increases in the quantities of these goods and services bought for private consumption. In practice it is likely that while some prices and quantities have risen others have fallen; what is wanted in such a case is to be able to say something about the average change in prices and the average change in quantities. This is possible if sufficient information is available about the price and quantity movements of the goods and services bought by private consumers.

4.2. There are many other cases which can be handled by the method just indicated: the decomposition of a change in value expressed in current prices into a price component and a quantity component. In principle, though the practical difficulties are in some cases formidable, all flows in the commodity accounts and most, if not all, flows in the activity accounts can be decomposed in this way. But elsewhere in the system this is not the case. Consider, for example, the net disposable income of households which is either spent on consumption goods and services or is saved. In the first place, a significant part of this income is likely to be received in the form of transfers from government and this part can hardly be decomposed into a price and a quantity component. In the second place, while some other forms of household income, such as wages, could be decomposed into an average rate of earnings and an amount of labour supplied, this would not be what is needed because the concept of income at constant prices, or real income as it is usually called, relates to what can be done with income rather than with what has been done to earn it. Difficulties similar to those just described are encountered with other elements of the disposable income of households and so the idea of decomposition into price and quantity components is not relevant in this case. Instead, it is necessary to consider how the purchasing power of disposable income has changed over some well-defined collection of items on which it might be spent. This question admits of as many answers as there are collections of items which are deemed relevant. For most

purposes it is generally agreed that the collection of goods and services which enter into household consumption expenditures provides a suitable unit in which to measure changes in real disposable income.

4.3. These two approaches, decomposition into price and quantity components and selection of a relevant collection of items in terms of which purchasing power can be measured, are radically different and should not be confused with one another. In a sense, both approaches are dependent on the first; it is possible to define various units of purchasing power only because it is possible to decompose certain value totals into price and quantity components.

4.4. It is sometimes suggested that the two approaches can be united by defining a unique set of units in terms of which to express the purchasing power of every value total that cannot be decomposed. The essential idea is simple: the accounting constraints of the system should be used in conjunction with the price index numbers obtained through decomposition to define implicit price deflators for the elements that cannot be decomposed. The objections to this method are two in number. First, in all but the simplest cases, there are not sufficient accounting constraints to define all the implicit deflators without the introduction of arbitrary assumptions. Second, even where there are sufficient constraints, the resulting deflators may not have any clear economic interpretation.

4.5. An example will help to make these difficulties clear. Consider a simple closed system with only three accounts. The production account tells us that income (or net product) is equal to consumption expenditures plus net capital formation. The consumption account tells us that consumption expenditures plus saving are equal to income. The accumulation account adds no independent constraints since it tells us only that net capital formation is equal to saving. Granted that only consumption expenditures and capital formation can be decomposed, there are two unknowns, the implicit deflators of income (or net product) and of saving and two independent accounting identities. We can use these two constraints and make the whole system balance at constant prices if we deflate income by the price index number obtained by combining consumption expenditures and capital formation and if we deflate saving by the price index number appropriate to capital formation.

4.6. The deflator of income obtained in this way is equal to the deflator of net product as it is usually derived. This is a useful concept but it is not the same as a deflator of primary inputs unless any gain in productivity is itself regarded as an input. Again, the deflator of saving is equal to the deflator of capital

formation so that saving at constant prices is defined in terms of the capital goods it will buy rather than in terms either of the consumption goods foregone to make it possible or of the benefits expected to accrue from it in terms of future consumption. Thus the implicit deflators arrived at in this simple case, though they may be appropriate for certain purposes, are only a selection from the whole range of possible deflators, other members of which may be more appropriate for other purposes. The present method forces us into a selection which may not be suitable for the analytical purposes we have in mind.

4.7. If we add an external account, as in table 1.3 of chapter I, the difficulties immediately increase. Granted that only imports and exports can be decomposed, this extension adds one more constraint and three more undecomposable items for which implicit deflators must be found. This problem admits of any number of formal solutions. For example, we might assume: (i) that the two flows between the consumption account and the rest of the world, net distributed factor incomes and other transfers, should have the same implicit price deflator; and (ii) that saving should have the same price deflator as consumption expenditures. On these assumptions it is a simple matter to express the implicit price deflators in terms of known quantities and values. Typically, these expressions contain differences between similar magnitudes and so are likely to be erratic. Furthermore, other seemingly harmless assumptions could be made which would lead to equally erratic but quite different results. Unless a good reason can be found in economic terms for accepting one set of assumptions rather than the others, the formal solutions just described cannot be regarded as satisfactory.

4.8. In spite of this it is generally considered important to give numerical expression to such aggregates as the gross national product at constant prices. There are two solutions to this problem in common use. The first is based on the assumption that the purpose of exports and net distributed factor income from abroad is to buy imports, and so these items are deflated by the price index number for imports. As a consequence, the price deflator for the gross national product is obtained by deflating the components of final expenditure in the domestic market by price index numbers of private and public consumption expenditures and of gross capital formation and by deflating the excess of exports and distributed factor income from abroad over imports by the price index number of imports. This is a clear assumption despite the fact that a balance of payments surplus is not used to buy imports at the time when it arises and may not be so used in the future; instead, it may be used either to reduce exports or to accumulate claims on the rest of the world and so increase factor income. The second solution is to deflate the gross national product by a price index number of current and capital final expenditure in the domestic market. The two methods will give different results only if the balance of payments is different from zero and then only if the price index number for imports differs from the price index numbers of final purchases in the domestic market.

4.9. In the remainder of this chapter attention will be concentrated on the first type of comparison, that

is to say on the decomposition of value changes into price and quantity components.

Alternative valuations

4.10. In the preceding chapter we saw the importance for input-output analysis of homogeneous commodity valuation. Now we shall consider the ways in which commodities can be valued and examine the relationships between them. We can approach this subject either by building up from factor values or by building down from purchasers' values. The relationships are set out in paragraphs 4.98 to 4.106 of the mathematical annex to this chapter.

4.11. Let us begin with factor values and, for the purpose of verbal exposition, let us ignore all forms of subsidiary production so that the cost structure of a commodity can be identified with the cost structure of a single industry. Only verbal simplicity will be gained in this way; the transformations involved as a result of subsidiary production are fully set out in the mathematical annexes to this and the preceding chapter. The production of any commodity, let us say steel, requires direct outlays on primary inputs or factors of production measured by compensation of employees, operating surplus and consumption of fixed capital. Similar outlays are required for each intermediate input into steel production, for each intermediate input into these inputs and so on. This theoretically infinite but convergent series of outlays can be calculated by input-output methods, as shown in equation (4.11) of the mathematical annex. The result of this calculation is the value of primary inputs required directly or indirectly in the production of a unit of steel, or what may be called the factor value of this unit.

4.12. This true measure of factor value, which can only be estimated by analytical means, differs from the approximate measure which is commonly used. This approximate measure consists of the sum of the factor cost per unit in steel making plus the producers' values of, and distribution and transport margins on, intermediate inputs into steel making. Since the difference between factor values, including the factor values of the distribution and transport services, and these values is equal to accumulated indirect taxes, it follows that true and approximate factor values differ by accumulated indirect taxes on direct and indirect intermediate inputs into steel making, as shown in equation (4.20) of the mathematical annex. This difference may be quite small if the tax system is so arranged that taxes are reduced or remitted on commodities that form part of intermediate input.

4.13. In the present system, indirect taxes, net, are divided into two categories: commodity taxes, net, and other. Net commodity taxes are those indirect taxes and subsidies which are allocated to commodity outputs and uses and which appear in the rows and columns for "commodity taxes, net" in table 2.1. In that example, all indirect taxes and subsidies, apart from protective import duties, were allocated in this way, but in a more detailed example it is to be expected that some indirect taxes either could not be allocated or would not be worth allocating.

4.14. The true measure of basic values is obtained by accumulating factor costs and other net indirect

taxes, as shown in equation (4.12) of the mathematical annex in just the same way as factor costs alone were accumulated to obtain true factor values. The approximate measure is equal to the true measure plus the accumulated net commodity taxes embodied in inputs as shown in equation (4.17) of the mathematical annex. It is this approximate measure that appears in the rows and columns for "commodities, basic value" in table 2.1.

4.15. Producers' values are equal to the accumulation of factor costs, including the factor costs of the distribution and transport services embodied in inputs, and all indirect taxes as set out in equation (4.13) of the mathematical annex.

4.16. Purchasers' values are equal to producers' values plus the trade and transport margins appropriate to the purchaser in question, set out in equation (4.14) of the mathematical annex.

4.17. A numerical example of this sequence of values is given in the following section. As we saw in chapter III, the basis of valuation should be as homogeneous as possible for the purposes of input-output analysis. This requirement points to factor or basic values, and the concept of approximate basic values was used in many of the examples given in chapter III. Producers' values are less satisfactory for these purposes because they are less homogeneous, not so much between different parts of the productive system as between the productive system generally and various categories of final buyer. Purchasers' values are even less satisfactory for these purposes and do not form an integral part of the valuation of commodities in the present system. They may, however, be useful for purposes of current reporting and table 4.4 below illustrates a set of commodity accounts in which the uses of commodities are valued at purchasers' values and the supplies of commodities are valued at producers' values (c.i.f. values plus import duties in the case of imports) plus domestic trade and transport margins.

The sequence of values

4.18. The following numerical example is based on table 2.1. It is restricted to the production accounts

for commodities and industries, all other accounts in the system being consolidated together. It is assumed for the purpose of this illustration that all entries for the third group (transport, communications, distribution) relate to trade and transport margins, although this would not be so in practice since the group includes communications and passenger transport as well as the transport and distribution of goods. In order to simplify the presentation, the order of the last two groups of both commodities and industries has been reversed so as to bring the margins and the margin activities to the final position in their respective groups.

4.19. With these minor changes, table 2.1 can be reduced to table 4.1. The main purpose of this table is to show the commodity flows, the entries in the first four rows and columns, at basic values. It will be noticed that protective import duties have been added to imports and that the four entries in row 9 and columns 5 through 8 are composed of compensation of employees plus operating surplus plus consumption of fixed capital plus commodity taxes on inputs rather than on outputs. It will be remembered that in this example all indirect taxes and subsidies are allocated to commodity tax categories. It is for this reason that there is no table at factor values: these values only differ from basic values if there are indirect taxes and subsidies which are not allocated to commodity tax categories.

4.20. Table 4.1 can be compared with table 4.2 in which the same example is set out at producers' values. In terms of table 2.1, this new table is obtained by adding net commodity taxes to basic values and deriving the other entries accordingly. Thus, the commodity totals in table 4.2 exceed those in table 4.1 by the value of net commodity taxes, 7, 14, 6 and 1 respectively, levied on each of the product groups; the industry totals differ by the value of net commodity taxes, -1, 9, 1 and 6 respectively, levied on the output of each domestic industry group; and the totals of value added in table 4.2 differ from the corresponding totals in table 4.1, by the excess of net commodity taxes paid by each domestic industry group over net commodity taxes levied on the corresponding output, -1, -2, 3 and -1 respectively.

Table 4.1. Commodity flows at basic values

		1	2	3	4	5	6	7	8	9	10
Commodities	Agriculture and mining	1				1	19	3	0	18	41
	Manufacturing and construction	2				8	118	8	11	154	299
	Commodities n.e.c.	3				1	14	2	3	44	64
	Transport and distribution	4				1	13	2	9	51	76
Industries	Agriculture and mining	5	26	0	0	0					26
	Manufacturing and construction	6	0	267	1	0					268
	Industries n.e.c.	7	0	1	61	0					62
	Transport and distribution	8	0	1	0	71					72
All other accounts		9	15	30	2	5	15	104	47	49	
TOTAL 10		41	299	64	76	26	268	62	72	267	

Table 4.2. Commodity flows at producers' values

		1	2	3	4	5	6	7	8	9	10
Commodities	Agriculture and mining	1				1	27	3	0	17	48
Industries	Manufacturing and construction	2				8	121	9	12	163	313
Commodities	Commodities n.e.c.	3				1	14	4	3	48	70
Industries	Transport and distribution	4				1	13	2	10	51	77
Industries	Agriculture and mining	5	25	0	0	0					25
Industries	Manufacturing and construction	6	0	276	1	0					277
Commodities	Commodities n.e.c.	7	0	1	67	0					68
Industries	Transport and distribution	8	0	1	0	72					73
Industries	All other accounts	9	23	35	2	5	14	102	50	48	
Industries	TOTAL	10	48	313	70	77	25	277	68	73	279

4.21. The same example can only be expressed in terms of purchasers' values with the help of information not available in table 2.1. This information consists of an allocation of the entries in the row for trade and transport margins over the various intermediate and final uses. In the present example, this allocation is set out in table 4.3.

Table 4.3. The allocation of trade and transport margins

		Industries	Final demand	Total
Commodities	Agriculture and mining	0 1 0 0	1	2
Industries	Manufacturing and construction	1 10 2 8	40	61
Commodities	Commodities n.e.c.	0 2 0 2	10	14
Industries	TOTAL	1 13 2 10	51	77

4.22. In this table, the final row of column totals is the same as the fourth row of table 4.2; and the allocation of these entries appears in the upper part

of the table. The final column shows the row totals of these allocations; each element corresponds to the trade and transport margins on all uses of one group of commodities.

4.23. The use of this information is shown in table 4.4. This table is in a conventional form and is headed "purchasers' values" although it contains purchasers' values in the commodity rows and producers' values plus trade and transport margins in the commodity columns. Since the trade and transport margins are allocated to commodity groups, the commodity "transport and distribution" disappears and only the corresponding industry remains.

4.24. If table 4.4 is compared with table 4.2, it can be seen that the three commodity rows are simply the first three rows of table 4.2 increased by the corresponding entries in table 4.3. The commodity columns of table 4.4 are similar to the first three commodity columns of table 4.2 except that entries in the row for transport and distribution relate not to the commodities produced by that industry group but to the transport and distribution margins on each of the other commodities. These margins are shown in the final column of

Table 4.4. Commodity flows at purchasers' values

		1	2	3	4	5	6	7	8	9
Commodities	Agriculture and mining	1			1	28	3	0	18	50
Industries	Manufacturing and construction	2			9	131	11	20	203	374
Commodities	Commodities n.e.c.	3			1	16	4	5	58	84
Industries	Agriculture and mining	4	25	0	0					25
Industries	Manufacturing and construction	5	0	276	1					277
Commodities	Commodities n.e.c.	6	0	1	67					68
Industries	Transport and distribution	7	2	62	14					78
Industries	All other accounts	8	23	35	2	14	102	50	53	
Industries	TOTAL	9	50	374	84	25	277	68	78	279

table 4.3 and the one apparent difference (62 in place of 61) is due to the fact that it is assumed in this example that the group transport, communications, distribution is wholly concerned with the transport and distribution of goods. In fact, as we have seen, this is not the case; in addition to the services of communications and passenger transport, the industry also produces one unit of the products characteristic of manufacturing and construction. A similar anomaly appears in this example in connexion with the entries for value added. These, as is to be expected, are the same as in table 4.2 except that the entry in the column for the industry group of transport, communications, distribution is increased by five units. This corresponds to the imports of the characteristic products of this group and, with imports valued c.i.f., would not relate to imported goods transport. In a complete example, a row and column for the commodity "transport, communications, distribution" would remain to handle the services included in the group which are not connected with the handling of goods; and the anomaly would disappear.

4.25. This example shows what happens to a table of commodity flows as we pass along the sequence of values from factor values (≡ basic values in this example) through producers' values to purchasers' values. At each stage some of the entries are changed considerably and the formation of a table at purchasers' values requires additional information, set out in table 4.3, which does not form an explicit part of the new system. The basic values in table 4.2 are "approximate"; a table of true basic values would require a further decomposition based on input-output methods as described in the mathematical annex to this chapter.

The value flows used in index-number construction

4.26. As has been said, the main flows used in the construction of a system of price and quantity index numbers are those which appear in the commodity and activity accounts. The system proposed here contains, as is usual, index numbers relating to final demands and to value added; and it also includes index numbers relating to gross outputs and intermediate inputs and some suggestions for the construction of index numbers of primary inputs. This last type of index number is needed in the analysis of productivity which, as usually defined, can be measured as the ratio of the change in value added at constant prices to the change in primary inputs at constant prices.

FINAL DEMANDS AND IMPORTS

4.27. The main categories in respect of which quantity and price index numbers are included are as follows.

Private consumption expenditure

4.28. Series are compiled on the final consumption expenditure of households and of private non-profit bodies serving households.

4.29. The final consumption expenditure of resident households is measured at purchasers' values as outgoings from the income and outlay account of house-

holds; and is computed as the sum of household consumption expenditures in the domestic market and the excess of direct purchases abroad of resident households over the direct purchases of non-resident households in the domestic market. Household consumption expenditures in the domestic market classified according to object are measured at purchasers' values as outgoings from the accounts for household goods and services. The expenditures which are made on commodities are in addition measured at other bases of value, for example, producers' values and approximate basic values. These expenditures account for almost all the household consumption expenditure; they are shown by type of commodity, as well as by object of expenditure. Index numbers in respect of household consumption expenditures in the domestic market are often compiled from data on the categories of commodities purchased.

4.30. The final consumption expenditure of private non-profit bodies serving households, classified according to purpose, are measured at purchasers' values as outgoings from the accounts on the purposes of these bodies. In view of the one-to-one correspondence between the classifications of the purpose and of kind of activity of the private non-profit services, the final consumption expenditure of the various purposes of these bodies can be converted into the difference between the cost of production (gross output) and the sales of the various services. The costs of production are measured at the various bases of valuation as outgoings from the production accounts of the services. The various commodities entering into intermediate consumption are distinguished. It is frequently necessary to compile the index numbers in respect of the final consumption expenditure of the private non-profit bodies from series in respect of the various inputs into the production of these services rather than from series in respect of the gross output of the services.

Government final consumption expenditure

4.31. These expenditures, classified according to purpose, are measured at purchasers' values as outgoings from the accounts on government purposes. As a result of the correspondence between the classifications of the purposes and the kinds of activity of government services, the series in respect of final consumption expenditures may be evaluated in terms of series on the costs of production (gross output) of the government services. The data in respect of costs of production are measured at the various bases of value as outgoings from the production accounts of the services. Index numbers of government final consumption expenditure, classified according to purpose, are frequently compiled from data on the elements of the cost of production of government services classified according to kind of activity.

Gross capital formation

4.32. Separate series of data are compiled in respect of additions to stocks and gross fixed capital formation. In each case the series are classified by the kind of activity of the producers making the outlays and by the kind of commodities on which these outlays are made. The series on both additions to stocks and fixed

capital formation are measured on the various bases of value as outgoings from the capital formation accounts of industries, the producers of government services and the producers of private non-profit services to households. The index numbers in respect of additions to stocks and fixed capital formation are generally compiled from data on the commodities which are acquired.

Exports and imports

4.33. Exports and imports of goods and services are each the subject of series of data.

4.34. Exports include the direct purchases of non-resident households in the domestic market in addition to exports of commodities. Total exports of goods and services are measured at purchasers' values as outgoings from the account for current transactions of the rest of the world. Exports of commodities, which account for most of the exports of goods and services, are measured at f.o.b. values on the various bases of value.

4.35. Imports of goods and services include direct purchases abroad of resident households and of government services, in addition to imports of commodities. The imports are measured at c.i.f. values as incomings into the account for current transactions of the rest of the world. In order to obtain basic values, protective customs duties should be added to the c.i.f. values. For producers' values both protective and revenue raising duties, net, should be added to the c.i.f. values.

PRODUCTION

4.36. The flows of the production accounts in respect of which index numbers are compiled are outlined below.

Gross output and intermediate consumption

4.37. Series of index numbers are compiled in respect of the gross outputs and intermediate inputs of the various classes of producers.

4.38. The gross outputs of industries are shown both by kind of activity and by commodities as incomings into the production accounts for industries and as outgoings from the production accounts for commodities. In each case the gross outputs are measured directly at producers' values and approximate basic values and, as has been said above, can be evaluated at true basic values and approximate and true factor values. Index numbers of the gross output of industries are generally built from series on the gross output of the commodities produced by the industries.

4.39. The intermediate inputs of industries are shown both by kind of activity and by commodities as outgoings from the production accounts for industries and incomings into the production accounts for commodities. In each case the intermediate inputs are measured directly at approximate basic values, producers' values and purchasers' values and can be evaluated at true basic values and true factor values. Index numbers of the intermediate consumption of industries are usually compiled from series on the commodities they consume.

4.40. The gross outputs of the producers of government and private non-profit services classified according to the kind of activity of these services, are measured at the various bases of value in their production accounts. In the case of practically all of the gross output of these services, approximate basic values, producers' values and purchasers' values are likely to be equivalent. As has been said, it is often necessary to construct index numbers of the gross output of these services from data on the elements of their cost of production. Since the intermediate inputs of the services are classified by commodity, index numbers in respect of this element of costs can be compiled from commodity data. This furnishes the basis for compiling series on gross output and intermediate consumption on the various bases of value.

Value added

4.41. The series in respect of this flow are also divided into the value added of industries, government services, private non-profit services to households, and the domestic services of households. By definition, index numbers of value added should be derived from the difference between measures of gross output and measures of intermediate consumption. This method of compilation is usually referred to as the double-deflation method. The index numbers of value added are classified by the kind of activity of the various classes of producers. It may be measured at producers' values and approximate basic and factor values directly and, as is shown in the mathematical annex, at true basic and factor values by analytic methods.

PRIMARY INPUTS

4.42. The measures of primary inputs of particular interest here concern labour and the stock of fixed capital. These series are required, for example, in measuring the productivity of industries. What is involved is the decomposition of the employee compensation and operating surplus and consumption of fixed capital included in the value added of the various categories of producers into quantity and price index numbers. Official experience has been accumulated in compiling appropriate measures in the case of labour inputs but not the capital inputs. The discussion of this subject in this report is intended to suggest the directions in which the considerable amount of required work on, and experimentation with, these measures might proceed.

4.43. The index-number system is illustrated numerically in paragraphs 4.84 through 4.94 below.

Forms of index numbers

4.44. Although a large number of index-number formulae have been devised, those in most common use are the aggregative index numbers associated with the names of Laspeyres and Paasche, the geometric mean of which is Fisher's ideal index number. Laspeyres' index numbers are base-weighted and are equivalent to weighted arithmetic averages of current to base quantity (or price) ratios with base period values as weights. Paasche's index numbers are current-weighted

and are equivalent to weighted harmonic averages of current to base quantity (or price) ratios with current period values as weights. These index numbers are easy to understand, simple to calculate and have a number of convenient properties. The algebra of a system of index numbers using these forms is set out in the mathematical annex.

4.45. Laspeyres and Paasche index numbers are symmetrical: a price index of one form multiplied by a quantity index of the other form is equal to the relative change in value. In practice it is usual to construct Laspeyres index numbers of quantities and to derive implicit Paasche index numbers of prices by dividing the quantity index numbers into the corresponding changes in values. In some cases it may be better to construct Laspeyres index numbers of prices and derive implicit Paasche index numbers of quantities. The mixture of forms in this way leads to some inconsistency; but this is often slight and usually worth incurring if it makes possible a fuller use of the available information.

4.46. In the mathematical annex and in the numerical examples given below, attention is restricted to the comparison of two periods, the base period and the current period, on the assumption of complete information. As new data become available for successive quarters or years, it is necessary to keep the index-number system up to date; and the way in which this is usually done has just been indicated. This method rests on the use of the values of the latest base period as weights for the price or quantity relatives and, as time progresses, these values tend to get further and further removed from current relative values. From time to time, therefore, say at five- or ten-year intervals, it is desirable to institute a new base period. The estimates for the period between the old and the new base can then be revised, possibly by constructing Fisher index numbers though experience shows that this refinement may not be worthwhile if the two bases are not far separated in time. The whole system can then be carried into the future using the relative values derived from the new base. The series which result from this procedure for the period since the new base was established will not be of the same form as the earlier series. But this is not a very serious objection since the only alternative, in the absence of a complete set of price and quantity indicators for all periods, is to base all past comparisons on the relative prices of the latest base. This will give the same results as those above for the period since that base was established and will almost certainly give inferior results for earlier periods. Moreover, it implies a revision of all estimates prior to the period of the last base but one, an inconvenience that is avoided if, whenever a new base is established, final estimates are made, as suggested above, for the period between the new base and the base that preceded it.

4.47. In concluding this section it is of interest to consider what would happen if the method that has just been suggested were carried to the limit. This would imply that a new base be established in each period and the linking of each period to the next by means of a Fisher index. Through time, the index-number system would take the form of a set of chains in

which non-adjacent periods were compared with one another not directly but only through the intervening links in the chain. It is true that this indirect comparison would not, in general, yield exactly the same result as a direct one, but there is no reason to consider it inferior on that account. Although it does not seem possible to prove the superiority of either method over the other, the chain method has considerable intuitive appeal and it may well be the better of the two. It is not proposed for general application in connexion with the new system mainly because the amount of data it requires is altogether greater than the amount required by the alternative.

The price approach and the quantity approach

4.48. Since prices and quantities enter in a symmetrical way into the formulae for the various index numbers, alternative approaches are possible even if our aim is to construct only a system of quantity index numbers. We can either follow a direct approach and concentrate on obtaining indicators of quantity movements or we can follow an indirect approach, obtain indicators of price movements and derive implicit indicators of quantity movements by dividing the price indicators into the corresponding series of values. If we are able to mix the formulae correctly, for example to construct a price index by Paasche's formula in order to obtain an implicit quantity index on Laspeyres' formula, the two approaches lead to formally identical results. If this cannot be done, that is to say if all the index numbers we can construct, whether of prices or of quantities, are of Laspeyres' type, some measure of formal inconsistency will result. In practice, a mixture of the two approaches is likely to represent the best use of the data available and they should be regarded, therefore, as complementary rather than competitive.

4.49. In either case the main problem is to obtain a good measure of the component prices or quantities. From a practical point of view, this is the basic problem of index-number construction and it cannot be surmounted by any amount of mathematical manipulation of the kind described in the annex. It is frequently a simple matter to get a crude measure of quantity, numbers of cars or tons of steel say, and so given value statistics, to derive a crude measure of price. But at any one time there is a wide range of new cars available and as change follows change in successive new models, the quality of the average new car changes too. The same can be said of steel or, indeed, of almost any commodity. As a consequence the crude unit is not likely to be very satisfactory for measuring either prices or quantities. The question then arises: how can it be improved?

Improving the units of measurement

4.50. In trying to improve on crude measures of prices and quantities, it is useful to keep in mind a number of general considerations which will help us to thread our way through the maze of problems presented by the real world. In the absence of an exhaustive formulation, some guidance may be found in the following propositions.

(a) In distinguishing different varieties of a commodity with the object of valuing some varieties higher than others, it is necessary to consider desirable features of commodities which influence their price. Thus it will improve matters to distinguish silk shirts from cotton shirts but not to distinguish blue shirts from red shirts. Colour, however, is not always irrelevant: in some kinds of glassware, certain colours are much more expensive than others;

(b) In principle, the measurement of output is quite different from the measurement of input even if in some cases we are forced to accept an input measure of output. Thus a ton of wheat of a certain kind does not embody more output, although it does embody more input, in a bad year when the farmer has had to work particularly hard;

(c) Attention should be paid to the intentions of buyers and sellers, the transactions actually open to them and the methods of charging in force. Thus, when goods are transported it is usually understood that the charge covers the costs of loading and unloading as well as those of carriage in appropriate equipment over a certain distance. Or, again, a bus service may make a fixed charge independent of distance, in which case the passengers can buy journeys but not passenger-miles;

(d) Varieties of a commodity which sell at different prices should be regarded *prima facie* as different; and if inquiry confirms this assumption, they should either be treated separately or measured in units such that the prices per unit of the different varieties are equal to one another;

(e) As far as possible, quantities should be so measured that a unique price per unit can be said to exist at any one time;

(f) In assessing relative values, it is the relative values of the base period that are relevant.

This list of propositions is neither exhaustive nor exclusive. Some examples will show how far it is useful in practice.

VARIATIONS IN QUALITY OVER THE RANGE AVAILABLE IN THE BASE PERIOD

4.51. The crude measure of quantity for many commodities is simply number. Most commodities, however, vary in several characteristics; for example, eggs vary in size and freshness, and the different varieties sell at different prices. If the varieties always sold in the same relative numbers, we could resort to the concept of the average egg and nothing would be gained by departing from the crude measure of quantity. But as a country gets richer, the majority of consumers may become dissatisfied with anything but fresh eggs and in due course the distributive system may adapt itself to meeting this demand. In such a case the crude measure could be improved by weighting the different varieties according to their relative prices in the base year.

4.52. There are several ways of approaching this problem, depending on the information that can be obtained. First, if time series are available for the different qualities and if the average price of each quality is known for the base period, then each

quality can be treated as a separate commodity and the problem is completely solved. Second, if this information is not available, it may nevertheless be possible, by sampling or other means, to estimate the changing quality of eggs coming onto the market and to adjust the crude measure of quantity accordingly. Finally, if neither of these methods can be applied, we may be able to construct a price index number for eggs of constant quality and use this series to deflate the series of expenditure on eggs.

4.53. Whatever its practical defects, each method is likely to represent an improvement on the crude measure of quantity. Whether, in any particular case, the refinement is worth the effort must depend on circumstances. But it should not be too readily assumed that small improvements, which are all that can be expected in most cases, will cancel out in the aggregate; they may well reinforce one another.

VARIATIONS IN QUALITY OUTSIDE THE RANGE AVAILABLE IN THE BASE PERIOD

4.54. Many simple cases arise in which the range of qualities available on the market gradually shifts through time. Beer, in which strength is an important component of quality, provides an example. The changing pattern of demand may lead to the production of beer outside the range of strengths available in the base period, so that it becomes necessary to assign a base-period value to something that was not available in that period, that is to say, to extrapolate the relationship between strength and price in the base period outside the observable range.

4.55. If a number of commodities satisfy a given want and share an important quality component, it may be possible to extend this method. Just as there are many varieties of beer, so there are many varieties of alcoholic beverages which are generally regarded as separate commodities. In a study of a range of these beverages it was shown that the prices of different varieties of all the beverages were closely related to the corresponding strengths by a single log-linear relationship. If the association between price and strength were perfect, this would imply that all alcoholic beverages could be characterized by liquid volume and strength and that no information other than measures of these two variables would be needed for alcoholic beverages as a whole: the whole complex of beverages, beer, wine, spirits, etc. could be replaced by two simple aggregate measures. To the extent that the association is not perfect, it might still be worthwhile to treat individual beverages separately, accounting for average changes in their strength by means of a distinct relationship between strength and price for each beverage.

NUMEROUS COMPONENTS OF QUALITY

4.56. Many commodities are available not in a few comparatively stable qualities, as is the case with beer, but in immense and ever-changing variety. Men's shirts, for example, differ in material, in quality of material, in method and quality of fabrication and in style; and, within the great range of varieties available, the importance of these factors is constantly changing. In such a case, the method just suggested may be hard to apply,

partly because it is difficult to find a relationship between price and the many quality factors in the base period and partly because it may be difficult to measure these factors in later years. It may, however, be possible to follow either of two simpler courses. One of these is to divide shirts into a number of fairly homogeneous categories for which an average price can be estimated in the base period and to collect quantity data for each category. The alternative is to collect price data for a number of representative shirts of constant quality, combine these series into a price index number and use this to deflate the expenditure on shirts. Of the two, the price approach may well be the more practical, in spite of the difficulty of maintaining constant quality in the varieties priced and in spite of the necessity of changing these varieties from time to time to ensure that what is priced is still representative.

FASHION

4.57. In most of the cases considered so far it is probably safe to assume that tastes do not change very much in relation to the system of classification, so that a physico-technical classification of goods, which is the most that can usually be applied, does not vary significantly in relation to a socio-psychological classification. This assumption can no longer be made in the case of goods which are subject to changes in fashion, and it then becomes important to analyse the implications of the classification system adopted, as can be seen from the following example.

4.58. Let us assume: that fashion fluctuates between short, simply made dresses and long, elaborately made ones; that each category is produced in great variety and is available in greater or smaller quantities in every period; and that there is a significant price differential between the two categories. If the average price of each category remains constant, an application of the methods so far suggested will mean that the swing from long dresses to short dresses and back again will be represented as a change in quantity. But this result may not accord at all with the ideas of the majority of consumers, who probably do not care much whether their dresses are long or short provided that they are in fashion. On the assumptions made, eras of short fashions are ones in which it is possible to be acceptably dressed at relatively small cost; and so consumers will see the swings not as fluctuations in quantity but as fluctuations in price. If this point of view is carried to its extreme, a dress is a dress, quantity is measured by number and price is measured by average value. In practice this would be going too far but, to improve on it, one would have to be able to classify dresses on a scale of fashion, that is on a socio-psychological scale.

4.59. This example shows that, in improving the units of quantity, it is not only necessary to classify commodities into categories but also that these categories should reflect desirable qualities. In many cases, physico-technical classification may achieve this; but not always.

UNIQUE PRODUCTS

4.60. Ships, industrial equipment and structures are examples of products which are usually made to order

and vary considerably from case to case. The number of ships produced, for example, would not provide a good measure of shipbuilding output; under constant conditions of ship production and equipment, the weight of ships produced would provide a better measure. But weight, even if closely associated with carrying capacity, is not everything; a still better measure might be obtained by drawing up the specifications of a "standard" ship and pricing this standard in each interval of time. This price series could then be used to deflate a series of the value of shipbuilding output. In this way, any improvement in shipping standards would tend to appear as an increase in quantity rather than as an increase in price.

4.61. In a similar way, one might price a "standard" factory made up of so much work on foundations, so much structural steel work, so much reinforced concrete and so on. The difficulty with this categorization is that its relevance may be largely swept away by technical change. A factory, like anything else, has a certain function to perform which it may perform well or badly. The materials from which it is made and the method by which it is built may be dictated at any particular time by a combination of economic and technical conditions and customary standards; but in themselves they are irrelevant. For these reasons it might be better to define a "standard" factory in functional terms. This approach would give rise to the following kind of problem. It might be possible to effect a great saving in structural costs by substituting glass curtain-walling for brickwork. If this were done, however, it might be necessary to install air-conditioning to make the glass building as habitable as a brick building. In this case the air-conditioning equipment would not be something extra; it would be something necessary to offset the undesirable features of a different method of construction.

NEW MODELS

4.62. Cars provide an example of goods which, though generally mass-produced, are constantly undergoing minor changes in design, and from time to time major ones. The main object of these changes is either to enable cheaper materials or processes to be used without affecting the desirable characteristics of the product or to improve on these characteristics, whether they be reliability, safety, performance, economy or anything else. The problem is to devise a measure of quantity that will give due weight to these changes. Since the mere number of cars produced will not do this at all, it would probably be better to take the weight of cars produced, since at any time a fairly close association is usually found between weight and price. But, as we saw in earlier examples, such an association may gradually lose its relevance, either because changes in material and design make it possible to build a car that is light as well as safe, comfortable and fast, or because the use of weight as a measure of quantity implies a negative weight in respect of one characteristic, manœuvrability, which in itself calls for a positive weight. In the base period, when manœuvrability mattered little, this positive weight was probably small; and to the early motorist the fact that it was to acquire great importance as a consequence of parking difficulties would have appeared irrelevant. But it is

relevant to us that the increase in this characteristic should be reflected, with its base-period weight, in the measure of quantity adopted.

4.63. This example differs from some of those given earlier mainly in that it implies that present qualities may require very large extrapolations from the range of qualities available in the base period, with the consequence that the base-period valuation of present qualities will necessarily be somewhat speculative.

COMPOSITE PRODUCTS

4.64. If we look at statistics of goods transport, we shall probably find a quantity measure expressed in ton-miles. But if we are able to disaggregate these statistics, we shall probably find that the charge per ton-mile is greater for shorter hauls than for longer hauls because it embodies a charge for loading and unloading which is independent of distance. Goods transport can therefore be regarded as a composite commodity consisting of a certain amount of loading and unloading and a certain amount of transport. If we related price per ton-mile to distance, we should expect to find a positive relationship with a positive intercept. The intercept represents the fixed charge and should be associated with a measure of quantity expressed in tons; the slope represents the marginal cost of travelling an additional mile when so many miles have been travelled. If it is constant it provides a simple measure of the cost of movement which should be associated with a measure of quantity expressed in ton-miles.

4.65. The same idea can be applied to passenger transport. Some transport systems have a fixed charge independent of distance; others have a variable charge dependent on distance. In the first case the marginal cost of travel is zero, and the measure of quantity is the number of passengers. In the second case, the measure of quantity is partly passengers and partly passenger miles, depending on the relationship of the intercept and the slope of the function relating price to distance.

4.66. Yet another field of application is to commodities, mainly gas and electricity, which are charged for by means of two-part tariffs. The fixed charge can be regarded as a charge for the right to call on the public supply and the measure of quantity to be associated with it is the number of consumers. The variable charge can be regarded as a charge for gas or electricity supplied and the measure of quantity to be associated with it is the quantity supplied. If some such method is not adopted the price of a unit of gas or electricity will come to depend on whether the number of consumers is growing or consumption per consumer is growing. The tariff in force at any time may not distinguish very well between the fixed and variable components of cost but at least the method suggested is not based on the assumption that all costs are variable which is the implicit assumption of the use of therms or kilowatt-hours as the sole units of quantity.

CHARGES FOR TRADE AND TRANSPORT

4.67. As we have seen, commodities are recorded in the present system at producers' values and the trade and transport margins involved in their carriage and

distribution are shown separately. As a consequence, two kinds of comparison are possible. Farm produce, for example, can be measured either in terms of the quantity of produce leaving the farms or with the addition of the quantity of trade and transport services necessary to bring the produce to non-farm consumers. The measures of total production and consumption adopted in this report are of the second kind. This means that the trade and transport services associated with final goods form part of final product and implies a rejection of the concept of the cost of urbanism as far as these services are concerned. Equally, of course, the concept of the cost of ruralism in this sense is also rejected.

SEASONAL VARIATIONS

4.68. Seasonal commodities provide an example of similar commodities that sell at widely different prices at different times of year. Since out-of-season varieties cost more to produce and command a higher price, their growth should count for more in a measure of quantity than the growth of in-season varieties. Only if the seasonal pattern of consumption and price do not change can nothing be gained, in an annual comparison, by taking seasonal factors into account. If, on the other hand, through the development of alternative sources of supply, refrigeration, etc. the consumption and price of a commodity throughout the year become more uniform, then it must be recognized that the measures of prices and quantities will be affected by the year chosen as the base. From the point of view of a base year before the change a growth in out-of-season consumption will obtain a relatively large weight. But from the point of view of a base year after the change (when seasonal prices have been more nearly equalized) a growth in out-of-season consumption will appear as little more important than a growth of consumption at any other time of year. This is just as it should be; from the point of view of the earlier period out-of-season consumption is something special, from the point of view of the later period it is not.

SUMMARY

4.69. All the examples given above are intended to illustrate the problems that have to be solved in improving on crude measures of prices and quantities. First, it is necessary to classify varieties according to the degree in which they possess one or more desirable properties. These properties should be so formulated that their validity is as far as possible timeless. There is a point in having a safe car or a fast car; there is no point in having a heavy car or a car with twelve cylinders except in so far as existing technology can only produce a safe car that is heavy or a fast car that has twelve cylinders. Similarly, there is a point in having a dress that is in the fashion; there is no point in having a long dress or a short dress except in so far as fashion dictates the one or the other.

4.70. Second, it is necessary to estimate an average price for each variety in the base period or, more generally, to find the relationship between quality factors and price in the base period.

4.71. Finally, it is necessary to enumerate or measure each variety in subsequent periods or, more

generally, to measure the degree in which the various quality factors are present in those periods.

4.72. It cannot be claimed that this formulation of the problems, and the examples which illustrate it, provide definitive answers to particular questions. The answers reached in practice must depend to some extent on the data available and to some extent on the importance attached to improving these data in specific cases. If, over wide areas, phenomena change in an approximately common ratio, many of the refinements suggested are of only minor importance. What should be questioned is whether, over wide areas, phenomena do always change in a common ratio.

Indicators of prices and quantities

4.73. Before turning to a numerical illustration of the system of index numbers described in this chapter, let us take a look at the kinds of indicator likely to be available in practice. Quite apart from the refinements suggested in the preceding section, even crude indicators are not always available in an ideal form and so a decision has to be taken as to the best use of what is available; as we have seen, it will be best in some cases to accept direct measures of quantities and in other cases to construct indirect measures by dividing a value series by a price series.

4.74. The necessity for choice and compromise can easily be seen. The best indicator to use should be considered in each case on its merits, bearing in mind: (i) that if no indicator is judged fit to use in a particular case then, implicitly, either the scope of the index number is reduced or the series in question is assumed to move with some related series; and (ii) that each unit of value in the base period should receive approximately the same amount of attention whether it forms a small part of a large component or the whole of a small one. As regards the first point, there can be no question of reducing the scope of the index number if the aim is to measure the whole domestic product at constant prices and so the relevant question is whether an inferior indicator is likely to give a better measure of the movement of some component than would be obtained by assuming that that component followed the measured movement of its group or of output as a whole. As regards the second point, there is always the temptation to spend a great deal of time on some small group which happens to be elaborately documented and to spend very little time in trying to improve a crude but otherwise appropriate indicator for a large group which happens to be easily accessible. For example, it may be more important to find some means of making a rough allowance for changes in the quality of coal produced, so as to be able to adjust a crude indicator of tonnage, than to carry out a refined analysis of some much-less-important group such as iron castings.

4.75. Bearing these general points in mind, it may be useful to review the kinds of indicator commonly available, following the general order of discussion of paragraphs 4.27 through 4.42 above.

FINAL DEMANDS

4.76. Available indicators are likely to take one or other of the following forms

(a) *Quantities sold to final consumers.* These quantities adjusted for quality and other changes can be regarded as the standard as far as consumption expenditures are concerned. Final consumption is measured at the point at which goods and services reach the consumer and no account is taken either of changes in consumers' stocks or of any further transformation that the goods and services may undergo at the hands of the consumer;

(b) *Quantities delivered to retailers.* This indicator will provide a good approximation to (a) as long as retail stocks are not subject to much fluctuation;

(c) *Quantities withdrawn from bond.* This indicator, based on information collected in the course of tax administration, is subject to one major disadvantage: large changes in stocks may be induced at budget time by expectations of changes in rates of duty. These changes are likely to be short-lived and may not be of great importance in annual comparisons;

(d) *Total inputs.* In the case of many services, government services are a good example, no direct measure of the quantity of the gross output which enters into government final consumption is available. An indirect measure can be constructed as a weighted total of the quantities of inputs including the important element of labour. The weakness of this method is that it makes no allowance for changes in the productivity of inputs. Two methods of improvement suggest themselves. The more promising is to persevere with attempts to formulate and measure production and final consumption in these cases. The alternative is to impute a productivity change in these activities based on the experience of similar activities in which productivity can be measured. Such activities are not very easy to find and the whole subject calls for further study;

(e) *Primary inputs.* Cases arise in which the only available indicator relates to labour input. The same considerations apply as in the preceding instance. If a corresponding series of capital stock is available, it will almost certainly be better to approximate output by a measure of total factor input than by a measure of labour input alone. Provided that there is a positive return to capital in the base period, the measure of output will rise in relation to labour input if capital per head at constant prices is rising;

(f) *Quantities started, completed and under construction.* Quantity series for capital goods, for example houses and ships, frequently take the above forms. If it can be assumed that the period of production is a known constant and that work proceeds at a constant rate throughout the production period, then it is a simple matter to form a series of work done from these data. Indeed, they are highly redundant since, on the assumptions made, any one of the three series would yield an estimate of work done; and work started would be the most useful because, in a sense, it is the most up to date. If the production period is constant but work takes place in a known though uneven way in successive intervals of it, then work done can again be calculated from a series of work started. But if the production period varies, as in practice it must for a variety of reasons, then it is difficult to derive an acceptable series of work done. More information is

needed, and what would be particularly useful would be to know the amount of work outstanding on work under construction; for example, that out of x million tons of shipping under construction the equivalent of y million tons remains to be completed;

(g) *Adjusted output.* In some cases it may be impossible to measure final consumption or gross fixed capital formation directly but possible to obtain indirect measures by adjusting the quantities produced. Imports and exports are obvious items in this adjustment but, if this method is to be used, it is desirable to set up complete supply and disposals tables and try to account for all other uses, such as intermediate use, wastage and change in stocks;

(h) *Values deflated by prices.* This method depends on the availability both of a series for the value of expenditure and of an appropriate price index number. As we have seen, there are likely to be many cases in which this indirect approach gives better results than the direct one.

GROSS OUTPUTS

4.77. Some of the series refer in the first place to the gross output of commodities while other series relate to the gross output of industries and other producers.

(a) *Gross outputs.* These adjusted as far as possible for quality and other changes can be regarded as the standard to which the following alternatives are, in one way or another, inferior;

(b) *Sales by producers.* This indicator differs from an indicator of output by the amount of the change in stocks of finished goods and work in progress;

(c) *Deliveries by producers.* This indicator not only fails to take account of stock changes but may also involve a time-lag compared with sales;

(d) *Inputs.* The series available under this heading usually relate to one or more materials or to labour. Even if a series of material input relates to absorption in production and not, as is more usual, to deliveries to the producer, it is still subject to the influence of technical and economic changes and its relationship to output may therefore alter. In the case of labour, there is the problem of changing productivity. The position may be improved by allowing for the effect of increasing capital per head, but it cannot be entirely corrected by this means;

(e) *Values deflated by prices.* In many cases there is a choice between quantity measures of the components of a commodity or industry group and the corresponding measures of prices. The price approach is often to be preferred because there is likely to be more uniformity in the movement of the component prices than in that of the corresponding quantities. For this reason a sample of prices is likely to be more representative than a sample of quantities; and it will also often be easier to define and collect.

VALUE ADDED

4.78. The standard quantity measure of value added consists of subtracting from the quantity of gross output

a measure of the quantity of intermediate inputs using, in each case, base-year weights. In practice, much cruder calculations are frequently made based on one of the indicators just suggested for gross output. The justification for these approximations is either that intermediate inputs can be assumed to vary in the same proportion as gross output or that the change in the productivity of one or more primary factors can be assumed to be small.

PRIMARY INPUTS

4.79. Index number systems usually confine themselves to products, whether commodities or not. It is usual to provide some measure of labour input into different industries but rare to give corresponding estimates of fixed capital stocks. The suggestions made below, and especially those relating to capital stock, can only be regarded as tentative until more experience has been gained.

Labour

4.80. The aim here should be to measure total hours worked in different activities by different kinds of workers, whether employees or self-employed, and to weight each series by the average hourly earnings in the base period of the type of worker in question. It will be helpful if male, female and juvenile workers in each category can be distinguished. In the case of some categories, in particular the self-employed, the measurement of hours worked may be impracticable, but it may be possible to make some allowance for the changing length of customary holidays. In the case of the self-employed it will be necessary to impute their earnings from labour on the basis of the earnings of appropriate categories of employees

Capital

4.81. The aim here should be to measure the gross stock of fixed capital in different activities at constant replacement costs. This is one of the measures of capital stock usually made by the perpetual inventory method. This method consists of: accumulating gross fixed capital formation, usually subdivided by type of asset, on to an initial capital stock similarly subdivided; reducing the components to their replacement cost in the base year; and allowing for components retired, scrapped or destroyed, usually by reference to assumptions about average, normal lifetimes and information on destruction from insurance sources

4.82. This measure concentrates on capital invested in buildings, plant machinery and vehicles available in different activities. It does not take account of capital invested in stocks of goods, though this could be done, or of capital invested in land or used for purely financial purposes. Nor does it take account of assets used, as opposed to assets available, at any particular time.

4.83. The measurement of land and other natural resources gives rise to many special problems. The problems will not be discussed in this report but will be taken up later in connexion with national and sector balance sheets.

Some numerical illustrations

4.84. The numerical example used up to now has been further disaggregated, repeated for a second year and used to illustrate some of the calculations described in this chapter and its annex. In particular, we shall consider: (i) the balance of value added and final demand; (ii) the effect of the basis of value adopted on quantity and price index numbers of the value added and expenditure and (iii) the relationships between the output, primary inputs and productivity of industries. Throughout, the calculations are made with both Laspeyres' and Paasche's forms in order to show the differences between them in relation to the underlying changes.

4.85. An illustrative example can hardly hold much substantive interest but it can bring out the small though systematic differences which result from the use of different concepts and formulations and the need for caution in making statements about changes in productivity and the reasons for these changes.

VALUE ADDED AND FINAL DEMAND

4.86. As is well known, these two totals are equal at constant as well as current prices provided that a common basis of value is used throughout the calculations. This is illustrated from the present example in table 4.5.

Table 4.5. Quantity index numbers of value added and final demand at producers' values

(Base-year values = 1 000)

	Value added			Final demand	
	Las-peyres	Paasche		Las-peyres	Paasche
Agriculture and mining	1.052	1.039	Consumption expenditure:		
Manufacturing and construction	1.203	1.201	Private	1.199	1.197
Transportation, communication and distribution	1.106	1.110	Government	0.985	0.981
Other industries	1.206	1.209	Gross capital formation ^a	1.423	1.403
All industries	1.164	1.165	Exports	1.193	1.192
Producers of government services, etc	1.000	0.998	less Imports	-1.368	-1.367
TOTAL	1.147	1.145	TOTAL	1.147	1.145

^a The index numbers for gross fixed capital formation were 1.242 and 1.247 respectively

4.87. In this example the differences between the two forms of index number are on the whole small. The principal exception is gross capital formation, where the difference is largely due to the erratic movement of additions to stocks. This component rose between nine- and ten-fold over the period, a result which can easily happen if the additions to stocks in the base year are abnormally small.

INDEX NUMBERS ON DIFFERENT BASES OF VALUE

4.88. These differences are illustrated in table 4.6 in the case of price and quantity index numbers of the value added of industries.

4.89. Several conclusions emerge from this example. First, there is a small but systematic difference between

Table 4.6. Price and quantity index numbers of the value added of industries

(Base-year values = 1 000)

	Price index numbers				Quantity index numbers			
	Laspeyres		Paasche		Laspeyres		Paasche	
	Single deflation	Double deflation	Single deflation	Double deflation	Single deflation	Double deflation	Single deflation	Double deflation
Producers' values	1.210	1.225	1.202	1.224	1.186	1.165	1.179	1.164
True factor values	1.215	1.230	1.206	1.227	1.182	1.161	1.174	1.160
Approximate factor values	1.216	1.232	1.207	1.229	1.181	1.159	1.173	1.158

Table 4.7. Outputs, inputs and productivity of industries

(Base-year values = 1.000)

	Gross output (Producers' values)		Value added (Producers' values)		Labour input		Capital input		Factor input		Productivity		Productivity $A_g = A_t$		Productivity $F_g = F_t$		
	Las- peyres	Paasche	Las- peyres	Paasche	Las- peyres	Paasche	Las- peyres	Paasche	Las- peyres	Paasche	Las- peyres	Paasche	Las- peyres	Paasche	Las- peyres	Paasche	
Agriculture, forestry, fishing	1	1.228	1.228	1.187	1.221	0.845	0.846	1.096	1.096	1.001	.998	1.186	1.223	1.228	1.230	0.966	0.994
Mining	2	0.918	0.916	0.862	0.870	0.816	0.818	1.699	1.684	.913	.948	.944	.918	1.003	.966	0.941	0.950
Food, beverages, tobacco	3	1.134	1.134	1.250	1.252	1.052	1.051	1.264	1.254	1.179	1.157	1.060	1.082	.962	.981	1.102	1.103
Textiles, wearing apparel, leather	4	0.990	0.987	1.032	1.042	0.875	0.875	1.021	1.021	.918	.914	1.124	1.140	1.076	1.080	1.045	1.056
Rubber, chemicals, petroleum products	5	1.433	1.421	1.583	1.694	1.075	1.075	1.399	1.398	1.238	1.226	1.279	1.382	1.148	1.158	1.114	1.193
Basic metal industries	6	1.222	1.218	1.222	1.244	1.056	1.062	1.319	1.327	1.159	1.168	1.054	1.065	1.051	1.043	1.003	1.021
Metal products, machinery, equipment	7	1.278	1.275	1.212	1.219	1.085	1.096	1.357	1.363	1.167	1.160	1.039	1.051	1.093	1.099	0.951	0.956
Manufacturing n.e.c.	8	1.243	1.243	1.175	1.197	1.070	1.078	1.237	1.240	1.123	1.123	1.046	1.066	1.106	1.106	0.946	0.964
Gas, electricity, water	9	1.356	1.398	1.461	1.586	0.987	1.001	1.270	1.263	1.119	1.137	1.306	1.395	1.179	1.160	1.108	1.203
Construction	10	1.170	1.170	1.007	1.027	1.090	1.090	1.227	1.227	1.118	1.120	.901	.917	1.046	1.044	0.861	0.878
Transport and communication	11	1.132	1.132	1.190	1.186	0.978	0.978	1.115	1.115	1.017	1.020	1.170	1.163	1.113	1.110	1.051	1.048
Distribution	12	1.145	1.145	1.052	1.060	1.127	1.127	1.302	1.302	1.209	1.198	.870	.885	.948	.956	0.918	0.926
Services	13	1.180	1.180	1.142	1.153	1.085	1.085	1.332	1.332	1.173	1.167	.974	.988	1.006	1.011	0.968	0.977
All industries		1.193	1.189	1.165	1.164	1.038	1.047	1.266	1.270	1.121	1.122	1.039	1.037	1.047	1.047	0.992	0.990

the index numbers obtained on the basis of producers' values and those obtained on the basis of factor values (equal to basic values in this example). Second, the index numbers based on approximate factor values are very close to those based on true factor values. Third, the small but systematic difference between Laspeyres' and Paasche's index numbers, which appears when single-deflation methods are used, almost disappears when double-deflation methods are used. Fourth, under double-deflation methods, the price index numbers are consistently higher and the quantity index numbers are consistently lower than under single-deflation methods.

OUTPUTS, PRIMARY INPUTS AND PRODUCTIVITY OF INDUSTRIES

4.90. The material for an analysis of the productivity of industries provided by the index-number system described in this report is illustrated in table 4.7 above.

4.91. The kind of information contained in this table can be seen by tracing the entries in the first row, which relates to agriculture, forestry and fishing. Gross output at producers' values rose by nearly 23 per cent over the period, and value added by 19 or 22 per cent depending on whether Laspeyres' or Paasche's measure is taken. The input of labour fell by 15 per cent and that of fixed capital rose by 10 per cent, implying an increase in fixed capital per head of 30 per cent. If labour and capital are weighted by their contributions to value added, the total input of primary factors remained unchanged. By comparing value added and primary input it can be seen that productivity rose by between 19 and 22 per cent depending on whether Laspeyres' or Paasche's measures are taken. The productivity of labour alone rose, of course, very much more, namely by between 40 and 44 per cent. The growth in the productivity of primary inputs as a whole is more than accounted for by the partial measure in which the intermediate input-output coefficient matrix is held constant; and the partial measure in which the primary input-output coefficient matrix is held constant contributes a slight fall. As is shown in the mathematical annex, these two partial measures correspond respectively to the changes in the ratio of gross output to primary input and of value added to gross output.

4.92. It would appear, therefore, that in this industry the rise in the productivity of primary inputs as a whole is attributable to economies in them and not to economies in intermediate inputs; indeed, the latter contributed, if anything, a contrary component. How far these results could be explained in terms of technical change, organizational change or a change in product mix, is a matter that could only be clarified through discussion with agricultural experts. The outcome of such discussions may be to render the conclusions plausible or to cast doubt on one or more of the basic measurements which, as we have seen, are not very easy to make. However this may be, a complete set of measures on the lines indicated at least provides a point of departure from which to explore the phenomenon of productivity.

4.93. It will be observed that the roles played by the two components of productivity appear in every

possible mixture. Thus, in food, beverages and tobacco, the first component tended to reduce productivity growth while the second tended to increase it, leaving productivity somewhat higher than in the base year. In the chemicals group, both components tended to increase productivity which, as a consequence, was substantially higher than in the base year. The extent of this increase, between 28 and 38 per cent, cannot be determined exactly because the measure of value added is sensitive to the weighting system adopted; this sensitivity can also be seen in the second component of productivity though hardly at all in the first. In distribution both components show a negative influence.

4.94. The results for individual industries are combined in the final row of table 4.7 to show the outcome for industries as a whole. In this example the gross output of industries rose by 19 per cent, value added by 16 per cent and primary inputs by 12 per cent. Productivity rose, therefore, by 4 per cent and, of this, more than the whole was contributed by the first component. The input of labour rose only by 4 or 5 per cent and capital per head rose by 21 or 22 per cent. The main effect of this increase in capital per head, coupled with the redeployment of primary and intermediate inputs that accompanied it, seems to have been to enable a small increase in labour to produce a comparatively large increase in output but not to increase to any great extent the productivity of primary inputs as a whole.

ANNEX

Mathematical discussion

VALUE ADDED IN COMMODITY PRODUCTION

4.95. In order to build up commodity prices from industry costs it is necessary to transform these costs into commodity costs. In the preceding chapter we saw how this could be done in the case of the costs of intermediate products; to take the simple, limiting cases, the matrix B of commodity inputs per unit of industry outputs is transformed into $A = BC^{-1}$ on the assumption of a commodity technology and into $A = BD$ on the assumption of an industry technology. Let us now see how to deal with the costs of primary inputs.

4.96. In the notation we have used so far the set of industry cost equations can be expressed in the form

$$g = y + \hat{g} B'i \quad (4.1)$$

If we denote the vector of primary costs entering commodity outputs by z , then we can write

$$q = z + \hat{q} A'i \quad (4.2)$$

On premultiplying (4.2) by D and using (3.5), we obtain

$$\begin{aligned} g &= Dz + D\hat{q} C^{-1} B'i \\ &= Dz + VC^{-1} B'i \\ &= Dz + VV^{-1}\hat{g} B'i \\ &= Dz + \hat{g} B'i \end{aligned} \quad (4.3)$$

On comparing (4.3) with (4.1) we see that

$$y = Dz \quad (4.4)$$

By similar reasoning, on premultiplying (4.2) by C^{-1} and using (3.6), we obtain

$$y = C^{-1} z \quad (4.5)$$

4.97. Let us now denote the cost of primary inputs (factors of production) per unit of industry by $m = \hat{g}^{-1} y$ and the corresponding cost per unit of commodity outputs by $n = \hat{q}^{-1} z$. Then from (4.4) we can see that

$$\begin{aligned} m &= \hat{g}^{-1} y \\ &= \hat{g}^{-1} D \hat{q} \hat{q}^{-1} z \\ &= \hat{g}^{-1} V \hat{q}^{-1} z \\ &= C' \hat{q}^{-1} z \\ &= C'n \end{aligned} \quad (4.6)$$

Whence

$$n = C'^{-1} m \quad (4.7)$$

Similarly, from (4.5)

$$n = D'm \quad (4.8)$$

In what follows the argument will be carried out in terms of (4.7) but clearly it can easily be rewritten in terms of (4.8).

THE SEQUENCE OF TRUE VALUES

4.98. Value added per unit of industry output, m , can be decomposed into three elements: factor costs per unit, w , composed of compensation of employees, operating surplus and provisions for the consumption of fixed capital; indirect taxes, net, other than commodity taxes, t ; and commodity taxes, x . Thus

$$m = w + t + x \quad (4.9)$$

and, from (4.7),

$$n = C'^{-1}(w + t + x) \quad (4.10)$$

4.99. The value of commodities at factor cost, f say, is obtained by accumulating factor cost values back through the chain of inputs, direct and indirect, including the inputs of trade and transport margins at each stage, thus

$$\begin{aligned} f &= A'f + C'^{-1} w \\ &= (I - A')^{-1} C'^{-1} w \\ &= H w \end{aligned} \quad (4.11)$$

say, where $H \equiv (I - A')^{-1} C'^{-1}$.

4.100. Similarly, the basic value of commodities, b say, is obtained by the same accumulation of w and t . Thus

$$\begin{aligned} b &= A'b + C'^{-1}(w + t) \\ &= H(w + t) \end{aligned} \quad (4.12)$$

and the producers' value of commodities, p say, is obtained by the same accumulation of w , t and x . Thus

$$\begin{aligned} p &= A'p + C'^{-1}(w + t + x) \\ &= H(w + t + x) \end{aligned} \quad (4.13)$$

4.101. Finally, the purchasers' value of commodities to purchaser j , s_j say, is obtained by adding the trade and transport margins involved in delivering the commodities to purchaser j , u_j say, to the producers' value. Thus

$$s_j = p + u_j \quad (4.14)$$

4.102. This hierarchy of values is based on the assumption of perfectly homogeneous commodities each of which has a

single unit value in all uses. In practice this assumption is not wholly justified on account of the aggregation of individual commodities into groups, variations in the composition within groups of the purchases of different kinds of buyer, inadequate allowance for quality variations and so on. It is, however, implicit in the accumulation and decomposition of values by input-output methods because, generally speaking, it is impossible to make m and its components in (4.9) specific to users.

4.103. At the same time it is frequently possible to replace the vector p , of uniform commodity prices expressed at producers' values by a matrix, P say, in which the columns relate to different users. This additional information can easily be used in the construction of index numbers as indicated in paragraph 4.112 below.

TRUE AND APPROXIMATE VALUES

4.104. The measure of basic unit values adopted in this report, like the measure of unit factor costs usually adopted, is different from the one given above. In each case inputs are valued at producers' values plus trade and transport margins whatever may be the basis on which outputs are valued. Thus denoting the approximate measure of basic values by b^* , we can write

$$b^* = A'p + C'^{-1}(w + t) \quad (4.15)$$

and, so since

$$p = b^* + C'^{-1} x \quad (4.16)$$

it follows that

$$\begin{aligned} b^* &= A'b^* + A'C'^{-1}x + C'^{-1}(w + t) \\ &= H(w + t) + A'H x \\ &= b + A'H x \end{aligned} \quad (4.17)$$

that is to say basic unit values in this report exceed basic unit values by the accumulated commodity taxes on inputs into commodities.

4.105. In a similar way, denoting the usual measure of unit values at factor cost by f^* , we can write

$$f^* = A'p + C'^{-1} w \quad (4.18)$$

and so, since

$$p = f^* + C'^{-1}(t + x) \quad (4.19)$$

it follows that

$$\begin{aligned} f^* &= A'f^* + A'C'^{-1}(t + x) + C'^{-1} w \\ &= H w + A'H(t + x) \\ &= f + A'H(t + x) \end{aligned} \quad (4.20)$$

that is to say unit values at factor cost as they are usually calculated exceed true unit values by the accumulated indirect taxes on inputs into commodities.

4.106. Thus it follows that $b^* \geq b$ and $f^* \geq f$. The extent of the difference in either case depends on the extent to which indirect taxes are levied on commodities that enter as inputs into the productive system. If they are not so levied and if the input-output matrix is sufficiently disaggregated to reflect this fact properly, the differences may be comparatively small.

THE IDENTITY: TOTAL FINAL EXPENDITURE EQUALS TOTAL VALUE ADDED

4.107. As might be conjectured, this identity holds for any measure of value but only provided that the true and not the approximate measure is used. This can readily be demonstrated as follows.

4.108. Let us write the quantity equation in the form

$$e = (I - A) q \quad (4.21)$$

If we combine this equation with (4.13), we can write

$$\begin{aligned} p'e &= (w' + t' + x') H'(I - A) q \\ &= (w' + t' + x') C^{-1} q \end{aligned} \quad (4.22)$$

4.109. The term on the left-hand side of (4.22), $p'e$, represents total final expenditure valued at producers' values plus trade and transport margins. The term on the right-hand side represents total value added. The expression in parenthesis represents the relevant concept of value added (factor incomes plus indirect taxes). This concept is converted from an industry to a commodity basis, on post-multiplication by C^{-1} , before being multiplied into the commodity output vector, q , where trade and transport is one of the commodities.

4.110. In a similar way, by combining (4.12) and (4.21), we can express the identity in terms of basic values. Thus

$$b'e = (w' + t') C^{-1} q \quad (4.23)$$

The left-hand side represents total final expenditure valued at true basic values and the term in parenthesis contains the components of value added relevant to this valuation.

4.111. Finally, by combining (4.11) and (4.21), we can express the identity in terms of factor costs. Thus

$$f'e = w'C^{-1} q \quad (4.24)$$

The left-hand side represents total final expenditure valued at true factor costs and, in this case, the concept of value added contains only a single component, factor costs.

INDEX NUMBERS IN MATRIX FORM

4.112. The index numbers used in this report are either base-weighted aggregatives (Laspeyres' form) or current-weighted aggregatives (Paasche's form). Fisher's ideal index number can always be formed by taking their geometric mean. Laspeyres' and Paasche's index numbers are simply the ratios of inner products of vectors of prices and quantities and so can be written by attaching suffixes to the vectors to indicate the period to which they relate. This statement is not effectively changed by the fact that prices are not homogeneous but vary from buyer to buyer. In practice this fact presents no difficulty but its introduction into the equations which follow would needlessly complicate the notation and so it is ignored: the equations are written on the assumption that each commodity has a single price. As is usual, the suffix 0 will be used to denote the base period and the suffix 1 will be used to denote the current period.

4.113. The final expenditure index numbers can easily be written down. Let us denote the two price index numbers by Λ and π (for Laspeyres and Paasche) and let us denote the corresponding quantity index numbers by Λ^* and π^* . Then, at market prices

$$\Lambda = p_1' e_0 / p_0' e_0 \quad (4.25)$$

$$\pi = p_1' e_1 / p_0' e_0 \quad (4.26)$$

$$\Lambda^* = p_0' e_1 / p_0' e_0 \quad (4.27)$$

$$\pi^* = p_1' e_1 / p_1' e_0 \quad (4.28)$$

and, as is well known,

$$\Lambda \pi^* = \pi \Lambda^* = p_1' e_1 / p_0' e_0 \quad (4.29)$$

4.114. The corresponding value added index numbers can be written down by substituting $(I - A)q$ for e from (4.21). This derivation shows that the two sets of index numbers are identical. It is, however, more convenient to transpose the terms in the multiplications because in this way the vectors of index numbers of value added in different branches of commodity production can immediately be written down. Since, in the present application, the results of all matrix multi-

pllications are single numbers, their value is unaffected by transposition. Thus

$$\Lambda = q_0'(I - A') p_1 / q_0'(I - A') p_0 \quad (4.30)$$

$$\pi = q_1'(I - A') p_1 / q_1'(I - A') p_0 \quad (4.31)$$

$$\Lambda^* = q_1'(I - A') p_0 / q_0'(I - A') p_0 \quad (4.32)$$

$$\pi^* = q_1'(I - A') p_1 / q_0'(I - A') p_1 \quad (4.33)$$

4.115. In these equations, the coefficient matrix is undated. If it is assumed to have the same value in period 1 as it had in period 0 then, to take an example,

$$\Lambda^* = \frac{q_1'(I - A'_0) p_0}{q_0'(I - A'_0) p_0} \quad (4.34)$$

By transposing the numerator and denominator of (4.34) it is easy to see that this expression corresponds to the single-deflation method, that is to say the method which consists of applying value-added weights to single indicators of the different outputs. In general the assumption of a constant A is unwarranted, and so it is necessary to distinguish between the base-period value, A_0 , and the current-period value, A_1 . In this case

$$\begin{aligned} \Lambda^* &= \frac{q_1'(I - A'_1) p_0}{q_0'(I - A'_0) p_0} \\ &= \frac{q_1'(I - A'_0) p_0}{q_0'(I - A'_0) p_0} + \frac{q_1'(A'_0 - A'_1) p_0}{q_0'(I - A'_0) p_0} \end{aligned} \quad (4.35)$$

This expression corresponds to the double-deflation method, that is to say the method which consists of subtracting from gross outputs at constant prices measures of the relevant inputs at constant prices. The second term in the second row of (4.35) measures the error in the single-deflation method. If $A_1 = A_0$ this error is, of course, zero; but even if $A_1 \neq A_0$ the error may not be large because positive and negative components may to some extent offset one another.

4.116. Corresponding to (4.35), Paasche's quantity index number, π^* , takes the form

$$\pi^* = \frac{1}{\frac{q_0'(I - A'_1) p_1}{q_1'(I - A'_1) p_1} + \frac{q_0'(A'_1 - A'_0) p_1}{q_1'(I - A'_1) p_1}} \quad (4.36)$$

4.117. The price index numbers are not affected by changing coefficients since, as can be seen from (4.30) and (4.31), only a single value of A enters into the numerators and denominators of these expressions

4.118. In (4.30) through (4.36) the value-added index numbers of prices and quantities have been expressed in terms of commodity outputs. In order to express them in terms of industry outputs, it is only necessary to remember that $q = Cg$ and make the appropriate substitutions. Thus, for example, (4.30) becomes

$$\Lambda = g_0' C(I - A') p_1 / g_0' C(I - A') p_0 \quad (4.37)$$

4.119. It will be noticed that (4.25), (4.30) and (4.37) all give the same result; they are simply alternative ways of expressing a Laspeyres' price index number for the economy as a whole. Their differences become plain, however, when they are disaggregated. The elements of (4.25) are product prices, or groups of product prices, weighted by final purchases; the elements of (4.30) and (4.37) are value-added prices for commodities and industries respectively

GROUP INDEX NUMBERS

4.120. In order to obtain index numbers for the economy as a whole, all components must be weighted and added as

was done in the preceding section. It is a simple matter, however, to replace the single numbers in (4.30) through (4.37) by vectors whose elements are the weighted component series. These series can then be grouped in any way so as to provide, let us say, a price index for food or a quantity index for value added in manufacturing.

4.121. If we denote vectors of index numbers by placing a tilde over the index number symbol, we can express a vector of group index numbers as follows.

$$\tilde{\Lambda} = (G \hat{p}_0 \hat{e}_0 G')^{-1} (G \hat{p}_1 e_0) \quad (4.38)$$

In (4.38) G denotes a grouping matrix and, as usual, a circumflex over the symbol for a vector indicates that the vector is spread out to form a diagonal matrix. The expression represents a vector of group index numbers for final product prices. The grouping matrix G has as many rows as there are groups and as many columns as there are items to be grouped. Each row of G relates to a single group and contains a 1 at its intersection with the columns relating to items to be included in the group. Its remaining elements are zero.

VALUE ADDED AND PRIMARY INPUTS: THE NET SYSTEM OF PRODUCTIVITY MEASUREMENT

4.122. The index numbers described in this report are built up from the prices and quantities of commodities. The value added index numbers depend on subtracting commodity inputs from commodity outputs and so, in a sense, are the outcome of a residual method of calculation.

4.123. The outcome of the method described is a measure of value added. Although little experience is available, it would be interesting to compare measures of value added at constant prices with measures of primary input at constant prices.

4.124. The association of price and quantity measures with primary inputs is a subject on which more work is needed. The choice of a suitable quantity unit for labour has been widely discussed and agreement on this subject could probably be reached. The choice of a suitable quantity unit for capital is more difficult; but to the extent that capital embodied in tangible assets were acceptable as a first approximation, the concept of the gross stock of tangible assets at constant replacement costs might prove an acceptable point of departure. The comparison of an index number of value added with an index number of primary inputs would give rise to measures of productivity which could be carried out as follows.

4.125. Let F denote a coefficient matrix the elements of which measure the quantity of one of the primary inputs required per unit of output of one of the commodities. This matrix relates primary inputs to commodity outputs in just the same way that the matrix A relates intermediate (commodity) inputs to commodity outputs. Further, let r denote a vector of the return per unit for the use of each primary input. Then we can write the basic factor cost equation in the form

$$\begin{aligned} f &= Af + Fr \\ &= (I - A')^{-1} F'r \end{aligned} \quad (4.39)$$

4.126. Consider now a system of Laspeyres' index numbers based on factor costs. In this case, Laspeyres' index of value added, Λ^* , takes the form

$$\begin{aligned} \Lambda^* &= \frac{q_1'(I - A_1') f_1}{q_0'(I - A_0') f_0} \\ &= \frac{q_1'(I - A_1')(I - A_0')^{-1} F'_0 r_0}{q_0' F'_0 r_0} \end{aligned} \quad (4.40)$$

on substitution for f_0 from (4.39). Similarly, Laspeyres' index

of primary inputs, Λ^{**} say, takes the form

$$\Lambda^{**} = \frac{q_1' F_1' r_0}{q_0' F_0' r_0} \quad (4.41)$$

and so Laspeyres' index of productivity, Λ^{***} say, takes the form

$$\Lambda^{***} = \Lambda^*/\Lambda^{**} = \frac{q_1'(I - A_1')(I - A_0')^{-1} F'_0 r_0}{q_1' F_1' r_0} \quad (4.42)$$

From (4.42) we can see how changes in intermediate technology, the elements of A , and changes in primary technology, the elements of F , enter into a measure of productivity. We can also see that if there is no change in technology, that is if $A_1 = A_0$ and $F_1 = F_0$, there can be no change in productivity as measured by (4.42).

4.127. The index of productivity given by (4.42) can be expressed as the product of two partial measures. Thus, if $A_1 = A_0$, we can define a partial measure, $\Lambda^{***}(A_1 = A_0)$, say, given by

$$\Lambda^{***}(A_1 = A_0) = \frac{q_1' F_0' r_0}{q_1' F_1' r_0} \quad (4.43)$$

Similarly, if $F_1 = F_0$, we can define a partial measure, $\Lambda^{***}(F_1 = F_0)$ say, given by

$$\Lambda^{***}(F_1 = F_0) = \frac{q_1'(I - A_1')(I - A_0')^{-1} F'_0 r_0}{q_1' F'_0 r_0} \quad (4.44)$$

4.128. From (4.42), (4.43) and (4.44) we can derive an important proposition, namely that

$$\Lambda^{***} = \Lambda^{***}(A_1 = A_0) \times \Lambda^{***}(F_1 = F_0) \quad (4.45)$$

Equation (4.45) shows that the total change in productivity is equal to the partial change associated with the change in intermediate technology multiplied by the partial change associated with the change in primary technology.

4.129. A similar set of equations can be derived for a system of Paasche's index numbers. Equations (4.46) through (4.51) correspond to (4.40) through (4.45).

$$\begin{aligned} \pi^* &= \frac{q_1'(I - A_1') f_1}{q_0'(I - A_0') f_1} \\ &= \frac{q_1' F_1' r_1}{q_0'(I - A_0')(I - A_1')^{-1} F'_1 r_1} \end{aligned} \quad (4.46)$$

$$\pi^{**} = \frac{q_1' F_1' r_1}{q_0' F_0' r_1} \quad (4.47)$$

$$\pi^{***} = \pi^*/\pi^{**} = \frac{q_0' F_0' r_1}{q_0'(I - A_0')(I - A_1')^{-1} F'_1 r_1} \quad (4.48)$$

$$\pi^{***} = (A_1 = A_0) = \frac{q_0' F_0' r_1}{q_0' F_1' r_1} \quad (4.49)$$

$$\pi^{***} = (F_1 = F_0) = \frac{q_0' F_1' r_1}{q_0'(I - A_0')(I - A_1')^{-1} F'_1 r_1} \quad (4.50)$$

and so

$$\pi^{***} = \pi^{***}(A_1 = A_0) \times \pi^{***}(F_1 = F_0) \quad (4.51)$$

GROSS OUTPUT AND ALL INPUTS: THE GROSS SYSTEM OF PRODUCTIVITY MEASUREMENT

4.130. In the preceding section attention was concentrated on the relationship between value added and primary inputs,

the usual measure of productivity. Some interest attaches, however, to the relationship between gross output and all inputs. This comparison, though it seems straightforward enough for a single productive unit, is less appropriate for a productive system because it involves some duplication. In fact it will be shown that a gross measure of productivity is always less in absolute value than a net measure. However, by introducing the concept of gross output, it is possible to reinterpret the components of a measure of net productivity. For these reasons the equations of the gross system corresponding to (4.40) through (4.44) will now be given. A bar over an index number in the net system, for example $\bar{\Lambda}^*$, will denote the corresponding index number in the gross system.

4.131. Corresponding to (4.40), we have

$$\bar{\Lambda}^* = \frac{q_1'(I - A_0')^{-1} F_0' r_0}{q_0'(I - A_0')^{-1} F_0' r_0} \quad (4.52)$$

since in the gross system $(I - A)$ q is replaced by q , the vector of gross outputs. Similarly,

$$\bar{\Lambda}^{**} = \frac{q_1'[A_1'(I - A_0')^{-1} F_0' + F_1'] r_0}{q_0'(I - A_0')^{-1} F_0' r_0} \quad (4.53)$$

so that

$$\begin{aligned} \bar{\Lambda}^{***} &= \frac{q_1'(I - A_0')^{-1} F_0' r_0}{q_1'[A_1'(I - A_0')^{-1} F_0' + F_1'] r_0} \\ &= \frac{q_1'[F_0' + A_0'(I - A_0')^{-1} F_0'] r_0}{q_1'[F_1' + A_1'(I - A_0')^{-1} F_0'] r_0} \end{aligned} \quad (4.54)$$

Thus if $A_1 = A_0$ and $F_1 = F_0$, then $\bar{\Lambda}^{***} = \bar{\Lambda}^{**} = 1$. But if only one of these conditions is met, we have

$$\begin{aligned} \bar{\Lambda}^{***}(A_1 = A_0) &= \frac{q_1'(I - A_0')^{-1} F_0' r_0}{q_1'[A_0'(I - A_0')^{-1} F_0' + F_1'] r_0} \\ &= \frac{q_1'[F_0' + A_0'(I - A_0')^{-1} F_0'] r_0}{q_1'[F_1' + A_0'(I - A_0')^{-1} F_0'] r_0} \end{aligned} \quad (4.55)$$

and

$$\begin{aligned} \bar{\Lambda}^{***}(F_1 = F_0) &= \frac{q_1'(I - A_0')^{-1} F_0' r_0}{q_1'[I + A_1'(I - A_0')^{-1} F_0'] r_0} \\ &= \frac{q_1'[F_0' + A_0'(I - A_0')^{-1} F_0'] r_0}{q_1'[F_0' + A_1(I - A_0')^{-1} F_0'] r_0} \end{aligned} \quad (4.56)$$

A comparison of (4.54), (4.55) and (4.56) shows that the simple multiplicative relationship which held in the net system does not hold in this case.

4.132. Let us now turn to the relationship between Λ^{**} and $\bar{\Lambda}^{***}$. If we put

$$q_1'(I - A_0')^{-1} F_0' r_0 = \alpha \quad (4.57)$$

$$q_1'A_1'(I - A_0')^{-1} F_0' r_0 = \beta \quad (4.58)$$

and

$$q_1'F_1'r_0 = \gamma \quad (4.59)$$

we can see that

$$\begin{aligned} \Lambda^{**} &= \frac{(\alpha - \beta)(\beta + \gamma)}{\alpha\gamma} \bar{\Lambda}^{***} \\ &= \left[1 + \frac{\beta(\alpha - \beta - \gamma)}{\alpha\gamma} \right] \bar{\Lambda}^{***} \end{aligned} \quad (4.60)$$

4.133. From (4.60) it follows that $\Lambda^{**} \geq \bar{\Lambda}^{***}$ according as $\alpha \geq (\beta + \gamma)$ that is to say according as $\bar{\Lambda}^{***} \geq 1$.

In other words $\bar{\Lambda}^{***}$ always understates the loss or gain in productivity compared with Λ^{**} .

4.134. For a particular branch, j say, but not for the economy as a whole, the two partial measures of productivity can be expressed as follows:

$$\Lambda_j^{**}(A_1 = A_0) = \bar{\Lambda}_j^*/\Lambda_j^* \quad (4.61)$$

and

$$\Lambda_j^{**}(F_1 = F_0) = \Lambda_j^*/\bar{\Lambda}_j^* \quad (4.62)$$

In other words, for branch j , the partial measure of productivity gain when $A_1 = A_0$ is equal to the ratio of the index number of gross output to the index number of primary inputs; and the corresponding measure when $F_1 = F_0$ is equal to the ratio of the index number of value added to the index number of gross output. These relationships do not hold for the productive system as a whole.

PRODUCTIVITY IN TERMS OF PRICE RATIOS

4.135. It might be conjectured that everything that has been said about productivity in terms of the ratio of quantity index numbers could equally well be expressed in terms of the ratio of price index numbers. This is indeed the case.

4.136. Consider a set of Paasche price index numbers. Let π^o denote an index number of value added output prices, π^{oo} an index number of primary input prices and π^{ooo} their ratio π^o/π^{oo} . Then, just as

$$\Lambda^* = \Lambda^{**} \times V^{***} \quad (4.63)$$

so

$$\pi^o = \pi^{oo} \times \pi^{ooo} \quad (4.64)$$

and

$$V = \pi^o \Lambda^* = \pi^{oo} \Lambda^{**} \quad (4.65)$$

where V denotes an index number of the value of value added. Since

$$\pi^{ooo} \Lambda^{***} = 1 \quad (4.66)$$

it follows that

$$\begin{aligned} \pi^{oo} &= \pi^o \Lambda^*/\Lambda^{**} \\ &= \pi^o \Lambda^{***} \end{aligned} \quad (4.67)$$

and that

$$\begin{aligned} \Lambda^{**} &= \pi^o/\pi^{oo} \Lambda^* \\ &= \pi^{ooo} \Lambda^* \end{aligned} \quad (4.68)$$

4.137. The expressions for the price index numbers and their ratios are

$$\pi^o = \frac{q_1' F_1' r_1}{q_1'(I - A_1')(I - A_0')^{-1} F_0' r_0} \quad (4.69)$$

$$\pi^{oo} = \frac{q_1' F_1' r_1}{q_1' F_1' r_0} \quad (4.70)$$

$$\pi^{ooo} = \frac{q_1' F_1' r_0}{q_1'(I - A_1')(I - A_0')^{-1} F_0' r_0} \quad (4.71)$$

$$\pi^{ooo}(A_1 = A_0) = \frac{q_1' F_1' r_0}{q_1' F_0' r_0} \quad (4.72)$$

and

$$\pi^{ooo}(F_1 = F_0) = \frac{q_1' F_0' r_0}{q_1'(I - A_1')(I - A_0')^{-1} F_0' r_0} \quad (4.73)$$

4.138. Thus the information that can be derived from a system of quantity index numbers can equally well be derived from a set of price index numbers.

Chapter V

THE TRANSACTORS OF THE SYSTEM

5.1. This is the first of three chapters on the concepts, definitions and classifications of the system. It is concerned with transactors, that is to say with the resident economic agents of the system; and with the statistical units, that is to say the units of observation and classification, used for each category of transactor. After we have dealt with transactors we shall turn in the next two chapters to the various forms of transaction into which they enter and to the way in which these are represented in the system.

5.2. This chapter starts with a discussion of the differing but related classes of transactors used in the production, consumption expenditure and capital formation accounts, on the one hand, and the income and outlay and capital finance accounts, on the other. The following two sections of the chapter are devoted to defining the categories of each class of transactors, and the associated statistical units. Dealt with next are the schemes of classifying the kind of economic activity of producers and the purposes of government and private non-profit bodies serving households. The last section of this chapter concerns the definition of the resident economic agents.

The two main classes of transactors

5.3. In any national accounting system transactors are necessarily grouped; it would be impossible and also useless to treat every individual transactor separately. But they need not be grouped in the same way in all parts of the system and, indeed, it is not desirable that they should be. In the present system two main classes are used: one in connexion with the flow of goods and services and relevant in the production, consumption expenditure and capital formation accounts; and the other in connexion with flows of finance and relevant in the income and outlay and capital finance accounts. The first class deals first and foremost with producing units, that is to say units in which production decisions are mainly taken, and also with an intermediate kind of unit which can be considered as a type of transactor. The second class deals with financing units, that is to say units in which financing decisions are taken, whether these decisions relate to the financing of current or capital outlays.

5.4. The reason for this distinction is not very difficult to see. In the analysis of production we are mainly concerned with the workplaces, or establishments, in which most operating decisions are taken. In the analysis of finance, on the other hand, we are mainly concerned with the frequently much larger units in which most financial decisions are taken. For

example, a business corporation may control a number of establishments producing similar or very different commodities and so assignable to the same or different industrial categories. And the corporation may itself be only one of a number, all of which are controlled by a giant business enterprise. A similar situation exists in government. For example, there may be a number of local education authorities and a still larger number of schools, colleges and universities which contribute to producing the government service of public education. If we consider the units which contribute to the government purpose of public education, we need to add the central ministry of education to these services. These units may all have some measure of financial autonomy, if only in the sense that certain operating standards are recognized and finance will be found for them; but, in general, they all have to compete for finance with the many other uses which are the concern of government. As a consequence it is necessary to set up the accounting system so that government can be seen not only as the producer and final consumer of a variety of services, each with its own cost structure, but also as the institution concerned with allocating finance to these and many other objects.

5.5. Even in the case of households the same dichotomy can be said to exist though it may not be as clear as in the examples just given. The reason is that, following the usual practice, the production boundary of the system is drawn so as to exclude the further processing in households of the goods and services bought with consumption expenditure. This means that such household activities as cooking meals, scrubbing floors or minding children do not form part of productive activity; only the goods and services bought for these purposes, including the services of domestic servants, form part of production. As a consequence there are no production accounts for households as such. However, not all productive activity is organized in corporations. There are also unincorporated enterprises, own-account workers, peasant farmers and so on; and in some countries the greater part of production is in such hands. The production accounts of these unincorporated producers are merged with the production accounts of corporate establishments engaged in the same kind of production. But the operating surplus from these activities is, in each case, simply a part of the income of the proprietor's household and is merged with other forms of income, such as income from the employment of family members, from investment or from pensions, to provide a basis for household decisions on spending and saving.

Transactors of the production, consumption expenditure and capital formation accounts

5.6. The categories of transactors used in the production, consumption expenditure and capital formation accounts are designed to classify transactors according to the fashion in which they participate in the production and use of goods and services. These categories are industries, producers of government services, producers of private non-profit services to households, the domestic services rendered by households, one to the other, and households as consumers.¹ As has been said above, for purposes of distinguishing industries from the other types of producers and separating the activities of households as producers from their activities as consumers, institutions must be divided into narrower, more homogeneous establishment-type units. The establishment-type units are also required in order to array the producers according to the major kind of goods and services they supply and in order to classify the purposes for which the government and private non-profit services carry on production.

INDUSTRIES

General definition

5.7. The core of industries is made up of establishments the activities of which are financed by producing goods and services for sale in the market at a price that is normally designed to cover the costs of production. In other words they produce commodities. The establishments may be part of an incorporated or unincorporated business; and may be owned or controlled by private individuals, private non-profit institutions or organs of government. They differ fundamentally from the other producers in the cost-structure, general character and disposition of their output.

5.8. It is necessary to extend the scope of industries beyond the business establishments described above in order to encompass units which produce similar goods and services and utilize similar inputs and production processes, though they may not be run to make a profit and may not dispose of their output in the market. In other words, in order to define the scope of industries, the primary consideration of the way in which the output of goods and services is disposed of and financed needs to be supplemented by the criterion of the kind of goods and services produced.

5.9. While financial intermediaries, that is, units mainly engaged in incurring liabilities and acquiring financial assets in the market, often do not sell a service as such, they should be included among industries. Government-owned units may produce goods and services for the market, or for the government, which are characteristically the output of business establishments, utilizing similar inputs and technologies, though they do not dispose of these goods and services at a price intended to approximate the costs of production. In a number of countries, households will produce goods for their own consumption, which are usually

¹ The producers of government services and the producers of private non-profit services to households are also called the services of government and the services of private non-profit bodies serving households in this report

sold in the market. Because households as such are not treated as producers, the extent to which industries are delineated in respect of the own-account activities of households sets bounds to the concept of production that is used in the system.

Industries of government

5.10. Industries should encompass government departments, establishments and similar units mainly engaged in selling the kinds of goods and services which are often produced by business establishments, though as a matter of policy, the prices (charges) set for these goods and services may not approximate the full costs of production. So as to qualify as sales in this context, the charges should be proportional to the amount (i.e., quantity and quality) of the goods and services furnished; and the decision to acquire (i.e., purchase) the goods and services should be voluntary. Governmental policies may also bring about sales at prices which are set below full costs of production in the case of privately owned establishments. Examples of the public enterprises under discussion are the operation of farms, nationalized mining and manufacturing units, electricity production and distribution, water supply services, railways, port facilities, toll roads, postal services, banks and other financial intermediaries, letting dwellings and non-residential buildings, and the buying and selling commodities on the market.

5.11. Governmental departments engaged in the usual social or community activities of government, for example, national parks, health, educational, cultural and sanitary services, and scientific or technical research and assistance, should not be considered public industries unless the fees set for these services are clearly designed to approximate the full costs of production. Where commodities are sold incidental to providing such services, for example, timber in the case of forest preserves, products made at vocational schools, seeds from experimental farms, postcards and art reproductions by museums, it is generally undesirable and impracticable to isolate these activities as public industries. Governmental units engaged in providing services of a regulatory character, for example, issuing passports or licences, administering driving tests or courts, are not to be considered industries though the payments for these services may cover the full current costs of operating the agencies. These payments, which are compulsory and unavoidable in the only circumstances in which they are useful, are not considered to be purchases of services.

5.12. Public enterprises should also encompass government departments, establishments and similar units which furnish goods and services to the government itself of a kind which are often provided by business establishments. Examples are munition factories, repair shops, navy dockyards, printing and publishing services, building and construction activities. In order to include these ancillary government activities among public industries, it is essential to isolate the production and capital expenditure involved. This is most practical where the activities are the functions of a government department or other unit established independently of the departments served. Under these circumstances, not

infrequently, the costs of production of the ancillary department is financed by charges made to other government departments for the goods and services provided. Where the ancillary activities are undertaken within the government department served, it becomes difficult to isolate the related expenditures; and efforts should be made to encompass the activities in an industry only if these activities do not form a minor part of the government department.

Own-account activities of households and private non-profit bodies

5.13. As in the case of governments, certain own-account activities of households and private non-profit institutions should be treated as industries. These activities are enumerated below.

(a) *All the dwellings which households or private non-profit institutions own and use on their own-account*. Private non-profit bodies may, for example, furnish dwellings which they own to their staff as part of wages and salaries in kind. Family dwellings which a government owns and furnishes to her employees in the same fashion are also to be classed as industries. However, in the case of the government or private non-profit bodies, it may be disadvantageous to class the dwellings in question as industries when the housing services are furnished on a small scale and considerable difficulty would be encountered in delineating a separate establishment in respect of the services;

(b) *The own-account construction of dwellings, non-residential buildings and other projects by households and private non-profit bodies, as well as by government organs*. These construction activities will make substantial contributions to the supply of dwellings, public buildings, roads, wells and other community facilities in the case of a number of countries. In some instances, households may combine, for example, in community development projects, to engage in such works. These modes of carrying on construction may also generate considerable demand for construction materials; and may be important sources of income for the population during certain periods;

(c) *The own-account production by households of primary commodities, that is the characteristic products of agriculture, forestry, fishing, hunting and mining and quarrying, where the producer activities of the households had not already been set off as industries by virtue of sale of the products on the market*. Household production entirely on own account is a major source of the supply of the primary commodities for portions of the population in the case of a number of countries. As economic development proceeds, the importance of the subsistence production declines. For purposes of adequate and comparable measures of output, income and consumption, it is therefore essential to set off these households activities into industries. However, in the case of other countries, the subsistence production may not make a significant contribution to the well-being of any of the population; and may present marked difficulties of measurement. In these instances it may not be worthwhile to raise industries in respect of household production of primary goods on own account. (Also see paragraphs 6.19-6.20.)

Private non-profit institutions primarily serving business

5.14. Though receipts from the sale of services and goods will not finance the costs of production of private non-profit institutions which mainly serve business establishments, it is best to include these bodies among industries as long as they are not wholly or mainly financed and controlled by organs of government. Examples of the private non-profit units under discussion are technological, design or testing institutes, bodies engaged in economic or management studies, trade associations and chambers of commerce. These institutions provide services designed to increase the efficiency or earning capacity of business units which, in many instances, are similar in character to the activities the business units might otherwise carry on themselves. They are often founded by particular industries and are wholly, or primarily, financed and controlled by these business units. Financing may take the form of membership dues paid by business units, which are not necessarily proportional to the services rendered, grants and endowments by business units, income from property, and charges for services which may not approximate the current costs of operation. Business units usually exercise control over the non-profit bodies in question, that is, effectively determine policies, programmes and activities, by choosing the majority of the managers and executives and/or the board of directors of the organizations. The private non-profit institutions are generally incorporated. The business units may in some instances furnish the staff of the non-profit bodies

The establishment

5.15. As is indicated in paragraph 5.6, the unit of observation and classification used in the case of industries — the establishment — should be designed to serve two important purposes. It should segregate the activities of government bodies, of private non-profit institutions serving households and of households which are to be classed as industries, from their other economic activities, and it should yield transactor units which are relatively homogeneous in respect of the character, cost-structure and technology of production. If data are to be classified according to region, the establishment should in addition draw distinctions in respect of the location of the activities. The extent of the area which might be considered to make up a single location will depend on the detail in which data are to be classified according to geographic area.²

5.16. In order to delineate establishments, it will be necessary to divide up incorporated enterprises, as well as government bodies, private non-profit institutions and households. Incorporated enterprises may engage in various kinds of activity at diverse locations. This will also be the case for the unincorporated commercial activities of government, households and perhaps non-profit bodies, which are to be set off as industries.

5.17. The degree of homogeneity that can usually be attained in respect of activities and the location of

² For a more detailed discussion of the concept and definition of the establishment see *International Standard Industrial Classification of All Economic Activities*, Statistical Papers Series 17, No. 4, Rev 2, United Nations, New York, 1968.

establishments will depend on the manner in which the industries of single proprietorships are organized, managed and accounted for. In most instances much of the gross output of the establishments should consist of commodities which are usually sold in the market. Otherwise, numerous artificial commodities would be created; and serious problems would be encountered in valuing the gross output. Further, it must be feasible to compile data on all of the gross output, employment, intermediate and direct inputs into the production, and capital formation of each establishment. The inputs should of course include the overhead costs incurred in carrying out activities which are ancillary to the production of each establishment, such as supervision and control, repair and maintenance, electricity, fuel and water supply, warehousing, record keeping, advertising and other office work, buying and selling. And the capital formation attributed to the kind of activity in which each establishment primarily engages should, in general, include the acquisition of fixed assets for purposes of the activities which are ancillary to its production. This should also be the case in respect of the employment of each establishment.

5.18. Where a single proprietorship carries on diverse types of production, or operates in a number of locations, the feasibility of raising separate establishments in respect of the differing kinds of activity, or in respect of the various locations, depends to a significant extent on the severity of the difficulties which will be encountered in allocating the cost-structure of, and the employment and capital formation in, overhead services among these establishments.

5.19. The problems of dealing with outlays on overhead services are probably most manageable when the differing kinds of activity of a single ownership are situated in different locations. In these cases an establishment should be delineated in respect of each kind of activity. Much of the activity ancillary to the production of a given establishment is likely to be located there and to be managed and recorded as an aspect of the establishment. There may however be central administrative offices, purchasing or sales offices, or warehouses which serve all, or a number of, the establishments of the single proprietorship. These central units are not to be treated as individual establishments. Instead the outlays on the central ancillary activities should be distributed among the commodity producing establishments which the ancillary activities serve. Where these ancillary activities are not clearly linked with the specific activities of certain establishments the outlays might be allocated among the establishments which are served in proportion to the excess of the value of the gross output by each of the establishments over its direct outlays on intermediate consumption. Or, the owning enterprises, which should be able to make more specific and reliable allocations, might be requested to furnish the required data.

5.20. The problems of dealing with outlays on overhead services vary with the kind of activity when business units engage in the same kind of major activity in differing locations. The difficulties of apportioning these outlays among the locations are frequently too great to make it practicable to raise an establishment in respect of each location in the case of industries such as construction and transport, and probably communica-

cations and electricity and gas Enterprises, or divisions of enterprises, primarily engaged in such activities operate over wide areas; and centralize all their overhead activities. Further, adequate data are often unavailable concerning the inputs into production made directly at the various locations. If data classified according to geographic area are urgently required, the most that might be practicable in the case of these kinds of activity is to create individual statistical units in respect of wide geographic areas. Otherwise, the entire business unit which primarily engages in a kind of activity under discussion, should be used as the establishment-type unit.

5.21. The problems of delineating establishments are similar in character, but not nearly as formidable, in the case of proprietorships mainly engaged in the distributive or related service trades or in banking and other financial activities.

5.22. The difficulties of allocating outlays on overhead activities are far less serious in the case of businesses, or divisions of enterprises, primarily engaged in the same kind of mining and manufacturing at a number of sites. The problems are of the same order of magnitude as those encountered in the case of enterprises which carry on differing kinds of activity at different sites. The difficulties may however be somewhat greater because businesses engaged in the same kind of activity at differing locations may centralize a larger portion of their ancillary activities to production. If data classified according to geographic area are not required, it is advantageous to treat the enterprises, or divisions of them, which engage in one kind of major activity at a number of locations, as the establishment-type units.

5.23. Considerable difficulty is likely to be encountered in delineating an establishment in respect of each kind of activity when a single proprietorship produces differing classes of commodities at the same location. In these circumstances, much of the overhead activity and capital formation in respect of each kind of production is likely to be pooled. In general, efforts should be exerted to separate the differing kinds of production into establishments under circumstances such as the following: each kind of activity is usually carried on by differing proprietorships or at differing locations (in other words, the differing kind of production may, in most instances, be segregated into establishments without undue difficulty); and the order of magnitude of the various kinds of production is substantial. It will usually be more desirable and practicable to raise separate establishments in respect of each kind of production in the case of horizontal integration than in the case of vertical integration.

PRODUCERS OF GOVERNMENT SERVICES

General definition

5.24. The producers of government services furnish, but normally do not sell, to the community those common services which cannot otherwise be conveniently and economically provided, and administer the State and the economic and social policy of the community. Their activities therefore differ substantially in character, cost-structure and source of finance from the activities of industries. The activities of the govern-

ment services are largely financed by the government itself; and they are consequently considered to be the final consumers of most of the services and goods which they produce. Their cost-structure does not contain an element of operating surplus; and is made up, to a substantial extent, of compensation of employees. A very minor portion of the gross output of the producers of government services may be disposed of in the market on the terms which will result in classification as a commodity.

5.25. The producers of government service should include all bodies, departments and establishments of government — central, state or provincial, district or county, municipal, town or village — which engage in a wide range of activities, for example, administration, defence and regulation of the public order; health, educational, cultural, recreational and other social services; and promotion of economic growth and welfare and technological development. The legislature, executive, departments, establishments and other bodies of government should be included, irrespective of their treatment in the actual government accounts. It is immaterial whether they are accounted for in ordinary or extraordinary budgets, or in extra-budgetary funds.

5.26. In addition to the government units in the narrower sense, the producers of government services should include social security arrangements and certain other non-profit bodies even though they are not formally part of government. These are social security schemes and non-profit bodies which, by virtue of the relations with a government, are clearly instruments of the social or economic policies of the government. In some countries, these schemes and organizations are formally government bodies, while in other countries, this is not the case.

Social security arrangements

5.27. The social security arrangements to be included are those which are imposed, controlled or financed by the government. Schemes imposed by the government will involve compulsory contributions by employees and/or employers and cover the whole community or particular sections of the community. These arrangements may, in addition, allow certain sections of the community to join the scheme voluntarily. Schemes formulated by the government solely in its role as an employer of personnel, for example schemes which differ significantly from social security arrangements for the community or which are the subject of negotiation with government employees, are not to be included here. Such schemes are considered to be pension arrangements. Even if a scheme does not involve compulsory contributions imposed by the government, it should nevertheless be included as a part of general government services if, by way of public regulation and supervision, or by virtue of the existence of a system of government grants, the scheme clearly forms part of the social policy of the government in respect of the community as a whole.

Other non-profit bodies

5.28. The non-profit bodies to be included are organizations which primarily serve households or business units and are wholly, or mainly, financed and

controlled by the public authorities, and organizations which primarily serve government units themselves. Not infrequently, the public authorities will have participated in founding and organizing the non-profit bodies in question.

5.29. The financing may take the form of grants, membership fees and payments for services and publications which do not fully cover current operating costs. Control will consist of effectively determining the policies, programmes and activities, and the detailed standards of operation, of the bodies. Such control may be exercised through detailed specification of the aforementioned aspects of the organization and management of the non-profit bodies as conditions for the receipt of grants and fees from government, choice of the board of directors or executive staff of the institutions, or similar means. The participation of the public authorities in the finance and control of the bodies should be so intensive that it is clear that these organizations are instruments of the government. Government specification of the types of services to be offered, the charges to be made, or other aspects of the operations of social and community organizations, which are often the subject of general regulation of such bodies by a government, will not constitute control.

5.30. Non-profit organizations which primarily serve government are bodies which are not established with the aim of earning a profit and which are mainly engaged in research and similar activities with regard to public administration.

The statistical units

5.31. Data in respect of the producers of government services are to be classified according to the kind of economic activity in which they engage, and the purpose for which they carry on these activities. So as to be able to make these classifications, the statistical unit used in the case of the producers of government services should be establishment-type units which are as homogeneous as is feasible in respect of both the kind of services they perform and the purpose they are designed to serve. If, in addition, data are required classified according to geographic area, it may be necessary to define these statistical units so that they draw distinctions according to the location of the producers of government services. In any case the establishment-type units should be delineated so that it is practicable to gather and compile data on their production, consumption expenditure, capital formation and employment. The use of the same statistical unit for all these purposes furnishes the basis for correlating these series, one with the other, and transferring data classified according to kind of economic activity of the producers into data classified according to the purpose they serve.

5.32. In general, it will be necessary to select certain types of governmental administrative units as the establishment-type units for the producers of government services. The character and breadth of the administrative unit that is appropriate will depend on the structure, organization and record keeping practices of the government in question, and the extent to which the purpose served and kind of activity carried on coincide at given levels of administration.

5.33. Some departments of a government may render a single major kind of service the aim of which is identical; and will be suitable statistical units. For example, the major purpose of a department engaged in operating schools or public health services, or furnishing public assistance or sanitary services, is just that. Other departments of a government may carry on more than one major kind of activity in order to serve a single major purpose. For example, a department of education or health may in addition to operating the schools or public health services, respectively, engage in general policy making, regulation and research. Or, a department of the army may operate schools, hospitals, and other social and cultural services for the dependants of soldiers, as well as the soldiers themselves, in addition to administering the army. In these instances it will be necessary to use sub-divisions of departments, perhaps bureaux or sections of bureaux, as statistical units in order to reach a sufficient degree of homogeneity in respect of the kind of activity conducted and the purpose served. The suitable administrative unit is likely to be at a lower level in the hierarchy in the case of a central government than in the case of a local government.

5.34. The possibilities of gathering and compiling data on the costs of production, sales, capital formation and employment of producers of government services, will set limits to how far down in the administrative hierarchy practicable establishment-type units might be delineated. And the lower the position on the administrative ladder of the statistical units used, the more homogeneous are they likely to be in respect of kind of activity carried on and the purpose served. The main obstacles to using detailed administrative units will probably be inadequate data, if any, on the employment, capital formation and other outlays in respect of overhead activities which should be allocated to these units, and on their use of supplies. The lack of detailed data will probably lead to the use of departments or bureaux, or at best, large sections of bureaux, as statistical units. Because of the breadth of the administrative units which it will be necessary to use as establishments in the case of producers of government services, detailed distinctions are not made in the relevant categories of the industrial classification or in the corresponding categories of the purpose classification. However, if project and performance budgeting, or a similar technique, is used, the data required in order to employ detailed administrative units as establishments are likely to be available. In these circumstances, it may even be possible to compile figures of the cost-structure of production, of employment and perhaps of capital formation in respect of the various functions of government departments or bureaux. In any case, government accounting records should allow detailed classification of grants, subsidies, other current transfers, loans and similar outlays according to the purpose served.

PRODUCERS OF PRIVATE NON-PROFIT SERVICES TO HOUSEHOLDS

General definition

5.35. The role in an economy of the producers of private non-profit services to households is in certain

respects similar to that of some of the producers of government services. They furnish social and community services to households on convenient terms which would not otherwise be available. Like the producers of government services, the bodies under discussion provide the services to households on a non-profit basis. However, other facets of the arrangements under which the private non-profit producers operate are different. They consist of voluntary associations of individuals who have banded together in order to carry on specific activities. Some of these associations of individuals are designed to perform functions which the public authorities would not ordinarily undertake. Examples of such associations are trade unions, professional associations, political parties, religious groups, fraternal societies and social clubs.

5.36. The transactors included in this category of producers primarily furnish services to households such as education, medical and dental care, welfare assistance, religion, and cultural, recreational and social facilities. The producers of private non-profit services to households differ from the industries and producers of government services engaged in the same kind of economic activity, in respect of their sources of finance and control.

5.37. Though the private non-profit producers may sell some of their services to households, the receipts from these sales will not fully cover the costs of producing all of the services and goods they furnish. Their full cost of production, reduced by the receipts from sales, is considered to be their final consumption expenditure. The bulk of the services and goods they produce will not be classed as commodities. However, when the receipts from the sales of given services and goods cover the full costs of producing the items in question, these services and goods are classified as commodities.

5.38. Much of the activities of producers of private non-profit services to households is usually financed through the dues of members, contributions, grants and endowments from individuals, business units and government, and income from property. The bodies may be societies, trade unions, churches, schools, hospitals, foundations, fraternal organizations, clubs etc., which have been founded by associations of individuals without the aim of making a profit. They may be incorporated or unincorporated. Associations of individuals should effectively determine the policies, programmes and activities of the private non-profit bodies. They may do this directly, by means of the selection of the officers, managers and executives, and/or through the election of a board of directors. Excluded from the producers of private non-profit services to households are units which, while not officially part of an organ of government, are wholly or mainly financed and controlled by the public authorities. These bodies are classed as producers of government services. (See paragraphs 5.28-5.29 above.)

Exclusion of commercial activities

5.39. Private non-profit producers may be part of institutions which engage in secondary or subsidiary commercial activities, such as owning and letting dwellings, operating eating and drinking facilities, selling

goods produced in their workshops for the handicapped, or publishing and selling books and pamphlets. The owning and letting of dwellings is, in general, to be segregated from the main activities of these institutions; and should be treated as an industry. The same practice should be followed in the case of the other subsidiary activities if the sales receipts normally cover the connected current costs of production and the scale of the activities is large enough so that considerable difficulty will not be encountered in setting the activities off into an establishment.

Exclusion of very small units

5.40. Fraternal groups, social clubs and similar bodies, for example, sport, bridge and neighbourhood clubs, which have the equivalent of less than two full-time employees, are excluded from the producers of private non-profit services to households. These bodies are to be included among households. Small fraternal societies and social clubs are often informal groups of individuals who combine to carry on, and obtain facilities for, activities which would otherwise be centred in households. While many such societies and clubs may exist, they usually account for an insignificant amount of economic activity. Further, it would be difficult to gather data in respect of these bodies since they are unlikely to have adequate records, if they have any at all.

The establishment-type unit

5.41. The producers of private non-profit services to households are to be classified according to the kind of activities in which they primarily engage and the purpose for which these activities are carried on. The statistical units used in respect of these producers should therefore be establishment-type units which are homogeneous in respect of the character and purpose of the activities carried on. If data are wanted classified according to geographic area, each of the establishment-type units should also be situated in a single location.

5.42. In a number of instances, a private non-profit institution as a whole, that is a legal entity, will provide the appropriate establishment-type unit. The legal entity may be a corporate body, association of individuals, foundation, fund or the like. Many private non-profit institutions serving households primarily engage in a single kind of non-profit activity; and the character and aim of the activities are identical. Because such coincidence occurs frequently in the case of these institutions, it is feasible to construct a purpose classification for these bodies which is in one-to-one correspondence with the relevant categories of the industrial classification at each level of classification. The offices of a number of the private non-profit institutions are also likely to be found in one location.

5.43. Should an institution engage in a number of differing kinds of non-profit activities, for example, providing higher education and conducting scientific research, or furnishing adult education and public library facilities, to a substantial extent, it will be desirable, if feasible, to raise statistical units in respect of each major kind of service. The feasibility of dividing the differing types of activity into establishments will

depend on the manner in which the institution is organized and managed, and accounts are kept. Each of the establishments should of course cover all of the costs of production, sales, capital formation and employment involved in carrying on the activities dealt with and in providing the associated supporting services.

5.44. As in the case of producers of government services, the main difficulties encountered in delineating these establishments will relate to the allocation of outlays for the common overhead services. The feasibility of raising a separate establishment for each kind of activity will therefore reflect the extent to which the outlays on supporting services are, or can be, segregated in respect of each kind of activity, by virtue of the way in which the institution is organized, or the manner in which records are kept.

5.45. When private non-profit institutions serving households engage in an activity which it is suggested in paragraph 5.39 above should be classed as an industry, efforts will be required to set the activity off into an individual establishment. The possibility of making this separation will depend on the availability of data on the sales, costs of production, capital formation and employment of the commercial activity. It is considered that these series of data might be gathered without undue difficulty when the commercial activity is conducted on a substantial scale.

HOUSEHOLDS

Domestic service

5.46. The domestic services which one household renders to another, for example, maid and char services, cooking, child's nurse, companion, gardening, are considered to be a distinct category of production. These services are classified as goods and services other than commodities. The costs of production of domestic services consist of compensation of employees only; and capital formation is not involved in this form of production.

As consumers

5.47. In the case of the accounts on the supply and use of goods and services, households concern the activities of individuals as consumers. Included here are the fraternal groups, social clubs and similar bodies which have the equivalent of less than two full-time employees. (See paragraph 5.40 above.) The activities of households as owners of unincorporated producing units are encompassed under industries. The expenditure of households on goods and services are classified according to the object of the outlays in the case of the consumption expenditure account.

Transactors of the income and outlay and capital finance accounts

5.48. This section of the chapter concerns the categories, and the associated statistical units, used for transactors in the case of the accounts of the system on the source and disposition of income, the accumulation and finance of capital, and balance sheets. The

definitions of the categories — the institutional sectors and sub-sectors — are set out in table 5.1. The considerations which led to these definitions are indicated in the text below. The text also deals with the definition of the transactor units in the case of each institutional sector and with their classification according to kind of economic activity.

5.49. Institutional units are, as a rule, recommended as the transactors in the case of the accounts under discussion. It is these bodies which independently receive and disburse incomes, and own and manage all forms of property. The institutional units are classified into sectors and sub-sectors, primarily in the light of differences in their financial role, behaviour and experience. Since the dissimilarities in these respects between business enterprises are also related to their major kind of economic activity, this type of classification is also recommended.

CORPORATE AND QUASI-CORPORATE ENTERPRISES

Scope

5.50. The institutional sectors, non-financial corporate and quasi-corporate enterprises and financial institutions are designed to cover business enterprises which are legally, or clearly act as, entities independent of their owners. This means that the incomes and outlays of the enterprise, and all the tangible and financial assets and liabilities connected with the business, should be controlled and managed independently and that separate, complete records should be available in respect of all these items. This will be the situation legally in the case of incorporated enterprises, for example, corporations, joint stock companies, co-operatives, limited liability partnerships. It may clearly be so in practice in the case of certain types of ordinary partnerships or sole proprietorships. Including these

Table 5.1. The definition of the institutional sectors and sub-sectors

1. Non-financial enterprises, corporate and quasi-corporate

(a) Private enterprises

Privately owned and/or controlled enterprises primarily engaged in non-financial activities which are (i) incorporated enterprises, e.g., corporations, joint stock companies, limited liability partnerships, co-operatives or other forms of business associations recognized as independent legal entities by virtue of registration under company and similar acts, laws or regulations, (ii) unincorporated enterprises owned by non-residents, (iii) important, large ordinary partnerships or sole proprietorships owned by residents and maintaining complete profit-and-loss records and complete balance sheet accounts on the financial assets and liabilities, as well as the tangible assets, involved in the business or (iv) non-profit institutions and associations mainly serving business enterprises and entirely, or mainly, financed and controlled by these units.

(b) Public enterprises

Publicly owned and/or controlled enterprises primarily engaged in non-financial activities which are (i) incorporated public corporations, i.e., by virtue of company acts or other public acts, special legislation or administrative regulations, they hold and manage the financial assets and liabilities, as well as the tangible assets, involved in their business or (ii) large unincorporated units (government enterprises) that sell most of the goods or non-financial services they produce to the public. These enterprises will not hold and manage financial assets and liabilities apart from their working balances and business accounts receivable and payable.

2. Financial institutions

Incorporated and unincorporated enterprises which are primarily engaged in financial transactions in the market consisting of both incurring liabilities and acquiring financial assets.

(a) The central bank

The publicly owned and/or controlled bank which is a monetary authority, i.e., issues currency and sometimes coins, and not infrequently holds the international reserves of the country. The central bank also

has liabilities in the form of the demand deposits of other banks and often of the government. The bank is to be classified as a public financial institution.

(b) Other monetary institutions

All banks except the central bank which have liabilities in the form of deposits payable on demand and transferable by cheque or otherwise usable in making payments. These banks are to be classified into privately owned and/or controlled institutions and publicly owned and/or controlled institutions.

(c) Insurance companies and pension funds

Insurance companies consist of incorporated, mutual and other entities which mainly engage in providing life, accident, sickness, fire, casualty or other forms of insurance. Also included are separately organized schemes established by fraternal, friendly and other societies, by banks or by the public authorities in order to provide various forms of insurance on a voluntary basis. Excluded are voluntary social security arrangements for certain sections of the community which are part of a more general social security scheme.

The pension funds included here are separately organized schemes established for purposes of incurring incomes on retirement for specific groups of employees which (i) are not part of social security arrangements for large sections of the community imposed, controlled or financed by the public authorities and (ii) engage in financial transactions in the capital market. These funds will have been organized, and will be directed, by specific private or public employers or jointly by the employers and their employees; and the employees and/or employers will make regular contributions. Excluded in addition to pension funds which are considered to be part of public social security schemes, are pension arrangements for the employees of private or public entities which do not include a separately organized fund or which consist of a separately organized fund, but the reserves of the fund are added to the reserves of, or only invested in the securities of, the employer.

The insurance companies and pension funds are to be classified into privately owned and/or controlled institutions and publicly owned and/or controlled institutions

Table 5.1. The definition of the institutional sectors and sub-sectors (*continued*)

2 *Financial institutions* (continued)

(d) Other financial institutions

All entities other than those included above which primarily engage in financial transactions in the market, consisting of both incurring liabilities and acquiring financial claims on others. Examples are building and loan associations; private saving banks; public saving institutions, the funds of which do not flow directly and automatically into the balances of the public authorities or special issues of public debt; public lending institutions, the liabilities of which are not necessarily to the public authorities only; credit unions, sales-finance, hire-purchase and other business and personal finance companies; security brokers and dealers performing financing and depository functions; and investment companies, funds, societies and trusts.

The other financial institutions are to be classified into privately owned and/or controlled institutions and publicly owned and/or controlled institutions. Where the public institutions include lending institutions, the liabilities of which are in fact to the public authorities only, though they have the legal authority to incur liabilities to the public or to other financial institutions, the data in respect of these entities should be given separately.

3 *General government*

All agencies of the public authorities not classified elsewhere: (i) government departments, offices and other bodies engaged in administration, defence and regulation of the public order, promotion of economic growth and welfare and technological development, provision of education, health, cultural, recreational and other social and community services free of charge or at sales prices which do not fully cover their costs of production; (ii) other non-profit institutions serving households or business enterprises which are wholly, or mainly, financed and controlled by the public authorities or which primarily serve government bodies; (iii) social security arrangements for large sections of the community imposed, controlled or financed by the government; (iv) government enterprises (unincorporated public units) which mainly produce goods and services for government itself or which primarily sell goods and services to the public, but do not operate on a large scale; and (v) public saving and lending bodies which are financially integrated with a government or which lack the authority to acquire financial assets or incur liabilities, respectively, in the capital market.

(a) Central government

All departments, offices, establishments and other bodies classified under general government which are agencies or instruments of the central government, irrespective of whether they are covered in ordinary or extraordinary budgets, or in extra-budgetary funds. Included are non-profit institutions which, while not an official part of the central government, are entirely, or mainly, financed and controlled by the central public authorities. Excluded are the social security funds defined below.

(b) State and local government

All departments, offices, establishments and other bodies included under general government which are agencies or instruments of state or provincial, district or county, municipal, town or village, or another organ of government except the central public au-

thority. The bodies may be covered in ordinary or extraordinary budgets, or in extra-budgetary funds. Included are non-profit institutions which, while not an official part of an organ of state or local government, are wholly, or mainly, financed and controlled by it.

(c) Social security funds

Schemes imposed, controlled or financed by the public authorities for purposes of providing social security benefits for the community, or large sections of the community, which are separately organized from the other activities of the public authorities. The reserves and other financial assets of the schemes, and the liabilities of the schemes, should be distinguished, and recorded separately, from the other financial assets and liabilities of these authorities. Excluded are schemes for government employees formulated by an organ of government solely in its role as an employer of personnel.

4. *Private non-profit institutions serving households*

Private non-profit institutions mainly serving households which are not entirely, or mainly, financed and controlled by organs of general government and which employ the equivalent of two or more full-time persons. These institutions furnish educational, health, cultural, recreational and other social and community services to households free of charge, or at sales prices which do not fully cover their costs of production. Included here are any commercial activities of the private non-profit institution, e.g., owning and letting dwellings, operating eating and lodging facilities, publishing and selling books, which are not set off in a separate legal entity from the main activity of the institution.

5. *Households, including private non-financial unincorporated enterprises*

Resident households and all unincorporated enterprises, i.e., ordinary partnerships and sole proprietorships, primarily engaged in non-financial activities which are owned and/or controlled by resident individuals and are not classified as quasi-corporate enterprises in 1(a) above. Also included are neighbourhood and other social clubs which employ less than the equivalent of two full-time persons.

It is suggested that the household sector be classified according to the socio-economic status of the head of the household as follows: (a) households headed by an owner of unincorporated or quasi-corporate enterprise, sub-divided into primarily engaged in agricultural and non-agricultural kinds of economic activity; (b) households headed by an employee; and (c) persons in other status and small social clubs, perhaps sub-divided into households headed by an independent, inactive person, households headed by persons supported by another individual, inmates of institutions and small social clubs. It will also be useful to classify the owners of agricultural and non-agricultural unincorporated or quasi-corporate enterprises into employers and own-account workers. The socio-economic status of the head of the household is to be based on his main kind of economic activity (occupational and industrial attachments) and/or status (main role in economic activity or main source of livelihood). The main source of livelihood of persons in independent, inactive status may be pensions, savings, income from property, social security benefits or social assistance.

particular unincorporated business enterprises, that is, the quasi-corporate units, in the same sector as the incorporated enterprises should improve international comparability in institutional sectoring since countries differ considerably in the extent to which the enterprises, which in fact behave as independent entities, are incorporated.

5.51. It is easier to define the unincorporated business units which should be classed as quasi-corporate in the case of financial institutions than in the case of enterprises primarily engaged in non-financial activities. The enterprises included in the former sector should be financial intermediaries, that is their principal business should consist of incurring liabilities in the market in order to raise funds for lending in the market. Private unincorporated enterprises which are financial intermediaries will therefore frequently be required by government statutes or regulations to hold, manage and record the liabilities and financial assets of the enterprise separately from the other liabilities and property of the owners. Or, the enterprise in question will find it essential to follow this practice even when not compelled to do so, in order to win the confidence required to carry on the business. All publicly owned and/or controlled enterprises classed as financial institutions should be corporations. In view of the character of their activities, these bodies will necessarily be incorporated under a public law or special legislation, or by virtue of an executive order or administrative regulation. They will have been authorized to hold, control and manage financial assets and liabilities independently and separately from the public authorities.

5.52. The appropriate criteria for purposes of identifying quasi-corporate enterprises are much less evident in the case of non-financial enterprises. While the private non-financial unincorporated units which are classed as quasi-corporate enterprises will have separate, complete profit-and-loss data and balance-sheet accounts on all the tangible and financial assets and liabilities of the business, this condition is often insufficient to indicate that the units in fact behave financially as if they were incorporated enterprises. Moreover, a number of countries would not find it feasible to distinguish private non-financial unincorporated enterprises which maintain complete accounts from other unincorporated units. Use is therefore recommended of the criteria that the private non-financial unincorporated business should be important and large, as well as keep complete accounts, in order to be classed as a quasi-corporate enterprise when it is owned by resident economic agents. In some countries, practically all these units are in fact incorporated; and it may not be worthwhile to search out the few private non-financial unincorporated enterprises which might be added. In other countries, however, a number of important, large private enterprises engaged in certain kinds of non-financial activity are often unincorporated though they behave like corporations.

5.53. The criterion of scale of operations is also useful for purposes of deciding on which government enterprises to include among the non-financial quasi-corporate enterprises. Large government enterprises, especially when they sell goods and services to the public, will have large sums in working balances and

business credit, and will present special investment and financing problems, though they are otherwise financially integrated with the government proprietor. The large government enterprises which serve the public are likely to be considerably more independent of the parent public authorities than small or ancillary government enterprises. The extent to which large public enterprises selling goods or non-financial services to the public are incorporated differs from one country to another; and including such unincorporated units in the same institutional sector as public corporations should improve international comparability.

Classifications

5.54. Corporate and quasi-corporate enterprises are classified into non-financial and financial businesses primarily in the light of their differences in role in the economy and in the sources and uses of funds. The sub-division of financial institutions into the central bank, other monetary institutions, insurance companies and pension funds and other financial institutions, is based on similar considerations. The non-financial enterprises and the various financial institutions are classified into private and public enterprises because of the dissimilarities in purpose and policies, as well as in the controlling authority.

Distinction between private and public enterprises

5.55. The last classification is based on whether the ownership and/or control of an enterprise rests in the public authorities or private parties. The public authorities, or private parties, are considered to be the owners of a given enterprise if they own all, or a majority, of the shares of, other forms of capital participation in, or equity of the unit. The criteria required in order to determine who controls an enterprise are more complex. Various means may be used in order effectively to determine all the main aspects of the management (policies, administration and operations) of the unit. This may be accomplished, for example, by choosing the majority of the board of directors or the managing directors, providing the staff of the organization, or specifying the policies and operating practices of the enterprise in detail. Because of the many forms in which government may exercise control over enterprises, it is difficult to describe the means of influencing the management of an enterprise which, in all cases, indicate who effectively controls a given enterprise. The important consideration in determining whether the public authorities are in control is: do they exercise an effective influence in all the main aspects of management; not merely such influence as is derived from the use of their regulatory powers of a general kind.

Pension funds and other financial institutions

5.56. Questions may arise as to which bodies should be classified in certain of the sub-sectors in respect of financial institutions.

5.57. Care is required in order to identify the pension schemes which are to be included among "Insurance companies and pension funds". These pension schemes should differ from other arrangements for ensuring income on retirement in a number

of respects. First, the pension fund is to relate to specific groups of employees; and is not to be part of a social security scheme, that is an arrangement ensuring income on retirement etc., for large sections of the community which is imposed, controlled or financed by the public authorities. Some indications of the fact that a pension arrangement is not part of a social security scheme are: the pension scheme is, or has been, the subject of negotiation between employers and employees; the benefits and contributions are not similar; its reserves are managed and invested differently. An example of the type of pension scheme under discussion is an arrangement for government employees which the public authority establishes solely in its role as an employer of personnel. Second, the pension scheme should include an independently organized fund which engages in financial transactions in the capital market. The pension scheme is to be classified in the same institutional category as the employer to whose employees the scheme relates, when the funds of the scheme are not segregated from the employer's reserves or when the funds are clearly separated, but are only invested in the employer's securities.

5.58. Countries may consider it desirable to use somewhat different interpretations of the circumstances under which government lending agencies should be included in the sub-sector "Other financial institutions". Some countries may wish to restrict the government lending agencies classified as financial institutions to those bodies which in fact obtain a significant portion of their funds in the market. Otherwise they will be classed as part of general government. Other countries may wish to cover all government lending agencies which have the authority to borrow funds in the market, under financial institutions. In order to have information concerning such differences in interpretation, it is suggested in table 5.1 that data be furnished in respect of any government lending institutions classified under "Other financial institutions" which in fact have liabilities to the public authorities only.

Classification according to kind of economic activity

5.59. The non-financial corporate and quasi-corporate enterprises and financial institutions are also to be classified according to their major kind of economic activity. This classification has been included in the system for two main reasons: First, the financial behaviour and experience of the business enterprises will, it is thought, be related with their major kind of economic activity. It should be noted in this connexion that the sub-sectors for financial institutions already draw distinctions in respect of the kind of economic activity of these bodies. Second, classification of data according to kind of economic activity in the case of both industries and their parent enterprises will provide links between the two bodies of information.

The statistical units

5.60. In order to delineate the statistical unit or units to be used in the case of corporate and quasi-corporate enterprises, it is necessary to consider the analytical requirements for information on income and outlay and capital transactions and the feasibility of employing the transactor units desired. While the most

suitable statistical unit for purposes of the various forms of analysis, or the most practicable unit for gathering various series of data, may differ, it is usually advantageous to settle on a single type of institutional unit for use in the main accounts and supporting tables on income and outlay and capital transactions. Otherwise, all the data compiled in respect of these accounts may not be precisely comparable because of differences in the degree to which certain transactions will be netted for the transactor units of differing scope.

5.61. For most purposes, the transactors wanted are those who independently direct and manage the receipt and disposition of income, the accumulation of property, and borrowing and lending. This leads to statistical units consisting of families of incorporated or quasi-corporate enterprises which, as a result of ties of ownership, are controlled and managed by the same interests. Using the family of entities will also avoid showing formal transactions and links between the entities, which are not meaningful economically. The families may be defined as consisting of the entities, the majority, that is 50 per cent or more, of the equity (shares or other forms of capital participation) of each of which is owned by the same interests. However, it may not always be feasible to identify these families of enterprises, or to compile consolidated data on their transactions with one another in respect of transfers and financial claims. In these circumstances the families of entities might be limited to those for which consolidated balance sheets and profit-and-loss statements are available. The presence of consolidated statements is also strong evidence that much of the activity and portfolio of each enterprise of a family is in fact decided on, and managed, together.

5.62. However, the families of entities may engage in very diverse kinds of economic activity. The use of such units in compiling data classified according to kind of economic activity, on the institutional sector of origin of factor incomes, or similar flows, will substantially reduce the analytical usefulness of these tabulations. It may therefore be necessary to employ the institutional unit which is narrowest in scope in the case of the compilations in question. This is the legal entity in the case of incorporated enterprises, for example, corporation, joint stock company, co-operative, limited liability partnership, or the unit for which complete profit-and-loss and balance-sheet data are available in the case of quasi-corporate enterprises. This institutional unit may consist of a number of establishments (in other words, be more heterogeneous in respect of kind of activity than the transactors of the production account), but it is the unit of narrowest scope which receives and disburses incomes and buys and sells property and which always has complete profit-and-loss and balance-sheet accounts. It should be also noted that where families of entities owned by the same interests consist of non-financial and financial enterprises, it will be essential to use at least two statistical units in order to include each group of enterprises in separate institutional sectors.

5.63. Some countries may find it practicable to use the legal entity or its equivalent, but not the family of commonly owned entities, for purposes of gathering data on income and outlay and capital transactions. Business registrations and reporting acts, the income

tax forms and other administrative reports of the public authorities, may relate to individual legal entities only. And, most enterprises may keep their accounts and compile periodic statements on this basis only. In these circumstances it will be very difficult to delineate the families of entities which are owned by the same interests, and to gather data in respect of these families. However, some individual legal entities may not be viable economic agents; they may have been established for convenience only. Despite the difficulties which may be involved, it will be desirable to deal with such legal entities as part of a family of commonly owned enterprise.

GENERAL GOVERNMENT

Scope

5.64. The institutional sector for general government covers all departments, offices and other bodies which are defined to be producers of government services in paragraphs 5.24 through 5.30 above and the government enterprises which are not considered to be quasi-corporate units. The government enterprises included in general government are those which are likely to hold small working balances and to be highly integrated financially with the public authorities. They consist of ancillary departments and establishments mainly engaged in supplying goods and services to the other units of a government; and agencies mainly selling services and goods to the public, but operating on a small scale. Examples of the former types of public industries are printing plants, construction, repair and maintenance units, central transport pools, building management services, munition plants and navy dockyards. Illustrations of the latter type of public industries are government restaurant services in public buildings, local small-scale bus services, inland water docking facilities, letting dwellings to government employees. As is pointed out in paragraph 5.58, some countries may class government lending agencies which have the authority to borrow in the capital market but have not exercised this authority significantly, as general government (and producers of government services), while other countries may consider these agencies to be other financial institutions (and industries).

Classification

5.65. The institutional sector for general government is divided into the following sub-sectors in the light of the differing roles in an economy of the various organs of government: (i) central government, (ii) state and local government and (iii) social security funds.

5.66. The sub-sector for central government or for state and local government may include certain arrangements and bodies which are not a formal part of these organs of general government. This may be the case for certain pension arrangements in respect of government employees established by an organ of government solely in its role as an employer or for certain non-profit institutions. The pension arrangements in question would not be covered by a separately organized pension fund; or would be covered by such a fund, but it would be invested in the government's

indebtedness only. The non-profit institutions in question would be entirely, or mainly, financed and controlled by the public authorities. More than one organ of government may participate in financing and controlling such a non-profit body. The institution should then be classified as part of the organ of general government which furnishes the largest share of the funds and exercises the greatest amount of control.

5.67. In order to be included in the sub-sector "Social security funds", the arrangements which are defined in paragraph 5.27 above should be separately organized from the other activities of the organ of general government which imposes, controls or finances the scheme. The separation should at least consist of distinguishing and separately recording the assets and liabilities of the scheme. Otherwise, the social security scheme should be included in the sub-sector in which the administering organ of general government is classified.

The statistical units

5.68. In the case of the income and outlay and capital finance accounts, the organs of general government, for example, the central government as a whole, the various state, provincial and local governments, and the individual social security schemes, should be used as transactor units. This is so because the finance and current and capital outlays of the constituent units of a given organ of general government are usually decided, controlled and managed in common. Following this procedure will yield the data needed on government money-raising and outlay for purposes of economic and social analysis. The data for these purposes should not be obscured by the numerous book transactions between units of the same organ of government. As may be seen from chapter VIII, in the case of certain accounts and supporting tables of the system, the transactions of the various organs of general government are to be consolidated, rather than combined, in order to portray clearly the transactions between general government and the rest of an economy.

5.69. The organs of government engage in many differing activities, but a statistical unit which is more homogeneous in respect of kind of economic activity is not needed for use in the national accounts. The data of the income and outlay and capital finance accounts in respect of general government bodies are not to be classified according to kind of economic activity.

PRIVATE NON-PROFIT INSTITUTIONS SERVING HOUSEHOLDS

Scope

5.70. As for general government, the institutional sector for private non-profit institutions serving households is defined to be broader in scope than the producers of non-profit services to households. (See paragraphs 5.35 through 5.40 above for the definition of these producers.) Covered is the whole of each of these private non-profit institutions, including any of their activities which are to be classed as an industry in the accounts on goods and services. Examples of activities of this type may be owning and letting dwellings, running eating and drinking facilities or

operating retail shops. (See paragraph 5.39 above.) However, if any of these activities are carried on by a legal entity separated from the parent private non-profit institution, the legal entity is to be classified as a non-financial corporate enterprise.

The statistical units

5.71. The private non-profit institutions as a whole, that is the legal entity, is the appropriate statistical unit for purposes of the income and outlay and capital finance accounts. Each legal entity generally holds and manages its income and outlay and investments independently. Since the range of services rendered by each legal entity is usually limited, the private non-profit institution is also a suitable unit for the industrial classification of data on the institutional origin of factor incomes.

HOUSEHOLDS, INCLUDING NON-FINANCIAL PRIVATE UNINCORPORATED ENTERPRISES

Scope

5.72. The institutional sector for households includes the unincorporated businesses of resident individuals which are not classed as quasi-corporate enterprises. The owners of these units will frequently mingle and manage together the financial transactions and holdings of the business and of his other activities. These ordinary partnerships or sole proprietorships will mainly engage in non-financial activities; and will generally not be important, large units which maintain complete profit-and-loss and balance sheet accounts. (See paragraph 5.52 above.) As is indicated in paragraph 5.51 above, unincorporated businesses which primarily render financial services will in general satisfy the requirements for classification as quasi-corporate enterprises. The household sector also covers neighbourhood and social organizations which employ the equivalent of less than two full-time persons. These clubs are included among households in the case of the accounts on the supply and use of goods and services.

Classification

5.73. The combination of business and personal transactions in the case of owners of non-financial unincorporated enterprises results in marked differences in income and outlay and capital flows between the households of the owners and the rest of the population. Certain patterns in respect of the sources and disposition of income and the investment of saving will also be characteristic of the owners of quasi-corporate enterprises, employees, pensioners and other retired individuals, etc. The financial experience and behaviour of operators of various types of unincorporated businesses, in particular agricultural and non-agricultural enterprises, may also differ substantially.

5.74. It should be of value to classify households into a limited number of sub-sectors which are based on the socio-economic characteristics of households, for purposes of bringing out the major patterns of income, outlay and investment of the population. The number of sub-sectors must be small enough to be manageable in compiling the national accounts. Fur-

ther, in order to be practicable, the classification should be similar in character to the socio-economic classifications commonly used in population censuses and other household inquiries. The recommended classification of households according to socio-economic status is therefore based on the main kind of economic activity and/or status of the head of the household. The status of the head of the household usually reflects his major source of income or livelihood and his role in economic activity; his kind of economic activity is to be determined from his main type of occupational and industrial attachment. The head of the household is considered to be the individual who is generally recognized as such in the case of a given community, for example, the husband in a one-family household, the wife if no husband is present, the eldest head of a constituent family in a multi-family household. In most instances, the head of the household so defined will be the principal recipient of income in the household. The abbreviated socio-economic classification of households should also be of value for purposes of summarizing statistics of the distribution of income, consumption and wealth and linking such detailed statistics with the national accounts.

5.75. The suggested abbreviated classification of the household sector is shown in table 5.1. For use in compiling statistics on the distribution of income, consumption and wealth, the classification will need to be more detailed in character. For example, the heads of households who are owners of unincorporated or quasi-corporate enterprises should perhaps be classified according to a number of categories of kind of economic activity. The suggested sub-division of owners into employers and workers on own account may not furnish an adequate analysis in respect of the size of their business. It may be desirable to separate the proprietors of the enterprises into owners of quasi-corporate enterprises and owners of unincorporated enterprises and to classify the latter group in some detail. The category of employees should probably be classified according to the main types of occupational and industrial attachment for purposes of the detailed statistics of the distribution of income and wealth. It may also be useful to distinguish employees who are owners of small incorporated enterprises from other employees. The detailed socio-economic classification required for statistics of the distribution of income and wealth has not yet been worked out. Since it, and the socio-economic classification of the national accounts, should fit together, the classification set out in table 5.1 is tentative.

5.76. The category "Households headed by owners of unincorporated or quasi-corporate enterprises" will not encompass all of the private unincorporated businesses which are included in the household sector. Some of these businesses may be owned by members of households who are not heads of the household, or the main status of some heads of households who own an unincorporated enterprise may be represented by another economic role. In any case, all unincorporated enterprises which are included in the household sector are to be classified according to the major kind of economic activity of the enterprises when compiling data on the institutional sectors of origin of factor incomes.

The statistical units

5.77. For purposes of classifying households according to the socio-economic status of the head of the household, units of observation and classification are wanted which encompass the individuals who live together and who pool and dispose of their income and saving more or less collectively. The housekeeping concept of the household, which is frequently used in censuses of population and other demographic and household inquiries, furnishes a suitable statistical unit from this point of view. The use of the housekeeping concept in national accounting will also make it feasible to use data gathered in population censuses and surveys.

5.78. The housekeeping concept of the household includes (i) one-person households, that is a person who makes provision for his own food or other essentials for living without combining with any other person to form part of a multi-person household; and (ii) multi-person households, that is a group of two or more persons who occupy the whole or part of one housing unit and make common provision for food or other essentials of living. The degree to which the persons in the group pool their income and outlay may vary. They may be related or unrelated persons.

5.79. The statistical unit to be used in the case of persons not living in households also needs to be defined. These persons consist of inmates of institutions such as homes for the aged, poor or orphans, asylums, prisons, that is groups of persons living together who usually share their meals, are bound by a common objective, and generally are ruled by an authority outside the group. The staff of these institutions is not included among the persons not living in households. The statistical unit in respect of inmates of institutions might consist of the single individual or the conjugal family (for example, husband and wife) living together in an institution.

5.80. In some socio-economic situations, a more restricted definition of the household than the house-

keeping concept is likely to be desirable and practicable. This concept is the family household. In this case the multi-person household is limited to individuals related by blood, marriage or adoption who satisfy the other conditions of the housekeeping concept. In the case of some countries the use of the family or the housekeeping concept will result in delineating the same unit in most instances. Where, in these countries, the use of the two concepts results in differing units, the individuals making up housekeeping households are likely to pool their incomes to a minor extent.

5.81. Besides the household, the individual is the desirable statistical unit for certain purposes. This is the case for the classification according to kind of economic activity, of the unincorporated enterprises which are included in the household sector. This classification should be based on the predominant kind of activity of all these businesses which are owned by the same person, or persons. Employing the proprietor, or proprietors, of the businesses as the statistical unit should result in groups of enterprises which are somewhat less heterogeneous in respect of kind of economic activity than if the group of enterprises which are owned by the members of each household were to be used. The individual is also the appropriate unit in the case of inquiries into the character of, and the factors underlying, the distributions of employee compensation, entrepreneurial income or property income. In such studies the subject of major interest is the individual stream of income and the attributes of the individual income earner, or the property he holds, with which differences in the given type of income are correlated.

The industrial and purpose classifications for transactors

5.82. The schemes for the classification of the appropriate classes of transactors according to kind of economic activity and according to purpose are set out in the tables below. Table 5.2 exhibits the scheme

Table 5.2. Classification according to kind of economic activity^a

Division	Major group	Title of category	Division	Major group	Title of category
<i>Major division 1. Agriculture, hunting, forestry and fishing</i>					
11	111	Agriculture and hunting		313	Beverage industries
	112	Agricultural and livestock industries		314	Tobacco manufactures
12	113	Agricultural services	32		Textile, wearing apparel and leather industries
		Hunting, trapping and game propagation		321	Manufacture of textiles
	121	Forestry and logging		322	Manufacture of wearing apparel, except footwear
13	122	Logging		323	Manufacture of leather and products of leather, leather substitutes and fur, except footwear and wearing apparel
	130	Fishing		324	Manufacture of footwear, except vulcanized or moulded rubber or plastic footwear
<i>Major division 2. Mining and quarrying</i>					
21	210	Coal mining			Manufacture of wood and wood products, including furniture
22	220	Crude petroleum and natural gas production		331	Manufacture of wood and wood and cork products, except furniture
23	230	Metal ore mining		332	Manufacture of furniture and fixtures, except primarily of metal
29	290	Other mining			
<i>Major division 3. Manufacturing</i>					
31	311	Manufacture of food, beverages and tobacco			
	312	Food manufacturing			

Table 5.2. Classification according to kind of economic activity^a (continued)

<i>Division</i>	<i>Major group</i>	<i>Title of category</i>	<i>Division</i>	<i>Major group</i>	<i>Title of category</i>
<i>Major division 3 Manufacturing (continued)</i>					<i>Major division 7. Transport, storage and communication</i>
34		Manufacture of paper and paper products, printing and publishing	71		Transport and storage
	341	Manufacture of paper and paper products	711		Land transport
35	342	Printing, publishing and allied industries	712		Water transport
		Manufacture of chemicals and chemical, petroleum, coal, rubber and plastic products	713		Air transport
	351	Manufacture of industrial chemicals	719		Services allied to transport
	352	Manufacture of other chemical products	720		Communication
	353	Petroleum refineries			
	354	Manufacture of miscellaneous products of petroleum and coal			
	355	Manufacture of rubber products			
36	356	Manufacture of plastic products not elsewhere classified			
		Manufacture of non-metallic mineral products, except products of petroleum and coal			
	361	Manufacture of pottery, china and earthenware			
	362	Manufacture of glass and glass products			
	369	Manufacture of other non-metallic mineral products			
37		Basic metal industries			
	371	Iron and steel basic industries	81	810	Financial institutions
38	372	Non-ferrous metal basic industries	82	820	Insurance
		Manufacture of fabricated metal products, machinery and equipment	83	830	Real estate and business services
	381	Manufacture of fabricated metal products, except machinery and equipment		831	Real estate
	382	Manufacture of machinery except electrical		831*	Owner-occupied dwellings ^b
	383	Manufacture of electrical machinery, apparatus, appliances and supplies		832	Business services except machinery and equipment rental and leasing
	384	Manufacture of transport equipment		833	Machinery and equipment rental and leasing
	385	Manufacture of professional and scientific and measuring and controlling equipment not elsewhere classified, and of photographic and optical goods			
39	390	Other manufacturing industries			
<i>Major division 4. Electricity, gas and water</i>					
41	410	Electricity, gas and steam			
42	420	Water works and supply			
<i>Major division 5. Construction</i>					
50	500	Construction			
<i>Major division 6. Wholesale and retail trade and restaurants and hotels</i>					
61	610	Wholesale trade			
62	620	Retail trade			
63		Restaurants and hotels			
	631	Restaurants, cafes and other eating and drinking places	91	910	Public administration and defence ^c
	632	Hotels, rooming houses, camps and other lodging places	1		General public services
			2		Defence
			3		General administration, economic policies and services
			4		General administration, health policies and services
			5		Administration, social security and assistance
			6		Administration, housing and community development policies and services
			92	920	Sanitary and similar services
			93	930	Social and related community services
				931	Education services
				932	Research and scientific institutes
				933	Medical, dental, other health and veterinary services
				934	Welfare institutions
				935	Business, professional and labour associations
			94	939	Other social and related community services
					Recreational and cultural services
				941	Motion picture and other entertainment services
				942	Libraries, museums, botanical and zoological gardens, and other cultural services not elsewhere classified
				949	Amusement and recreational services not elsewhere classified
			95		Personal and household services
				951	Repair services not elsewhere classified
				952	Laundries, laundry services, and cleaning and dyeing plants
				953	Domestic services
				959	Miscellaneous personal services
			96	960	International and other extra-territorial bodies

^a The major divisions, divisions and major groups, and the code number and title of each category, excepting the categories listed in the other footnotes to this table, are from the *International Standard Industrial Classification of All Economic Activity (ISIC)*, Series M, No. 4, Rev.2, United Nations, New York, 1968. The composition of each of the categories is defined in that publication.

^b The category for the activity of owner-occupied dwellings does not exist in the ISIC.

^c The categories shown as sub-divisions of public administration and defence do not occur in the ISIC. These categories are defined in table 5.3.

for the classification of establishment-type and institutional-type statistical units according to kind of economic activity. Table 5.3 gives the schemes for classifying the producers of government services according to the purpose which the activities of these bodies serve. Table 5.4 sets out a similar scheme in the case of the producers of private non-profit services to households. These schemes of classifications are discussed in turn in the text which follows.

CLASSIFICATION ACCORDING TO KIND OF ECONOMIC ACTIVITY

5.83. The scheme presented in table 5.2 is designed to be used in the industrial classification of the establishment-type units of the accounts on goods and services and of the institutional-type units of the other accounts of the system. All levels of the classification scheme — the major divisions, divisions and major groups — may be used to classify establishment-type units according to kind of economic activity. Because the kinds of activity carried on by enterprise-type units will often be more heterogeneous, the first two levels of the classification only will be useful for purposes of classifying institutional units according to kind of economic activity. When compiling industrial classifications of certain series of data of the national accounts, it may be desirable, or necessary, to reduce the detail of classification by combining selected major groups, or even divisions, of the recommended classification scheme. For example, in compiling detailed data in respect of the outputs and inputs of industries, it may be sufficient, and necessary, to use the divisions only in the case of transport and communication and the major divisions only in the case of business, community and other services. Or, in the industrial classification of data on the institutional sector of origin of factor incomes, it may be appropriate to restrict the classification of these services to major divisions only.

5.84. The scheme of industrial classification in table 5.2 is from the latest version of the International Standard Industrial Classification of all Economic Activities (ISIC). The scheme consists of the major divisions, divisions and major groups of the ISIC except for the category relating to owner-occupied dwellings and the sub-divisions of "Public administration and defence". The ownership and own-account occupancy of dwellings is considered to be a kind of economic activity in the national accounts, but not in the ISIC. While the division "Public administration and defence" is not sub-divided in the ISIC, it must be sub-divided in the scheme for the national accounts so that data classified according to the major kind of activity of producers of government services may be transposed into data classified according to the purpose these activities serve.

5.85. The recommendation that the scheme set out in table 5.2 be used to classify institutional-type units is much more tentative than the recommendation that it be used to classify establishment-type units. A great deal of experience has been accumulated, nationally and internationally, in the use of the ISIC, or comparable schemes, in the case of establishment-type units, but not in the case of enterprise-type units. A number of national experiments are required on the use of the

divisions of the ISIC, or a comparable level of classification of similar schemes, in classifying enterprise-type units, before a positive recommendation can be made in this respect. More information is also needed concerning the characteristic combinations of kind of activities found among the establishments of the same enterprises.

CLASSIFICATIONS ACCORDING TO PURPOSE

Use of the classifications

5.86. The classification of the purposes of government set out in table 5.3 is designed to be used in classifying various types of outlays in this respect, for example, the final consumption expenditure and capital formation of the producers of government services and the loans of the organs of general government. The scheme in table 5.4 may be put to similar uses in the case of private non-profit bodies rendering services to households.

5.87. As paragraph 5.34 indicates, the statistical unit to which the purpose classification can be applied may, in the case of government bodies, differ from one category of transactions to another. For example, the bureau may be the most homogeneous unit in respect of type of purpose served that it is feasible to use in the case of data on the final consumption expenditure of the producers of government services. But in the case of the transfers or loans of organs of general government, it will be practicable to use the individual transaction as the unit of observation and classification. However, for the comparison and joint analysis of various kinds of outlays according to the purposes served, it seems advantageous to employ a common statistical unit. The establishment-type unit for producers of government services that is suggested in paragraph 5.31 above is probably the most suitable common statistical unit that it is practicable to use.

5.88. The unit of observation and classification which can be used in compiling data on the purpose served by the various outlays of private non-profit bodies serving households, will also differ from one type of outlay to another. However, the classification of the outlays according to purpose will probably not change significantly as the units of classification are narrowed, in view of the high degree of homogeneity of the private non-profit institutions in respect of their objectives. The establishment-type unit suggested for producers of private non-profit services in paragraph 5.41 above might therefore be used in the purpose classification of all types of outlays of the private non-profit bodies.

Characteristics of the classifications

5.89. The schemes of classification under discussion have been aligned with the related categories of the industrial classification so that data classified according to kind of economic activity may be converted into data classified according to purpose. This has been accomplished by introducing categories of cross-classification according to kind of economic activity and purpose in each kind of classification scheme.

5.90. In the case of government, the summary categories of the purpose classification can be derived

from the major groups of the industrial classification. This is not always possible for the detailed categories of the purpose classification. Some of these categories (e.g., "8.2 Agriculture, forestry, fishing and hunting" or "8.3 Mining, manufacturing and construction" of table 5.3) do not coincide with the related major groups of the industrial classification. In order to bring about such correspondence, it would at least be necessary to add to the categories in the industrial classification which consist of cross-classifications of purpose and kind of economic activity. If one-to-one correspondence between the detailed categories of the purpose classification and the industrial classification were sought, it would also be essential to increase the number of such categories at the detailed level of the

purpose classification. The addition of these detailed categories of cross-classification to the industrial and purpose classifications might result in schemes of classification which are too complicated for use internationally.

5.91. In the case of the private non-profit bodies serving households, the categories of the purpose classification coincide with the related categories of the industrial classification. In some instances the divisions of the latter scheme correspond to the categories of the purpose classification; in other instances, this is the case for the major groups of the industrial classification. It has been relatively easy to reach coincidence between categories of the two schemes of classification

[text continues on page 90]

Table 5.3. Classification of the purposes of government

1. General public services	
1.1. General administration	police activities including traffic control; expenditure for the operation, upkeep and new construction of prisons and other places of detention and correction, such as criminal asylums, reformatories and reform schools.
Organs of government; financial affairs and fiscal administration; offices serving a government as a whole such as planning services, statistical offices and personnel administration; general services such as purchasing and operation of government buildings; and other aspects of general administration not included elsewhere. Organs of government include the legislative bodies and chief executive organs of all levels of government, their staff and library, research and other facilities and personnel; and audit organizations, permanent or <i>ad hoc</i> commissions, and similar agencies acting on behalf of these bodies. Financial affairs and fiscal administrations consist of such tasks as collecting taxes, raising public money, managing the public debt and controlling the disbursement of public funds. The typical agencies concerned are the treasury or ministry of finance, the budget office, and the internal revenue and customs authorities. General services such as printing, the operation of government buildings, central motor vehicle pools, or the provision of repair and maintenance services, are included when it is not practical to segregate these activities into ancillary government enterprises.	
1.2. External affairs	Institutions and organizations engaged in basic and general research; and the promotion of such research and general scientific knowledge and endeavours. Covers all expenditures on, and grants for, basic and general research and scientific endeavours in the biological, physical or social sciences which are not linked to the provision or promotion of any particular kind of service or activity.
Covers the expenditure of agencies charged primarily with the formulation and execution of foreign policy and the handling of foreign relations; and all outlays on foreign economic aid and contributions to international bodies other than military alliances and organizations. Broadly speaking, included are the expenditure of all agencies located abroad except military units; outlays on broadcasting services and other means of information directed to foreign countries, as well as libraries and other cultural activities conducted abroad; all grants and loans in kind or cash for economic aid to foreign countries and outlays on technical assistance and the administration of foreign economic aid; and all contributions in cash or kind to international civilian organizations and programmes.	2. Defence Central administration and outlays on research in connexion with activities carried on for defence purposes; expenditure on military and civil defence; and foreign military aid and contributions to international military organizations and alliances. Covers all expenditure, whether by defence or other departments, on recruiting, training, equipping, moving, feeding, clothing and housing members of the armed forces, and on medical care and other services for them. Also included are outlays on military construction and equipment, inspection, transport and storage; capital expenditure for the provision of quarters to families of military personnel; outlays on military schools; expenditure for purposes of strengthening the public services to meet war-time emergencies, training civil defence personnel and acquiring materials and equipment for these purposes.
1.3. Public order and safety	3. Education 3.1. General administration, regulation and research Administration of ministries or central departments of education; general regulation and promotion of school systems, institutions of higher learning and adult and other educational activities; expenditure on research into objectives, organization, administration and methodology of all types of education.
Administration and research connected with the maintenance of internal order; law courts; police; fire protection; prisons and other places of detention and correction. Covers all outlays on law courts and the judicial system, including general legal tribunals and related organizations in charge of parole and probation activities and the registration of legal titles to property; transfer payments for legal aid to households and private non-profit institutions; expenditure on	3.2. Schools, universities and other educational facilities Provision, management, inspection and support of primary and secondary schools, colleges and universities, technical training institutions, schools for the deaf, blind and dumb of a non-custodial character and adult education facilities; scholarships; and loans and similar grants to individuals for educational and training purposes.
	3.3. Subsidiary services Transportation of school children, school meals,

Table 5.3 continues

Table 5.3. Classification of the purposes of government (*continued*)

3. Education (continued)	comfort stations; and other sanitary activities not elsewhere classified.
3.3. Subsidiary services ^a (continued)	
	medical and dental services furnished in schools, and other ancillary services designed to promote and facilitate school attendance.
4. Health	
4.1. General administration, regulation and research ^b	Ministries of health and similar government departments; regulation of standards in respect of hospitals, medical and dental clinics, doctors, dentists, nurses and mid-wives, health and sanitation; administration of national health schemes and medical insurance schemes; expenditure on, and grants for medical, dental and health research; and registration of information on vital events, collection of statistics on infectious diseases, and the like
4.2. Hospitals and clinics ^c	Hospitals and similar institutions, including insane asylums and care of mentally defective; expenditure on medical and dental clinics and similar centres; and the outlays in respect of hospital and clinical care, of national health and medical insurance schemes.
4.3. Individual health services	Medical, dental and mid-wifery services except in hospitals and clinics; provision of drugs and appliances; immunization, vaccination and similar field programmes; and outlays in respect of the services of individual doctors, dentists, etc. and drugs and appliances of national health and medical insurance schemes.
5. Social security and welfare services	
5.1. Social security and assistance	Administration of payments and funds for unemployment benefits, old-age pensions, accident, injury, sickness and other benefits to compensate for loss of income; family, guardians' and widows' allowances; public relief, war veterans' benefits and the like.
5.2. Welfare services ^c	Child welfare services and institutions; homes for, and care of, the aged, disabled, blind, etc; family welfare agencies and services; and other special welfare institutions and organizations
6. Housing and community amenities	
6.1. Housing	Administration, regulation of standards, and promotion of activities and facilities in respect of housing; research, subsidies and capital expenditure in connexion with housing. Includes expenditure for provision, assistance or support of housing and related slum clearance activities; and management expenses of government departments engaged in mortgage financing of residential buildings, the liabilities of which are solely to the government
6.2. Community development	Agencies engaged in town and country planning and the promotion and assistance of these activities; administration, promotion and subsidizing of urban and rural renewal and community facilities; and research in connexion with community development
6.3. Sanitary services	Facilities and services in respect of the collection and disposal of garbage and refuse, sewerage and operation of drainage systems, street cleaning and other sanitary services; regulations in respect of smoke, disinfection, disposal of refuse, etc.; public baths and
7. Other community and social services	
7.1. Recreational and related cultural services ^{c, d}	Provision and upkeep of facilities such as parks, playgrounds, athletic fields, beaches, swimming pools, camps, hostels and other lodging places which are not operated on a commercial basis; botanical and zoological gardens; libraries, museums and like institutions; theatres, orchestras and art groups. Includes support payments to non-profit institutions engaged in recreational and cultural services
7.2. Religion and services n.e.c.	Expenditure for religious purposes and contributions to religious organizations; contributions to fraternal civic, youth and social organizations
8. Economic services	
8.1. General administration, regulation and research	Ministries and central departments concerned with the general administration of economic, commercial and labour affairs; general regulation and registration of businesses; technological, engineering, market and similar research not allocable to specific kinds of industry. Included are price and wage control agencies; labour conciliation services and arbitration boards; employment exchanges; factory inspection and the regulation of working conditions; agencies charged with regulating weights and measures; and general meteorological and map-making services. Expenditures on regulation, promotion and research linked to specific kinds of industry are classified in the pertinent category below.
8.2. Agriculture, forestry, fishing and hunting	Advisory services, conservation, assistance and investment for the development and effective use of the soil, forests, livestock, fishing resources, and wild-life of a country. Includes outlays in respect of veterinary services and agricultural extension services; irrigation and drainage of lands; reclamation of waste lands and land settlement; reforestation, forest fire prevention, propagation and protection of fish and wildlife; subsidies to farmers and agricultural price support schemes which are not organized and operated as public enterprises
8.3. Mining, manufacturing and construction	Promotion, regulation, research, investment grants, subsidies and other assistance in connexion with the development and extraction of coal, petroleum and other natural resources; manufacturing; the building and construction industry. Also included are geological and prospecting surveys
8.4. Electricity, gas, steam and water	Promotion, regulation, research, investment grants, subsidies and other assistance in connexion with the production, transmission and distribution of electricity, gas, steam, heat and power; and the conservation, collection, purification and distribution of water
8.5. Roads	Administration, research, investment and other outlays in respect of the promotion, provision, upkeep and lighting of highways, roads, bridges and tunnels, carparks, etc. Bridges, tunnels, carparks and highways for which tolls are charged will usually be excluded
8.6. Inland and coastal waterways	Administration, research, investment and other out-

Table 5.3. Classification of the purposes of government (*continued*)

8. Economic services (continued)	
8.6. Inland and coastal waterways (continued)	
lays for promoting, providing for, and maintaining facilities for navigation on inland and coastal waters; and the regulation of the use of these facilities. Includes expenditure for dredging of canals, rivers and lakes; lighthouse operation buoys and other navigational aids; construction of new canals; construction, maintenance and operation of dock, harbour and port facilities; and for coastal protection Excluded are facilities such as canals, harbours and ports which are organized and operated so that they may be considered public enterprises Investments, other grants and assistance to these facilities are however included	road transport, water transport, air transport and communication
8.7. Other transportation and communication	8.8. Other economic services
Promotion, regulation, research, investment grants, subsidies and other assistance in respect of railways,	Promotion, regulation, research, investment grants, subsidies and other assistance in respect of commerce, including storage and warehousing, and other economic activities, n.e.c. Includes multi-purpose flood-control, irrigation, electric-power and navigation projects
	9. Other purposes
	9.1. Public-debt transactions.
	9.2. Transfers of a general character to other government organs.
	9.3. Outlays in connexion with disasters and other calamities.
	9.4. Outlays n.e.c.

^a In addition, it is desirable to furnish data of total outlays on all the research and scientific endeavours, i.e., on the activities, services and promotional schemes of this type included under other categories of the classification as well as in category 1.4.

^b Some outlays on educational or health research of a more detailed character will be classified under categories 3.2 or 4.2, respectively.

^c It is desirable to compile separate data on the outlays and

receipts of these bodies for food, beverages and tobacco, clothing and medicines and pharmaceuticals for individual use

^d Where educational institutions provide board and lodging, or museums, theatres, etc have eating and drinking facilities, which it is not desirable to set off into distinct statistical units, supplementary data should be compiled on the outlays and receipts for food, beverages and shelter included in the total outlays and receipts of the bodies

Table 5.4. Classification of the purposes of private non-profit bodies serving households

1. Research and scientific institutes	4. Welfare services ^b
Institutions and organizations engaged in basic and general research in the biological, medical, psychological and the related physical sciences; and in the social sciences, history and the humanities. Included also are organizations engaged in promoting, financing and otherwise assisting such research.	Child welfare services and institutions; homes for, and care of, aged, disabled, blind, etc.; family welfare agencies and services; shelters; travellers' aid and legal aid societies; Red Cross and similar organizations; agencies for the collection and allocation of contributions for charity and other welfare services.
2. Education ^a	5. Recreational and related cultural services ^a
Universities and colleges; primary and secondary schools; technical, vocational, arts and crafts schools; dramatic, music, dancing and other art schools; blind and deaf schools. Included in addition are institutions and organizations engaged in research into the objectives, organization, administration and methodology of all kinds of education; providing scholarships, fellowships and other stipends for educational and training purposes; and making grants in support of educational research, activities and facilities.	Dramatic, opera, concert and similar companies and organizations; libraries, museums and like institutions; botanical and zoological gardens; parks, playgrounds, swimming pools, gymnasiums, sports clubs, camps and hostels which are not operated on a commercial basis.
3. Medical and other health services ^b	6. Religious organizations
Medical, surgical, dental and other health services and individual care; immunization, vaccination and similar public health programmes; research into medical and dental techniques and technology; promoting and assisting the development and provision of medical, dental and other health facilities, services and research. Included in the health services and care are hospitals, sanatoria and nursing homes; institutions for the care of the mentally ill or defective; medical, mental health, maternity and dental clinics; individual medical, nursing, mid-wifery and dental care.	Churches and other religious organizations and associations
	7. Professional and labour organizations and civic associations ^a
	Trade unions, professional societies and similar organizations; social clubs and fraternal societies; civic associations; political organizations and associations.
	8. Miscellaneous purposes
	Non-profit organizations and institutions serving households, the activities and purposes of which are so diverse and scattered that they do not fall into one of the above categories

^a Where educational institutions provide board and lodging, social and sports clubs have restaurants, bars and lodging facilities, or museums having eating facilities etc, which it is not desirable to cover in separate statistical units, supplementary data should be compiled on the outlays and receipts for food and beverages and shelter included in the total outlays

and receipts of the institutions.

^b It is desirable to compile supplementary data on the expenditure and receipts of these bodies in respect of food, beverages and tobacco, clothing, and medicines and pharmaceuticals for individual use.

because of the high degree of correspondence between the kind of activity and the aim of the private non-profit bodies.

5.92. Similar categories of each of the purpose classifications are defined so that data grouped according to these categories may be combined into the total consumption expenditure, capital formation, etc. of the government and private non-profit bodies on education, health, recreational and cultural services and so on. The related categories of each of the purpose classifications and the object classification of households' goods and services, which is set out in table 6.1, are also aligned, one with the other. The categories of these schemes relating to such objectives as health, education, recreation and cultural services, or housing are defined so that data may be compiled on the total consumption of the population for these purposes, irrespective of the class of economic agents who make the outlays. This alignment of the relevant categories of the three schemes of classification also lays the basis for analysing the sources of finance of the consumption expenditure for these purposes.

5.93. Since outlays are classified according to objective in the three classifications under discussion, expenditure in respect of care in hospitals, old-age homes and the like, will cover the value of the food, beverages, tobacco, medicines and clothing consumed there. In order to allow for the compilation of the total value of the consumption of these items by a population, it is suggested in tables 5.3 and 5.4, and also in table 6.1, that supplementary figures be furnished on the value of the food, medicines, etc. included in the data concerning the consumption expenditure on the aforementioned types of care. For the same purpose, it is also proposed in these tables that similar supplementary series of data be compiled on consumption expenditure, and receipts, in respect of education, recreation and cultural facilities where these flows include expenditure on food, drink or lodging. It will be recalled that it is not recommended that the boarding and lodging activities of educational institutions, or the eating and drinking facilities of museums, social clubs or theatres, should be segregated from the main activities of these bodies where the scale of the commercial activities is small.

5.94. The classification of the purposes of government systematically distinguishes between the objectives of (i) serving the community as a whole, for example, general public services, community development, sanitary services, (ii) furnishing services to households, for example, education, health, housing and (iii) promoting and assisting economic activity. In the case of the categories of the scheme relating to services to households, an effort has been made to distinguish between services usually rendered on an individual basis and services customarily furnished collectively. The drawing of this distinction should be of value in compiling data on the total consumption of the population. The points of overlap between the classifications of the purposes of government and of private non-profit bodies and the classification of the object of households' goods and services of course occur in the case of the categories concerning the serving households only. The categories for the government objective of promoting economic activity distinguish, to the

extent it is feasible, between the classes of industries which are promoted, assisted or regulated.

The resident economic agents

5.95. This part of the chapter is devoted to defining the concept of resident economic agents that is used in the system. The accounts of the system for a given country all relate to the transactions of the same resident agents — industries and enterprises, producers of government services and organs of general government, producers of private non-profit services to households and the parent institutions, and households.

5.96. The accounts in respect of the production of goods and services cover the transactions, for example, gross output, intermediate consumption, value added, of all resident producers, that is industries, the producers of government services and of private non-profit services to households, and domestic service, only. Resident producers are defined so that all, and solely, production taking place on the domestic territory of the given country is encompassed. The production accounts of the system therefore relate to the activity of resident producers, and not to the return to resident factors of production. In other words, the concept of domestic production is used.

5.97. The accounts on the disposition of goods and services also concern the transactions of resident economic agents. The final consumption expenditure accounts cover the outlays in this respect of resident households, producers of private non-profit services to households, and producers of government services. Use is also made in the system of a concept of the final consumption expenditure of resident and non-resident households in the domestic market, that is on the domestic territory, of a country. The capital formation accounts deal with the activities of resident producers only. Fixed capital formation consists of the acquisition of fixed assets by resident industries and the producers of government services and of private non-profit services to households; and occurs on the domestic territory of the given country only. The increase in stocks of resident industries and of the producers of government services are defined so as to be consistent in scope with the definition of imports and exports. If imports and exports of goods are recorded as of the time the goods cross the customs and free-zone frontiers of a country, changes in stocks occur on the domestic territory of the country only. This is not the case if imports and exports of goods are recorded as of the time the ownership of the goods passes.

5.98. Resident economic agents receive compensation as employees and income from property and entrepreneurship as a result of participation in the production of the given country and in the production of the rest of the world. Some of the incomes accruing from the production of the country in question are also paid to non-resident economic agents. Thus the incomes accruing to resident economic agents for contributing to production differ from the incomes accruing from domestic production.

5.99. The incomes of the resident economic agents of a given country from employment and the ownership of property and enterprises in the country and

abroad are recorded on the income and outlay accounts of the country. Also dealt with in these accounts are the disbursement by resident economic agents of their shares in the income from production and their receipt and disbursement of non-contractual (unrequited) transfers. As is indicated earlier in this chapter, the transactor units in respect of resident economic agents, including producers, which are used in the income and outlay accounts, are essentially institutional units, that is corporate and quasi-corporate enterprises, organs of general government, private non-profit institutions, and households. The capital transactions, for example, gross capital formation, saving, net acquisition of financial assets and liabilities, of the identical resident economic agents are recorded in the capital finance accounts of the system.

INDUSTRIES AND ENTERPRISES

The domestic territory

5.100. Resident industries, corporate and quasi-corporate enterprises and similar producers are units which are engaged in production, and in transactions in land, on the domestic territory of a given country. The domestic territory of a country is defined to exclude the overseas territories and possessions and to include, in addition to the territory lying within its political frontiers, (i) ships and aircraft which resident enterprises of the country run entirely, or primarily, between two or more countries, (ii) fishing fleets, vessels and floating platforms which residents of the country operate wholly, or mainly, in international waters and (iii) fishing vessels, oil and natural gas rigs, and platforms engaged in extraction in areas in which the country has the exclusive rights of exploitation by virtue of international agreements or pronouncements. The political frontiers of a maritime country include her territorial seas. A maritime country may be recognized, or claim, to have exclusive fishing or other rights of exploitation (in other words, jurisdiction in respect of these rights) in international waters beyond her territorial seas. The extent of the territorial seas of a maritime country and the further area over which the country is recognized, or claims, to have exclusive rights of fishing or other forms of exploitation, may vary from one country to another. Ships and aircraft operated entirely, or primarily, within the political frontiers of a country for at least one year are considered to be resident units of the given country.

5.101. Ships, aircraft, fishing fleets and platforms which resident enterprises of a country operate primarily in international waters are to be considered part of the domestic territory of the country in view of considerations such as the following: the facilities will be subject to the laws, regulations and protection of the country; and are likely to be linked more closely with her economy than the economy of other countries. These considerations should be taken into account in deciding on the residence of the operators of the vessels or other facilities. Attention might be devoted to such attributes as the flag of registration of the vessels; the country of incorporation and the residence of the owners of the major parts of the equity, if a corporation operates the ship, aircraft or other facility; and the residence of the operator in the case of sole

proprietorships or partnerships. It is recommended that oil rigs, platforms and ships engaged in a given form of exploitation, for example, fishing, extraction of crude petroleum or natural gas, in international waters which has been designated as the exclusive right of a country, be treated as resident producers of the country since these activities will be subject to the laws, regulations and control of the country and will be closely linked to her economy.

5.102. These definitions with respect to the residence of ships, aircraft, floating rigs and platforms apply whether they are leased, for example, operated on charter in the case of vessels or are owned by the operators. If a ship or aircraft is owned by a business unit which is resident in a country other than the country of residence of the enterprise engaged in operating it, the payment of the charter fee constitutes a payment for a service produced in the country in which the owner is resident; and the ship or aircraft is part of the domestic fixed capital of this country. The same approach should be taken in respect of leased oil and natural gas rigs and platforms. However, where the ships, aircraft, floating platforms, rigs of non-residents are classed as resident industries (quasi-corporate enterprises) of a country by virtue of operating within the domestic territory of the given country, the ships, aircraft, etc. are to be considered as the property of the resident quasi-corporate enterprises. The non-resident owners of the quasi-corporate enterprises will receive income from their branches in the form of withdrawals from entrepreneurial income. When the notional resident industries (quasi-corporate enterprises) are raised, the ships, aircraft, etc. involved are to be classed as gross fixed capital formation and imports in the case of the given country and negative gross fixed capital formation and exports in the case of the countries of the non-resident owners.

Producers operating in several countries

5.103. Problems of definition of residence arise where the operation of ships or aircraft is not concentrated in either international service or in one country. Similar difficulties occur in respect of railway, motor or pipe-line transport, electricity or gas services, or like activities which enterprises carry on in several countries. The principle adopted in these cases, in conformity with the practice of the International Monetary Fund, is that the production, and the income therefrom, should be ascribed to the country in which the production takes place.

5.104. Resident producer units are to be delineated for this purpose. The costs and proceeds of these units are to be calculated as if they bought and sold at market prices even though in fact part, most or all of what they receive from, or transfer to, the other units of the complex of which they are members, are omitted from their records or entered only at nominal value. The costs of production of the resident industries should include an appropriate share of the common operating costs of the complex of which each resident industry is a member. These common costs of production are to include charges in respect of transportable fixed assets, for example, aircraft, railway cars, lorries, used in the operations in the country in question, as

well as in the other countries, and a share of the head-office expenses of the parent enterprises.

5.105. The capital formation of the enterprise on the territory of the country should be attributed to the resident units under discussion. The capital formation of the parent enterprise in transportable fixed assets employed in the operations in several countries should be allocated to the country of residence of the parent enterprise.

5.106. The net income of the resident enterprises in question, adjusted for any part of it which is in fact retained, should be transferred to the rest of the world if their parent enterprise is a resident unit of another country. The parent enterprise may not be a resident unit of a single country. It may, for example, be the joint venture of (i.e., owned by) a number of governments, one of which is the government of the country where a unit of the complex under discussion is located. In these circumstances, the capital formation in the rolling stock, the saving, net lending and other financial transactions of the parent enterprise as a whole should, in principle, be allocated to the resident unit in proportion to the participation of the government of the given country in the financial capital of the enterprise. Or, the parent enterprise may be the joint venture of two or more enterprises, or individuals, one of which is a resident unit of the country in question. In this case, the same approach to allocating the net income, capital formation and financial transactions of the enterprise should be followed as where governments are the owners of an enterprise which is not resident in a single country.

5.107. The resident producer units under discussion are to be classed as foreign-owned branches when their parent enterprise is not resident in the given country. It will be recalled that branches, that is unincorporated business units, owned by non-residents are considered to be quasi-corporate enterprises. Where the parent enterprise is resident in the given country, or is a joint venture of the type discussed above, the corresponding resident industry will generally be part of a wider resident incorporated enterprise.

5.108. The principles discussed above are applicable in the case of all types of branches of enterprises which engage in business activities in a number of countries. The branches may be aircraft, ships or fishing vessels which are operated exclusively, or primarily, in the political territory of a given country for at least a year, or industries engaged in other kinds of economic activity in a given country. Some of the nominal transactions, and associated procedures, outlined above may also be required in dealing with the subsidiaries in a given country of non-resident enterprises or of the jointly-owned enterprises described in the preceding paragraph. The subsidiary of an enterprise is an incorporated unit, the majority of the equity of which is owned by the enterprise.

Producers operating in international commerce

5.109. Problems of definition of residence also arise where an enterprise which operates aircraft, ships or fishing fleets entirely, or primarily, in international commerce, is jointly organized and owned by a num-

ber of governments or by enterprises resident in a number of countries. In this case, the sales and costs of production, the other current receipts and disbursements, and the capital transactions of the entity should, in principle, be allocated to a resident corporate enterprise of each country in proportion to the share of its government, or its resident enterprise, in the financial capital of the entity.

Other problems of defining residence

5.110. Commercial agencies transacting business for foreign principals should be treated as resident producers of their country of location. When the sales or purchases of goods and services of the agency are for its own account, these transactions would be allocated to the country in which the agency is located. When it acts as agent for the account of a foreign principal, the sales or purchases of goods and services would be classified according to the country of the principal. The transactions of foreign commercial travellers in the country in which they are travelling are not considered to be the transactions of a resident economic unit of this country.

5.111. Problems of defining domestic production are also encountered where employees of a resident enterprise of a country go abroad in order to install machinery or equipment which the enterprise has sold to non-residents. In these instances the value of (payment for) the installation services should be considered to be part of the gross output of the resident enterprise if the work of installation is carried out entirely, or primarily, by the employees in question and they complete the installation in less than one year. The installation services would then be classed as an export of the given country. If, however, a significant portion of the work of installation is performed by residents of the foreign country where the machinery or equipment is installed, the value of the services should, in principle, be attributed to a notional industry resident in this country. In these circumstances, the work of installation is likely to be substantial; and will probably take a significant time to complete. It should therefore be practicable to follow the procedure of raising a notional industry unless the cost of the installation services is an integral and inseparable part of the payment made for the machinery or equipment.

GOVERNMENT AND INTERNATIONAL INSTITUTIONS

5.112. The resident government bodies of a country include all departments, establishments and bodies of its central, state and local governments located in its domestic territory and the embassies, consulates and military establishments of its government located elsewhere. Embassies, consulates and military establishments of a foreign government are to be considered as extra-territorial by the country in which they are located. The production, fixed capital formation and other transactions of these bodies, except in land, are therefore attributed to their home country, and not to the country in which they are located. The construction of embassies, structures and other works in extra-territorial enclaves by resident producers of the country in which the enclaves are located, is part of the production and exports of the country in question. Wages and

salaries paid to locally recruited staff of foreign diplomatic and military establishments are wages and salaries paid to residents of the country in which these establishments are located.

5.113. International bodies, such as political, administrative, economic, social or financial institutions, in which the members are governments, are not considered residents of the country in which they are located or operate. The staff of these bodies are however residents of the country in which they live, which in most cases will be the country in which the given international unit is located or in which the employees are engaged in the technical assistance, peace keeping or other activities of the international institution. In these circumstances, the wages and salaries paid by the international institution would be wages and salaries paid to residents of the country in which the employees of the institution are stationed. The value added, gross fixed capital formation or consumption expenditure of the international unit would however not be part of the domestic product, gross fixed capital formation or consumption expenditure, respectively, of the country in which it is located or operates.

PRIVATE NON-PROFIT BODIES SERVING HOUSEHOLDS

5.114. All private non-profit bodies classed as serving households which are located, or operate, in the domestic territory of a country are resident economic agents of the country.

INDIVIDUALS AND HOUSEHOLDS

5.115. The concept of residence adopted in the case of individuals and households is designed to encompass all individuals who may be expected to consume goods and services, participate in production and engage in their other economic activities in the domestic territory of a country on a lasting basis. These are the persons whose general centre of interest is considered to rest in the given country.

5.116. A point of departure for purposes of a practicable definition of residence in the case of individuals and households is furnished by the *de facto* concept of population of a country, which is not infrequently used in censuses of population. Since some of the persons staying in a country at a given time do not propose to live there indefinitely, in order to complete

the definition of residence, it is necessary to enumerate categories of persons who in view of their purpose in coming to the country, and their activities and length of stay in the country, may be said to have a centre of interest elsewhere. This is the manner in which a practicable definition of the residents of a country is formulated below. The same approach is used in the case of a number of other international recommendations in respect of this question. The working definition given below is also consistent with that of the other international recommendations and with common national practice.

5.117. The resident individuals of a country is considered to comprise all individuals living within the domestic territory of the given country except the persons listed in the following:

(a) Foreign visitors (tourists), persons in the given country for less than one year, specifically for purposes of recreation or holiday, medical care, religious observances, family affairs, participation in international sport events, conferences and other meetings, and study tours or other student programmes;

(b) Crew members of foreign vessels or aircraft docked in the given country or on lay-over;

(c) Foreign commercial (business) travellers who are to be in the given country for less than one year; and foreigners who are the employees of non-resident enterprises and who have come to the country for less than one year for purposes of installing machinery or equipment purchased from their employer;

(d) Seasonal workers, persons who are, and will be, in the given country explicitly for purposes of seasonal employment only;

(e) Official diplomatic and consular representatives and members of the armed forces of a foreign country who are stationed in the given country;

(f) Employees of international bodies who are not citizens of the country and are on a mission of less than one year in duration.

The individuals enumerated above are to be considered residents of the country in which they normally live, that is have their general centre of interest. Border workers, persons who cross the border between two countries daily, or slightly less frequently but regularly, in order to work in one country but live (have their abode) in the other country, are the residents of the country in which they live, not the country in which they are employed.

Chapter VI

TRANSACTIONS ON THE PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

6.1. This chapter is devoted to the definition and classification of transactions in respect of the supply and disposition of goods and services. These transactions are recorded on the production, consumption expenditure and capital formation accounts of the system. For purposes of outlining the transactions dealt with in this chapter, it will be useful to recapitulate certain features of these accounts.

The supply (1) and disposition (2) of goods and services¹

6.2. The supply of goods and services is shown on the production accounts of the system; and comes from the gross output of the resident producers — industries, the producers of government services, the producers of private non-profit services to households and the domestic service of households — and from imports. The goods and services are classified into commodities (goods and services normally sold on the market at a price which is intended to cover the costs of production) and other goods and services. Commodities account for most of the supply of goods and services; and are primarily produced by industries or imported. Other goods and services are supplied by the producers of government and private non-profit services and by domestic service; and may also be imported. Imports of other goods and services of a country consist of direct purchases abroad by resident households and by producers of government services. Detailed articulated production accounts are included in the system in respect of the activities of each class of producers and in respect of the supply and disposition of commodities. This is not so in the case of the supply and disposition of other goods and services.

6.3. The supply of goods and services is taken up in intermediate and final uses. The intermediate consumption of commodities by the classes of producers and of other goods and services by the producers of government services is recorded on the production accounts of the system. The final uses of goods and services consist of final consumption expenditure, gross capital formation in stocks and fixed assets, and exports. The final consumption expenditure of households

in the domestic market is made in respect of commodities and other goods and services, while that of government and private non-profit services is entirely on the non-commodity items which they produce for their own use. The gross capital formation of the resident producers takes place in commodities only. Exports of goods and services also consist of commodities. However, a category of other goods and services is included among the exports in order to segregate the outlays on commodities which non-resident households make in the domestic market of a country from the outlays of resident households. Accounts are provided in the system in respect of the consumption expenditure of each type of final consumer and the gross capital formation of each class of producer.

The gross domestic product (3.0)

6.4. The value of the gross output of producers of course includes the value of their intermediate consumption. For a number of analytical purposes, measures of production are required which are free of the value of intermediate consumption. The basic measure of this type employed in the system is the gross domestic product measured in purchasers' values.

6.5. This measure may be compiled in three ways.

6.6. The first approach is to take the sum of the difference during the period of account between the value of the gross output of producers measured in producers' values (i.e., in market prices at the units) and the value of their intermediate consumption measured in purchasers' values (i.e., in market prices on delivery to the units) and to add import duties to this sum. The difference in the case of each producing unit represents its contribution to the gross domestic product in producers' values, or its value added.

6.7. The second way is to sum up the value of the final uses of goods and services measured in purchasers' values; and to deduct the c.i.f. value of imports of goods and services. It should be noted that when imports are valued c.i.f., the transport and insurance services of resident producers which are embodied in the imported goods should be included in the exports of services. Imports may be valued f.o.b. instead of c.i.f. in using this approach. In this case, the transport and insurance services of resident producers in respect of imports of goods into a country should not be included in the exports of services by the country. The second approach is equivalent to taking the total value of the final products of resident producers, that is, the part of their gross output disposed of to final uses only, reduced by the value, either c.i.f. or f.o.b., of the

¹ In the two chapters on the definition and classification of transactions, codes are given for the type of the transactions under discussion. These codes are utilized in the standard accounts and tables of the system; and are defined in annex 8 I of chapter VIII. The initial digit of the code stands for the broad class of the transactions under consideration; and the second set of one or two digits indicates the precise category of the given group of transactions.

imported goods and services which they use up in intermediate consumption; and adding the duties on the imported goods and services which go directly to final uses.

6.8. The third way is to take the sum of the incomes accruing from production, that is, the provision for consumption of fixed assets, compensation of employees, operating surplus and the excess of indirect taxes over subsidies.

6.9. The gross domestic product may also be valued in factor incomes, that is, exclusive of the excess of indirect taxes over subsidies. Another measure of production that is used is the domestic factor incomes, that is the preceding aggregate less the consumption of fixed assets.

Gross output of goods and services (1.0)

6.10. The scope assigned to gross output, coupled with the definitions of the resident producers of an economy which are given in chapter V, delineates the boundaries set in respect of the production of goods and services. It is necessary here to identify the activities of resident producers which in this system are considered to add to the supply of goods and services during a period of account. The manner in which gross output is valued, and the time at which it is to be recorded, also sets the principles of valuation and time of recording in the case of the dispositions made of goods and services.

GENERAL DEFINITION FOR INDUSTRIES (1.1)

6.11. The gross output of industries during a given period is equivalent to the gross value of the commodities (the goods and services) produced during the period. The gross output of goods is to be recorded at the moment the goods are made. The commodities may be sold, go into the stocks of the producers in respect of work-in-progress or finished goods, or become part of their fixed capital formation. The production of services takes place at the time the services are rendered. In the case of the distributive trades, production occurs at the time commodities are sold, that is, when the ownership of (legal title to) the goods passes.

6.12. The gross output of commodities, other than the services of the distributive trades, is to be valued at producers' values in the standard accounts and most of the supporting tables of the system. Producers' values are not to include charges involved in delivering goods to purchasers after the goods in question leave the producers' establishments, for example, charges in respect of transport and storage. The charges to be included will therefore reflect the scope assigned to the establishments where the goods are produced. For example it will often be necessary to define the producer's establishment so as to include short-range delivery services which he himself furnishes. Or, the establishments of producers of machinery and equipment should in general be defined to include the services of installation which they furnish in respect of this machinery and equipment.

6.13. In some of the supporting tables, valuation is at basic values, that is, producers' values exclusive of net commodity taxes (selected indirect taxes reduced

by similar types of subsidies). As was indicated in chapter II, basic values are desired in input-output analysis and other studies of the experience of industries.

6.14. Gross output in the distribution of commodities is to be valued at the gross margins realized on the sale of goods in the same condition as they have been purchased, that is, the market value at the distributive-trade unit, reduced by the delivered cost of the goods to the unit. Gross margins may also be valued exclusive of net commodity taxes.

6.15. The content of net commodity taxes (3.6) will vary from one country to another. A major purpose of using basic values is to avoid distorting the relative weight of the various uses made of the commodities of a given class in the demand for the class of commodities because of the following circumstances: significant variation in the ratio of net commodity taxes to producers' values from one use to another in the case of the same commodity; or marked differences in this ratio from one commodity to another of the class in the case of a given use. The scope of net commodity taxes might therefore be limited to those indirect taxes and subsidies which vary in either fashion. However, for the purposes of other, though less essential, analytical requirements, it is desirable to broaden the coverage of net commodity taxes. It is advantageous to extend this category of net indirect taxes to all indirect taxes and subsidies which are proportioned to the quantity, or the value, of commodities produced or sold.

6.16. Producers' values, or basic values, should, as far as is practicable, be assigned to commodities in terms of market prices at the producing unit of identical items at the moment the commodities are produced. In general, the appropriate price is the price at which the commodities are sold against immediate cash payment. The amount of cash discount that would be granted in case of immediate payment should, in principle, be subtracted from the nominal sales price in order to arrive at the market price. The market price should also be net of rebates made on the nominal sales price. Where an additional quantity of the commodity is provided free at the time of sale, the nature of the transaction may indicate that the effective market price of the commodity is below its nominal value, or the quantity sold is above the nominal quantity.

6.17. It may not infrequently be impracticable to follow these principles of valuation completely. Valuation at actual producers' or basic values will be feasible in the case of commodities sold, but it may be necessary to value commodities which have been partially or completely processed, but not sold, at explicit cost. In the case of goods which have been sold, account should be taken of rebates and cash and other discounts in valuation. Charges made in respect of delayed payment for purchases of goods and services beyond the normal period of settling accounts should not be included in the producers' or basic values. These charges are, in principle, interest and/or service charges in respect of the delayed payment.

UNMARKETED OUTPUT OF INDUSTRIES

6.18. Some of the goods and services covered in the gross output of industries is not eventually sold in

the market, but these items are similar in all essential respects to the goods and services which are marketed. In a number of countries, a significant part of the output of agricultural producers will be consumed in their households. In many instances, producing units of the same enterprise may supply commodities, one to the other; producers may make fixed assets for their own use; or the wages and salaries they pay may include goods or services. The flow of housing services to the owner-occupiers of dwellings will also not be recorded on the market.

Own-account production for consumption

6.19. Subsistence production of primary products (the characteristic products of agriculture, fishing, forestry and logging, and mining and quarrying) is of considerable importance in the developing countries; and a shift takes place from subsistence to market production as development proceeds. In order to include this major source of sustenance for the population in production and in order to attain some measure of comparability in national accounting data, it was recommended in chapter V that producing units be delineated to cover these activities where such units do not already exist by virtue of production for the market. For the same reasons, all production of primary products should, in principle, be included in gross output, whether for own-account consumption, for barter, or for sale for money. It is also desirable to include in gross output, (i) the output by producers of other commodities which are consumed in their households and which they also produce for the market and (ii) the processing of primary commodities by the producers of these items in order to make such goods as butter, cheese, flour, wine, oil, cloth or furniture for their own use though they may not sell any of these manufactures.

6.20. Some countries may not find it worthwhile to cover all of the types of production enumerated above in gross output. Certain of these activities may make a negligible contribution to the well-being of all groups of their population; and may present marked difficulties in the compilation of data on production and capital formation. The scope of the final consumption expenditure of households should of course be aligned with the extent to which the own-account growing or making of the items under discussion is included in gross output. If, for example, the own-account production of vegetables, cereals or flowers is included, the seeds and small implements which are acquired for this purpose should be classed as intermediate consumption; and the value of these crops which are consumed should be covered in final consumption expenditure. On the other hand, if the own-account production is not included, the acquisition of the seeds and small implements in question only is to be covered in the final consumption expenditure of the households.

6.21. Gross output for own consumption should be valued at producers' prices on the market. Where the producer does not sell any of his output, the relevant prices are those at which producers in the same or neighbouring localities sell the same or similar commodities. Valuing this output at producers' prices furnishes a measure of the income foregone, or the costs incurred, in consuming the commodities; and

assigns the proper weight to the output, as compared to marketed products.

6.22. The total rent of owner-occupied dwellings, which is to be included in gross output, should, in principle, be valued at the rent on the market of the same facilities. It may be necessary to approximate the market rent by an estimate which should cover items such as operating, maintenance and repair outlays, water charges, insurance service charges, taxes, depreciation and mortgage interest, in addition to interest on the owner's investment in the dwelling and other elements of net return. The same kind of estimate is required in respect of the total rent of the dwellings owned by private non-profit institutions and the family dwellings owned by government, which these bodies do not let on the market.

Own-account fixed capital formation

6.23. All production of fixed assets on own account should, in principle, be included in the gross output of commodities. In view of this objective, it is recommended in chapter V that, if possible, a separate establishment should be delineated where households or government departments engage in own-account construction of structures, roads and similar works. For the same purpose, the value of tools, instruments, containers and similar items which have an expected life of use of one year or more and which industries produce on their own account, should be recorded in gross output. However, business units may record the costs of producing these items in outlays on intermediate consumption; and it may not be worthwhile to include these outlays in fixed capital formation where the value of the items is small.

6.24. Fixed assets produced on own account should, in principle, be valued at the producers' values of the same commodities when sold in the market. However, not infrequently, it will be impracticable to value these fixed assets at producers' values. Serious difficulties are likely to be encountered in comparing these items with goods which are supplied on the market, particularly in the case of structures, other construction works, or heavy machinery. Further, a suitable market for purposes of determining prices may not be available. In these circumstances it will be necessary to resort to valuing fixed assets produced on own account at the explicit costs incurred.

Payments in kind of wages and salaries

6.25. Goods and services which industries produce and furnish to their employees free of charge, or at markedly reduced cost, and which are of clear benefit to these employees, should be covered in the gross output and payments of wages and salaries of the industries. The final use of this portion of gross output is in the final consumption expenditure of households (See paragraphs 7.15 and 7.16 for a fuller definition of these payments.) The gross output of these goods and services is to be valued at the cost of production.

SALES RECEIPTS EXCLUDED FROM GROSS OUTPUT

6.26. The sales receipts of industries do not invariably measure the production which has taken place.

The receipts may contain elements which do not represent production during the given period.

Second-hand goods, land and intangible assets

6.27. This is so in the case of transactions in respect of second-hand goods and scrap, land and intangible assets such as financial claims, leases, mineral rights and patents. In most of these instances, the gross output generated in the transaction (in other words, the addition to the supply of goods and services of an economy during the period of account) is equivalent to the dealers' margins and other transfer costs. It is equal to the difference between the net receipts from the transaction of the seller of the item and the full payment in respect of the transaction of the buyer of the item. In most instances, the charge in respect of the value of the gross output in question which should be made to the buyer and seller will be clear from the terms of the transaction under consideration. This question is discussed later in this report where transactions in second-hand goods and scraps, land, financial claims and other intangible assets are considered individually. (See paragraphs 6.53 and 6.82, 7.84, 7.87 and 7.109, respectively.)

6.28. Scraps and wastes which are by-products of the manufacture of commodities, for example, scraps generated in making metal products, should be treated differently from other scraps and wastes. These scraps and wastes are to be included in the gross output of commodities at full sales value. It should be noted that in addition to these scraps and wastes, the full value of imports of second-hand goods and of scraps into a country add to the supply of commodities during the period of account.

Credit sales

6.29. The proceeds from the sale of goods or services on credit may contain elements of interest in respect of the credit and a service charge for administering it, as well as the payment for the goods or services themselves. This, for example, is the common practice in the case of hire-purchase sales. In principle, the interest charged for delayed payment should be recorded on the income and outlay account, and not the production account, of the seller of the item. When the surcharge for credit consists of both interest and a service charge, it would therefore be desirable to subdivide the surcharge into the two components. However, it may not always be feasible to subdivide the surcharge in this fashion. Where this is the case, the entire surcharge might be classed as a service charge and recorded in gross output.

FINANCIAL INSTITUTIONS

6.30. The gross output of sales and personal finance companies, banks and similar financial intermediaries, and insurance companies and pension funds also cannot be equated to their proceeds from activities.

Sales and personal finance companies

6.31. The charge of sales finance and similar companies in respect of loans consists of interest and a charge for the service of granting and collecting the

loan. Their gross output is equivalent to the service charge only; and the total charge needs to be divided into service charge and interest. Sales finance companies may quote each of these elements of the total charge separately. The service charge only in respect of loans is also to be covered in the gross output of personal finance companies.

Banks and similar financial intermediaries

6.32. Charges for services account for a small proportion of the income of commercial and saving banks, saving and loan associations, and similar financial institutions. The activities of these institutions are largely financed by the excess of the property income they receive over the property income they pay out. The property income involved consists essentially of interest. If the transactions of banks and similar financial institutions were treated like the transactions of other industries, their operating surplus, and perhaps their value added, would therefore be negative.

6.33. This anomaly may be avoided by imputing a service charge in addition to the charges actually paid. The imputed service charge should, in principle, be equated to the excess of the property income received by the banks and similar intermediaries on loans and other investments made from the deposits they hold, over the interest they pay out on these deposits. The property income they receive as a result of investing their own funds should not be taken into account in calculating the imputed service charge. In practice, it will generally be necessary to include all the property income received in the calculation.

6.34. The imputed service charge is to be treated as intermediate consumption of industries for a number of reasons. A key service performed by banks and similar institutions is to channel the savings of other economic agents into loans to industries. The serious difficulties of allocating the imputed service charge among industries, general government services and households are avoided. And, the value of the gross domestic product, and of the operating surplus of industries to an equivalent amount, is not inflated by assigning part of the service charge to final consumption expenditure. The extent to which imputations for service charges and interest would otherwise be included in the transactions of households and general government is also substantially reduced. Classifying the imputed service charge as the intermediate consumption of industries is tantamount to sub-dividing the charges of banks and similar institutions for loans to industries into two elements — a service charge and "pure" interest.

6.35. Because it is not feasible to allocate the imputed service charge among the various industries, the charge is to be treated as the intermediate consumption of a nominal industry. The negative operating surplus of the nominal industry, all its value added, is of course equivalent to the imputed intermediate consumption. The nominal unit is to be classified as a financial institution in the case of the income and outlay accounts of the system. The negative operating surplus of the nominal financial institution will be counterbalanced by the difference between the property income actually received and the interest actually paid out by banks and similar institutions. Imputations of property

income paid out by these financial institutions will therefore be avoided.

Insurance and pension funds

6.36. The premiums for insurance against risks, for example, against accident, fire and other casualties, life insurance and pension funds, consist of a charge for the service of insuring, a payment for the risk of insuring, and, in the case of life insurance and pension funds, a substantial element of saving. In ascertaining the gross value of the commodities produced (the services rendered), it is therefore necessary to separate out the charge for the service of insuring from the other components of the premium.

6.37. In the case of casualty insurance, the payment for the risk of carrying the insurance during a given period is taken to be equal to the claims paid during the period. The service charge is consequently equivalent to the difference between the premiums received and the claims paid. The amount of the service charge for a given year thus computed may be more (less) than the service charge the casualty insurance company takes into account in setting premiums. This is so for the following reasons: the claims may be less (more) than the expected (i.e., normal) claims that are reflected in the premiums set by the casualty insurance company; claims in respect of the period of account may be outstanding and the premiums paid may include pre-payments of premiums in respect of future periods of account. The computed service charge may therefore contain elements of capital gain (loss) and of a financial claim of policy holders on the casualty insurance company. Nonetheless, it is not suggested that the gross output realized on casualty insurance be equated to the normal service charge for the period of account, that is, the estimated service charge for the period in question which the casualty insurance company includes in the premiums. The national experience required to know whether countries would find it practicable to correct the estimates of the service charge for either deviation from the ideal measure has not been accumulated. (See paragraphs 7.53 and 7.54 for further discussion of casualty insurance.)

6.38. In the case of life insurance, the service charge is considered to be equivalent to the excess of premiums received over the sum of the claims paid and the net additions to the actuarial reserves, excluding the interest on these reserves, which accrues to policy holders. The actuarial reserves, as here defined, cover the equity of policy holders on the reserves of life insurance companies; and include the reserves set aside to cover the risk of insuring during the year in question, pre-payments for risks of insuring during future periods, and other elements of saving involved in life insurance policies. In some instances, it may not be feasible each year to identify the actuarial reserves, or the interest on the reserves which accrues to policy holders. Instead, it may be necessary to resort to estimates of the service charge in which use is made of the net additions to life funds and the interest which insurance companies earn on these funds. Life funds are reserves which are earmarked for policy holders and which include contingency reserves in addition to actuarial reserves. (See paragraphs 7.95 and 7.96 for further discussion of life insurance.)

6.39. Service charges in respect of casualty insurance are to be included in intermediate consumption in the case of producers, or in final consumption expenditure in the case of households. Service charges in the case of life insurance are of course part of the final consumption expenditure of households. Where necessary, the service charge in respect of a given type of casualty or life insurance might be allocated among the various classes of policy holders in proportion to the amount of premiums which they pay. Apportioning the service charge in this fashion probably approximates the relative value of the services rendered since in the case of a given type of insurance, commissions on the sale of policies and the costs of processing claims vary with the amount of the premiums. It is also the most practical way of distributing the service charge among the various classes of holders of a given type of insurance.

6.40. The service charge in respect of pension funds is taken to be equivalent to the administrative expenses of these funds. Where necessary, this service charge is to be allocated among the various classes of households, the individuals of which participate in a fund, in proportion to the contributions to the fund which are made on their account during the period in question. (See paragraphs 7.97 and 7.98 for further discussion.)

PRODUCERS OF OTHER GOODS AND SERVICES (1.2 THROUGH 1.8)

General definition

6.41. The value of the gross output of the producers of other goods and services — the producers of government services and of private non-profit services to households and the domestic services rendered by households — is taken to be equivalent to the costs of producing these services. The costs in the case of the first two classes of producers consist of outlays on the intermediate consumption of commodities and of other goods and services and of the value added in production. The value added consists of their compensation of employees, consumption of fixed assets, and direct payments of indirect taxes. Consumption of fixed assets is charged in respect of all these assets except roads, bridges, dams and similar facilities. The value added is not to include an element of operating surplus, for example, in respect of office and other buildings which the government and private non-profit bodies own and occupy. The costs of production in respect of the domestic services rendered by households consist of the compensation of employees only, which is the value added in production in this case.

6.42. The costs of production are to be recorded at the time the costs are incurred. However, strategic materials and important commodities which government services purchase for emergency stockpiling and, perhaps, other purposes should not be included in their costs of production at the time of purchase. These purchases are to be recorded as additions to the stocks of the producers of government services.

Other goods and services

6.43. Most of the gross output of the producers of government services and of private non-profit services

to households will necessarily consist of other goods and services (1.4 through 1.7). The gross output of commodities by these services (1.2 and 1.3) should, in general, be very small. All of the gross output of the domestic services rendered by households (1.8) is included in other goods and services.

Commodities

6.44. The sales of services and new goods which the producers of government services and of private non-profit services make to industries are to be included in their gross output of commodities. The terms of sales of services by producers of private non-profit services to government services will usually also be such that the transactions should be classed as commodity production. If the sales of the private non-profit producers to government and industries account for most of their activities, and cover practically all of their costs of production, they should be classed as industries. Where this is the case for units of private non-profit institutions serving households, for example, research, engineering or technological bureaux of universities, the units should, if possible, be separated out as industries. Much of any commodity output by producers of government services may be due to the impracticability of segregating such activities as own-account construction and publication, printing and sale of periodicals, pamphlets and books, into separate establishments for purposes of including these activities among industries.

6.45. Certain sales of services and goods which the producers of government or private non-profit services make to households may be classed as commodity production. In these instances a complete product of the government or private non-profit service must be sold at a price which approximates the cost of producing the item. Examples of these commodity sales may be the sale of reproductions by museums, handicrafts made in institutions for the handicapped, or firewood produced in government forestry. Payments which certain individuals may be required to make in respect of the full cost of care in a government or private non-profit hospital, are also to be classed as purchases of commodities. However, payments which they make for special or extra treatment only, the basic hospital care being free or furnished at a nominal cost, are to be considered as non-commodity purchases.

THE TREATMENT OF RENTS

6.46. The letting of structures, equipment, machinery and other goods except land is considered to be a commodity-type service. The total rent received is part of the gross output of the producer owning and letting the assets, and the net rent is part of his operating surplus. Specific categories are provided in the industrial classification of producers for the activity of owning and letting of structures, machinery and equipment, etc. Whether the establishment engaged in owning and letting these fixed assets will be classified to this economic activity will depend on its main kind of activity. The treatment of rents recommended here avoids the difficulties of allocating the gross fixed capital formation in, and consumption of, rented capital assets to the user. The total rent paid is of course included in the intermediate consumption of the user in

the case of producers and in the final consumption expenditure of the user in the case of households.

6.47. Net rent in respect of land is considered to be a form of property income; and is recorded on the income and outlay accounts of the system. Transactions in land as a non-reproducible tangible asset (7.4) are distinguished in the system from transactions in other fixed assets (2.6); and, except for the dealers' margins and other transfer costs involved, are recorded on the capital finance accounts, but not the capital formation accounts. Where the owner of the land is responsible for maintenance, taxes and similar outlays in connexion with the land, the portion of the total rent which covers these costs should be recorded on the production account of the user of the land as though he incurs these costs directly. Thus, in the case of agricultural land, the elements of the total rent in question are to be classified to the activity "agriculture". Taking this approach is expedient for such purposes as input-output analysis. The net rent for the land is still to be recorded as property income paid (received).

6.48. In view of the difference in treatment between rents in respect of land and rents in respect of structures and equipment, it is necessary to divide the total rent into at least two portions when, for example, farm rents cover buildings and equipment, as well as the land. If real estate taxes are assessed in respect of the land and structures, these taxes should also be segregated. Where it is not possible to make the separations, the total rent, excluding the real estate taxes, may be recorded as part of property income paid (received) on the income and outlay accounts of the transactors. (See paragraphs 7.50 and 7.51 for further discussion.) It is desirable to record the real estate taxes on the production accounts of the users of these capital assets in order to separate out the indirect taxes collected from the operating surplus of the producers.

THE CLASSIFICATION OF COMMODITIES AND OF SECOND-HAND GOODS

6.49. A classification of commodities which is linked directly to the classification of industries according to kind of economic activity is wanted for purposes such as studies of input-output relations, quantity and price data, and of imports and exports. The value of having this type of commodity classification for purposes of input-output analysis should be evident from the discussion in chapter III. In compiling and using measures of quantity and price in respect of outputs, it is advantageous to be able to pass from data on commodities to data on industries, and contrariwise, easily. And certain studies involve comparisons of value, quantity and price between the imports and exports of various commodities and the gross output of various industries. The most useful way of linking the schemes for classifying commodities and industries is to group commodities in terms of the kind of economic activity of the industries in which the commodities are characteristically produced.

6.50. For a number of international purposes, a classification of commodities based on the more detailed categories of the industrial classification in table 5.2 will be sufficient. The number of categories suggested is manageable in the case of most countries. And each

of the categories is, on the whole, narrow enough to avoid grouping together significantly differing outputs, but broad enough to accommodate national differences in the structure of production. For other international purposes and for most national requirements, more detailed classifications of commodities than the scheme in table 5.2 furnishes will be needed in the case of the goods-producing industries.

6.51. Some of the more detailed of international requirements may be met by use in the commodity classification of the most detailed level of classification, that is the groups, of the International Standard Industrial Classification (ISIC).² However, a more detailed level of classification than is furnished by the ISIC groups is needed in certain international studies, and a number of national investigations, of data on commodities. For these purposes, each ISIC group might be sub-divided into at least one, or perhaps two, further levels of classification in respect of the commodities characteristically produced by the establishments of the group. The categories of these levels of classification might be delineated in the light of criteria such as the physical characteristics, technology of production, and use of the commodities.

6.52. It is planned that an international classification of commodities should be formulated, based on the principles outlined above. In delineating the categories of the classification which represent sub-divisions of the ISIC groups, use may be made of the sub-groups of the Standard International Trade Classification Revised (SITC).³ Meanwhile, a publication is available — *Classification of Commodities by Industrial Origin* — which delineates the links between the groups of the former ISIC and the sub-groups and items of the SITC.⁴ A similar detailed publication is to be prepared in respect of the present ISIC.

6.53. As is indicated in paragraphs 6.27 and 6.28 above, except for scraps and wastes which are a by-product of the manufacture of commodities, only the dealers' margins and transfer costs in respect of transactions in second-hand reproducible and non-reproducible goods, scraps and wastes are to be included in the gross output of commodities. In practically all instances the circumstances are likely to be such that the value of this gross output should be charged to an account of the buyers of such items. The remainder of the value of these transactions will cancel out for an economy as a whole since it is equivalent in the case of the seller and buyer of the items. However, this is not so for imported second-hand goods and scrap, which do represent additions to the supply of commodities of an economy as a whole. In either case the entire value of the transaction, not only the dealers' margins and other domestic transfer charges, is of course relevant to the supply of goods available to the parties to the transaction.

6.54. It will therefore be valuable for instrumental and analytical purposes to add to the commodity

² See *International Standard Industrial Classification of All Economic Activities*, Series M, No. 4, Rev.2, United Nations, New York, 1968.

³ *Standard International Trade Classification*, Revised, Series M, No. 34, Statistical Office of the United Nations, 1961

⁴ Statistical Papers, Series M, No. 43, United Nations, New York, 1966.

classification, special categories in respect of transactions in second-hand goods, scraps and wastes. These categories might be designed to make the following classifications: first, distinguish second-hand goods from scraps and wastes and separate second-hand reproducible goods from second-hand non-reproducible goods, and second, divide the second-hand reproducible goods according to type, for example, textiles and clothing, furniture and fixtures, machinery, transport equipment, structures, and the scraps and wastes according to physical composition, for example, metals, textiles, paper. The figures to be entered in these categories of the classification will generally be equivalent for the seller and buyer of second-hand goods and scraps (the sales value in the case of the former and the cost, net of dealers' margins and other appropriate transfer charges, in the case of the latter) since distribution and transport margins and other transfer costs are to be accounted for in a different category of the classification of commodities.

Intermediate consumption (2.1, 2.2 and 2.3)

6.55. There are differences between industries, on the one hand, and the producers of government services and of private non-profit services to households, on the other, in the composition of the intermediate consumption of goods and services and the problems of distinguishing between intermediate consumption and other dispositions of goods and services. The outlays of industries and the non-profit producers on intermediate consumption are therefore discussed separately in this section of the chapter.

INDUSTRIES (2.1)

Definition of intermediate consumption

6.56. The intermediate consumption of industries consists of non-durable goods and services which are used up in production. In principle non-durable goods are goods which have an expected lifetime of use of less than one year. The commodities should be valued, as far as is possible, at purchasers' values (in other words, at the cost of the items in the market to the point of delivery to the consuming establishment) at the moment the items enter into the production of the unit. This principle of pricing ensures that charges for intermediate consumption will be equivalent to the costs of replacing the commodities at the time these items are actually consumed.

6.57. All the costs incurred to the point of delivery of the intermediate commodities to the establishment should be included in the purchasers' values. The standard input-output tables of the system call for subdivision of the purchasers' values into the three elements of (i) basic values, (ii) distribution and transport margins incurred in the course of the transfer of the goods from the establishment of the producer to the establishment of the user, and (iii) net commodity taxes levied on the commodities at the establishment of the producer and while the goods are in transit between the two establishments. The Standard Class II accounts in respect of commodities require the subdivision of purchasers' values into producers' values and distribu-

tion and transport margins only. Purchasers' values are used in the other standard accounts and tables.

Boundary problems

6.58. In compiling data on the intermediate consumption of industries, problems arise in discriminating between intermediate consumption, on the one hand, and final consumption and fixed capital formation on the other.

Distinguishing intermediate consumption from final consumption

6.59. Business units may acquire goods and services for provision to employees free of charge, or at markedly reduced costs. As long as these goods and services are of clear benefit to the employees, these outlays should be classed as payments in kind of wages and salaries, and not as intermediate consumption. (Paragraphs 7.15 and 7.16 give a fuller definition of these payments.) None the less, not infrequently, the expenditure will be shown in business accounts as intermediate consumption. Conversely, the accounts may show commodities allocated to a final use when from the standpoint of the national accounts, intermediate consumption is involved. For example, under certain contractual arrangements, miners are required to purchase working tools, such as lamps and explosives, out of their money wages. It is reasonable to regard these outlays as intermediate consumption. To record them as such in the national accounts requires a downward adjustment to the wages and salaries entered in the mining companies' accounts and a corresponding upward adjustment in its intermediate consumption. In general, these types of imputations should be confined to cases in which there is a contractual obligation on the part of employees to use part of their compensation for purchases which have no direct utility to them. No adjustments are to be made for the fact that many expenditures by individuals, such as expenditure on the journey to work, contain an element akin to business expenses. On the other hand, travel, entertainment and similar expenses which are incurred by employees in connexion with the business of their employer and for which they are reimbursed, should be classified as outlays on intermediate consumption.

Distinguishing intermediate consumption from fixed capital formation

6.60. It was indicated in paragraph 6.23 above that the accounts of producers may show the costs of making tools, small items of equipment and similar commodities as intermediate consumption, while, in principle, at least some of these outlays should be recorded as capital formation. A number of other questions of discrimination between intermediate outlays and capital outlays are discussed in the section of this chapter on gross capital formation. Important examples of these problems are given in the following paragraphs.

6.61. Some of the expenditure on repair and similar activities which may be recorded in business accounts as intermediate consumption should be considered to be gross capital formation. These are outlays which lengthen the expected lifetime of a fixed asset or which

significantly increase its productivity, for example, substantial alterations in, or additions to, machinery, transport equipment, factory buildings or other structures. Outlays on the repair and maintenance required to make good breakage or to keep fixed assets in proper working condition are classified as intermediate consumption. In the case of residential and non-residential structures, for example, outlays on painting, replacing damaged gutters and plumbing, or repairing lighting or heating systems, should be included in intermediate consumption.

6.62. In general, outlays in respect of the cultivation of producing plantations, other farms or timber tracts or the operation of producing mines, are included in intermediate consumption. However, significant outlays on the extension and development of these units should be considered to be fixed capital formation. This type of expenditure may be on land clearance and reclamation, irrigation works, extension of mining sites and shafts, planting new timber tracts, or planting and cultivating new holdings of fruit-bearing and sap-bearing plants which yield products only after a number of years. When the new holdings become productive, the outlays should be classed as intermediate consumption.

Treatment of research and exploration

6.63. Commodities consumed in the research, developmental and exploratory activities of industries are, in most instances, to be included in intermediate consumption though these outlays may be capitalized in the accounts of business units. These activities may be directed towards specific business purposes, such as prospecting for minerals, developing new commodities or improving the technology of particular production processes, or towards more general ends such as extending scientific knowledge. As the outlays on the commodities used in these activities may not yield concrete benefits and are usually not embodied in tangible assets, the convention is adopted that the expenditure is a form of intermediate consumption. A similar approach is taken in respect of expenditure on advertising, market research and activities, such as public relations, which are designed to improve the goodwill of business units.

PRODUCERS OF GOVERNMENT SERVICES AND OF PRIVATE NON-PROFIT SERVICES TO HOUSEHOLDS (2.2 AND 2.3)

Composition of intermediate consumption

6.64. The intermediate consumption of the producers of government services and of private non-profit services is made up of the purchases of new goods and services on current account, reduced by net sales (sales less purchases) of similar second-hand goods and scraps and wastes therefrom. The goods and services in question are items which are used, for example, organized and directed, distributed, packaged or transformed, by these producers in furnishing their services. The used goods which the private non-profit services acquire for direct, free distribution to households is not to be recorded in their net sales of second-hand goods.

6.65. Goods purchased by government services for purposes of stocks of strategic material and other stocks of special importance to the nation are excluded from

intermediate consumption. Instead, the acquisition of these goods should be recorded in their accounts in respect of stocks. When the commodities are withdrawn from stocks for sale, or for another purpose, the items are to be deducted from stocks. Government sales of large quantities of surplus stocks of goods, which were originally charged to intermediate consumption, should also be recorded in the account in respect of stocks. This will avoid distorting the data in respect of the intermediate consumption during a given period. It may be desirable, if feasible, to make adjustments retroactively in the accounts on stocks and intermediate consumption for large lots of surplus goods which are sold.

6.66. The items which the government and private non-profit services acquire on current account cover purchases of non-durable goods, except the goods described in the preceding paragraph, and of services. In addition, the outlays of government services include durable goods acquired primarily for military purposes. It should be noted in this connexion that the provision of family dwellings for military personnel is to be treated as an industry, and not a government service, and that durable goods purchased primarily for civil defence are part of fixed capital formation. In case military hospitals, schools, airfields or roads are shifted to civilian use, the purchasers' value of these items at the time the shift occurs should, in principle, be deducted from intermediate consumption and added to fixed capital formation.

Classification of intermediate consumption

6.67. Most of the items entering into the intermediate consumption of the producers under discussion will consist of commodities produced by industries and imported, and of similar second-hand goods. The producers of government services may also purchase commodities (services) from the producers of private non-profit services. In addition, the intermediate consumption of the government services will include their direct purchases abroad of other goods and services (1.12.2). Sharp distinctions are drawn in the system between the commodities and other goods and services which enter into the intermediate consumption of the producers of government services. The gross value of the commodities entering into the intermediate consumption of the government and private non-profit services is also separated from the value of the net sales of similar second-hand goods and scraps, and each of these categories of items are classified according to the type of goods and services. (See paragraphs 6.49 through 6.54 above.)

Valuation and recording of intermediate consumption

6.68. Charges to the intermediate consumption of the producers of government and private non-profit services will, in most instances, be recorded at the moment at which the covered goods and services are purchased. The purchase occurs at the time when legal title is acquired to the goods, or the services are rendered. The charges should be made at purchasers' values. In case these producers sell second-hand goods and scraps which are to be accounted for in intermediate consumption, the net proceeds of the sales (the sales receipts less any service charges) are to be deducted

from intermediate consumption at the time the sales are made. It should be noted that in decomposing the value of these sales into transactions in second-hand goods and scraps and transactions in commodities, the sales receipts should be shown in the case of second-hand goods and scraps and the service charges should be included in the intermediate consumption of commodities.

6.69. As in the case of industries, in the standard input-output tables of the system, the purchaser's value of commodities acquired by government and private non-profit services is decomposed into basic values, distribution and transport margins, and net commodity taxes. The Class II accounts in respect of commodities call for the use of producers' values. Purchasers' values are used in all other standard accounts and tables which concern data on the goods and services acquired by government and private non-profit services.

Boundary problems

6.70. Questions frequently arise as to whether certain types of transactions should be classified as the intermediate consumption of the producers of government services or of private non-profit services to households, on the one hand, or the final consumption expenditure of households, on the other. Problems may also be encountered in respect of the organs of government to which a given outlay on intermediate consumption should be assigned.

Payments in kind of wages and salaries

6.71. The wages and salaries of the employees of government services or private non-profit services may include items such as housing, food or clothing which are acquired from industries or imported and are furnished free of charge or at reduced prices. (See paragraphs 7.15 and 7.16 for definition of payments in kind.) In these instances the value of the payments in kind, which is equivalent to the cost of the items to the government or private non-profit service, should be included in the final consumption expenditure of households, and not in the intermediate consumption of the service. When the wages and salaries in kind consist of a service produced by the government or private non-profit body, for example, care in a government or private non-profit hospital which is furnished free of charge, the value of the payment, which is the cost of production of the service, will of course be included in the gross output of the service. The gross output in question will be disposed of to the final consumption expenditure of households; and the counterpart of this sale will be the payment in kind included in wages and salaries.

Other transactions involving households

6.72. When a government service provides goods or services directly to persons, the items acquired from industries or private non-profit services which are used in this activity should always be included in the intermediate consumption of the government service. This is so whether the service in question furnishes the goods or services free of charge, at reduced costs or at full cost. In these cases the government service is the producer of the goods or services which are

provided to persons since, at a minimum, it will organize and direct the activity and, in addition, may repackage and distribute the goods or combine the goods and services purchased from the private producers into new items.

6.73. Questions also arise as to whether to classify the transactions to the intermediate consumption of a government service or the final consumption of households when industries or private non-profit bodies supply services or goods to individuals directly and individually which are paid for entirely, or in part, by the government service. The considerations which should be taken into account in deciding to which flow to assign the entire cost of the service or good in question are: (i) the degree to which the government service organizes and controls the provision of the item and (ii) the extent to which the individual can, and does, choose the unit from which, and the terms on which, the service or good is to be acquired. These criteria should furnish the basis for determining whether the government service or the individual is the purchaser of the item in question and should therefore be charged for its full cost.

6.74. When the government service arranges for, and specifies in detail the terms and standards of, furnishing the service or good, the person receiving it is left with little opportunity to make decisions in respect of these matters. In these circumstances, the government service should be considered to be the purchaser of the service or good. If the person makes some payment in connexion with the transaction, it will be treated as a purchase from the government service. On the other hand, if the person receiving the service or good is, in each instance, free to select the private unit which is to furnish the item, and the terms on which it is to be supplied, he should be considered to be the purchaser of the service or good, irrespective of the extent to which the government service finances the purchase. In these circumstances the participation of the government service in the transaction consists of a transfer payment only to the individual; he decides on and controls the arrangements for acquiring the service or good. The use of these criteria is illustrated below in the case of two types of national health services.

6.75. In the case of one of the schemes, the government health service makes contracts with medical and dental practitioners which specify the terms and standards of the services to be rendered and which set an annual retainer fee to be paid to each practitioner, based on the number of persons registered for his care, as well as the payments for the forms of treatment he actually gives. While individuals are permitted to change practitioners with whom they register, in practice, such shifts are inconvenient and infrequent. The government health service pays almost all of the costs of medical and dental care; the individuals make nominal payments only. The government health service thus organizes and controls the provision of the private medical and dental services furnished to the individuals; and should be considered to be the purchaser of these services.

6.76. In the case of the other national health scheme, the government health service sets the maximum payments which it will make, and general standards, in respect of the various forms of medical

and dental treatment. The individuals covered under the scheme are left free to choose the practitioner from whom to receive care and the terms on which the treatment is to be furnished. The government health service finances, within the limit of the maximum payment it has set, most of the cost of actual treatment received. The government service may pay the medical or dental practitioners directly, or reimburse the individuals for making these payments. The individuals in question thus make the essential decisions and arrangements in respect of the medical or dental services they receive; and should be considered to be the purchasers of these services. The circumstances outlined in this paragraph are also characteristic of most, if not all, government medical insurance schemes.

Transfers in kind between government organs

6.77. Questions of allocating intermediate consumption between a resident government and a foreign government, or between a central government and a local government, may arise in the case of grants of relief food, clothing, other civilian supplies or military equipment. The convention adopted is that these gifts are transfers in kind. Thus the goods should be recorded in the intermediate consumption of the appropriate service of the recipient organ of government only. The grant will be financed by a current transfer on the income and outlay account from the donor organ of government to the recipient organ of government. Such transactions between a resident government and a foreign government should also be recorded in the exports of commodities of the donor country, if the commodities are supplied by her resident industries, and the imports of commodities of the recipient country. Grants of non-durable goods by a government service to a private non-profit body are also considered to be transfers in kind on current account.

Contributions to joint military arrangements

6.78. The net contribution of a government to common construction works and equipment under a joint military agreement should be recorded in the intermediate consumption of the defence service of the government in question. If the net contribution of a government exceeds the value of the works and equipment produced in her domestic territory, the difference would be included in the direct purchases abroad on current account of the given government. If it falls short of the value, the difference would be recorded in the exports of the country in question.

Final consumption expenditure (2.20 and 2.30)

6.79. This section of the chapter concerns the definition and classification of the final consumption expenditure of households, private non-profit services to households, and of government services.

DEFINITION OF HOUSEHOLD FINAL CONSUMPTION EXPENDITURE (2.4 AND 2.32)

Composition

6.80. The final consumption expenditure of households is made up of outlays on new durable and non-

durable goods and services reduced by net sales of second-hand goods, scraps and wastes. The final consumption expenditure of resident and non-resident households in the domestic market is to be classified into outlays on commodities, outlays on other new goods and services, and the net sales of second-hand goods, scraps and wastes. Household final consumption expenditure in the domestic market is also classified according to the object (purpose) of the expenditure and according to the character of the item purchased, that is whether it is a durable, semi-durable or non-durable good or a service. The system provides as well for the classification of outlays on commodities according to the kind of economic activity where the commodities are characteristically produced and the classification of the net sales of second-hand goods, scraps and wastes according to the character of these items. (See paragraphs 6.49 and 6.54 above.)

Time of recording and valuation

6.81. The outlays of households on goods and services should in general be recorded at the moment purchases are made, irrespective of delays in delivery of goods. Except for hire-purchase arrangements, purchases take place at the time at which the households acquire legal title to goods or are rendered services. In the case of hire-purchase arrangements, the purchase is considered to occur at the time the contract in respect of the arrangement is signed; or if there is no formal agreement, at the time the goods are delivered. Similarly, household sales (purchases) of second-hand goods are to be recorded at the time ownership passes.

6.82. Acquisitions of new goods and services should be valued at purchasers' values, including transport, installation and similar charges, but not interest for delayed payment. The value of the net sales of second-hand goods and scraps is equivalent to the excess of the proceeds of households from these sales over the purchasers' value of their acquisitions of second-hand goods, reduced by the included dealers' margins and other transfer costs. The dealers' margins and other transfer costs as well as any service charges which households may pay in respect of the sale are classed as purchases of commodities.

6.83. Household final consumption expenditure is valued at purchasers' values in the standard accounts and tables of the system except in the Class II accounts on commodities and a supporting table to these accounts on input-output data. In the accounts, producers' values are used; and in the supporting tables, basic values are employed.

The two concepts

6.84. Two concepts of household final consumption expenditure are employed in the system, namely, final consumption expenditure in the domestic market (2.4) and final consumption expenditure of resident households (2.32). The former concept concerns the expenditure of resident and non-resident households in the domestic territory of a country. The system calls for compilation first of all of data in respect of this concept. The final consumption expenditure of resident households is derived from the aggregate data in respect

of expenditure in the domestic market by adding the direct purchases which resident households make abroad (1.12.1) and deducting the purchases which non-resident households make in the domestic market (2.12.1).

6.85. The direct purchases which resident households of a given country make abroad are part of the non-commodity imports of the country, and of the outlays of the households on other goods and services. Included in these purchases are the outlays in foreign countries of tourists, diplomatic and military personnel, seasonal workers or border workers, who are residents of the country in question. When a business traveller from a country purchases lodging, food, etc. abroad for which he is reimbursed by his employer, these outlays are not to be included in the direct purchases abroad by the resident households of the country. Instead, the outlays are part of the intermediate consumption of the resident employer of the business traveller and the commodity imports of the country in question.

HOUSEHOLD FINAL CONSUMPTION EXPENDITURE IN SELECTED SITUATIONS

6.86. As was indicated earlier in this chapter, the gross output of industries for use in the household of the owner, for example, agricultural products, gross rent on owner-occupied dwellings, and payments in kind of wages and salaries, are included in the outlays of households on final consumption. (See paragraphs 6.19 through 6.22, 6.25 and 6.71 above.) On the other hand, outlays by employees which are treated as the intermediate consumption of industries, and therefore reductions in wages and salaries, should not be recorded in the final consumption expenditure of households. (See paragraph 6.59 above.) The purchases made by households and financed, in whole or in part, by government services which are discussed in paragraphs 6.73 and 6.74 above will of course be included in the final consumption expenditure of households.

6.87. Questions of apportionment between the final consumption expenditure of households and the intermediate consumption and gross capital formation of industries will occur in the case of goods utilized by professional practitioners and other individual proprietors for business and household purposes, for example, automobiles. The costs of acquiring and operating such automobiles should be divided between households and industries, based on the relative extent to which the automobile is utilized for household and business purposes. Similar problems will arise in respect of rents, fuel, lighting, etc. of quarters utilized for both business and living purposes. Again, it is desirable to subdivide the outlays between the intermediate consumption of industries and the final consumption of households, in the light of the relative extent to which these facilities are put to business and household uses.

HOUSEHOLD PURCHASES FROM GOVERNMENT AND PRIVATE NON-PROFIT SERVICES

6.88. It has already been indicated in this chapter that households will make purchases of goods and services from the producers of government services and the producers of private non-profit services, which, in

a number of instances, will be non-commodity purchases. As households make differing kinds of payments to government or private non-profit bodies, it is necessary to indicate clearly which of the payments are to be considered to be purchases of services or goods.

Government bodies

6.89. The general criteria for identifying purchases of services or goods from government bodies is that there should be a clear link between the payment and the acquisition of the services or goods and the decision to make the payment should be voluntary, that is, in no circumstances required by the public authority. Examples of purchases of services and goods from government services by households are charges for entering museums and public recreational facilities, for publications, for postcards and art reproductions from museums, for goods produced in vocational schools as an incidental part of education, or for radio and television licences where the government furnishes substantial broadcasting services. Fees, nominal or otherwise, which are charged in respect of public hospitals or schools are also classed as purchases of services. Payments in kind of wages and salaries which are part of the gross output of a government service (e.g., care in a public hospital) are of course covered in household purchases. The criteria for classifying these purchases into expenditure on commodities and expenditure on other goods and services have been discussed in paragraph 6.45 above.

6.90. The other types of payments which households make to government bodies are as follows.

(a) *Payments made in respect of services the primary purpose of which is to serve as an instrument of government policy which are compulsory but unavoidable in the only circumstances in which they are useful.* These payments should be considered as current transfers. Examples of such payments are fees paid for passports, driving tests, licences, airport duties and court services. The payments are included in the category "Compulsory fees, fines and penalties" (6.3) of the income and outlay account;

(b) *Payments in respect of charges which do not*

involve the provision of an identifiable service to the payer and which are mainly designed to raise revenue. These payments, for example, motor vehicles duties, income taxes, social security taxes, are classed as direct taxes (6.2 or 6.1). Treating payments such as motor vehicle duties as direct taxes is recommended though these payments will be classified as indirect taxes in the case of other economic agents because no productive activity is associated in the system with the household operation of personal vehicles. (See paragraph 7.65 for a full discussion of these payments.)

Private non-profit bodies

6.91. Payments by households to private non-profit bodies are classified as purchases of services or goods where there is a clear and direct link between the payment and an acquisition of a service or good, that is the amount of the payment is proportional to the quantity and quality of the service or good received. For example, the fees charged by private non-profit schools or hospitals are to be classed as payments for the purchase of a service. On the other hand, membership dues to trade unions, political associations, fraternal organizations or social clubs, and gifts to churches and welfare organizations, are to be treated as current transfers. In the latter instances, there is no direct link between the payments and the services received.

6.92. Government bodies may also make payments to private non-profit services in respect of services and goods which the latter furnish to individuals. These transactions should be classed as purchases. Application of the criteria described in paragraphs 6.73 and 6.74 above may result in including the purchases in the final consumption expenditure of households or the intermediate consumption of the producers of government services.

THE CLASSIFICATION OF HOUSEHOLD GOODS AND SERVICES

6.93. Table 6.1 below gives the scheme to be used to classify the outlays on goods and services which

[text continues on page 109]

Table 6.1. Classification of household goods and services

(The symbols D, SD, ND and S stand for items classified as durable, semi-durable, or non-durable goods and services, respectively.)

1. Food, beverages and tobacco (ND)	tarts and pies other than meat and fish tarts and pies; macaroni and spaghetti cooked, ready for consumption; farinaceous products stuffed with substances other than meat; rice, cooked, ready for consumption.
1.1. Food	
1.1.1. Bread and cereals	
Rice, glazed or polished, but not otherwise worked (including broken rice); maize, meal and flour of wheat, barley and other cereals; cereal preparations; malt (including malt flour) and malt extract; macaroni, spaghetti, noodles, vermicelli and similar products; bread, biscuits, cake and other bakery products; preparations of flour, starch or malt extract, used as infant food or for dietetic or culinary purposes; potato starch; sago, tapioca and other starches; sealing wafers, communion wafers and similar products. Includes	
1.1.2. Meat	
Fresh, chilled and frozen meat of bovine animals, sheep and goats, swine, poultry, horses, game, and edible offal; bacon, ham and other dried, salted or smoked meat and edible offals; meat extracts and meat juices, sausages, meat preparations; and canned meat. Includes meat pies; frog meat; meat of marine mammals such as seals, walruses and whales; meat soups in liquid, solid or powder form,	

Table 6.1 continues

Table 6.1. Classification of household goods and services (continued)

1. Food, beverages and tobacco (ND) (continued)	
1.1. Food (continued)	
1.1.2. Meat (continued)	other than rubber: handkerchiefs except paper handkerchiefs; muffs and sleeve protectors; sports clothing including bathing suits and crash helmets; suspenders, accessories for making up clothing such as buckles, buttons, fasteners, patterns, zippers, etc; hire of clothing.
1.1.3. Fish	2.1.2. Repairs to clothing other than footwear
Fresh, frozen, canned and preserved fish and other sea food and fish preparations. Included are tinned fish soup, snails, fish pie.	2.2. Footwear, including repairs
1.1.4. Milk, cheese and eggs	2.2.1. Footwear
Fresh, evaporated, condensed and dried milk and cream (including buttermilk, skimmed milk, whey and yoghurt); cheese and curd; eggs, including treated eggs.	All footwear including rubbers, gaiters, spats, leggings and puttees; sports footwear other than boots and shoes with ice or roller skates attached.
1.1.5. Oils and fats	2.2.2. Repairs to footwear
Butter, margarine, lard and other prepared edible fats; cooking, salad and other edible oils; peanut butter.	3. Gross rent, fuel and power
1.1.6. Fruits and vegetables other than potatoes and similar tubers	3.1. Gross rents and water charges
Fruits and other vegetables, fresh, dried, frozen or preserved, juices and nuts. Includes fruit-peel, nuts and parts of plants preserved by sugar (drained, glacé or crystallized); edible seeds; garlic; culinary herbs; mushrooms; rhubarb; tomatoes; truffles; vegetable soups, without meat or meat extracts or only traces; dried beans, lentils and other pulses.	3.1.1. Gross rents (S)
1.1.7. Potatoes, manioc and other tubers	All gross rent in respect of dwellings, actual and imputed in the case of owner-occupied houses including ground rents and taxes on the property. House rent will in general be space rent, covering heating and plumbing facilities, lighting fixtures, fixed stoves, wash basins and other similar equipment which is customarily installed in the house before selling or letting. Also included are payments for garbage and sewage disposal and expenditures of tenants on indoor repair and upkeep, such as indoor painting, wallpapering and decorating. Rents paid for rooms in boarding houses, but not in hotels, are included. Rents of secondary dwellings such as summer cottages, mountain chalets, etc., are also included.
Potatoes, manioc, arrowroot, cassava, sweet potatoes and other starchy roots. Includes tinned and other products, like meal, flour, flakes, chips, except starches.	3.1.2. Water charges (ND)
1.1.8. Sugar	3.2. Fuel and power (ND)
Refined sugar and other products of refining beet and cane sugar, not including syrups.	3.2.1. Electricity
1.1.9. Coffee, tea, cocoa	3.2.2. Gas
Coffee, tea, cocoa and their substitutes.	Natural - and manufactured gas, including liquefied petroleum gases (butane, propane, etc.).
1.1.10. Other foods, including preserves and confectionery	3.2.3. Liquid fuels
Syrup; jam, marmalade and table jellies; honey; chocolate and sugar confectionery; salt; spices; prepared baking powders; sauces; mixed condiments and mixed seasonings; ice cream; vinegar; yeast.	Heating and lighting oils.
1.2. Non-alcoholic beverages	3.2.4. Other fuels
Mineral waters and other soft drinks	Coal, coke and briquettes; firewood; charcoal; peat; purchased heat.
1.3. Alcoholic beverages	4. Furniture, furnishings, and household equipment and operation
Spirits; wine; beer and cider, including beer and cider with low alcohol content.	4.1. Furniture, fixtures, carpets, other floor coverings and repairs (D)
1.4. Tobacco	4.1.1. Furniture, fixtures, carpets, other floor coverings
Cigars and cheroots; cigarettes; smoking and chewing tobacco; cigarette paper; snuff.	Beds, chairs, tables, sofas, storage units, and hallboys; carpets, large mats and linoleum; cribs, high chairs, playpens; door and dividing screens; sculptures, carvings, figurines, paintings, drawings, engravings and other art objects; venetian blinds; fireplace equipment; other furniture and fixtures.
2. Clothing and footwear (SD)	4.1.2. Repairs to furniture, fixtures, carpets, other floor coverings
2.1. Clothing other than footwear, including repairs	
2.1.1. Clothing other than footwear	
All made-up clothing and clothing materials including haberdashery, millinery and custom tailoring and dressmaking. Includes aprons, smocks and bibs; belts; gloves and mittens	

Table 6.1. Classification of household goods and services (*continued*)

4. Furniture, furnishings, and household equipment and operation (continued)
- 4.2. Household textiles, other furnishings, and repairs (SD)
- 4.2.1. Household textiles and other furnishings
Curtains, sheets, table-cloths and napkins, towels, tapestries, bedding mattress and other coverings, of all materials; furnishings such as ashtrays, candlesticks and mirrors; awnings, counterpanes and door mats; flags; garden umbrellas; garment and shoe bags, laundry hampers and bags, and shoe racks; mosquito nets; steamer and travelling rugs; wastepaper baskets, flower and plant boxes and pots.
- 4.2.2. Repairs to household textiles and other furnishings
- 4.3. Heating and cooking appliances, refrigerators, washing machines and similar major household appliances, including fittings and repairs (D)
- 4.3.1. Heating and cooking appliances, refrigerators, washing machines and similar major household appliances, including fittings
Covers major equipment like clothes washing and drying, dishwashing, ironing, sewing or knitting machines; electric floor scrubbing, waxing and polishing machines; vacuum cleaners; water softening machines; refrigerators, food freezers and ice boxes; room air-conditioning units; cooking appliances other than spirit stoves and plate-warmers; reflector ovens; camping stoves and similar appliances; toasters; electric fans, and electric coffee-makers and heating appliances; lawn mowers; non-portable safes; water pumps.
- 4.3.2. Repairs to heating and cooking appliances, refrigerators, washing machines and similar major household appliances
- 4.4. Glassware, tableware and household utensils including repairs (SD)
- 4.4.1. Glassware, tableware and household utensils
Pottery, glassware, cutlery, silverware; hand, kitchen and small garden tools (not power-driven); all types of kitchen utensils; portable toilet and sanitary utensils for indoor use; electric bulbs, plugs, wire, cable and switches; heating-pads, sauce-pans, non-electric coffee-makers; thermos bottles and flasks; watering cans, wheelbarrows, garden hose and sprinkling devices, and small garden appliances (not power-driven); portable money boxes and strong-boxes; household scales; ladders; locksmith's wares.
- 4.4.2. Repairs of glassware, tableware and household utensils
- 4.5. Household operation except domestic services
- 4.5.1. Non-durable household goods (ND)
Household goods of limited durability such as matches, household soap, scourers, polishes, cleaning materials; household paper products; candles and lamp wicks; clothes hangers; shoe polish; clothes pins; mops, brooms and brushes; rope, string and twine; dyes for dyeing clothing and household textile furnishings; nails, nuts and bolts, screws, tacks, washers, hooks, knobs etc.; needles and pins; insecticides, fungicides and disinfectants; aluminium foil, etc.
- 4.5.2. Household services excluding domestic service (S)
Cleaning, dyeing and laundering; hire of furniture, furnishings and household equipment, including payments by sub-tenants for the use of furniture, etc.; service charge for insurance of household property against fire, theft and other accidents; payments for services such as chimney cleaning, window cleaning, snow removal, exterminating, disinfecting and fumigating, etc.
- 4.6. Domestic services (S)
Remuneration in cash and in kind of domestic servants, cleaners, cooks, etc. Includes payments in cash and in kind to baby-sitters, chauffeurs, gardeners, governesses, tutors, etc.
5. Medical care and health expenses
- 5.1. Medical and pharmaceutical products (ND)
Medicines, vitamins and vitamin preparations; cod and halibut liver oil; clinical thermometers, hot-water bottles and ice bags; first aid kits, elastic medical hosiery and similar medical goods.
- 5.2. Therapeutic appliances and equipment (D)
Major appliances and equipment: eye glasses; hearing aids; glass eyes, artificial limbs, orthopedic braces and supports; surgical belts, trusses and supports; medical massage equipment and health lamps; wheel chairs and invalid carriages, motorized or not.
- 5.3. Services of physicians, nurses and related practitioners (S)
Fees paid to physicians, psychiatrists, nurses, physiotherapists, midwives, dentists, etc. who are not employed by hospitals; payments to medical and dental laboratories for tests, analyses, etc.; rental of therapeutic equipment
- 5.4. Hospital care and the like^a (S)
Fees to hospitals and clinics, including fees for services provided by physicians, nurses, etc. employed by, and ambulances of, these hospitals and clinics.
- 5.5. Service charges on accident and health insurance (S)
6. Transport and communication
- 6.1. Personal transport equipment (D)
Motor cars; trailers and caravans; motor cycles and bicycles.
- 6.2. Operation of personal transport equipment
- 6.2.1. Tires and tubes, parts and accessories; and repair charges (SD)
- 6.2.2. Gasoline, oils and greases (ND)
- 6.2.3. Other expenditure (S)
Payments for parking and garaging; bridge, tunnel, ferry and road tolls; driving lessons; hire of personal transport equipment; service charges on insurance of personal transport equipment.
- 6.3. Purchased transport (S)
Fares on railways, trams, buses, cabs, ships and airlines; fees for transporting personal transport equipment in ships, trains and aircraft; fees for baggage transfer, storage and excess charges; tips to porters, etc.; service charges for baggage and special transport accident insurance; moving and storage of household goods.

Table 6.1 continues

Table 6.1. Classification of household goods and services (*continued*)

6. Transport and communication (continued)	8. Miscellaneous goods and services
6.4 Communication (S)	8.1 Personal care and effects
Postal, telephone and telegraph services, including all expenditure on new postage stamps	8.1.1 Services of barber and beauty shops, etc (S) Services of barber and beauty shops, baths and massage parlours.
7 Recreation, entertainment, education and cultural services	8.1.2 Goods for personal care (SD) Toilet articles and preparations including shaving equipment; electric hair driers and hair clippers, electric or not, permanent wave sets for home use; tooth and toilet brushes; repairs to such items.
7.1 Equipment and accessories, including repairs	8.2 Goods n.e.c.
7.1.1 Wireless and television sets and gramophones (D)	8.2.1 Jewellery, watches, rings and precious stones
Wireless and television sets; gramophones, record players and tape recorders; radio transmitting and receiving sets for amateur radio stations; clock-radios.	8.2.2 Other personal goods (SD) Travel goods, handbags and similar goods; umbrellas, walking sticks and canes; pipes, lighters, tobacco pouches; pocket knives; sunglasses; clocks; baby carriages; repairs to such items.
7.1.2 Photographic equipment, musical instruments, boats and other major durables (D)	8.2.3 Writing and drawing equipment and supplies (SD) Pens and pencils; rulers, slide rules, drawing sets and similar instruments; pencil sharpeners; paper punches, hand stamps and seals; typewriter ribbons and carbon and stencil papers; stationery; erasers, ink and paper clips.
Aeroplanes; boats and outboard motors; cameras, projection equipment, other photographic equipment, binoculars; microscopes and telescopes; pianos, organs, violins, cornets and other major musical instruments; typewriters; power-driven equipment for wood-working, metal-working etc.; horses; swimming pools which are not permanent fixtures.	8.3 Expenditure in restaurants, cafés and hotels ^a (S) Included are the value of food, drinks and tobacco consumed; tips for services rendered by the personnel of restaurants, cafés and hotels; fees for use of camping sites and facilities.
7.1.3 Other recreational goods (SD)	8.3.1 Expenditure in restaurants and cafés
Goods purchased in connexion with hobbies which are not included in 7.1.2; harmonicas and other minor musical instruments not included in 7.1.2; records; flowers; sports equipment and supplies except sports clothing and sports footwear; camping equipment; films and other photographic supplies; used postage stamps for philatelic purposes; children's outdoor play equipment; pets other than horses; feeding stuffs for pets; exercising equipment.	8.3.2 Expenditure for hotels and similar lodging services
7.1.4 Parts and accessories for, and repairs to, recreational goods (SD)	8.4 Packaged tours ^b (S) All inclusive tours which provide for travel, food, lodging, guide services, etc.
7.2 Entertainment, recreational and cultural services, excluding hotels, restaurants and cafés (S)	8.5 Financial services, n.e.c. (S) Service charges for life insurance and for insurance against civil responsibility in respect of injuries to other persons or other persons' property not arising from the operation of personal transport equipment; actual charges for bank services; fees and service charges for brokerage, investment counselling, household finance company loans and services of similar financial institutions; charges for money orders and other financial services provided by the post office; and administrative charges of private pension schemes.
Expenditure on theatres, cinemas, sports and other places of public amusement; expenditure on private entertainment such as hiring musicians, magicians, clowns, etc for private parties; bridge, social dancing and sports lessons; gambling; portrait and other services, such as film developing and print processing furnished by photographers; hire of wireless and television sets, aeroplanes, boats, horses and other recreational equipment; veterinary and other services for pets; fees for use of teleferics, ski-lifts and similar conveyances; fees to mountain, ski, tourist and other guides; radio and television licences where government broadcasting stations exist; admission fees to museums, art galleries, historical monuments, and botanical and zoological gardens.	8.6 Services, n.e.c. (S) Fees for legal services, to tax consultants and to employment agencies; membership dues in professional associations; charges for undertaking and other funeral services; expenditure for duplicating, blueprinting, photostating, addressing, mailing and stenographic services; payments for copies of birth, death and marriage certificates; charges for newspaper notices and advertisements; etc.
7.3 Books, newspapers and magazines (ND)	for educational services
Books, newspapers and other printed matter.	^b In addition it is desirable to have data on the sub-division of the total outlay into transport, lodging, food and other items.
7.4 Education ^a (S)	
Fees to schools, universities, etc. excluding, if feasible, payments for food, beverages and shelter.	

^a In addition, it is desirable to have separately the outlay on food, beverages and tobacco made in the case of restaurants, cafés and hotels, hospitals and other medical institutions, and if this expenditure has been included, in the case of payments

for educational services

^b In addition it is desirable to have data on the sub-division of the total outlay into transport, lodging, food and other items.

households make in the domestic market, according to the major object (i.e., the purpose) for which the goods and services are acquired. This classification of household final consumption expenditure is needed for studies of consumers' demand and welfare. The scheme of classification is also designed to separate goods from services and to draw distinctions between durable, semi-durable and non-durable goods. Semi-durable goods differ from durable goods in that their expected lifetime of use, though equivalent to one year or somewhat longer, is often significantly shorter and their purchasers' value is substantially less. The classification of goods according to degree of durability is valuable for such purposes as assessing household stocks of goods and the cyclical variation in consumers' demands.

6.94. The goods included in the categories at a given level of classification of the scheme in table 6.1 are homogeneous in respect of the major object of their use, but sometimes not in respect of their degree of durability. In certain instances, goods and services are also covered in the same category since these items are put to the same type of use. In general, more detailed categories are needed in order to separate goods from services and to classify goods according to degree of durability than in order to classify goods according to the major purpose for which they are used. Since the primary aim of this scheme of classification is to distinguish between the purposes for which household purchase goods and services, the international classification has not been overburdened with the detailed categories which in certain instances are required in order to distinguish sharply between goods of differing durability. It has also been essential to limit the detail of classification of the scheme in order that most countries would find it practicable to use. It may however be feasible in the case of a number of countries to devise practicable national classifications of household goods and services which are comparable with the international classification and are sufficiently detailed in order to distinguish precisely between goods of differing degree of durability. It would, in these instances, be desirable to construct such schemes of classification so that precise data may be compiled in respect of goods, classified according to degree of durability, and in respect of services.

6.95. As is said in paragraph 5.92, the related categories of the object classification of households' goods and services and the purpose classifications of government services and of private non-profit services to households, are aligned, one with the other. The categories of each of the schemes relating to such purposes as health, care, education, recreation and cultural services are defined so as to permit the summation of data on the final consumption expenditure of households and governments and private non-profit services in respect of each of these objectives. Because of this, as well as the essential character of the classification of household goods and services, outlays for care in hospitals, other medical and welfare facilities, and perhaps educational institutions, are not to be sub-divided into components such as food, lodging, health services etc. This principle is followed throughout the scheme of classification, for example, in the case of restaurants and hotels, ship and rail travel, and all-inclusive package tours. However, in order to provide

data for purposes of certain types of analysis it is suggested that supplementary figures be compiled in respect of the food, drink, lodging, transport etc. included in the relevant outlays. The two-digit level of classification in the scheme set out in table 6.1 and in the related scheme of classification of the International Labour Office also are aligned, one with the other.

FINAL CONSUMPTION EXPENDITURE OF GOVERNMENT AND PRIVATE NON-PROFIT BODIES (2.20 AND 2.31)

6.96. The final consumption expenditure of government services and private non-profit services to households is equivalent to the value of the services and goods which they produce for their own use on current account (1.5 and 1.7, respectively). The value of these services is in each instance equal to the excess of the gross output of the producers over the sum of their sales of services and new goods and their own-account fixed capital formation which it is not feasible to segregate as an industry. The sales of services and goods have already been described in the case of households in paragraphs 6.89 and 6.91 above. The paragraphs below are devoted to defining the sales to industries and between the non-profit producers themselves.

Sales to industries

6.97. Business units, like households, make the following types of payment to government bodies: in respect of the purchase of goods and services; airport, passport, court and licence duties and fees; fines and penalties; and in respect of taxes. The principles of distinguishing these categories of payments, one from the other, are identical with the criteria given in paragraphs 6.89 and 6.90 above. In the case of purchases, there should be a clear link between the payment and the acquisition of services or goods and the decision to make the payment should be voluntary. On the other hand, passport, airport, court and similar duties and fees are compulsory but unavoidable payments linked with given services; and taxes are primarily designed to raise revenue.

6.98. Examples of items which business units may purchase from government services are timber from forest preserves, seed from agricultural experimental stations, publications, or surplus goods. These purchases, except in the case of surplus goods, are a form in which the producers of government services dispose of their gross output and are classed as sales (purchases) of commodities. Sales of surplus goods are to be recorded in the accounts of the appropriate government service in respect of stocks or intermediate consumption. Passport, airport, court, licence and similar duties and fees are in the case of industries and other classes of producers classed as indirect taxes. This is also so in respect of motor vehicle duties, which, unlike the aforementioned fees, are primarily designed to raise revenue. Income taxes are the form in which business units pay direct taxes; and fines and penalties are treated as another category of current transfers. (The transactions in respect of indirect and direct taxes, etc. are dealt with in detail in paragraphs 7.25 through 7.33 and Table 7.1.)

6.99. Most of the payments which business units make to the private non-profit bodies serving house-

holds are likely to be classed as transfers. However, the business units may make some purchases of services and new goods, for example, payments in respect of publications or research and consultation services from units of educational institutions which cannot be separated out into industries. In all these instances, there should be a clear and direct link between the payment and the provision of specific services and/or goods; and the transactions should be classed as sales (purchases) of commodities.

Between the non-profit producers

6.100. Government bodies may also make payments to private non-profit bodies which should be classed as purchases of services or new goods. In these instances there must be a clear and direct link between the payment and the provision of specified services and goods. For example, payments made in connexion with a contract between a government department and a private non-profit body which specifies the services to be rendered, the links between the services and the payment, and the standards to be observed, should be classed as purchases. The government service may make the purchases for the benefit of individuals, for example, in the circumstances described in paragraphs 6.73 and 6.74 above, or for other purposes. When government services make payments to private non-profit bodies in circumstances other than those just described, the payments are to be treated as transfers. In general, the sales of private non-profit services to government bodies would be sales (purchases) of commodities.

6.101. Sales (purchases) of services and new goods may also occur between organs (levels) of government, for example, a central government and a local government. The criteria for distinguishing between receipts (payments) for services and goods and current transfers, in these cases should be the same as in the case of similar transactions between government departments and private non-profit bodies. Transactions in services and new goods between organs of general government are however to be classed as non-commodity sales (purchases).

Gross capital formation (2.5 and 2.6)

6.102. Gross capital formation, that is increases in stocks and gross additions to fixed assets, during a period of account is made up of the outlays of producers on commodities which do not enter into the intermediate consumption of the period. The fundamental distinction between intermediate consumption and gross capital formation is whether commodities are considered to be used up during a period of account, or to yield benefits in the future. Nonetheless, as is indicated in paragraph 6.63 above, intermediate consumption does cover such outlays of producers as research and development or advertising expenses. This convention has been adopted because the outlays are not embodied in tangible assets and the accrual of future benefits from the expenditure is uncertain.

6.103. Gross capital formation falls short of measuring gross additions to tangible assets during a period of account. Non-reproducible tangible assets,

such as land, mineral deposits, and the natural growth of standing timber or crops, are not included in gross capital formation, just as these assets are excluded from the supply of commodities. However, outlays on improving land and developing or extending mining sites, timber tracts and plantations, are considered to be part of gross fixed capital formation. In any case, purchases and sales of land, mineral deposits, timber tracts, etc. are shown in the capital finance accounts of the system; and the value of holdings of these capital assets is to be recorded in the balance sheet accounts.

6.104. It is convenient to deal with the definition, valuation and classification of increases in stocks and gross additions to fixed assets separately, though problems of distinguishing between these two flows do arise.

THE SCOPE OF STOCKS (2.5)

General definition

6.105. Stocks consist largely of the materials and supplies, work-in-progress, and finished products and goods in the possession of industries. Standing timber and crops are excluded from stocks, but logs and harvested crops are included. Producers of government services may also engage in transactions in stocks. These transactions relate primarily to stocks of strategic materials, grains and other commodities of special importance to the nation, and to the sales of large lots of surplus goods discussed in paragraph 6.65 above.

6.106. In principle, the stocks of the producers consist of goods which they own, that is have legal title to, whether or not they are in physical possession of the goods. In practice, it may be necessary to deviate from this principle in recording additions to, or withdrawals from, stocks in the case of imports or exports of goods. (See paragraphs 6.131 and 6.132 below.)

Boundary problems

6.107. Questions of the boundary line between increases in stocks and gross fixed capital formation during a period of account arise in respect of heavy machinery and equipment, structures and other forms of construction which are produced on order, and take a considerable time to complete. While work put in place during a period of account on uncompleted heavy machinery and equipment is to be accounted for in the increase in the stocks of the producer of the goods, work put in place on structures, roads, dams, ports and other forms of construction is to be included in gross fixed capital formation of the unit for which the construction is being carried out. Construction projects generally take longer to complete entirely than do machinery and equipment; and are not infrequently put to use when partially completed. And, payments which cannot be separated from other outlays on fixed capital formation are common in respect of construction projects. Moreover, considering work put in place on construction as fixed capital formation results in the most useful data for purposes of analysing the factors of demand for commodities which contribute to fluctuation in economic conditions. For purposes of other aspects of economic analysis, for example, capital output coefficients, it is desirable, if feasible, to classify

the value of construction works into completed and uncompleted projects.

6.108. Questions of distinguishing between stocks and fixed assets also arise in respect of livestock. Breeding stocks, draught animals, dairy cattle and animals raised for wool clips should, in principle, be classed as capital assets. Other livestock are to be considered part of stocks. Some countries may find it necessary in practice to restrict the scope of gross fixed capital formation in livestock to a greater degree than is proposed. This is so because certain of the animals to be classed as capital assets may frequently be slaughtered for meat, hides, etc. after a few years of use, or are not easily distinguished in the livestock statistics of the country. In order to facilitate international comparisons of data on livestock, individual categories in respect of livestock are included in the recommended classification of increases in stocks and of gross fixed capital formation.

THE VALUATION OF CHANGES IN STOCKS

6.109. In principle, gross additions to stocks should be evaluated at purchasers' values where acquired from other economic agents, or at the producers' values where the additions have been processed internally. The purchasers' and producers' values which are current at the time the additions are made should be used. Similarly, stocks withdrawn for internal processing, or on sale, are to be evaluated at current producers' values if already processed internally or at purchasers' values if this is not the case. Producers' values for partially processed commodities are of course to be assigned in terms of the prices which the given commodities would fetch on the market if sold in that state.

6.110. These principles of valuing gross additions to, and withdrawals from, stocks are consistent with the principles of valuing gross output and intermediate consumption. (See paragraphs 6.16 and 6.56 above.) The gross output of commodities will be valued uniformly, irrespective of the use to which the items are disposed of. This also ensures that whenever part of the stocks is either sold or withdrawn and used up in production, a charge will be made in respect of stocks that is sufficient to provide for its replacement at current prices on the market.

6.111. The principles of stock valuation used in business accounting vary; and are often different from those required for the national accounts. While additions to, and withdrawals from, stocks which have been purchased are generally valued at purchasers' values, additions and withdrawals which have been processed internally are often valued at direct costs, explicit costs, or these costs plus a fixed margin, instead of at producers' values. Prices in respect of withdrawals may be assigned at cost on the basis of first-in, first-out; last-in, first-out; average over some period, etc. or, if lower, market values may be utilized in the case of purchased goods. Thus, the accounts of business units in respect of stocks will probably neither reflect the mode of valuation nor measure the physical change in stocks which are wanted for the national accounts. The values on these accounts will reflect changes in the unit prices, in addition to changes in the quantities, of commodities; and will consequently include capital gains

or losses arising from fluctuations in prices. Moreover, a limited degree of comparability will exist in the book values which business units give in respect of stocks.

6.112. Unless data are available in respect of the quantities of individual commodities held in stocks, it will therefore be necessary to adjust the available business accounting data in order to approximate as closely as is possible the value of the physical change in stocks during a given period, measured in the appropriate prices on the market, current at the time additions and withdrawals were made. The measure of physical change should take account of withdrawals from stocks due to the normal losses and damages experienced in stocks of commodities.

6.113. The closest feasible approximation to the desired measure may be the difference between the levels of stocks at the beginning and end of the period, both valued at the appropriate average prices ruling over the period. In determining the average prices, it may be impracticable to use producers' values in the case of commodities which have been processed internally. Instead, it may be necessary to use the explicit unit costs ruling over the period. It should be feasible to use purchasers' values in the case of goods which have not been processed internally. In any case, in making the estimates, it will be necessary to distinguish stocks of purchased goods, work in progress and finished goods, one from the other, and to classify each type of stock into broad categories of commodities. The estimates of the value of the physical change in stocks during a given period will no doubt differ from the change in value shown by the book figures of business units. It will be desirable to exhibit the two sets of data.

CLASSIFICATION OF STOCKS

6.114. Changes in stocks are classified in the standard tables of the system according to the kind of economic activity of the owner or according to type. The latter classification is given in table 6.2 below. As in the case of the other uses to which goods and services are disposed of, the system also provides for the classification of changes in stocks of goods into (i) stocks of newly produced and imported goods classified according to the industries which characteristically produce these commodities, (ii) stocks of second-hand goods classified according to type of good, and (iii) stocks of scraps and wastes, classified according to type of material.

DEFINITION OF GROSS FIXED CAPITAL FORMATION (2.6)

Composition

6.115. Gross fixed capital formation consists of the outlays of industries and the producers of government services and of private non-profit services to households, on additions of commodities to their fixed assets, reduced by their net sales (sales less purchases) of similar second-hand and scrapped goods. The commodities in question may be purchased or produced on own account. Included are (i) the acquisition the producers make for civilian use of durable goods, items the lifetime of use of which is one year or more, except land, mineral deposits, timber tracts and the like,

Table 6.2. Classification of stocks according to type

1. *Goods producing industries*

Agriculture, forestry and logging, and fishing; mining, manufacturing, and electricity, gas and water supply; and construction.

1.1. *Materials and supplies*

All materials, components, parts and supplies acquired for extracting, processing, fabricating, assembling, repairing, etc. commodities and for construction works; coal, oil and other fuels purchased for consumption; stocks of fertilizers, insecticides, seeds, feeds and similar goods of agricultural producers; greases and other lubricants; purchased non-durable containers, factory packaging, office and other supplies.

1.2. *Work-in-progress*

Goods which have been partially processed, fabricated or assembled by the goods-producing establishments, but which are not usually sold, shipped or turned over to other establishments without further processing. Partially completed construction works are excluded.

1.3. *Livestock except breeding stock, dairy cattle and the like*

Livestock raised for slaughter; all chickens and other fowl; and other livestock except those enumerated in table 6.3 below.

1.4. *Finished goods*

Commodities of the goods-producing establishments which are ready for sale or shipment by these units, including items which are usually sold by the units in the same form as when purchased. Construction works are excluded.

2. *Wholesale and retail trade*

Goods acquired by units classified to wholesale and retail trade for sale or for use as fuels and supplies.

3. *Other industries*

Stocks of coal, oil and other fuel and of repairing and maintenance supplies of the transport, communication, financial and other industries n.e.c.; non-durable containers, packaging, office and miscellaneous supplies; all other stocks of these industries.

4. *Stocks of government services*

Stocks of strategic materials, grains and other commodities of special importance to the nation, of the producers of government services.

(ii) expenditure on the improvement and alteration of the durable goods which significantly extend the expected lifetime of use, or productivity, (iii) outlays on the reclamation and improvement of land, and the development and extension of timber tracts, mines, plantations, orchards and similar agricultural holdings, (iv) purchases of breeding stocks, draught animals, dairy cattle and the like, and (v) dealers' margins, service charges and other transfer costs in respect of transactions in land, mineral deposits, timber tracts and similar non-reproducible assets. Excluded from gross fixed capital formation are government outlays in respect of construction works and other durable goods which are to be used primarily for military purposes.

6.116. The commodities which enter into fixed capital formation are new items which are produced

domestically and new and second-hand goods which are imported. Included among the imports of a country are the outlays in foreign countries of the embassies, consulates and other extra-territorial establishments of the government of the given country, on new non-transportable and transportable fixed assets, reduced by their net sales of similar second-hand and scrapped goods. Similarly, the net outlays of foreign embassies, consulates and other diplomatic bodies located in a country on fixed assets produced there, are to be recorded in the exports, and not the gross fixed capital formation of the given country. The fixed capital outlays of international agencies located in the country are treated in an identical manner.

6.117. As in the case of the other uses to which goods and services are disposed of, the transactions in respect of gross fixed capital formation are classified in the system into (i) outlays on commodities, classified according to the industries where the items are characteristically produced, (ii) net sales of second-hand fixed assets, classified according to type, and (iii) sales of scrapped fixed assets classified according to material.

Time of recording

6.118. As in the case of other transactions, the acquisition of fixed assets by purchasers should, in principle, be recorded in their capital accounts at the moment they take legal possession of the items in question. When machinery and equipment are bought in completed form, the purchaser usually acquires the legal title to the items when they contract for delivery of the goods in question. In the case of hire-purchase arrangements, it is desirable to adopt this time as the moment at which the buyer acquires ownership though legal title passes at a much later date. When machinery and equipment are produced on order for buyers, they are considered to take ownership of the goods at the time these items are completed. This is often the position from a legal standpoint though they may make progress payments in respect of the orders, and enter these advances in their capital accounts. For purposes of the national accounts, the progress payments are, in principle, to be treated as trade advances of the buyers of the machinery and equipment to the producers of these items. In the case of the construction on order, of buildings, roads, dams and other works, however, the buyers are considered to take possession of any work which has been put in place on the project. When producers make fixed assets on their own account, the value of the work put in place during a period of account should also be classed as the gross fixed capital formation of the period.

Valuation

6.119. Outlays on additions to the stock of fixed assets should, in principle, be valued at purchasers' values. However, it may be impracticable to value fixed assets produced on own-account in this manner, particularly in the case of the construction of structures and other works and alterations in fixed assets. Not infrequently, it may be necessary to resort to valuing such own-account production at explicit cost, including any imputations which may be required in respect of the employed own-account labour. The purchasers'

values in respect of gross fixed capital formation are sub-divided into (i) basic values, distribution and transport margins and net commodity taxes in one of the standard input-output tables of the system and (ii) producers' values and distribution and transport margins in the Class II accounts on commodities. Purchasers' values, unpartitioned, are used in the other standard accounts and tables of the system.

6.120. The purchasers' values in respect of gross additions to fixed assets should cover all costs directly connected with the acquisition and the installation of the items for use. These values comprise the cost of purchase of the fixed assets on the market, customs duties, purchase and other indirect taxes and fees paid to government, transport, delivery and installation charges, direct preliminary outlays such as for site clearance and the fees of architects, designers and engineers, and all legal costs. Indirect outlays for purposes of financing the acquisition of the fixed assets, for example, flotation costs in respect of security issues such as underwriters' commissions and registration charges, service charges in respect of loans, and expenses of special advertising campaigns, are excluded. Such expenses are treated as intermediate consumption in the period of account in which they are incurred though they may be capitalized in the business accounts.

PROBLEMS OF DISTINGUISHING GROSS FIXED CAPITAL FORMATION FROM OTHER FLOWS

6.121. In addition to the questions of the borderline between increases in stocks and gross fixed capital formation, which are discussed in paragraphs 6.107 and 6.108 above, difficulties may occur in drawing distinctions between intermediate consumption and gross fixed capital formation. Though common problems of the type are dealt with in the earlier section of this chapter on intermediate consumption, it will be useful to consider some of these questions in greater detail here.

Military facilities

6.122. Outlays by government services on the construction or alteration of family dwellings, but not military barracks, for personnel of the armed forces, are classified as gross fixed capital formation. The distinction between family dwellings and military barracks is based on the type of housing provided; family dwellings are facilities which are similar to the dwellings which are normally used by civilians. On the other hand, the construction of schools, hospitals, airfields or roads for use by the armed forces is classed as intermediate consumption though these facilities might be put to civilian use. This is also the case for motor vehicles used for military purposes. The transfer of such facilities to civilian purposes at a later date constitutes an addition to the stock of fixed assets. Such additions should, in principle, be evaluated at the purchasers' values current at the moment they are made. The counterpart entry is a reduction in the intermediate consumption of the relevant government service. Outlays on the conversion of schools, hospitals, motor lorries and the like to civilian use are also to be included in gross fixed capital formation.

Capital and current repairs

6.123. Expenditure on current repair and maintenance make good breakages in fixed assets and keep them in proper working order, while outlays on capital repair and alteration lengthen the expected normal lifetime of use of fixed assets, or increase the productivity of these goods, significantly. The capital outlays should consist of significant alterations and additions to, or replacements in, the parts of fixed assets. In order to be classified as fixed capital formation, the newly incorporated parts should have an expected lifetime of use of one year or more and involve substantial outlays; and should also lengthen the expected lifetime of the use of the fixed assets, or alter the character or volume of the services which they yield. Thus, for example, the replacement of the tires of trucks, dies, bits and cutting parts of presses or lathes, painting and re-decorating of dwellings, should not be treated as gross fixed capital formation. On the other hand, the complete replacement of engines in trucks or of motors in presses and lathes, or the addition of rooms to dwellings, may be treated as fixed capital formation.

Outlays on development

6.124. Significant expenditure on the development and extension of plantations, farms, timber tracts, mines and similar tangible capital, should be treated as gross fixed capital formation rather than as intermediate consumption. These outlays may be for land clearance and reclamation, preparation and extension of sites, pits and wells for extracting minerals and petroleum, construction of irrigation works and wells, preparation and initial stocking of fish ponds, clearing and planting timber tracts, and clearing, planting and tending orchards, rubber plantations, vineyards and similar new holdings, which begin to yield crops only after years of cultivation. When such new holdings become productive, outlays on replanting, cultivating and other operations should be classed as intermediate consumption. In general, relatively small outlays for such purposes as fencing and water holes for operating farms and ranches are to be considered as intermediate consumption. Small-scale expenditure on installing timber supports and lengthening mining shafts and on sinking test shafts and similar construction works in prospecting for minerals are also to be classed as intermediate consumption.

Structures

6.125. In the case of the construction of dwellings, factories and commercial buildings, the gross fixed capital formation should cover all outlays for purposes of placing these structures in condition for use, except the value of the land before improvement. For example, the capital outlays in respect of dwellings should include the cost of external and internal painting, installing all permanent fixtures, such as fixed stoves, central heating, lighting and water-supply facilities, and all other fixed equipment which is customarily installed before renting. The outlays should not include expenditure on furniture, household implements and similar equipment.

6.126. Gross fixed capital formation in dwellings, factories and commercial buildings will also include

major alterations in, and additions to, the structures, for example, installation of new central heating and air conditioning systems, addition of floor area, rooms, etc. and major changes in dividing walls. However, external and internal painting of old buildings and repair or replacement of worn-out and damaged gutters, plumbing and boilers, are to be treated as intermediate consumption.

6.127. Outlays on current repair and maintenance of rented dwellings should be included in intermediate consumption if paid for by the owner, but in household consumption expenditure if paid for by the tenant. In the case of owner-occupied dwellings, the outlays would be included in the intermediate consumption of the industry "Owner-occupied dwellings", and thus in the imputed gross rent and final consumption expenditure of the owners.

6.128. When dwellings, factories or commercial buildings are purchased (sold), the value of the structure and the transfer costs only are to be accounted for in gross fixed capital formation. The value of the

site of the structure which may be part of the transaction should be accounted for in the flow "Purchase of land, net" in the capital finance accounts of the transactors. It may not always be feasible to separate the value of the land from the value of the structure. Where this is the case, the entire value of the transaction, except the transfer costs, might be included in the value of the net sales of second-hand fixed assets. The transfer costs are to be included in the commodity component of fixed capital formation.

CLASSIFICATION OF GROSS FIXED CAPITAL FORMATION

6.129. In addition to the classifications described in paragraph 6.117 above, the system provides for the classification of gross fixed capital formation according to the kind of economic activity of the owner and the type of fixed assets. The classification according to the type of fixed assets is given in table 6.3 below. The definitions of the categories shown in the table supplement the definitions of gross fixed capital formation given above.

Table 6.3. Classification of gross fixed capital formation according to type

1. Residential buildings

Value of work put in place on the construction of buildings which consist entirely or primarily of dwellings; expenditure on major alterations in, and additions to, these buildings; and transfer and similar costs in respect of purchase (sale) of existing residential buildings. Included are outlays on the external and internal painting of new buildings and on the installation of new permanent fixtures such as fixed stoves, central heating, air conditioning, lighting, plumbing and water-supply facilities, and all other fixed equipment customarily installed before dwellings are occupied. Excluded are repair and replacement of worn-out or damaged fixed equipment and fixtures. Also classified here are the sales proceeds and purchase cost, except the included transfer costs, of transactions in existing residential buildings, leaving out the site of the buildings. Hotels, autocourts and similar buildings operated for purely transient occupancy are considered to be non-residential structures.

2. Non-residential buildings

Value of work put in place on buildings and structures which are entirely, or primarily, for industrial or commercial use; outlays on major alterations in, and additions to, these buildings and structures; and transfer and similar costs in respect of purchases (sales) of existing non-residential buildings. Examples of non-residential buildings are factories, warehouses, office buildings, stores, restaurants, hotels, garages, farm buildings such as stables and barns, and buildings for religious, educational, recreational and similar purposes. Also included are outlays on the installation, alteration and improvement of fixtures, facilities and equipment which are integral and unmovable parts of the structures, but not expenditure on the repair or replacement of such worn-out or damaged fixtures and equipment. Classified here as well are the sales proceeds and purchase cost, net of any transfer costs, of transactions in existing non-residential buildings, leaving out the value of the land which may be involved in the transaction.

3. Other construction except land improvement

Value of work put in place on the construction and major alteration or renewal of non-military works, such as the

permanent ways of railroads, roads, streets, sewers, bridges, viaducts, subways and tunnels, harbours, piers and other harbour facilities, car parking facilities, airports, pipe-lines, oil-wells and mine shafts, canals and waterways, water-power projects, dams and dikes which are not part of irrigation and flood control projects, aqueducts, drainage and sanitation projects, athletic fields, electricity transmission lines, gas mains and pipes, telephone and telegraph lines, etc. Includes the cost of raising the surface of future building sites, levelling the sites, and laying out the necessary streets and sewers, but excludes groundwork within the building line, which should be included in residential or non-residential buildings, as the case may be. Also included are transfer and similar costs in respect of purchases (sales) of existing assets of this type. Classified here as well are the sales proceeds and purchase cost, net of included transfer costs, of transactions in such existing assets, leaving out, if feasible, the value of the involved land.

4. Land improvement and plantation and orchard development

4.1. Land improvement

Outlays on all land reclamation and land clearance, irrespective of whether it represents an addition to total land availability or not; irrigation and flood control projects and dams and dikes which are part of these projects; clearance and afforestation of timber tracts and forests; and the transfer costs of transactions in land, farms, mineral deposits and concessions, timber tracts and forests, fishing grounds and concessions, and similar natural resources.

4.2. Plantation, orchard and vineyard development

Expenditure on planting and cultivating until they yield crops, of orchards, rubber plantations, and other new holdings of fruit-bearing and sap-bearing plants which take more than a year to become productive.

5. Transport equipment

Purchasers' value of new and imported, completed ships, aircraft, railway and tramway rolling stock, tractors for

Table 6.3. Classification of gross fixed capital formation according to type (continued)

5. *Transport equipment* (continued)

road haulage, trucks, moving vans and the like, motor vehicles, carts and wagons acquired by industries, government services for civilian use and private non-profit services; outlays on major alterations and improvements in existing transport equipment of this type owned by these units; and dealers' margins, transport and other transfer costs in respect of purchase (sale) of such second-hand assets. Transport equipment acquired for military purposes is excluded. Also classified here are the proceeds of sales by resident producers of their old and scrapped transport equipment and the cost of their purchases, net of included dealers' margins and other transport charges, of second-hand transport equipment for use as such.

6. *Machinery and equipment*

6.1. *Agricultural machinery and equipment*

Purchasers' value of new and imported agricultural machinery and equipment such as harvesters, threshers, ploughs, harrows and other cultivators, and tractors other than for road haulage; outlays on major alterations and improvements in such machinery and equipment; and dealers' margins, transport and other transfer charges in respect of the purchase (sale) of second-hand agricultural machinery and equipment. Also classified to this category are the proceeds of the sales of old and scrapped agricultural machinery and equipment by farmers and the cost, net of included dealers' margins and other transfer charges, of their purchases of such second-hand items.

6.2. *Other*

Purchasers' value of additions of new and imported durable goods not elsewhere classified to the fixed assets of resident producers; their outlays on major alterations, improvements and renovation of these goods; and dealers' margins, transport and other transfer charges in respect of the purchase (sale) of second-hand fixed assets not elsewhere classified. Included are power generating machinery; office machinery, equipment, furniture and furnishings; art objects; metal working machinery; mining, construction and other industrial machinery; cranes and forklift equipment; durable containers; equipment and instruments used by professional men; and equipment, furnishings and furniture for use by hotels, boarding houses, restaurants, hospitals, research institutions, schools and other services. Items of small value, such as hand tools, office desk equipment and furnishings, may be excluded on practical grounds if the customary accounting procedure is to treat them as a current expense. Also classified here are the proceeds of sales by resident producers of their used and scrapped fixed assets of the same type and the cost, net of dealers' margins and other transfer charges, of purchases of these second-hand items by resident producers for use as fixed assets.

7. *Breeding stock, draught animals, dairy cattle and the like*
Value of additions to, less disposals of, breeding stock, draught animals, dairy cattle, sheep, llamas, etc. raised for wool clipping

**Exports and imports of goods and services
(2.10 and 1.10)**

COMPOSITION AND TIME OF RECORDING

6.130. Exports and imports of goods and services consist of the transactions in these items of the residents of a given country with the rest of the world. These transactions are, for the most part, in items which are classed as commodities and, to a minor extent, in items which are classed as other goods and services.

6.131. The transactions should, in principle, be recorded in the national accounts at the moment at which the ownership of (legal title to) the goods in question passes between residents and non-residents, or the services are rendered by either group of transaction to the other. This is the principle of the time of recording transactions used in respect of the accounts of the system on the disposition of goods and services to final uses; and it is identical with the principle used in the balance-of-payments accounts of the International Monetary Fund. However, as most of the data on exports and imports of goods will necessarily be based on international trade statistics, the time of recording transactions employed in these statistics will frequently determine the approach to recording these transactions which, in practice, is adopted in the national accounts. This will be so especially in the case of the data on exports and imports of goods which are to be classified according to categories of commodities. International trade statistics generally record the physical movement of goods across specified boundaries of a country—her

customs frontiers or in addition, her free-area and customs-warehouse boundaries.⁵

6.132. Where this basis of recording exports and imports is adopted in the national accounts in the case of most goods, it will be necessary to align the other accounts of the system with it. For example, the accounts of industries in respect of stocks of the goods in question should be adjusted to take account of the sales to, and purchases from, the rest of the world of the items which have not yet crossed the appropriate frontier; and receipts in respect of these sales, or payments in respect of purchases, should be recorded as trade advances received from, or made to, the rest of the world, respectively. On the other hand, where the principle of recording exports and imports of all goods at the moment that ownership passes is adopted in the national accounts, it will be necessary to adjust the international trade statistics of merchandise. In these circumstances, when classifying exports and imports of goods and services according to type, it will be desirable to exhibit the adjustment separately so that the scope of the main category of the classification in respect of goods will correspond as closely as is possible to the international trade statistics of merchandise.

6.133. In the case of either approach to recording

⁵ For the United Nations recommendations in respect of international trade statistics, see *Yearbook of International Trade Statistics, 1966*, United Nations, New York, 1968, and *The Treatment of the Main Categories of Commodities in the Inward and Outward Flows in International Trade*, Statistical Office of the United Nations, IT/STAT/27, 15 April 1968.

transactions that is outlined above, essentially the same practical difficulties will be encountered in determining the required adjustments for the differences in timing between the physical movement of merchandise across given boundaries and the change in the ownership of the goods. It will usually be necessary, for example, to gather data in respect of the transactions (sales and purchases) in goods between resident businesses and the rest of the world which have been recorded in their accounts on stocks, but not in the international trade statistics. Information will also be required, though not for purposes of making the adjustments in question, in respect of goods sent to, or received from, the rest of the world, on consignment for sale or for processing which have been reflected in the international trade statistics but not in the business accounts on stocks

6.134. It is appropriate for purposes of the accounts to impute a change of ownership when goods are sent abroad, or received from abroad, on consignment for sale or for processing, and thereby promote consistency between the accounts and international trade statistics. It is however not suitable to impute a change of ownership when goods are shipped to, or from, the rest of the world for repair, though such goods are included in international trade statistics at full transaction value each time the goods cross the frontiers of the country of the owner and the country of the repairer. Instead, the value of the repair services only should be recorded in the imports of the country of the owner of the goods and in the exports of the country of the repairer. Transactions between residents and non-residents of a country in respect of repair services, but not in respect of goods sent for sale on consignment, are treated in the same manner in this system and the third edition of the *Balance of Payments Manual* of the International Monetary Fund. In the case of goods sent to, or received from, the rest of the world for processing, there is partial concordance between the national accounts and the third edition of the *Manual*. It should be noted that the International Monetary Fund is engaged in revising the third edition of the *Balance of Payments Manual* and that the work of ensuring consistency between this system and the next edition of the *Manual* has been pursued, and continues.

6.135. Irrespective of the time of recording exports and imports of merchandise which is adopted in the national accounts, it will of course be necessary to supplement the international trade statistics of a country in order to compile data on all transactions in goods between her residents and non-residents for purposes of the national accounts. This will be the case even where the general trade system of international trade statistics is used. For example, data must be added on external transactions in respect of the bunkering of ships and aircraft, fish landed abroad off national fishing vessels, the vessels and oil and gas rigs legally owned by non-residents but operating in the domestic territory of a country for which nominal resident branches are to be raised, the transfer of migrants' household and personal effects, and gifts between households. Also to be recorded in the national accounts of a country, but not the international trade statistics, are the purchases which her resident individuals make abroad and which non-residents make in

her domestic market and the purchases abroad direct use there by the government of the country. On the other hand, for purposes of the national accounts, it will be necessary to eliminate certain data from the international trade statistics of a country. For example, in addition to the figures of repair services mentioned above, this will be the case in respect of machinery, equipment and other goods sent, and received, for purposes of leasing or rental. The rents received or paid for these items are classed as an export or import of a service, respectively, in the national accounts, as well as the balance of payments, while the full transaction value of these items is included in the international trade statistics at the time the goods cross the customs frontier of a country.

VALUATION

6.136. As in the case of other transactions of the system in goods and services, the exports and imports of a country are to be valued at the transaction values on the market. This is also the principle of valuation that is used in international trade statistics and the balance of payments accounts of the International Monetary Fund. As in the case of international trade statistics, the transaction values in respect of exports of merchandise are taken f.o.b. the customs frontier of the country of export and the transaction values in respect of imports of merchandise are taken c.i.f. the customs frontier of the importing country. Covered in the f.o.b. values of exports are all costs of transporting the goods to the customs frontier of the exporting country, export duties, and the cost of loading the goods on to carrier's vessel unless the latter cost is borne by the carrier. Import duties assessed, and subsidies granted, on imported goods are not reflected in the c.i.f. value of imports; nor should the cost of unloading the goods from the carrier's vessel be included in this value unless it is borne by the carrier.

6.137. The c.i.f. value of imports of merchandise of course includes the charge for transporting and insuring the goods from the country of export to the country of import, irrespective of the residence of the producers who render the services. Consequently, the charges in respect of these services which are rendered by the resident producers of the country of import should be included in her exports of transport and insuring services. Since data are desired in respect of the magnitude of the actual exports and imports of transport and insurance services, as well as the f.o.b. value of imports of merchandise, it is recommended that the c.i.f. value of imports should be classified into the f.o.b. value, the charges for the transport services and the insurance services of non-resident producers, and the charges for such services rendered by resident producers; and that the value of exports of transport services and of insurance services be classified into charges in respect of imports of merchandise and all other charges.

CLASSIFICATION

6.138. Attention was called in paragraph 6.132 above to the advantages of classifying the external transactions in goods and services in the national accounts so that the exports and imports of merchandise measured in international trade statistics are

segregated from the external transactions in other goods and in services. The scheme of classification, which is set out in table 6.4 below, is designed to bring this about, as well as to serve other important purposes. It provides for the major distinctions of the system in respect of goods and services, for example, between commodities and other goods and services and between kinds of commodities and categories of other goods and services; and allows for the adjustment of the time of recording exports and imports of merchandise from

the time of recording which is used in international trade statistics to the change-of-ownership basis. The scheme of classification is also aligned as much as is possible with the classification of goods and services in the third edition of the *Balance of Payments Manual* of the International Monetary Fund.

6.139. In addition to the scheme of classification set out in table 6.4 below, the system includes a classification of exports and imports of commodities

Table 6.4. Classification of exports and imports of goods and services

The number 2 at the left of the codes stands for exports; and 1 represents imports; 11 in the next position to the right stands for commodities; and 12 in this position represents other goods and services.

2.11.1 and 1.11.1. Exports and imports of merchandise

The scope is broadly that of general exports and imports in international trade statistics except for certain additions and exclusions.¹⁰ The exports of merchandise of a country cover the movement to the rest of the world (i) across her customs frontier, of domestic produce, nationalized exports or goods from customs bonded manufacturing plants and (ii) from her customs bonded warehouses and free areas, of goods owned by residents or bulk broken, cleaned, repackaged, etc. there. The imports of merchandise of a country consist of the inward movement from the rest of the world (i) of goods across her customs frontier for domestic use or into customs bonded manufacturing plants and (ii) goods into her customs bonded warehouses and free areas which are owned by residents or which are to be bulk broken, cleaned, repackaged, etc. there. Included here and in international trade statistics, in addition, are all transactions (sales and purchases) between the residents of a country and the rest of the world in (i) new and used ships and aircraft though they may not cross the customs frontier of the country and (ii) electricity, gas and water. As in international trade statistics, excluded from the exports and imports of merchandise of a country are the inward and outward movement of such items as (i) goods in direct transit through the country, (ii) goods not owned by residents for purposes of storage and transshipment only, (iii) tourists' and travellers' effects and (iv) goods for exhibition or study, samples which are returnable or of no commercial value, returnable containers and animals for racing and breeding.

The main additions here to the external trade in merchandise of a country, as compared to international trade statistics, are (i) sales and purchases of bunkers, stores and ballast to ships, aircraft, etc., (ii) fish and salvage sold abroad off national fishing vessels and purchased off foreign vessels, (iii) sales and purchases of gold ore and unrefined gold and of refined gold for industrial use and (iv) sales of newly refined gold ingots and bars for other uses. Since gold ingots and bars which are not for industrial use are classed as a financial asset, the last item is included in the exports of a country in order to reclassify the commodity produced in the course of turning out the gold ingots and bars into a financial asset when the ingots and bars are used for non-industrial purposes.

The main exclusions here from the external trade in merchandise of a country, as compared to international trade statistics, are (i) the outward and inward movement of goods solely for purposes of repair and improvement and (ii) the transfer of leased (rented) machinery, equipment and other goods. The data in respect of exports and imports of merchandise should be net of (i) the

value of returned exports and imports and (ii) the value of the loss in, or damage to goods in transit between the exporting and importing countries.

Exports of merchandise of a country should be valued f.o.b. her customs frontier; the imports of merchandise of a country should, in the first instance, be valued c.i.f. her customs frontier. The imports are also to be valued f.o.b. the country of export. The c.i.f. value of imports of merchandise of a country is to be classified into (i) the f.o.b. value of the imports, (ii) the charges in respect of the transport and insurance services furnished by non-resident producers, sub-divided into transport and insurance services and (iii) the charges in respect of the transport and insurance services furnished by resident producers, sub-divided into transport and insurance services.

2.11.2 and 1.11.2 Transport and communication

Included here are the transactions described below.

(i) Freight

Relates to shipments by vessels, aircraft, railways, motor vehicles and other road carriers, and oil, gas and other pipelines.

The exports of a country cover the freighting services rendered by her resident carriers in respect of (i) the exports of merchandise from and the imports of merchandise to the country, (ii) the transit of foreign-owned goods through the country, (iii) the transport of goods and gold between foreign countries on the account of non-residents and (iv) the transport to, and from, the country of goods and gold not included in merchandise trade on the account of non-residents, for example, the household effects of foreign diplomats or non-industrial gold. The freighting services of the resident carriers of a country in respect of her imports of merchandise are included in her exports of these services since her imports of merchandise, which are valued c.i.f. in the first instance, include the services in question. The exports of freighting services of a country should be classified into (i) freighting services in respect of the imports of merchandise into the given country and (ii) all other freighting services.

When imports of merchandise are valued c.i.f. the imports of freighting services by a country cover the services furnished by non-resident carriers to her residents in respect of the transport of goods and gold between foreign countries and the import of goods and gold not included in merchandise trade. When imports of merchandise are valued f.o.b., the transport of imports of merchandise to the country by non-resident carriers should be included in imports of freighting services. It is recommended above that data should be compiled in respect of this item.

Table 6.4 continues

Table 6.4. Classification of exports and imports of goods and services (*continued*)

2.11.2 and 1.11.2. *Transport and communication* (continued)

(ii) *Passenger services*

The exports of a country cover the international transport, that is, between countries, of non-resident persons on resident carriers; the imports of the country cover the international transport of resident persons by non-resident carriers. The passenger fares include shipboard and similar expenses and fees charged for excess baggage and other articles accompanying passengers, e.g., automobiles. Passenger fares paid by non-residents in respect of transport within a country, or paid by residents of a country in respect of transport within foreign countries, are included in categories 2.12.1 and 1.12.1, respectively, which are defined below.

(iii) *Other transport and communication*

Receipts and expenditure in respect of charter of ships, harbour and airfield fees, towage, and international settlements on account of post, telegraph, telephone, radio and television transmission services. Not included in the transactions in respect of radio and television transmission are receipts and payments in respect of the rental of films and records, or the use or purchase of copyrighted programmes, etc. These transactions are included in categories 2.11.9 or 1.11.9 below.

2.11.3 and 1.11.3. *Insurance service charges*

Included here are the transactions described below.

(i) *Insurance of international freight*

The exports of a country consist of the insurance service charges of her resident insuring companies in respect of (i) her exports and imports of merchandise and (ii) movement, on the account of non-residents, of goods and gold between foreign countries and of gold and goods which are not included in merchandise trade into, and out of, the country. The insurance services of the resident insuring companies of a country in respect of her imports of merchandise are included in exports of insurance services since these service charges are covered in the c.i.f. value of her imports of merchandise. The exports of insurance services in respect of freight by a country should be classified into (i) the insurance service charges on her imports of merchandise and (ii) all other insurance service charges.

In case of the c.i.f. valuation of imports of merchandise, the imports of a country of insurance services on international freight consist of the service charges of non-resident insuring companies in respect of the transport, on the account of her residents, of goods and gold between foreign countries and the import of gold and goods which are not included in merchandise trade. When imports of merchandise into a country are valued f.o.b., the insurance service charges of non-resident insurance companies in respect of the transport of these goods to the country in question, should be included in imports of insurance services in international freight. It is recommended above that data should be compiled in respect of this item.

(ii) *Other insurance services*

The exports of a country consist of the service charges of resident insurance companies to non-residents, and her imports consist of the service charges of non-resident insurance companies to residents, in respect of (i) insurance against fire,

theft and damage of goods and other items, except international freight, (ii) re-insurance of international freight, (iii) insurance against accident, loss of income and medical costs during illness, and other casualties to persons and (iv) life insurance and participation in pension and similar funds.

2.11.4 or 1.11.2 and 1.12.2. *Direct purchases in the domestic market, extra-territorial bodies, or direct purchases abroad, government services, respectively*

The exports of a country consist of purchases, less sales of surplus and other second-hand goods and scraps, of supplies, equipment and other goods and services by extra-territorial civilian or military bodies stationed in the given country; the imports of a country consist of purchases, less sales of supplies and other second-hand goods and scraps, in foreign countries of goods and services for the extra-territorial bodies, and other direct uses abroad of the government of the given country. Included in the goods and services are outlays on the construction of buildings and other works for military or civilian use; rent paid for embassy buildings and other structures; and underwriters' commissions on government securities sold outside the country of issue. Also included in the exports are imports of a country are the deficit or excess, respectively, of the contributions of the given country to outlays on joint military installations and other specific common defense projects over these outlays on goods and services in the domestic territory of the given country.

The direct purchases of extra-territorial bodies in the domestic market of a country are classified among the exports of commodities. In the case of direct purchases abroad by the government of a country, direct purchases on capital account are classed in her imports of commodities, while the direct purchases abroad on current account are classed in her imports of other goods and services.

2.11.9 and 1.11.9. *Miscellaneous commodities*

Exports and imports include (i) the value of the exports of goods received from abroad, and sent abroad, respectively, for this purpose, (ii) the gross margin realized by merchants of a country on goods they purchase in another country which they ship to, and sell in, a third country, (iii) management and consultation fees and reimbursements for home office expenses due to parent companies from foreign branches and subsidiaries, and similar transactions between other non-residents and residents of a country, (iv) underwriters' commissions and other charges on private securities sold outside the country of issue, (v) fees of agents operating for foreign principals and handling charges in respect of non-industrial goods, (vi) machinery, equipment, film and similar rents, (vii) advertising fees, (viii) rent for office space and other outlays which are reimbursable by the employer paid by non-resident commercial travellers, (ix) direct subscriptions to newspapers and magazines, (x) profits losses on arbitrage transactions in foreign exchange with non-residents, (xi) gifts in kind sent, and received from abroad by resident households, (xii) migrants' household and personal goods and effects and (xiii) transactions in other goods and services not elsewhere classified.

2.11.10 and 1.11.10. *Adjustment to change-of-ownership b*

This category is intended for use when the exports imports of merchandise of a country are to be recorded in the national accounts at the moment the ownership of the items passes between her residents and non-residents.

Table 6.4. Classification of exports and imports of goods and services (*continued*)

**2 11.10 and 1 11.10. Adjustment to change-of-ownership basis
(continued)**

The entries here will exhibit the differences between the change-of-ownership principle and the physical-movement criterion of categories 2 11.1 and 1 11.1 above, that is in the values of the country's exports and imports of merchandise. Under the change-of-ownership principle, goods which residents of a country have sold to, or purchased from, non-residents but which have not yet crossed her customs, free-area or custom warehouse boundaries (e.g., goods stored in, or en-route through, the country, or goods stored abroad or en-route to the country, respectively) will be included.

^a The United Nations recommendations in respect of international trade statistics are described in *Yearbook of International Trade Statistics, 1966*, United Nations, New York, 1968, and *The Treatment of the Main Categories of Com-*

according to the industries in which the commodities are characteristically produced and a sub-division of imports of commodities into the various competitive and complementary commodities. The two schemes of classifications are used in the standard input-output table of the system in the supply and disposition of commodities. International trade statistics of merchandise should furnish adequate data for purposes of classifying the commodities covered according to these schemes. For purposes of distinguishing imports which complement domestic production from imports which compete with domestic production, it is necessary to have detailed classifications of imports and domestic output according to type of commodity. Otherwise the differences between imported and domestically pro-

2 12.1 and 1 12.1. Direct purchases in the domestic market, non-resident households and direct purchases abroad, resident households, respectively

Expenditure in the domestic territory of a country by non-residents and expenditure in the rest of the world by her residents, such as tourists, travelling businessmen and government officials, crews, border and seasonal workers, and diplomatic and military personnel stationed abroad. Covers outlays included in the household consumption expenditure, whether consumed on the spot, elsewhere or brought into the country of residence, and of services, including local transportation. The outlays of travelling businessmen, government officials, crews, etc. which are reimbursable by their employer, are not included.

modities in the Inward and Outward Flows in International Trade, Statistical Office of the United Nations, IT/STAT/27, 15 April 1968.

duced items will be obscured. In the case of the types of commodities which are not covered in international trade statistics, it should be feasible to gather adequate data on exports and imports of transport, communications and insurance services, bunkering of ships, aircraft and other vehicles, and the landing of fish off fishing vessels in order to classify these transactions according to kind of commodity. However, this may not be so in the case of such exports and imports of commodities as the services covered in the category "Miscellaneous commodities" of table 6.4 or the direct purchases of extra-territorial bodies in the domestic market of a country. It may be necessary to deal with these exports and imports in a miscellaneous category of the commodity classification.

Chapter VII

TRANSACTIONS ON THE INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

7.1. This chapter concerns the definition and classification of transactions on the income and outlay accounts and the capital finance accounts of the system. The former accounts delineate the receipt and disposition of incomes by institutional units; and are linked directly with the production accounts and the final consumption expenditure accounts of the system. The capital finance accounts portray the ways in which institutional units finance their accumulation of capital; and have direct ties with the capital formation accounts and income and outlay accounts of the system.

The classes of transactions

INCOME AND OUTLAY ACCOUNTS

7.2. The value added generated in domestic production, net of consumption of fixed capital, is distributed to the institutional sectors in the income and outlay accounts. Before the factor incomes, that is, compensation of employees and operating surplus, received by resident institutions are exhibited in their income and outlay accounts, these flows are classified according to the institutional sector in which they originate. In the case of the unincorporated business units which are included in the household sector, operating surplus is first sub-divided into entrepreneurial and property incomes; and these forms of income, as well as compensation of employees, are then distributed to the recipients. In the case of the other institutional sectors of origin, operating surplus is routed intact to the identical institutional sector of receipt while compensation of employees is distributed to resident and non-resident households.

7.3. The employee compensation originating in the domestic production of a country may be paid to residents or non-residents of the country, but the operating surplus is received by the resident institutions of the country only. The net indirect taxes, that is, the excess of indirect taxes over subsidies, included in the value added of the resident producers of a country, may in some situations be paid to non-resident international bodies, as well as to the government of that country. Unlike the factor incomes, this flow is not routed through the institutional sectors of origin.

7.4. Also shown on the income and outlay accounts are the employee compensation received by residents of a given country who are employed in other countries, and the distribution of operating surplus, in the form of transfers of property incomes and the entrepreneurial income of quasi-corporate enterprises. These transfers take place among the resident institutions of a country

and between them and the rest of the world. The sum of the employee compensation and the net income from property and entrepreneurship, that is the distributed factor incomes, represents the national income (4.0) of the country.

7.5. The income and outlay accounts also portray transactions in respect of casualty insurance, and the redistribution of incomes among institutional units. The latter transactions are unrequited current transfers. The net receipts of residents of a country of incomes from employment, entrepreneurship and property and from re-distributive transfers, make up their national disposable income (6.0). Finally, the income and outlay accounts show how residents apportion their disposable income between final consumption expenditure and saving.

CAPITAL FINANCE ACCOUNTS

7.6. The capital finance accounts of the system delineate the forms in which residents accumulate capital and the manner in which they finance this accumulation.

7.7. Gross fixed capital formation and increases in stocks are of course key forms of accumulation in the case of transactors who are producers. The other forms of accumulation consist of purchases of land and similar non-reproducible tangible assets, the acquisition of financial claims on residents and non-residents, and the purchase of other intangible assets.

7.8. Saving, carried down from the income and outlay account, and consumption of fixed capital, provided for in value added, are major sources of finance of accumulation. The other sources of finance are capital transfers and the incurrence of liabilities to resident and non-resident institutions.

7.9. The classes of transactions outlined above, except final consumption expenditure and gross capital formation, are discussed in this chapter. The last two types of transactions have been dealt with in the preceding chapter.

The components of value added (3.1 through 3.5)

7.10. The value added of producers comprises compensation to employees, operating surplus, the consumption of fixed capital and the excess of indirect taxes over subsidies. Operating surplus is simply the excess of value added (the difference between gross output and intermediate consumption, valued at producers' values and purchasers' values, respectively) over the sum of the three other flows.

COMPENSATION OF EMPLOYEES (3.1 WHERE A COMPONENT OF VALUE ADDED; 4.1 — 4.2 WHERE A RECEIPT OF DISTRIBUTED FACTOR INCOMES)

Composition and classification

7.11. The compensation of employees comprises all payments by producers of wages and salaries to their employees, in kind as well as in cash, and of contributions in respect of their employees to social security and to private pension, casualty insurance, life insurance and similar schemes. Employees cover all persons engaged in the activities of incorporated business units and in the production of government services and private non-profit services. Members of the armed forces, irrespective of the duration and type of their service, are classed as employees. Also included among employees are all persons engaged in the activities of unincorporated businesses, except the proprietors and the unpaid family members of the proprietors.

7.12. The compensation of employees is to be classified into payments in respect of civilian employees and payments in respect of members of the armed forces, in view of the great differences in character and rates of pay between these two forms of employment. The compensation of civilian employees should be sub-divided into (i) wages and salaries, in cash and in kind, (ii) employers' contributions to social security schemes on the account of their employees and (iii) employers' contributions to private pension, family allowance, health and other casualty insurance, life insurance and similar schemes in respect of their employees. This classification distinguishes between the actual and imputed compensation of employees; and is of value in analysing the welfare benefits of employees. It also facilitates comparisons between this system of national accounts and the MPS. The compensation of members of the armed forces is to be sub-divided similarly into (i) wages and salaries, in cash and in kind, and (ii) employers' contributions to social security, private pension, casualty and life insurance and similar schemes.

7.13. Wages and salaries cover all payments which employees receive in respect of their work, whether in cash or in kind, and before deductions for their contributions to social security, withholding taxes, and the like. The wages and salaries should be taken net of any purchase of working tools, equipment and special clothing which employees are contractually obligated to make out of their compensation. (See paragraph 6.59 for fuller discussion.) Reimbursement of employees for travel, entertainment and other expenditure which they incur in conducting the business of their employers is not to be included in this flow. Covered in wages and salaries are such payments as commissions, tips and bonuses, cost-of-living and dearness allowances, in respect of vacation, holidays, sick-leave and other relatively short absences from work when paid directly by the employer, fees to ministers of religion and members of boards of directors; and the cost to employers of food, lodging, ordinary clothing, etc. which they provide free of charge, or at a reduced cost, to their employees. Contributions which employers make on the account

of their employees to social security schemes or to private funds, reserves or other special schemes in respect of family allowances, lay-off and severance pay, casualties and maternity leave, pensions and the like, are to be classified in the other elements of compensation of employees. If, in the absence of special schemes or reserves, employers make direct payments of this type to their employees, imputed contributions in respect of these obligations should be included in the employers' contributions to the private schemes.

7.14. These recommendations and the Standard Classification of Labour Cost of the International Labour Organisation are, in all essential respects, consistent one with the other. The composition of the category of compensation of employees in respect of employers' contributions to private schemes has also been defined so that it covers the ground which is the subject of social security schemes in some situations and private employee welfare schemes in other situations.

Payments in kind

7.15. Payments in kind of wages and salaries should cover the cost to the employer of goods and services furnished to employees free of charge, or at markedly reduced cost, which are clearly and primarily of benefit to the employees as consumers. Outlays by employers which are of benefit to them, as well as their employees, should be included in intermediate consumption, not in compensation of employees. Examples of the second type of outlays are expenditure by employers on amenities at places of work, medical examinations, sport and other recreational facilities; and reimbursement by employers of the expenses of travel, entertainment and work clothing, tools and equipment which are incurred by their employees.

7.16. Free issues of food, beverages and tobacco, and clothing, including uniforms, to members of the armed forces, are considered part of their wages and salaries. On the other hand, uniforms and other work clothing furnished free of charge to civilian employees should not be classed as income in kind. The difference in treatment between uniforms issued to members of the armed forces and uniforms issued to civilian employees is based on the common practice of wearing military, but not civilian, work clothing whether or not on duty. The imputed gross rent of dwellings furnished free to employees should be included in their wages and salaries. This is the case for the family dwellings, but not the barracks, provided to military personnel.

Imputations of employers' contributions to private pension schemes

7.17. As is indicated above, if the contributions to pension, family-allowance, workmen's compensation and other casualty, lay-off, etc. schemes due from employers on behalf of their employees are not actually recorded, the contributions should be imputed. This will be the case where the employer pays pensions, family allowances, compensation in respect of casualties, etc. directly without participating in, or establishing, a fund, reserve or other special scheme for this purpose. If the characteristics of the employees and the employment situation which set the risks of

making a given type of payment, and the scale of payments in question, have remained relatively stable, the actual amount of these payments in recent periods of account might be utilized as the basis of estimating the imputed contribution. For example, so that pensions paid to past employees might be used as a basis for estimating the imputed contribution in respect of this obligation, the number, and age and sex composition, of the employees in respect of which the pension liability accrues, and the scale of wages and salaries and pensions, should have remained relatively stable. Otherwise, comparisons with the rights and contributions under a similar scheme in respect of a labour force and employment situation of like character may be of assistance in estimating the imputation. In lieu of a more exact estimate of the contributions to be imputed in these situations, the actual payments made during recent periods of account may be utilized for this purpose.

7.18. The imputed contributions in respect of employers' obligations to make direct payments of pensions, family allowances, workmen's compensation, etc., to employees should be recorded in the income and outlay accounts as a type of unrequited current transfer from the employees (households) to the employers (e.g., general government, corporate and quasi-corporate enterprises, private non-profit institutions), in addition to being included in the compensation of employees. The actual payments which the employers make in respect of these obligations during a period of account are to be entered as unrequited current transfers from them to households. (See table 7.1 below in respect of the classification of these current transfers.) The net result of these entries is to portray the actual income of households from the benefits under discussion and the actual outlays of employers in respect of these obligations.

CONSUMPTION OF FIXED CAPITAL (3.3)

Scope

7.19. Consumption of fixed capital may be defined in general terms as that part of the gross product which is required to replace fixed capital used up in the process of production during the period of account. This flow is based on the concept of the expected economic lifetime of the individual assets; and is designed to cover the loss in value due to foreseen obsolescence and the normal amount of accidental damage which is not made good by repair, as well as normal wear and tear. Unforeseen obsolescence is treated as a capital loss at the time at which it actually occurs, rather than as fixed capital consumption. Charges for the depletion of exhaustible natural resources are not included in the consumption of fixed capital.

7.20. In principle, the scope of the capital equipment for which consumption should be recorded is given by the definition of gross fixed capital formation. (See paragraph 6.115 for the definition.) Because of practical difficulties, consumption of fixed capital is not however provided for in the case of assets of government services such as roads, dams, breakwaters or other forms of construction except structures. In these

instances, it may be considered that outlays on repair and maintenance are sufficient to maintain the assets in their original condition. It should be noted that consumption of fixed capital is to be charged in respect of all other fixed assets of the producers of government services, including for buildings.

Valuation

7.21. In a stationary economy, in which the quantity of fixed assets in use remains the same and does not change in quality, consumption of fixed capital can readily be defined so that in each year it is equal to the replacement needed. The problem of definition is however more complicated in an economy characterized by changes in demand or by technical changes leading to obsolescence; and no general rule can be formulated for such situations. It seems reasonable, however, to value consumption of fixed capital on a straight-line basis with reference to the expected economic lifetime of the individual assets. The estimate of the expected economic lifetime of fixed capital should take account of the average (normally expected) amount of accidental damage to fixed assets which will not be made good by repair or replacement of parts, for example, damage arising from fire or flood. This amount might be evaluated by reference to the net premium, that is, the premiums reduced by the service charge, per unit value of fixed assets, of the appropriate type of casualty insurance.

Estimation

7.22. In general, producers base their methods of computing annual provisions for wear and tear and foreseen obsolescence on the concept of maintaining the money value of their capital intact by allocating the original cost of the asset over its expected economic lifetime. This procedure is open to objection since, as prices and techniques change, the cost of using fixed assets may be greater or less than that obtained by such a calculation. Accordingly, estimates of consumption of fixed capital should take into account the cost of replacing the assets in the period for which the estimates are being made.

7.23. A calculation of this character is however difficult to make since in most cases the only available data are the charges actually made by producers. Information about the purchasers' values of comparable capital goods that is required to convert the actual charges to a replacement-cost basis is often inadequate. Nevertheless, in view of the changes which may occur in the price level of capital goods, it is important that some adjustment of the charges actually made should be undertaken. In estimating this adjustment, no attempt should be made to allow for arrears of depreciation arising from the fact that earlier provisions have been made at a lower price level, since the estimates of consumption of fixed capital are treated as a current cost of production.

7.24. The adjustment for purposes of the national accounts may be considerable and subject to a large margin of error; and it will be useful to have information concerning the actual charges made and the net incomes calculated on the basis of these provisions. It is therefore recommended that data in respect of the

magnitude of the adjustment should be given separately. It will also be valuable, if feasible, to show the adjustments classified according to the sector and kind of economic activity of producers.

INDIRECT TAXES AND SUBSIDIES (3.4 AND 3.5)

General criteria

7.25. The gross domestic product at purchasers' values, reduced by the excess of indirect taxes over subsidies, is equivalent to gross domestic product at factor incomes. Thus indirect taxes are considered to enter into purchasers' values, but not to affect factor incomes. On the other hand, subsidies represent additions to factor incomes. The chief object of drawing a distinction between the excess of indirect taxes over subsidies, on the one hand, and direct taxes and other compulsory current transfers to government on the other, is to classify payments as to whether or not they are made out of factor incomes, undistributed or distributed. This leads to the use of the criteria of on whom, and on what basis, taxes are levied for purposes of drawing this distinction. These criteria are useful for purposes of drawing distinctions between all types of compulsory transfers to government bodies, for example, in distinguishing direct taxes from fines and penalties, and these current transfers from capital transfers. (See paragraphs 7.64 and 7.74 through 7.76 below.)

7.26. In view of the position of indirect taxes in the national accounts, they must be compulsory payments which producers make to government, and treat as an expense of engaging in production. Government, as used in connexion with indirect taxes and subsidies, may be an international organization, for example, the European Economic Community, as well as the government of the country of residence of the producers. For similar reasons, subsidies must be current transfers which government makes to producers and which the producers consider as additions to income in respect of production. Since in this system households do not engage in production, and have no production account, they cannot pay indirect taxes directly to a government. Nor can they receive subsidies.

Time of recording

7.27. In the case of indirect taxes and subsidies, as for other transfers, the general rule adopted is to record them at the date when they are due to be paid. In the case of indirect taxes, an obligation usually arises at some clearly stated point in the production or sale of goods and services. This point of time may differ from the time at which they should be recorded as due to be paid to the government, but the discrepancy involved is not likely to be large. The same is usually true with respect to subsidies.

7.28. Where a subsidy takes the form of a difference between the buying and selling price of a government trading organization, however, the position is less clear. Subsidies of this type should be considered as payable to the public enterprise at the date the goods enter its stocks. This treatment implies that such stocks are valued at the selling price charged by the public enterprise to the buyer; and is consistent with the principle

of valuing additions to stocks of finished goods at producers' prices. (See paragraph 6.109 above.)

7.29. While producers generally will find it feasible to record indirect taxes in accordance with the recommendation made above, this will often not be so in the case of the accounts kept by government revenue departments. The amount of indirect taxes may be recorded in these accounts when tax statements are filed or obtained, or even when payments are received. It will therefore be necessary to reconcile the estimates of indirect taxes made from business and government accounts with a view to recording the taxes on a when due basis.

INDIRECT TAXES (3.4)

Scope

7.30. Indirect taxes are taxes assessed on producers in respect of the production, sale, purchase or use of goods and services, which they charge to the expenses of production. Common examples of indirect taxes are import, export and excise duties, sales taxes, entertainment duties, betting taxes, business licences and transaction (e.g., stamp) duties, and real estate taxes. Real estate and land taxes are classed as indirect taxes except in those cases where they may be considered as merely an administrative procedure for the assessment and collection of income taxes. It is useful to note here that, where producers rent land, the tax in respect of the land is to be treated as indirect taxes which they pay. The land taxes are of course included in the total rent which the users of the land pay. (See paragraphs 6.47 and 7.50.) Also included among indirect taxes are levies on value added, the employment of labour and the use of fixed assets, duties (licences) in respect of the motor and other vehicles of industries and the producers of government and private non-profit services, and fees in respect of driving tests and licences, passports, airport duties, court and similar services paid by producers.

Fiscal and other public monopolies

7.31. The operating surplus, reduced by the normal margin of profits of business units, of fiscal monopolies of government (e.g., for the production and distribution of tobacco and alcohol) are, in principle, considered to be indirect taxes since at least this portion of the operating surplus will be designed to raise general revenue. The deduction of the normal margin of profit from the operating surplus is intended to eliminate the interest and similar returns in respect of the capital used by a fiscal monopoly that is included in its operating surplus. It may, in practice, be necessary to resort to the use of the full operating surplus as a measure of the indirect taxes because of the difficulties of estimating the proportion of operating surplus which is tantamount to these taxes. Fiscal monopolies are utilized to raise the revenue which in other countries is often gathered through indirect taxes on the production and distribution of tobacco, alcohol and similar items by private business units.

7.32. Difficulties will arise in respect of the treatment of the operating surplus of public enterprises which are in a monopolistic position, but cannot be

classified as fiscal monopolies, and which are wholly owned by government. In such cases it will frequently be necessary to investigate the consideration behind the price-fixing policy of the public enterprises. Some guidance may be obtained from whether the surpluses are of a permanent character or tend to cancel out over the years. If the surpluses, reduced, in principle, by the normal margin of profits of business units, are of a permanent character, they may be assumed to be a means by which government raises general revenue; and be treated as indirect taxes.

Boundary problems

7.33. Problems may arise in respect of the classification of certain payments by industries to government bodies as indirect taxes or as purchases of goods and services. Examples of transactions which give rise to this question are fees for driving tests and licences, passports, court services, or airport duties. The criteria for making this distinction have been discussed in paragraphs 6.97 and 6.98 above. The payments of producers to government bodies relating to services, the primary purpose of which is to serve as an instrument of government policy and which are compulsory but unavoidable in the only circumstances in which they are useful, should be classified as indirect taxes. All of the fees mentioned above are payments of this type.

SUBSIDIES (3.5)

Private industries

7.34. Subsidies include all grants on current account which private industries receive from government. These are transfers which, in view of the basis on which they are made, represent additions to the income of the producers from current production. The grants may, for example, be based on the amount or value of the commodities produced, exported or consumed, the labour or land employed in production, or the manner in which production is organized and carried on. Transfers by public authorities to private industries for investment purposes or to cover destruction, damage and other losses in capital and working assets are classed as capital transfers rather than as subsidies.

7.35. Current grants which government bodies make to private non-profit institutions serving households are not to be considered subsidies. These grants are classed as another type of current transfer by government. Nor should any current government grants to households be treated as subsidies. The value of coupons made available by government agencies to specific groups of the population to enable them to obtain goods at prices lower than the current prices on the market are classified as a different type of current transfers.

Public enterprises

7.36. Subsidies also include all grants on current account which government makes to public corporations, for example, in compensation for operating losses (negative operating surplus). In the case of government enterprises, transfers on current account should be treated as subsidies when it is clear that the transfers are the consequence of the policy of the

government to maintain prices at a level at which the proceeds of the enterprise will not cover the current costs of production. In order to determine whether this is the situation, it may be necessary to investigate the considerations behind the policy of determining the prices charged by the government enterprise. Circumstances such as the following would suggest that the loss is a consequence of the price policy of the government: the government enterprise is in competition with private industries which receive subsidies; or it is in a monopolistic position and has experienced losses over a number of consecutive years.

7.37. The operating losses of government enterprises which are not compensated for by subsidies will be entered as negative operating surplus in the income and outlay account of general government if the enterprises are included in the sector for general government. Where the government enterprises are considered to be quasi-corporate enterprises, government grant made in order to cover their current costs of production which are not classed as subsidies should be considered to be negative withdrawals from the entrepreneurial income of the government enterprises.

OPERATING SURPLUS (3.2)

7.38. The operating surplus during a period of account is the excess of the value added by resident producers during the period, over the sum of the costs of employee compensation, consumption of fixed capital and indirect taxes reduced by subsidies, which they incur during the period. The value added is equivalent to the difference between the gross output of the producers during the given period, valued at producers' values, and their intermediate consumption, valued at purchasers' values. Operating surplus can, by definition, be earned by industries only. The gross output of the producers of government services and private non-profit services to households is defined as equivalent to their explicit costs of production.

Transfers

7.39. A number of categories of transfers in addition to indirect taxes and subsidies are included in the system. The transfers may be classified into (i) transactions arising from the ownership of corporate and quasi-corporate enterprises and other property, (ii) other required (contractual) payments and receipts, for example, transactions in connexion with casualty insurance or broken contracts, (iii) obligations to, and commitments of, government organs, all of which are unrequited (non-contractual) transfers and (iv) other unrequited but voluntary grants. The last two classes of transactions are redistributive transactions; and are sub-divided into current and capital transfers, depending on the purpose for which, the basis on which, and the frequency with which the transfer is made. The categories of these transactions, which are recorded on the income and outlay accounts of the system, are discussed in turn below. In the course of that discussion, it is convenient to deal also with the definition of entrepreneurial income, in particular in the case of the unincorporated enterprises of the household sector, though the flow is not a transfer strictly speaking. Capital

transfers are considered later in this chapter, as part of the discussion of transactions on the capital finance accounts.

Entrepreneurial income

PRIVATE NON-FINANCIAL UNINCORPORATED ENTERPRISES (4.2)

7.40. The operating surplus of the private unincorporated enterprises which are included in the household sector is sub-divided into entrepreneurial income and property income in the accounts of the system in respect of the institutional sectors of origin of factor incomes. The entrepreneurial income is equivalent to the excess of operating surplus over the property income which is due to be paid in connexion with the activities of the business.

7.41. The property income in question consists of obligations to pay interest, rent and royalties to second parties, that is, to non-owners of the enterprises, which are incurred in carrying on the activities of the business. Interest may be due in respect of funds borrowed for use in the business, or the delayed settlement of trade credit received. Rent may relate to farms or other land utilized in the activities of the unincorporated enterprises. It will be recalled that rents in respect of structures, machinery and equipment utilized in the business are to be included in its intermediate consumption. Royalties may arise from the use of rights such as the manufacture of patented items, the use of patented processes or the publication of copyrighted materials. (See paragraphs 7.46 through 7.52 below for the further definition of the interest, rent, etc. in question.)

CORPORATE AND QUASI-CORPORATE ENTERPRISES

7.42. The entrepreneurial income of corporate and quasi-corporate enterprises is not shown as such in the income and outlay accounts of the system. All the elements required in order to evaluate this flow are, however, explicitly given. Thus the entrepreneurial income of these units is equivalent to the sum of their operating surplus and the property income due to them, reduced by the property income they are due to pay, except dividends. Corporate and quasi-corporate enterprises may of course earn interest, rents and royalties, as well as incur obligations to pay these property incomes. They may, for example, receive interest in respect of delayed settlement of trade accounts or the financial assets they hold, or earn rent in respect of land they possess.

WITHDRAWALS FROM THE ENTREPRENEURIAL INCOME OF QUASI-CORPORATE ENTERPRISES (4.3 AS DISBURSEMENT; 4.4 AS RECEIPT)

7.43. The income and outlay accounts of the system portray the withdrawals which the owners of the non-financial and financial quasi-corporate enterprises make from the entrepreneurial income of the business. These withdrawals should, in principle, be the actual payments made to the proprietors out of the sum of the operating surplus and net property incomes of the

quasi-corporate enterprises. In practice, the business arrangements and accounting may be such that it is not possible to have data on the actual withdrawals which the proprietors make from the entrepreneurial income of certain quasi-corporate enterprises, or that all the net income (saving) of the business is implicitly transferred to them. It will be necessary in these instances to equate the withdrawals under discussion to the net incomes of the quasi-corporate units. In any case, the flow should not include receipts which the proprietors derive from the capital transactions of the enterprise, for example, the running down of its fixed or financial assets, or from the liquidation of their equity in the business. The withdrawals are thus restricted to transactions which are relevant to the income and outlay accounts only.

7.44. The withdrawals of the proprietors from the entrepreneurial income of their quasi-corporate enterprises may be less than the unit's entrepreneurial income reduced by its net current unrequited transfers. These transfers may be taxes levied on the net income of the branches of foreign companies or on certain types of partnerships, grants made to private non-profit institutions or write-offs of bad debts. In other words, quasi-corporate enterprises will retain some of this net income though it is questionable whether certain units, for example, small branches of foreign companies or government enterprises, will in fact do so. Permitting quasi-corporate enterprises to retain saving is consistent with the fact that they do have, and control, capital assets, financial and tangible, and liabilities. A consequence of this approach is that the transactions in respect of the proprietors' net additions to the accumulation of quasi-corporate enterprises relate only to the funds, or other resources, which they actually add for this purpose, reduced by any withdrawals which they make from the capital of the enterprises. (See paragraphs 7.92 and 7.93 and table 7.2 below for fuller definition of "Proprietors' net additions to the accumulation of quasi-corporate enterprises".)

7.45. The owners of quasi-corporate enterprises may furnish funds in order to compensate for negative entrepreneurial, or net, income. Such funds should of course be treated as negative proprietors' withdrawals from the entrepreneurial income of the units. An example of this is given in paragraph 7.37 above, in the case of government enterprises. While compensation for the losses of government enterprises should, in certain instances, be classed as a subsidy, the funds which proprietors of private quasi-corporate enterprises transfer to these units on current account should always be considered as negative withdrawals from entrepreneurial income.

Property income (4.5 as disbursement; 4.6 as receipt)

GENERAL DEFINITION

7.46. Property income may be defined as the actual and imputed transfers of income resulting from the use by one economic agent of the financial assets, land and intangible assets, such as copyrights and patents, owned by another economic agent. The forms in which

property incomes are transferred depend on the institutional structure and arrangements of an economy; and should be reflected in the classification of these transactions in the national accounts for the economy. Common types of property income are interest and dividends, in respect of financial liabilities and assets, and net rent and royalties, in respect of the use of land, copyrights, patents and similar rights.

7.47. Flows of interest, dividends, net rents and royalties should be recorded as of the date they are due to be paid (received). Where, for example, the interest, net rent, or royalty due to be paid at a given time relates to more than one period of account, past or future, as well as current, no attempt should be made to apportion these flows to each of the periods. Dividends should also be recorded as of date payment (receipt) becomes due, not as of the time the dividends are declared or earned.

INTEREST AND DIVIDENDS (4.51 AND 4.52 RESPECTIVELY, AS DISBURSEMENT; 4.61 AND 4.62 RESPECTIVELY, AS RECEIPT)

7.48. Interest comprises property incomes in respect of such financial claims as bank and other deposits, bills, bonds, promissory notes and other loans, accounts receivable and payable, trade advances and consumers' debts, and household equity in life insurance reserves and pension funds. It may be necessary to impute certain flows of interest in part, for example, interest in respect of the household equity in life insurance reserves and pension funds. Dividends consist of transfers of income in respect of the shares and other forms of participation in the equity of private incorporated enterprises, co-operatives and public corporations.

RENTS AND ROYALTIES (4.53 AS DISBURSEMENT; 4.63 AS RECEIPT)

Net rents of land

7.49. The rents which should, in principle, be included in property income are the net rents in respect of leased or rented land. (See paragraph 7.81 below for definition of land.) The land may be utilized for agriculture, exploitation of mineral deposits, timber tracts and fishing sites, the construction of buildings and other structures, the provision of railroad rights of way, scrap yards and dumps, or the pursuit of other industrial and commercial activities. Net rents in respect of let, residential and non-residential buildings and other durable reproducible goods, should not, in general, be included in this flow. Instead, these net rents are part of the operating surplus of the owner of the fixed assets since the total rent for their use is treated as a payment for a commodity-type service. The difference in classification between the net rents in respect of land, on the one hand, and structures, machinery and equipment, on the other, reflects the difference in character and role in production between the two classes of goods (See also paragraphs 6.46 through 6.48 above.)

7.50. The rents in respect of land which is to be classed as property income is, in principle, restricted to the net rent (in other words, the net income from

the ownership of the land) since the total rents may include costs which should be recorded on the production accounts of the system. The rent may, for example, cover land taxes and certain forms of maintenance in respect of let land which are the obligation of the owner. In such instances, these elements, which are here called gross rent, should be recorded on the production account of the user of the land as indirect taxes and the intermediate consumption of a commodity-type service, respectively. As is said in paragraph 6.47 above, it is expedient to classify these charges to the user of the land, instead of the owner, for purposes of input-output and related analysis. Taking this approach also avoids the raising of a nominal industry in respect of the ownership of land in cases where the owner does not engage in other businesses. Marked difficulties may sometimes be encountered in partitioning the total rent of land into net rent and the elements of gross rent. In these instances, any land taxes which are included in the total rent should at least be segregated and entered on the production account of the user of the land. The remainder of the total rent might be recorded as property income.

7.51. Other situations may occur where it may be necessary to include rents which should be recorded on the production account in net rent. As is indicated in paragraph 6.48 above, farms may be let, including the associated agricultural buildings and equipment; and it may not be possible to segregate the rent in respect of the buildings and equipment from the net rent in respect of the agricultural land. In these instances, the total rent, net of any real estate taxes which may be included in the rent, might be recorded as property income. The real estate taxes should be treated as is recommended in the preceding paragraph.

Royalties

7.52. The royalties to be included in the same category of transactions as net rent of land are payments (receipts) for the use of patents, trade-marks, copyrights or similar exclusive rights owned by other economic agents. For example, periodic fees may be paid (received) in respect of licences for the manufacture of patented goods, or the use of patented processes or trade marks. Or, royalties are involved in the right to publish copyrighted materials. These royalties are classed as a form of property income rather than as payment for a commodity-type service since inventions, creating goodwill, authoring a book and the like, are not included in gross fixed capital formation, or even gross output, in the national accounts. However, where the fees in respect of the manufacture of patented goods or the use of patented processes or trade marks cover technical or managerial services as well, the full fees might be recorded as the purchase (sale) of a commodity-type service. In practice, it may be necessary to record the transactions in question in this fashion because of the way in which businesses keep their accounts. Finally, it should be indicated that the outright transfer, purchase and sale, of patents, copyrights and similar intangible assets is to be dealt with in the flow "Net purchases of intangible assets n.e.c." of the capital finance accounts (See paragraphs 7.85 and 7.86 below.)

Transactions concerning casualty insurance and other contracts (5.0)

CASUALTY INSURANCE

7.53. Contractual transfers of income include net premiums in respect of casualty insurance (5.1 as a disbursement; 5.3 as a receipt) and claims arising from the insurance (5.2 as a receipt; 5.4 as a disbursement). Examples of casualty insurance are insurances against the risks of accidents, illness, unemployment, fire, earthquakes and floods. The net premiums, that is, the excess of the premiums over the imputed service charges, in respect of a given type of casualty insurance is taken as the measure of the costs of the risk of insuring against the casualties in question during the period of account. It will be recalled from paragraph 6.37 that the imputed service charges for a given type of casualty insurance during a period of account is equal to the excess of the premiums over the claims which are payable during the period. Thus, in the case of the underwriters of the insurance, the net premiums and claims due during the period will be equivalent. Nonetheless, the net premiums received by the underwriters during a period of account do not furnish an exact measure of the cost of their actual risks of providing the casualty insurance during the period because of differences in timing between the occurrence of casualties and the settlement of claims. The net premiums payable and the claims receivable will not necessarily be equivalent in value in the case of the various sectors of policy holders.

7.54. Net premiums and claims in respect of casualty insurance are to be recorded when due to be paid (received). Where the net premium is for insurance covering several periods of accounts, no attempt should be made to apportion it among these periods. Claims are due to be paid after the parties concerned have reached agreement on the amount of the claim, or the claim has been adjudicated.

7.55. The transactions in respect of life insurance and pension funds which are comparable with net premiums and claims in respect of casualty insurance, are not to be recorded in the income and outlay accounts. Instead, these transactions are dealt with in the flow "Net equity of households on life insurance reserves and on pension funds" since they contain elements of saving and insurance which it is not feasible to separate meaningfully.

INSURED DAMAGES TO THIRD PARTIES

7.56. Certain forms of casualty insurance cover the risk that the insured economic agent may inflict damages on third parties, for example, insurance against claims arising from injuries to pedestrians inflicted by the motor vehicles of the policy holders. When such claims are paid, they should be recorded first as a transfer from the casualty insurance company to the policy holder and secondly as a transfer from him to the injured party.

UNINSURED DAMAGES AND BREACHES OF CONTRACT

7.57. Payments by one economic agent to another in respect of uninsured injuries, damages or breaches

of contract are also transfers of income of a contractual character. These transactions will be recorded on the income and outlay accounts of the parties concerned as of the date the payments are due to be made. The basis for establishing these dates should be the same as for insured claims.

Unrequited current transfers (6.1 through 6.23)

7.58. This section deals with the definition and classification of unrequited transfers on current account except indirect taxes and subsidies, which have been discussed earlier in this chapter. The categories of the transfers used in the system are listed and defined in table 7.1 below. The text of this section indicates (i) the nature of the classification, (ii) the manner in which the transfers under discussion are distinguished from certain other classes of transactions and (iii) the time at which the transfers should be recorded in the accounts of the system. Questions arise concerning (i) the sub-division of unrequited transfers into those on current account and those on capital account, (ii) the differentiation of direct taxes and compulsory fees from indirect taxes and (iii) the distinction between unrequited current transfers and purchases of goods and services. The principles of drawing the last two distinctions have already been discussed in earlier parts of the report (paragraphs 7.25 and 7.26, 6.89 through 6.91, and 6.97 through 6.100); the implication of these principles for the definition of selected categories of current transfers is indicated here.

GENERAL CHARACTER OF THE TRANSFERS

7.59. Unrequited transfers are neither contractual nor *quid pro quo* in character. The funds or goods transferred are, for example, not in exchange for a specified amount of goods or services purchased voluntarily, or in payment of a loan or contractual obligation. The transfers between private parties are purely voluntary but those to, or from, the public authorities usually arise from legal obligations to, or legal commitments of, these authorities.

7.60. Unrequited current transfers are distinguished from capital transfers in light of the purpose for which the transfer is to be utilized and the basis, source and frequency of the payment. Transfers on current account should be utilized to finance production or consumption, but not investment in tangible or financial assets, during a period of account; and should be made out of current income, and not wealth at very infrequent intervals. In order to be classed as a current transfer, a transaction should be on current account from the point of view of both the recipient and the donor. (See paragraphs 7.74 through 7.76 for fuller discussion of this question.) It is useful to recall at this juncture that transfers which enter into the current receipts of industries are generally classed as subsidies; and add to the operating surplus of these units. Transfers which finance the production of private non-profit services to households or government services only may be included among the current transfers under discussion in this section. Similarly, the distinction between indirect taxes and direct taxes in the case of producers hinges on whether or not the

current transfers to the public authorities are considered to be part of their costs of production.

TIME OF RECORDING

7.61. The general rule which is to be followed in the case of current transfers which represent obligations to, or commitments of, organs of general government is to record the transfers as of the date when they are due without penalty. The other unrequited current transfers under discussion should be recorded as of the date when they are made.

7.62. Several dates of recording can be connected with income taxes, namely, the dates of earning the income, of assessment or demand, or of payment. Frequently the assessment is based on the earning of the preceding year, and the demand is made in the year following the assessment. It would be useful for certain analytical purposes to have data on income taxes in respect of the time when the income on which the taxes are levied was earned. It is therefore suggested that data in respect of income taxes should be compiled on this basis, supplementary to data as of the date the income taxes are due without penalty.

CLASSIFICATION

Nature

7.63. The scheme of classification set out in table 7.1 is primarily designed to group unrequited current transfers into categories in the light of their character, for example, the basis and object of the transfers. Another consideration which has been taken into account in raising the categories is the role and importance of the various types of transfers in respect of the redistribution of incomes. The use of these criteria in designing the scheme of classification should promote its analytical and instrumental usefulness.

7.64. A number of the current transfers made to, or by, the public authorities are substantially different in nature from the current transfers between private transactors. As a consequence, such categories of the classification as direct taxes, compulsory fees and fines, social security contributions and social security benefits relate only to transactions where a government body

is one of the parties. It is also of value to include a special category in the classification in respect of transfers between government bodies. On the other hand, the public authorities are not the sole donors of grants for purposes of social assistance or financing the activities of private non-profit institutions on current account. And business units, as well as government services, may pay unfunded pensions, family allowances and similar benefits to their employees.

Selected aspects of definition

7.65. The category "direct taxes n.e.c." includes taxes and duties paid by households in respect of the possession and use of goods, for example, motor vehicle licence fees. Such fees, when paid by households, are classed as direct taxes if they are not directly connected with the provision of non-regulatory service by the public authorities, and are primarily designed to raise general revenue. For example, licence fees which households pay, in respect of their radio and television sets are not classed as direct taxes if the public authorities provide general broadcasting services. The licence fees are considered to be the purchase of a service in these circumstances. However, if the service furnished is regulatory in character, the fees which households pay for the service, for example, passport fees, airport duties, driving and dog licences, are classed as compulsory fees since they are obligatory and unavoidable in the only circumstances in which they are useful.

7.66. The compulsory fees and duties discussed in the preceding paragraph are classed as indirect taxes when paid by producers. These payments are included in the cost of production of business units and other producers. On the other hand, regular levies on the net income, financial assets or net worth of business units are not accounted for in their costs of production; and are classed as direct taxes.

7.67. The distinction between social security benefits and social assistance grants to households is, to a considerable extent, based on differences in mode of financing, deciding on and administering the transfers. In the case of social security benefits, for example, the payments are usually made out of special government funds or reserves and generally linked with compulsory employee and/or employer contributions

Table 7.1. Classification and definition of unrequited current transfers except indirect taxes and subsidies

6.1. Direct taxes

6.1.1. Direct taxes on income

Levies by public authorities at regular intervals, except social security contributions, on income from employment, property, entrepreneurship, capital gains, pensions and from other sources. Real estate and land taxes are included if they are merely an administrative procedure for the assessment and collection of income taxes

6.1.2. Direct taxes n.e.c.

Levies by public authorities at regular intervals on the financial assets and the net, and total, worth of enterprises, private non-profit institutions and households; and on the possession, or

use, of goods by individuals and households. Excluded are non-recurrent levies in respect of these items.

6.2. Compulsory fees, fines and penalties

Compulsory fees are payments to public authorities by households in respect of services the primary purpose of which is to serve as an instrument of the government and which are obligatory but unavoidable in the only circumstances in which they are useful. Examples of such fees are payments by households for driving tests and licences, airport duties or court services. The public authorities may assess fines and penalties on corporate and quasi-corporate enterprises, private non-profit institutions or individuals and households.

Table 7.1. Classification and definition of unrequited current transfers except indirect taxes and subsidies (continued)

6.3. <i>Social security contributions</i>	Contributions on the account of employees, whether made by themselves or their employers, to the social security arrangements which are defined in paragraph 5.27. These arrangements are schemes imposed, controlled or financed by public authorities for purposes of providing social security benefits for the community, or large sections of the community. All these contributions are classed as the social security contributions of the employees.	6.8. <i>Unfunded employee welfare benefits</i>	Direct payments of such benefits as pensions, family allowances, casualty, lay-off and severance compensation by employers to their employees without having established special funds or reserves, or participated in private funds or insurance schemes for this purpose. (See paragraphs 7.17 and 7.18 for fuller definition.) These payments may be made by general government bodies, enterprises or private non-profit institutions serving households
6.4. <i>Social security benefits</i>	Payments to individuals under the social security arrangements described in the case of category 6.3 above. The payments are usually made out of a special fund; and are generally related to the income of individuals from employment and/or the contributions to social security arrangements made on their account. Examples are unemployment insurance benefits and supplements, accident, injury and sickness benefits, old-age, disability and survivors' pensions, family allowances, reimbursements for medical and hospital expenses.	6.9. <i>Current transfers n.e.c. made by general government</i>	Unrequited current transfers made by general government bodies which are not classified elsewhere. These transactions will in general be transfers, in cash or in kind, to other general government bodies made for purposes of financing outlays and general deficits on current account. Examples are unilateral shipments of commodities for consumption, such as food, clothing and military equipment; grants to finance military outlays, current health, educational and other social expenditures, and budgetary deficits on current account; and payments of assessments and other periodic contributions to international organizations. It will be valuable to sub-divide this category into current transfers n.e.c. to resident government bodies (6.9.1) and to non-resident government bodies (6.9.2)
6.5. <i>Social assistance grants</i>	Cash grants to individuals and households, by public authorities, private non-profit institutions and corporate and quasi-corporate enterprises, except social security benefits and unfunded employee welfare benefits (categories 6.4 and 6.8 respectively), such as relief payments; widows', guardians' and family allowances and payments of medical and dental expenses which are not part of social insurance schemes; war bonuses, pensions and service grants; and scholarships, fellowships and maintenance allowances for educational, training and similar purposes. Included are payments by the public authorities for services provided by industries and private non-profit institutions directly and individually to persons, whether these payments are made to the individuals or directly to the providers of the services, which, in view of the criteria set out in paragraphs 6.73 and 6.74, the persons are considered to have purchased. Excluded are transfers to households and individuals in respect of property losses during floods, war and similar calamities and business investment	6.10. <i>Current transfers n.e.c. received by general government</i>	Unrequited current transfers received by general government bodies which are not classified elsewhere. These transactions will, in general, be transfers, in cash or in kind, received from other general government bodies for purposes of financing outlays and general deficits on current account. Examples are transfers of food, clothing and military equipment received and grants used to finance military outlays, current health, educational and cultural expenditure, and budgetary deficits on current account. It will be valuable to sub-divide this category into current transfers n.e.c. from resident government bodies (6.10.1) and from non-resident government bodies (6.10.2)
6.6. <i>Current transfers to private non-profit institutions serving households</i>	Grants and gifts, in cash and in kind, to resident and non-resident private non-profit institutions serving households which are intended for use on current account, that is, to cover the current costs of providing services. Included are membership dues paid to trade unions, political organizations, fraternal bodies and the like	6.11. <i>Current transfers n.e.c. made by other resident units</i>	Unrequited current transfers made by enterprises and households which are not classified elsewhere. The transfers will, in general, be made to enterprises and households; and consist of transactions such as write-offs of bad debts, migrants' remittances, emigrants' transfers of personal and household goods, cash grants of a current character between households, and gifts in kind from resident households to non-resident households. It will be useful to sub-divide this category into current transfers n.e.c. to resident units (6.11.1) and to non-resident units (6.11.2)
6.7. <i>Unfunded employee welfare contributions imputed</i>	Employers' imputed contributions on the account of their employees in respect of such benefits as pensions, family allowances, and casualty, lay-off and severance compensation which they pay directly to their employees, without establishing special funds or reserves, or participating in private funds or insurance schemes for this purpose. (See paragraphs 7.17 and 7.18 for fuller definition.) Imputations of this type may be required in the case of general government bodies, enterprises and private non-profit institutions serving households.	6.12. <i>Current transfers n.e.c. received by other resident units</i>	Unrequited current transfers received by enterprises and households which are not classified elsewhere. The transfers will in general be received from other enterprises and households; and consist of transactions such as allowances for bad debts, migrants' remittances, transfers of immigrants' personal and household goods, cash grants of a current character between households, and gifts in kind received by resident households from non-resident households. It will be useful to sub-divide this category into current transfers n.e.c. from resident units (6.12.1) and from non-resident units (6.12.2).

and past earnings in employment. This is not so in the case of social assistance grants, though the purposes of these grants and of social security benefits may be similar. Unfunded employee welfare benefits and imputed contributions are separated in the classification from social security benefits and contributions, respectively, also because of significant differences between these two classes of transfers in source of financing and mode of administration.

7.68. While one of the parties to the transaction must of course be a resident, the other party may be a non-resident in the case of any of the categories of transfers set out in table 7.1. In other words, the public authorities, employees, individuals and households, employers and enterprises, and private non-profit institutions which are referred to in the definition of the categories, may be resident or non-resident. Classification into transactions between residents only and transactions between residents and non-residents is, however, thought to be worthwhile in the case of the categories relating to miscellaneous unrequited current transfers only.

Saving (7.1)

7.69. We now pass from the income and outlay accounts to the capital finance accounts of the system. The sources of finance of accumulation are saving, which is the link between the two accounts, the sums set aside for the consumption of fixed capital, capital transfers and the net incurrence of liabilities. Accumulation consists of gross capital formation, net purchases of land, net purchases of certain intangible assets, and the net acquisition of financial assets. Gross capital formation is dealt with in chapter VI and consumption of fixed capital is discussed in an earlier section of this chapter. The other categories of transactions entered in the capital finance accounts are discussed in turn below.

DEFINITION

7.70. Saving is the balancing item on the income and outlay account of resident institutional units, after all current receipts and disbursements have been accounted for. Saving is thus defined in terms of the flows which have been discussed in the preceding sections of this chapter. Capital gains and losses associated with transactions in goods and services are therefore excluded from the concept of saving. Other deviations from the definition of saving in this system which may be encountered in the concept utilized in business or government accounts, may be due to deviation from the national accounts in respect of the following: the method of evaluating consumption of fixed capital; the classification of transactions into current and capital flows; or the use of a cash, instead of an accrual, basis of recording transactions.

7.71. In this system, institutional units are generally credited with the saving which they in fact retain. The retained saving of quasi-corporate enterprises, both non-financial units and financial institutions, is net of the proprietors' withdrawals from entrepreneurial income, just as the retained saving of incorporated enterprises is net of the dividends paid. All the saving of

pension funds is however transferred to households in the form of interest. While the saving is available to the pension funds for investment, pension funds usually credit it, as interest, to the equity of participants. On the other hand, life insurance companies distribute a part of their net income only to policy holders, as interest added to the equity of the policy holders in the reserves of the insurance company. The saving to be shown on the income and outlay and capital finance accounts of life insurance companies is their free saving, that is, their net income reduced by the interest earned by policy holders on their equity in the companies' reserves.

SUPPLEMENTARY DATA

7.72. The saving of non-financial corporate and quasi-corporate enterprises and financial institutions recorded in the national accounts of a country will include the saving (retained net income) of branches (i.e. unincorporated units) and subsidiaries (i.e. incorporated units) of non-resident proprietors. While the branches will be classed as quasi-corporate enterprises because of the presence of non-resident owners, the business and/or accounting arrangements in the case of a number of branches may be such that all of the net income of these branches is transferred to the proprietors, explicitly or implicitly. Since the subsidiaries are incorporated units, a convention is required as to what proportion of the equity of an enterprise should be owned by a proprietorship for it to be considered a subsidiary of the latter. Ownership of more than half of the share capital has often been used for this purpose. For certain analytical purposes it will be desirable to furnish separate data on the saving of the branches and subsidiaries of non-resident proprietors.

7.73. In some countries, public corporations will include authorities set up to administer marketing and price stabilization schemes, a part of the net income of which is set aside for future distribution to the producers on whose behalf the schemes have been set up. This undistributed income will be part of the saving of the authorities; and where important, it might be shown separately. Schemes of this type may also be established as government enterprises, and the surplus of general government may then include the part of the net income from these marketing schemes which has been set aside for future distribution to the agricultural producers.

Net capital transfers (7.6)

GENERAL PRINCIPLES OF DEFINITION

7.74. In this system, net capital transfers are recorded uniformly on the capital finance accounts of the resident institutions so that, in a closed economy, debits and credits on these accounts offset each other and no net contribution is made by these transfers to the finance of accumulation. In an open economy, net capital transfers received from the rest of the world constitute an independent source of finance for accumulation, and together with net borrowing from abroad, represent that part of the saving of the rest of the world placed at the disposal of the economy.

7.75 Capital transfers, as understood here, refer to those unrequited transfers which are not, in general, considered by the recipient as adding to his current income or by the payer as reducing his current income. Such transfers, in principle, influence the level of consumption only indirectly through their effects on the amount and composition of the assets of the recipient or the payer. Instead, they influence directly the level of capital investment or wealth of the recipient or the payer. In practice, however, intersectoral transfers of a mixed character may take place, particularly between general government and other sectors, in which one party regards the transfer to be of a current nature while the other party regards it as of a capital nature. The rule followed here is that all mixed transfers of this kind should be treated as capital transfers.

7.76 The adoption of this principle may be explained by considering what the situation would be if the accounts of the payer and recipient of an unrequited transfer were consolidated. Where the recipient utilizes the grant to finance accumulation, the funds would appear as part of saving on the consolidated account. Thus, the payer may be considered to be placing part of his saving at the disposal of the recipient. If the recipient utilizes the grant to finance his consumption expenditure, the saving on the consolidated account would be correspondingly reduced. Where taxes levied on wealth are utilized by the public authorities to finance outlays on consumption, the consolidated balance-sheet account for government and the private payer would show the drawing down of wealth.

7.77 The main criteria adopted to distinguish capital transfers from unrequited current transfers are therefore the purposes for which the transfer is to be utilized, the basis and source of the payment, and the frequency with which the transfer occurs from the point of view of either the payer or the recipient. Unrequited transfers which are non-recurrent (quite irregular) for either party to the transaction are considered to be capital transfers. Also included among capital transfers are grants which are designed to finance fixed capital formation or long-term expenditure and unrequited payments which may be considered as transfers of wealth.

APPLICATION OF THE GENERAL PRINCIPLES

7.78 It will be useful to describe the composition of capital transfers in terms of the types of transactions covered.

7.79 Government departments may make capital transfers, such as investment grants, payments for damage due to war or floods, or indemnities for other calamities, to enterprises and private non-profit institutions. Capital transfers on account of the private unincorporated enterprises included in the household sector should be treated as grants to the owners of these units. The public authorities may also indemnify households for war, flood and other damages in respect of personal property.

7.80 The public authorities may receive payments of non-recurrent capital levies and confiscations from corporate and private quasi-corporate non-financial enterprises, financial institutions and households. Households may also pay death duties and taxes on legacies.

7.81 Capital transfers between organs of governments may consist of grants for purposes of financing fixed capital formation and of unilateral transfers of capital goods. Capital transfers between the governments of two countries may, in addition, be in the form of grants to finance deficits on external trade or reparations. It will be useful to classify the net capital transfers made, or received, by general government into transactions with residents and transactions with the rest of the world.

7.82 Corporate and private quasi-corporate enterprises and households may make grants to private non-profit institutions for fixed capital formation and for establishing or augmenting endowments for long-term expenditure. Households may receive, or give, legacies and other gifts of a capital nature; and migrants may make capital transfers of financial assets or the capital assets of their businesses.

Land and selected intangible assets

NET PURCHASES OF LAND (7.4)

7.83 Land is defined to include sub-soil deposits, forests and inland waters, but to exclude structures and similar construction works situated thereon. Though expenditures made on other kinds of improvements to, and the reclamation of, land are part of fixed capital formation, these improvements become an integral part of the value of the land. It is therefore desirable to cover such improvements to land in the concept of land after the period of account in which they are made. Where dwellings and non-residential buildings are purchased (sold) at second-hand, it may not always be practical to separate the sales value of the land involved in the transaction from the sales value of the structure. In such instances the total sales value might be recorded in gross fixed capital formation, under net sales of second-hand fixed assets. (See also paragraph 6.127.)

7.84 Purchases and sales of land are considered to take place between resident institutions only, at the moment when the legal title to the land passes. Where land is purchased by a non-resident, a nominal resident institution is considered to be the owner of the land. The foreign owner will hold the equity of the notional resident institution, which will be equivalent to the cost of purchase of the land. The value recorded in the flow "Net purchases of land" in the case of the buyer and seller of the land will be the same, namely, the sales value of the land. The transfer costs involved in the transaction, for example, brokers' commissions, cost of legal services and fees for title searches, represent the production of a commodity-type service, and are to be recorded in the fixed capital formation of the buyer and seller in the light of the portion of the transfer costs which each party bears. The buyer and seller of the land may share the transfer costs, for example, fees for title search and legal services in the case of the former and brokers' commissions and fees for legal services in the case of the latter.

7.85 In recording transactions in "Net purchases of land" in the accounts and supporting tables of the system, sales are netted against purchases for all members of the sector or sub-sector shown, that is, consol-

idation is employed. In the case of a country, purchases and sales to be recorded in this flow cancel one another out.

NET PURCHASES OF INTANGIBLE ASSETS EXCEPT CLAIMS (7.5)

7.86. The transactions to be recorded in respect of net purchases of intangible assets except claims relate to the purchases and sales of intangible assets which do not represent claims on second parties; in other words, which are not matched by liabilities. Examples of these intangible assets are exclusive rights to exploit mineral deposits and fishing grounds, other concessions and leases in respect of land, patents, copyrights and trade marks. The transactions of interest here are once-for-all transfers of the legal title to such exclusive rights. In these transactions, the purchaser acquires the power to sell, assign, or use exclusive rights which the intangible asset represents; and the seller completely relinquishes all of these privileges. The issue of licences to use patented processes, or permission to publish copyrighted material, or sub-leases of mining concessions, should not be treated as the sale and purchase of the intangible assets in question. In the case of these contracts, the authority to make use of the patent, copyright or concession is limited and periodic payments are usually made in respect of the granted privileges. The periodic payments will be classed as payments of royalty. (See also paragraph 7.52.)

7.87. The flow "Purchases of intangible assets n.e.c., net" for a given group of transactors is equivalent to the excess of the cost of the purchases of these assets, reduced by the included commissions and legal fees, over the proceeds of their sales. In the case of a given transaction, the purchase and sales values to be entered in the flow under discussion are equivalent. The legal fees and other transfer costs involved in the transaction, the cost of which may be shared by the buyer and seller, represent the gross output of a commodity-type service. The part of these costs which the buyer or the seller bears should be recorded in his gross fixed capital formation. In view of the manner in which purchases and sales are recorded, the net purchases of intangible assets other than financial claims of a country represents her net purchases of these assets from the rest of the world.

Transactions in financial claims (8.0 as an asset; 9.0 as a liability)

7.88. This section of the chapter deals with transactions in financial assets and liabilities. These transactions are exhibited in the lower panel of the capital finance accounts of the system. The excess of the net acquisition of financial assets over the net incurrence of liabilities by a resident institution is equivalent to its net lending. Net lending and capital transfers are the ways in which the saving of an institution is made available to other economic agents. Financial institutions play a key role as middlemen for transactions in financial assets and liabilities.

7.89. The scheme to be used to classify transactions in financial assets and liabilities is dealt with

first in this section since it serves as a basis for discussion of the other aspects of the topic. The scheme, which is also suitable for purposes of classifying holdings of financial claims, is set out in table 7.2 below; and certain features of it are elaborated in the text of this section. Considered in turn, afterwards, are the basis of recording, the valuation of, and the time of recording of transactions in financial assets and liabilities.

THE SCHEME OF CLASSIFICATION

Character and use

7.90. The first level of the classification in table 7.2 is designed to classify financial assets and liabilities according to the type of instrument, degree of liquidity and the circumstances in which the transactions take place in the first instance. A second, more detailed level of classification is used in the case of a number of the categories of financial assets in order to indicate the institutional sectors of the debtors. It is also suggested that a few categories of liabilities be classified according to the institutional sectors of the creditors. These sub-classifications are limited to categories of financial assets and liabilities for which information about the class of debtor or creditor is of particular value analytically, and should be feasible to gather. The two recommended levels of classification of financial claims, in combination, should furnish a frame for the compilation of data on such questions as the exterior sinks of investment and sources of finance, as well as the degree of liquidity and solvency, of the various institutional units. The classification should also be of value in portraying markets, organized and unorganized, in respect of the various types of financial claims.

7.91. The detail in which the classification of financial assets and liabilities is to be employed in the standard accounts and tables of the system varies, depending on the institutional sector under study and the major analytical requirements to be served. Considerably less detail in classification is required, or is feasible, in the case of accounts and tables concerning households than in the case of the accounts and tables concerning financial institutions. In general, the use of the first level of the classification only, adapted to the institutional sector under study, is recommended in the case of the standard capital finance accounts. The use of the more detailed level of classification is restricted to the supporting tables relating to transactions in financial claims. In view of the need for data on foreign financial assets and liabilities for purposes of monetary and balance-of-payments studies, the distinction between foreign and national claims is extensively employed in the supporting table concerning the transactions of monetary institutions and monetary activities of the treasury.

7.92. It will be useful to elaborate below the definition of selected categories of financial claims.

Proprietors' net addition to the accumulation of quasi-corporate enterprises

7.93. This category is defined to exhibit the net result of the actual additions to, and withdrawals from, the capital of quasi-corporate enterprises which consist

Table 7.2. Financial assets and liabilities

(a) CLASSIFICATION (*Definitions of general terms, such as bills, bonds or loans, are given in the second section of the table*)

The number 8 in the first portion of the code identifies a financial asset; and 9 in the first portion of the code identifies a liability

8.1.	<i>Gold</i>	All holdings of gold except for industrial uses and purposes	incorporated enterprises, after the claims of all creditors have been met. Equity securities do not provide the right to a pre-determined income, or to a fixed sum on dissolution of the incorporated enterprise. Ownership of equity is usually evidenced by shares, stocks, participations or similar documents. Preferred stocks or shares which also provide for participation in the distribution of the residual earnings, or value on dissolution, of an incorporated enterprise are included. The categories are to be subdivided into the securities of (i) resident corporations and (ii) the rest of the world, i.e. non-resident corporations; and in each case, securities quoted on the stock exchange are to be distinguished from other securities
8.2 or 9.2	<i>Currency and transferable deposits</i>	Notes and coins in circulation; and deposits which are exchangeable on demand at par, without penalty or restrictions, and which are transferable by cheque, or are otherwise commonly used to make payments. These categories should be cross-classified according to currency and transferable deposits (i) which are held in the national currency of a country and in foreign currencies and (ii) which are the liabilities and assets of resident bodies (monetary institutions and central government) and the liabilities and assets of the rest of the world (e.g. foreign banks and governments).	<i>Short-term loans n.e.c.</i>
8.3 or 9.3.	<i>Other deposits</i>	All claims, other than currency and transferable deposits, on monetary institutions, other financial institutions and government organs that are represented by evidence of deposit. In the case of most countries, deposits with savings banks would be included. Also to be included are shares in small denominations, or similar evidences of deposit, issued by savings and loan associations, building societies, credit unions and the like which are legally, or in practice, redeemable on demand or relatively short notice. These categories are to be cross-classified into deposits (i) which are held in the national currency of a country and in foreign currencies and (ii) which are the liabilities and assets of resident and non-resident institutions.	All loans not classified elsewhere, the original maturity of which is less than one year. All loans repayable on demand should be classified as short-term even though these loans are expected to be outstanding for more than one year. Covered are loans extended to business, government, households, etc. by banks, finance companies and others, including instalment loans, hire-purchase credit and loans to finance trade credit. It will be of value to sub-divide these categories according to the resident sector and the rest of the world in the case of debtors and creditors, respectively, when compiling detailed data on claims
8.4 or 9.4.	<i>Bills and bonds, short-term</i>	Bills and bonds the original maturity of which is less than one year. Claims with optional maturity dates, the latest of which is one year or more away, should be considered to be long-term. The category should be sub-divided according to debtor, as follows: (i) resident corporations, (ii) central government, (iii) state and local government and (iv) the rest of the world.	<i>Long-term loans n.e.c.</i>
8.5 or 9.5	<i>Bonds, long-term</i>	Bonds, debentures, etc. the original maturity of which is one year or more. Included in the case of corporate issues are preferred shares of stocks, excepting participating preferred securities. The category should be sub-divided in the same fashion as category 8.4. In addition, subdivision of the bonds and debentures into (i) quoted on the stock exchange and (ii) not quoted on the stock exchange, will be of value	All loans not classified elsewhere, the original maturity of which is one year or more. It will be of value to sub-divide these categories according to the resident sector and the rest of the world in the case of debtors and creditors respectively, when compiling detailed data on claims. It may also be useful to distinguish loans secured by mortgages from other loans.
8.6 or 9.6	<i>Corporate equities, including capital participations</i>	Instruments and records acknowledging claims to the residual value, and residual income, of	<i>Net equity of households on life insurance reserves and on pension funds</i>
8.9 or 9.9			
8.10 or 9.10	<i>Proprietors net addition to the accumulation of quasi-corporate enterprises</i>	The net additions which the owners of quasi-corporate enterprises make to the funds and other resources of these enterprises for purposes of the capital investment of the quasi-corporate enterprise. These categories should be subdivided into resident and non-resident quasi-corporate enterprises and resident and non-resident owners, respectively, in the case of detailed analysis of claims.	
8.11 or 9.11	<i>Trade credit and advances</i>	Trade credit extended to enterprises, government and households; and advances for work which is	

Table 7.2 continues

Table 7.2. Financial assets and liabilities (continued)

- 8.11 or 9.11. *Trade credit and advances* (continued)
 in progress or is to be undertaken. In the detailed tabulations of claims, these are to be sub-divided according to resident sectors and the rest of the world in the case of debtors and creditors, respectively. It will also be of value to separate short-term trade credits and advances from long-term trade credits and advances. The dividing line between the two types of credit is one year, as in the case of the other distinctions between short-term and long-term claims
- 8.12 or 9.12. *Other accounts receivable and payable*
 Accounts receivable and payable which are not included above, for example, in respect of taxes, interest, dividends, rent, wages and salaries, insurance claims which are due to be received or paid. It will be useful to classify these categories according to the resident sector and the rest of the world in the case of the debtor and creditor, respectively.
- 8.13 or 9.13. *Other*
 Differences in time of recording between payments and receipts in respect of financial claims and statistical discrepancies in the figures between a category of financial assets and the corresponding liabilities which it is not feasible to adjust in the data for the categories listed

above. It will be valuable, if feasible, to indicate the extent to which differences in time of recording and statistical discrepancies account for the data entered here, and the broad categories of claims to which these differences and discrepancies relate.

(b) DEFINITIONS OF GENERAL TERMS

Bill: A security which gives the holder the unconditional right to receive a stated fixed sum on a specified date and which is issued and traded in organized markets at a discount, depending on the rate of interest and the time of maturity.

Bond: A security which gives the holder the unconditional right to a fixed money income, that is, payment of interest is not dependent on the earnings of the debtor and which is usually issued and traded in organized markets. With the exception of perpetual bonds, a bond also gives the holder the unconditional right to a stated fixed sum on a specified date or dates. Mortgages are not classified here; they are included under loans.

Loan: A direct transaction between borrower and lender, where the lender receives no security evidencing the transaction or a non-negotiable document. Included are transactions which are essentially loans, though the debtors may issue a security, for example, bonds specifically issued by the government to the central bank as security for a note, liens and mortgages created as a security for a loan.

of funds for use by the enterprise in purchasing fixed assets, accumulating stocks, acquiring certain financial assets or liquidating certain liabilities. The additions may also include the fixed assets, securities and the like which the owners transfer to the capital of the quasi-corporate unit. The withdrawals will consist of funds which the proprietors take from the accumulated, retained saving and the reserves for the consumption of fixed capital of the quasi-corporate enterprises, and from the proceeds of the sale of its fixed and financial assets. The withdrawals may also include transfers of fixed assets, securities and other financial assets from the business to the proprietors as individuals.

7.94. This definition of the proprietors' net addition to the capital of quasi-corporate units follows from the attribution of retained saving to these units. It should be recalled that in paragraphs 7.43 and 7.44 above, the withdrawals of the proprietors from the entrepreneurial income of quasi-corporate enterprises are restricted to the withdrawals which are made from the income of the units on current account. It should also be noted that these withdrawals may be negative, that is, the proprietors may transfer funds to the enterprise for use on current account. As is indicated in paragraph 7.44, in certain cases withdrawals from entrepreneurial income may usually be equivalent to the net income of the quasi-corporate enterprises. In these instances the figure recorded in the proprietors' net addition to the accumulation of the enterprise will be equivalent to the change in the equity of the unit, unadjusted for any changes in the prices of its assets and liabilities. This will, however, not be so in general since the quasi-corporate enterprise may retain at least part of its positive or negative net income

Net equity of households on life insurance reserves

7.95. The change during a period of account in the net equity of households on life insurance reserves will reflect all the transactions in life and similar insurance during the period. Gross additions to the equity consist of the sum of net premiums in respect of the insurance (i.e., the premiums reduced by the service charge for the insurance) and the interest which the policy holders earn on their equity. Reductions in the equity (i.e., claims paid) comprise payments in respect of insured deaths, the cash surrender and lapsing of policies, and payments in respect of matured endowment and similar policies. In view of the definition of the service charge in paragraph 6.38, the excess of the net premiums paid on life insurance during a period of account over the claims paid during the period is equivalent to the net change in the equity of policy holders on the reserves of life insurance companies. The equity consists of the saving accumulated on the life insurance policies in force, and is made up of pre-payments of premiums, accumulation in respect of value on maturity of endowment and similar policies, undistributed interest earned by the policy holders, and the reserves against the risks of insuring during the period of account.

7.96. The excess of the net premiums over the claims during a period of account will be equivalent to the change during the period in the equity in life insurance reserves of all policy holders of a given type of life insurance, but not necessarily of the various groups of these policy holders. While the service charge in respect of all the life insurance of a given type is defined so that it includes the capital gain (or loss), that is the difference between the actual claims and the

expected claims reflected in the premiums, as well as the charge for services which the insurance companies include in the premium, this is not necessarily so in the case of the service charge in respect of the policies held by a given group of households. The estimated service charge in respect of all life insurance of a given type is to be distributed among the various groups of policy holders in proportion to the premiums they pay (see paragraph 6.39); and the average capital gain (loss) in respect of the policies of certain groups of households may differ significantly from the average capital gain (loss) in respect of all policies of this type. Where accounts are compiled in respect of various classes of households, it may be necessary to make adjustments for these differences in the data in respect of the service charge and the net equity on the life insurance reserves, in the case of each class of household.

Net equity of households in pension funds

7.97. As for life insurance, the net change in the equity of households on pension funds during a period of account will reflect all the transactions which take place between covered individuals and the funds. Gross additions to the equity consist of the sum of net contributions made on the account of the individuals (i.e., contributions reduced by the administrative expenses of the fund) and the net property income earned by the fund. The total amount of the property income is distributed to the covered individuals in the form of interest. Reductions in the equity comprise payments of pensions and of lump-sum settlements on withdrawal of individuals from the fund.

7.98. The figures of the change during a period of account in the equity of covered individuals may differ when based on these transactions and when based on the balance sheets of the pension fund as of the beginning and end of the period. Since the equity of the individuals is equal to the value of the fund, these differences may result from capital gains (losses) which the fund makes on its financial assets. Where balance sheet accounts are compiled, it will therefore be necessary to make adjustments for these capital gains (losses) in the revaluation accounts of pension funds and households. Where balance sheets are compiled for various classes of households, it may be necessary to make additional adjustments in the revaluation accounts of some classes in order to account for the capital gains (losses) of covered individuals on their equity due to such events as forfeits of the whole, or part, of the equity when coverage is discontinued.

TIME OF RECORDING

7.99. The category "Other" of the classification of financial assets and liabilities is to be used to record differences in the figures of all the transactions during a period of account, or all the holdings as of one date, between categories of financial assets and the counterpart liabilities in respect of which it is not feasible to adjust these figures themselves. In the case of the transactions in financial claims, these differences may occur because of errors in recording and gathering data and/or the different dates at the start and end of the period of account as of which the two parties to each of the transactions record them.

7.100. In principle, the two parties to a transaction in a financial claim should record the transaction as of the same date. Where the transaction is a sale and purchase of a financial asset, it should be recorded by the seller and buyer at the moment the ownership of the asset is transferred. Where the transaction is the issue of a liability and the acquisition of the corresponding financial asset, or the redemption of a liability and the liquidation of the corresponding financial asset, the transaction should be recorded by both parties to the transaction as of the date the liability is incurred, or is redeemed. This will, in the case of many of these transactions, be the time at which the money that is the counterpart to the transaction is paid. Where, as in trade credit, the counterpart to incurrence of a liability and acquisition of a financial asset is the purchase and sale of goods and services, the financial transaction should be recorded as of the time when the ownership of the goods is acquired and relinquished or the services are rendered. Similarly, where accounts payable and receivable result from transactions in respect of employee compensation, property income, taxes, etc. entries should be made in these accounts as of the date the transactions are recorded in the production and/or income and outlay accounts. The dates of recording transactions in financial claims are thus aligned with the dates of recording the transactions in the other items of the system which give rise to the financial claims.

7.101. The dates as of which the two parties to a transaction in a financial claim record it may differ because they acquire the documents witnessing the transaction at differing times. This will, for example, occur in the case of financial transactions, such as the liquidation of an account payable (receivable), the counterpart of which is the payment and receipt of money. The recipient of the money will frequently receive the cheque for the money, and record the transaction, at a later date than when the payer of the money wrote the cheque, and recorded the transaction, because of the time required to transmit the cheque through the mails. The cheque in question is part of what is often called the float, that is to say, the cheques, money orders and other instruments of transfer of funds in the mails and in the process of clearing. The amounts involved in the float is generally substantial in the case of financial claims such as transferable deposits, trade credits and advances, and other accounts receivable and payable.

7.102. It may be practicable to estimate the extent to which the floats and similar differences in dates of recording, on the one hand, and statistical errors of reporting and gathering data, on the other, account for discrepancies in the figures of transactions during a period of account in respect of a category of liabilities and the corresponding financial assets. It may also be possible to estimate, with a reasonable degree of confidence, the adjustments which should be made in the over-all data for various categories of liabilities and/or the corresponding financial assets. It is much more difficult to decide on the institutional sectors for which the figures of liabilities or financial assets should be adjusted. If only the last of the aforementioned steps is impracticable, the over-all adjustment might be exhibited in the case of each category of financial

claims. The category "Other" in the classification of financial claims might be used to exhibit the differences in the figures of the transactions in various categories of liabilities and the corresponding financial assets when it is not feasible to eliminate these discrepancies by making reliable adjustments in the figures of specific categories of liabilities and financial assets. In this case it will be useful to indicate the extent to which the float and other circumstances resulting in differences in time of recording, on the one hand, and statistical errors in recording and gathering data, on the other, account for the discrepancies in the case of various types of liabilities and the corresponding financial assets. The category "Other" should not be used to indicate the discrepancy in the figure of net lending when based on transactions in financial claims and when compiled from other capital transactions. As is indicated in chapter VIII, this discrepancy should be shown in association with net lending, if necessary.

BASIS OF RECORDING

7.103. Transactions in financial assets and liabilities during a period of account may be recorded in accounts and tables according to varying degrees of netness (grossness). No netting may be employed; in other words, the acquisitions (purchases) and dispositions (sales) of each financial asset and the incurrences (issues) and redemptions of each liability by each transactor unit are shown. Acquisitions of a given category of financial assets by each transactor unit may be netted against dispositions of the category; and incurrences of a given category of liabilities by each transactor unit may be netted against redemptions of the category. The equivalent of this is to net acquisitions of each category of financial assets against dispositions, and issues of each category of liabilities against redemptions, in the case of each category of transactor units which are to be shown in accounts or tables. Successively more net ways of recording consist of netting (i) transactions in a given category of financial assets against the same category of liabilities and (ii) transactions in one category of financial assets against liabilities of another category. These approaches to netting could be used in respect of each transactor unit or in respect of each class of transactors; and they are more net ways of recording in the latter case than in the former case. In consolidation, netting is applied to the transactions in financial assets and the counterpart liabilities of a given class of transactors, as well as to their additions to, and reductions in, each category of financial assets and liabilities.

7.104. In general, the minimum degree of grossness used in exhibiting transactions in financial assets in accounts and tables should be netting acquisitions (purchases) against dispositions in the case of each category of financial asset and each class of transactors to be shown in accounts and tables. Similarly, incurrences (issues) would be netted against redemptions in the case of each category of liabilities and each class of transactors. This degree of netting has the undesirable consequences that the data exhibited will vary with the detail of classification used in the case of transactors, as well as transactions, and that significant differences in behaviour between the transactors of a class will be

obscured. In order to avoid these deficiencies in the presentation of data, it would be necessary to compile the data on financial assets and liabilities without netting. While it is not feasible to recommend this approach internationally, some countries may find it practicable to compile, and exhibit, the data on a fully gross basis in the case of at least certain categories of financial assets and liabilities. Data of this type will be of considerable interest in the case of bonds and corporate equity securities, loans and net equity of households on life insurance reserves and pension funds.

7.105. In general, adopting a greater degree of netting than is recommended in the preceding paragraph, in exhibiting data in accounts and tables will seriously impair the analytical usefulness of the data on financial transactions. However, the use of consolidation will be appropriate in the case of the compilation of certain data in respect of the transactions of monetary institutions and general government. In these instances, the transactions conducted with other sectors are most significant.

VALUATION

7.106. Purchases or sales of financial assets should in general be valued at the price at which the assets are acquired, or disposed of, respectively. The values assigned are not to reflect any commissions, service charges and similar costs which may be involved in the purchase or sale. Where the counterpart to financial assets acquired is a new issue of liabilities, the liabilities are to be valued at the receipts from the issue without reduction for any commission, service charge or other flotation costs paid by the issuer. Nor are pre-payments of interest to be deducted. Similarly, where the counterpart to the disposition of financial assets is the redemption of liabilities, redemption is to be valued at the payment made in respect of the liabilities. Thus the same value will be assigned to both sides of a transaction in financial claims.

7.107. It should be evident from paragraphs 7.92 through 7.95 that the valuation of proprietors' net additions to the accumulation of quasi-corporate enterprises and of changes in the net equity of households on life insurance reserves is less direct, and more complicated, than the valuation of other financial claims. It should also be noted that claims such as trade credit and advances, loans and bonds may be liquidated, in whole or in part, by the writing off of bad debts. In such instances, the counterpart to the disposition of the claim is recorded as a current transfer rather than the receipt (payment) of money.

7.108. The characteristic circumstances in the case of transactions in such claims as bank and other deposits, loans, trade credit and advance are that no service charges or similar costs are involved and the face value of the claims and funds, or the value in goods and services exchanged, are equivalent. Commissions, service charges and similar costs may be incurred by either party, or both, to transactions in securities or, in some instances, by borrowers of funds. These charges are part of the gross output of the financial intermediaries to the transactions; and are disposed of to the consumption, intermediate in the case of

producers and final in the case of households, of the appropriate parties to the transactions.

7.109. In some cases issues of bonds and other securities are sold to underwriters and other intermediaries for resale to investors at a higher price. In these instances the difference in the sales receipts of the intermediaries and the issuer is to be considered the charge for floating the issue; and the value assigned to the issue of liabilities will be based on the price the investors pay for the securities. The service charge will of course be allocated to the issuer of the liabilities.

Similarly, when bills and notes are rediscounted, the difference between the face value and the funds received (paid) will usually be treated as a service charge; and the service charge will be disposed of to the parties who sold the bills and notes to the financial intermediary. In the case of some transactions in securities which are already on the market, the dealer's service charge will consist of the difference in value between his purchase of the securities and his sale of the securities to another investor. In these instances, the service charge might be allocated to the investor to whom he sold the securities.

Chapter VIII

THE STANDARD ACCOUNTS AND TABLES

8.1. This chapter concerns the standard accounts and tables of the system. The accounts and tables included in this chapter relate to all aspects of the system except national and sector balance sheets and call for the tabulation of data in constant prices as well as data in current values.

8.2. The standard accounts and tables, and the coupled notes on certain aspects of the tabulations, are set out in annexes 8.2 and 8.3 respectively. Annex 8.1 gives the codes used to identify transactions in the standard accounts and tables. The codes are designed so as to indicate the place of the various transactions in the accounts and flows of the system and the links between the transactions.

8.3. The text of this chapter is devoted to considering the character and place in the system of each of the standard accounts and tables and the manner in which, and the orders of periodicity and priority with which, the accounts and tables might be used in presenting national accounting data. The discussion of the standard tables of data in constant prices also outlines some major problems and techniques of estimating these series. The text of this chapter starts with a discussion of the purposes which the standard accounts and tables are designed to serve.

The purposes of the standard accounts and tables

8.4. The standard accounts are intended to delineate the basic features of the system and to furnish guidance concerning the presentation, internationally and nationally, of the main series of the system. Illustrations of the standard accounts have already been used in chapter II in order to indicate how the accounts fit into the structure of the system. The standard supporting tables portray certain limited facets of the system, for example, the schemes of detailed classification. The main purpose of the tables is however to furnish guidelines in respect of the series of detailed data which it should be valuable and feasible to compile for national and international use in the foreseeable future, but which can not be appropriately exhibited in the form of accounts. As a result, the series called for in two of the tables do not fit exactly into the structure of the system. These two tables are therefore called supplementary, instead of supporting, tables in this report.

8.5. Unlike the extended matrix of table 2.1 the standard accounts do not delineate the structure of the system fully. National and sector balance sheets are not included at this juncture. And, except for the Accounts II on the supply and disposition commodities, the standard accounts are limited to accounts for

transactors.¹ Nor are the full accounts of the system for transactors shown explicitly. Attention is focused on those accounts which exhibit the main categories of transactions and aggregates of the system, and the web of relations between them. For example, the Accounts III concerning income and outlay do not illustrate the accounts of the system in respect of the institutional sector of origin of factor incomes. Or, the capital formation accounts of transactors are represented in the entries, increases in stocks and gross fixed capital formation, of the Accounts II on the supply and disposition of commodities, but are not shown in the form of full standard accounts. Both the accounts do however furnish the basis for individual standard tables.

8.6. The standard tables, in calling for tabulations of data of considerable interest for economic and social analysis, supplement the standard accounts in a number of ways. The tables set out the data of the system on flows valued in constant prices and on employment; and cover each of the accounts and classifications of the system except balance sheets in some detail. Some standard tables delineate the structure of sets of accounts, as well as the relevant detailed classifications. For example, standard tables 2 and 3, on input-output data, exhibit the interrelations between the transactions of the production, consumption expenditure and capital formation accounts and the main classifications used in respect of the supply and disposition of commodities and the gross output and cost-structure of industries. Other standard tables present detailed classifications, or views, of selected accounts which it is not advantageous to exhibit in the form of accounts. Illustrations of these uses are furnished by table 20, on the income and outlay and capital transactions of non-financial corporate and quasi-corporate enterprises classified according to kind of economic activity, table 17, on the institutional sector of origin of factor incomes classified according to kind of economic activity, and table 23, on the income and outlay and capital transactions of sub-sectors of households. Still other standard tables are restricted to presenting detailed, sometimes rearranged, classifications of certain aspects of a single account. Examples of this type of table are tables 4 through 7, which concern final consumption expenditures or gross capital formation.

8.7. The standard accounts and tables are intended to furnish international guidance in respect of goals for the elaboration and extension of national accounting. It is recognized that few countries are now in a position to compile the wealth of data listed in these

¹ The three classes of standard accounts are named Accounts I, II and III in this report

accounts and tables. Most national statistical authorities will need to develop the system of data gradually, in the light of the requirements and statistical circumstances of their country. They will generally find it desirable to assign varying periodicities, as well as differing orders of priority, to compiling the various series of data. The last section of this chapter is devoted to discussing the orders of priority and the periodicity with which the compilation of the data of the system might be undertaken.

8.8. The international reporting of the series called for in the standard accounts and tables must of course be geared to the situation in a number of countries. It will therefore be essential initially, and as the national accounts of countries are improved and extended, to select series from the standard accounts and tables for purposes of international reporting. The selection should of course be made in the light of the availability of data nationally and the requirements for information internationally.

8.9. The manner in which the series of data of the system are grouped and arrayed, in particular in the case of supporting tables, will differ from one situation to another. It should, for example, reflect the data which are to be presented and the purposes for which, and the circumstances in which, the series are estimated and published. The guidance which a number of the standard tables is intended to provide therefore concerns the items of data to be compiled, not the way in which the series are to be organized and arrayed. The standard accounts, and the standard tables which are essentially accounts in character, are however designed to suggest the way in which data might be organized and arrayed in tabulations. This is the case because these tabulations are intended to exhibit the structure of, and relations between, flows. This topic is discussed further in the last section of this chapter.

The character and structure of the standard accounts

8.10. Here the character and structure of the standard accounts are considered mainly in the light of the analytical purposes which the items of the accounts are intended to serve. In the course of this discussion the manner in which the standard accounts fit into, and illustrate, the structure of the system will be outlined though this subject was dealt with in detail in chapter II. Attention will be called to certain differences in the view given of the structure of the system between the standard accounts and the illustrative accounts of chapter II because of the emphasis in the standard accounts on the analytical requirements for data.

THE CLASSES OF STANDARD ACCOUNTS

8.11. The standard accounts of the system, which are set out in annex 8.2, consist of three classes of accounts. The Accounts I are the consolidated accounts for the nation. The Accounts II represent a decomposition of Account I 1 on the production of, and expenditure on, the gross domestic product into accounts on the available supply and disposition of goods and services and the domestic production of these goods

and services. The Accounts II relate to the production, consumption expenditure and capital formation accounts of the system. The Accounts III consist of a deconsolidation of the Accounts I on income and outlay and capital finance into the same types of accounts for the institutional sectors of the system. The way in which the Accounts II and III consolidate to the Accounts I is detailed in table 8.3 in annex 8.2.

Accounts I

8.12. The consolidated accounts for the nation are designed to summarize the transactions which take place in an economy so that attention is focused on the main features of economic conditions and the strategic relationships between various facets of the economy. As is indicated in chapter II, the Accounts I also portray, in summary, the basic accounts of the system. The five accounts of the system in respect of transactors — production, consumption expenditure, income and outlay, capital formation and capital finance — are summarized; and the system is closed by the account on the external transactions of the nation. It may be noted from annex 8.2 that the Accounts I are completely articulated.

Accounts II

8.13. The Accounts II on the supply and disposition of goods and services are divided into Accounts A, on commodities, and Accounts B, on other goods and services. The Accounts II A illustrate the production accounts of the system which are devoted to commodities. The Accounts II B have been pieced together mainly from the consumption expenditure accounts of the system in order to portray the supply and disposition of all goods and services. Production accounts are devoted to commodities since they make up the bulk of the available supply of goods and services and are the subject of studies of supply and demand, input-output relations, quantities and prices, and markets. On the other hand, other goods and services are mainly produced by government services and private non-profit services to households for their own final consumption. These non-commodity items are of interest primarily from the point of view of the purposes for which they are consumed.

8.14. The Accounts II on the domestic production of goods and services are divided into Accounts C, D, E and F, on industries, producers of government services, producers of private non-profit services to households and the domestic services of households, respectively. This classification is a basic aspect of the system because of the fundamental differences between the four classes of producers in the nature, role in the economy and the cost-structure of their production.

Accounts III

8.15. Accounts III are provided for each of the institutional sectors into which the resident transactors are divided in the system, that is non-financial corporate and quasi-corporate enterprises, financial institutions, general government, private non-profit institutions serving households, and households. Since these institutions exhibit significant differences in the type

of income receipts and disbursements and the form and sources of finance of investment, the detail in which certain categories of transactions is to be recorded in these accounts differs from one sector to another.

PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

Account I 1 and Accounts II

8.16. Account 1 of the consolidated accounts for the nation focuses on the gross domestic product at market prices; and portrays the sources of demand for the product and the factor incomes generated in producing it. The account is derived by consolidating the production and consumption expenditure accounts of the system, that is rows and columns 5 through 28 in table 2.1 or the Accounts II. As may be noted from table 8.3, the entries in the Accounts II in respect of gross output of goods and services, intermediate consumption and household final consumption in the domestic market cancel out in the consolidation. The sum of the remaining debit entries on primary inputs in Accounts II C, D, E and F is equal to the corresponding debit entries in the Account I 1. When imports of goods and services are treated as a credit instead of a debit in Accounts II A and B, this is also the case for the credit entries on final demands in these Accounts II and Account I 1.

8.17. While the final consumption expenditure of households and private non-profit bodies serving households are separated into differing accounts in Accounts II B, the outlays are encompassed in one item of Account I 1 in order to limit the classification of transactions in the consolidated accounts to the most essential distinctions for purposes of general economic analysis. This is also why the constituents of value added and gross fixed capital formation are shown as single items in Account I 1 though the flows are divided among accounts for industries, the producers of government and private non-profit services and domestic service in the Accounts II.

Accounts II A

8.18. The precise manner in which the Accounts II A fit in the system is illustrated in table 2.2. Accounts II A call for treating distributive-trade and transport margins (services) as distinct commodities; in other words, purchasers' values are to be partitioned into producers' values and distributive-trade and transport margins. The further separation of commodity taxes, net from producers' values to give basic values, which is provided for in the system, is not proposed in Accounts II A. It is avoided in order to limit the difficulties of compiling the accounts.

8.19. While recording transactions in terms of producers' values and distributive-trade and transport margins also raises difficulties, this mode of valuation is thought to be more essential for purposes of linking the experience of producers of given commodities with the sources of demand for the commodities. The question of simplifying the compilation of Accounts II A by substituting valuation at purchasers' prices for valuation at producers' prices is discussed in the notes annexed to the Accounts II. It is suggested that some

countries may find it necessary to resort to purchasers' values in the annual compilation of these accounts. As is emphasized in chapter IV, the modified accounts will not be completely consistent with the system since distributive-trade and transport margins will be incorporated into the value of each category of commodities.

8.20. Separate Accounts II A are to be compiled for a minimum number of classes of commodities, defined in terms of the industries where the commodities are characteristically produced. The same classes are to be used for commodities and for industries. In the notes to Accounts II it is suggested that a minimum of six classes of commodities might be used, that is agriculture; mining, manufacturing and electricity and gas; construction; wholesale and retail trade, restaurants and hotels; transport, storage and communication; and services.

Accounts II B

8.21. In these accounts the supply and disposition of goods and services are valued in purchasers' values. The major sources of supply of the non-commodity items are the producers of government and private non-profit services. Most of these services and goods are absorbed by the government and non-profit bodies themselves; households purchase some of the items. A part of the supply of these goods and services comes from the direct purchases of the government services and households abroad. Thus Accounts II B are derived from bits of the production and consumption expenditure accounts of government and private non-profit services and the final consumption expenditure account of households.

8.22. Covering the consumption expenditure accounts of the system in Accounts II B not only makes it possible to portray the supply and disposition of goods and services completely. These accounts also show the transformation of the services which government and private non-profit bodies produce for their own use into their final consumption expenditure. Account II B on the final consumption expenditure of households serves a somewhat similar purpose. It links the final consumption expenditure of resident households with the consumption expenditure of households in the domestic market and the direct purchases abroad of resident households.

Accounts II C, D, E and F

8.23. These accounts delineate the cost-structure and gross output of the four classes of producers of the system. As may be noted from a comparison with tables 2.3, 2.4 and 2.5, the accounts represent a simplification of the production accounts of the system for activities. Intermediate consumption is valued at purchasers' values and is not classified according to kind of commodity. And, gross outputs are valued at producers' values.

INCOME AND OUTLAY ACCOUNTS

Account I 3 and Accounts III 3

8.24. Account 3 of the consolidated accounts of the nation is designed to exhibit the main forms in

which the resident transactors receive and allocate their disposable income. The account represents a consolidation of the income and outlay accounts of the system in respect of the institutional sectors of origin and the institutional sectors of receipt, that is the equivalent of rows and columns 33 through 37 and 51 through 55 of table 2.1. As is evident from table 8.3, the account also results from consolidating the Accounts III 3. In either case, the property and entrepreneurial income and other current transfers paid by resident transactors must be treated as negative credits, instead of positive debits. Neither Accounts III 3, nor the income and outlay accounts of table 2.1, net disbursements against receipts.

8.25. Unlike the consolidated income and outlay account of the nation shown in table 2.14 of chapter II, the consumption expenditure accounts of the system are not entirely covered in extracting Standard Accounts 3 from the framework of the system. Included are the intersections between the accounts on consumption expenditure and the accounts on institutional sector of receipt only. As a result, the final consumption expenditure of the various institutional sectors is uniformly included in Accounts I 3 and Accounts III 3; and furnishes a link between these accounts, on the one hand, and Account I 1 and Accounts II B, on the other.

8.26. Consolidating the flows of the system in respect of institutional sectors of origin and institutional sectors of receipt only in constructing Account I 3 and Accounts III 3 ensures that identical categories of transaction are included in all these accounts. If, for example, the standard accounts were to be constructed from the flows of the system in respect of the institutional sectors of receipt only, as in tables 2.8 through 2.10, operating surplus would appear in the Accounts III 3 of each of the institutional sectors except households. The household account would show the entrepreneurial income, not the operating surplus, of the private non-financial enterprises included in the household sector. Moreover, the household account would exhibit the gross receipts, but not the gross disbursements, of property income since the property income paid out in connexion with the activities of these enterprises would be excluded.

Differences in detail and basis of recording between Accounts III 3

8.27. While steps have been taken to exhibit each category of income and outlay transactions in each of the Accounts III 3, the detail in which certain categories of transactions are to be recorded differs from one institutional sector to another. The variation in detail of recording reflects differences between the sectors in the character, role and importance of the various items of receipts and disbursements.

8.28. In view of the requirements for data on income shares, it is recommended that the various types of property incomes, interest, dividends and rent received and paid out be uniformly exhibited in the account of each institutional sector. Disbursements of given types of property income are omitted in the case of the income and outlay accounts of some of

the institutional sectors because the type of payment will not occur. This is also so in the case of withdrawals from the entrepreneurial income of quasi-corporate enterprises.

8.29. However, the detail suggested for purposes of recording unrequited current transfers other than direct taxes varies from one institution to another. The standard accounts for non-financial corporate and quasi-corporate enterprises and financial institutions exhibit few entries in respect of these transfers. The standard account for general government, which has a central role in the redistribution of incomes, however, calls for the full detail of the classification of unrequited current transfers. Use of the relevant detailed categories is also recommended in the case of the income and outlay accounts of households and private non-profit institutions serving them.

8.30. The standard income and outlay accounts of general government, on the one hand, and the other institutional sectors, on the other, differ in the recommended basis of recording transactions. In the case of the latter, transactions are to be recorded on a gross basis. In the case of general government, however, transactions between the various organs of government, for example, the central, state and local governments, are to be consolidated in order to delineate clearly the transactions between government and other sectors.

THE CAPITAL FINANCE ACCOUNTS

Account I 5 and Accounts III 5

8.31. The capital finance accounts of the institutional sectors, and of the nation as a whole as well, are designed to depict the forms in which capital assets are accumulated and the internal and external sources of finance of the accumulation. For these purposes, the capital finance accounts are divided into two panels in the case of the standard accounts. The upper panel concerns gross accumulation and its internal sources of finance; the lower panel relates to transactions in financial liabilities and assets. In order to show consumption of fixed capital as a source of finance of accumulation, the flow is recorded as a positive credit in the Accounts 5 instead of a negative debit, as in the corresponding accounts of table 2.11 and the extended matrix of the system. In consolidating the capital finance accounts for the institutional sectors to Account I 5, the capital transactions of one resident sector with another of course cancel out; only net capital transfers received from the rest of the world, net lending abroad and so on, remain. Because purchases (sales) of land take place between residents only, an entry in respect of net purchases of land does not appear in Account I 5.

Differences in detail and basis of recording in Accounts III 5

8.32. It is suggested that the detail in which capital transactions are recorded should differ from one institutional sector to another in the case of financial assets and liabilities only. The suggested variation in detail reflects the differences between the sectors in the relevance and importance of the various categories of

financial claims and in analytical requirements. A minimum number of distinct items is, for example, suggested in the case of private non-profit institutions serving households. On the other hand, the full condensed list of categories is to be exhibited in the accounts of non-financial corporate and quasi-corporate enterprises and financial institutions. Attention should also be called to the recommendation that capital transactions be consolidated in the case of the various organs of general government, but not in the case of other institutions.

EXTERNAL TRANSACTIONS—ALL ACCOUNTS

8.33. Account I 6 of the consolidated accounts of the nation is a summary of all the transactions of resident economic agents with the rest of the world. For purposes of separating current transactions from capital transactions and showing the surplus of the national on current account, the account is divided into two panels. While it is convenient to record current transfers between residents and the rest of the world on a net basis in the case of the other Accounts I, it is desirable to show these transactions on a gross basis in Account I 6. The manner in which the account is derived from columns and rows 80 and 81 of the extended matrix of the system is illustrated in table 2.12.

The character and structure of the standard tables

8.34. The standard tables are arranged in annex 8.3 to this chapter according to the standard accounts which the tables support or otherwise supplement. The tables relating to the production, consumption expenditure and capital formation accounts consist of two sets of tables — one on the flows in current prices; the other on the flows in constant prices. The third set of tables in annex 8.3 deals with income and outlay and capital transactions; and the last table of the annex supports the external transactions account.

CURRENT-PRICE TABLES—PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

8.35. The supporting tables in current prices to Accounts II are designed to array data in respect of (i) the kind of activity, output, cost-structure and gross capital formation of the various producers in an economy (tables 1, 3 and 7), (ii) the supply and disposition of categories of commodities (table 2), and (iii) the cost-composition and aims of the final consumption expenditure of government, private non-profit bodies serving households and households (tables 4, 5 and 6). Use is made in these supporting tables of the schemes of classification of the system in respect of the kind of economic activity, commodities, the types of stocks and fixed assets, and the purpose, or object, of final consumption expenditure.

Tables 1 through 3

8.36. Table 1 calls for the classification according to kind of economic activity of data shown in Accounts II C, D, E and F; and table 3, which supports Accounts

II C only, provides in addition for the classification of industries' intermediate consumption of commodities, in the first instance, according to the kind of activity where they are characteristically produced. Producers' values are used in table 1 while basic values are used in table 3. Table 3 is one of the two standard tables of the system which are designed to provide basic data for purposes of input-output analysis.

8.37. The other standard table that is intended for this purpose, table 2, calls for the detailed classification of the data shown in Accounts II A according to commodity and industry categories. As in table 3, the commodity categories are defined first of all in terms of the kind of activity of the industries where the commodities are characteristically produced. For some analytical purposes, it will be advantageous to use one, or even two, additional, more detailed levels of classification of commodities in tables 2 and 3. Table 2 also shows the kind of activity of the industries from which the supply of the various categories of commodities in fact comes and the classification of imports of commodities into competitive and complementary. Tables 2 and 3 array the full detail of the production accounts of the system in respect of commodities and industries.

8.38. As is indicated in the notes to the tables under discussion, some countries may find it impracticable on an annual basis to use the mode of valuation and to provide the full detail called for in tables 2 and 3. In these circumstances it is suggested in the notes that the tables might be simplified though their usefulness for input-output analysis will be attenuated and they will not fit completely into the system.

Tables 4 through 6

8.39. Tables 4 and 5 support Accounts II B b and D and II B c and E, respectively. In table 4, the government final consumption expenditure entered in Account II B b is classified according to purpose; and through the transformation in this account of the services government bodies produce for own use into their final consumption expenditure, the costs of producing these services shown in Account II D are also classified according to purpose. The relationships between table 5 and Accounts II B c and E, which concern private non-profit bodies, are similar.

8.40. Table 6, on the final consumption expenditure of households classified according to type of expenditure and object, supports Accounts II B d and the items on final consumption expenditure of households in the domestic market in Accounts II A and B a. The upper panel of table 6, on type of expenditure, is based on the cross-sections of the system which are summarized in these accounts. The lower panel of the table, on the final consumption expenditure of households in the domestic market by object, is a classification of this entry in Account II B d.

8.41. Use is not made in the standard tables of the cross-classification in the system of the final consumption expenditure of households in the domestic market by object and commodity category. Nor are the cross-classifications of the kind of service and the category of commodities used in the case of producers of govern-

ment or private non-profit services. Supporting tables in respect of these cross-classifications are omitted because of the difficulties of compilation and the specialized character of the tabulations.

Table 7

8.42. This table shows classifications of the entries, increases in stocks and gross fixed capital formation, in the Accounts II A; and details the capital formation accounts of the system. The classifications concern the type of stocks and fixed assets and the kind of economic activity of the owner of these items. While the notes to the table indicate the values of data on fixed capital formation cross-classified according to broad commodity categories and the kind of economic activity of the owner, full use is not proposed of this cross-classification.

CONSTANT-PRICE TABLES—PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

8.43. The standard tables on flows in constant prices consist of table 8, which concerns the items of expenditure on the gross domestic product shown in Account I 1, tables 9 and 11 through 16, which are the correlative of tables 1 through 7, and table 10, which relates to employment. The constant-price version of a number of the supporting tables has been simplified in view of difficulties of compilation. The discussion below outlines the considerations which led to the proposed simplifications in the tables and the related question of methods of estimating constant-price series.

Tables 9, 11 and 12

8.44. Table 9 is restricted to figures of value added classified according to kind of activity for each class of producers. The series on gross output, intermediate consumption and the elements of value added in the comparable table 1 are omitted so that the difficulties of compiling table 9 will be limited while the most essential data on the growth and changing structure of production will be available. The same considerations result in giving preference in table 9 to valuation at producers' values.

8.45. However, in view of the analytical and instrumental uses of the constant-price data omitted from table 9, these series are called for in table 12, one of two tables of the system on constant-price data for input-output analysis. Data on the gross output and intermediate consumption of industries classified according to commodity and kind of activity categories are wanted in order to use the double-deflation and commodity-flow techniques of estimating constant-price data as well as to measure input-output coefficients. And, constant-price series on domestic factor incomes and consumption of fixed capital are wanted for purposes of compiling measures of productivity.

8.46. Tables 12 and 11, together, provide the full series of constant-price data required for these various purposes. These constant-price data are valued in basic values. Table 11 not only includes the data on the gross output of commodities by industries classified according to type of commodity and kind of activity

of the industries, but also gives the disposition of the commodities classified according to type of commodity and use to which the commodities are put.

8.47. The compilation of tables 11 and 12 will give rise to more difficulties than the compilation of the comparable current-price tables 2 and 3. Tables 2 and 3 should furnish the weighting patterns for compiling the constant-price series but, in addition, suitable indicators of quantity and price are required in respect of the various series. Particular difficulties are likely to be encountered in gathering appropriate indicators in respect of highly fabricated and/or variable commodities, for example, heavy machinery, motor cars or pharmaceuticals, and in respect of trade and transport margins and net commodity taxes. Further, suitable basic data for purposes of estimating the series in table 12 on consumption of fixed capital or net indirect taxes in constant prices may not be available. The data of table 3 on domestic factor incomes are to be compiled as the difference between value added and the sum of consumption of fixed capital and indirect taxes, net, all of course in constant prices. Therefore the notes to tables 11 and 12 provide for substantial simplification in the mode of valuation and classifications of these tables, if necessary. None the less, the tables will still have values in estimating constant-price series by double deflation and commodity flows and in measuring input-output relationships.

Table 10

8.48. This table is designed to incorporate data on employment into the system for purposes of such studies as the relative trends in the structure of employment and production, the productivity of labour, or the factors in changes in the magnitude of employee compensation. For these studies, the concepts of employment and production used should be identical in scope and the measure of the quantum of labour used should be as uniform as is possible in the case of various industries and other producers. These considerations lead to suggesting that (i) all persons engaged in the production of the gross output of a given country should be included in data on her employment and (ii) the series on the average number of persons employed during a period of account should at least be derived from figures of employment during each month of the period. A much more exact measure of the quantum of labour is the number of man-hours worked during the period of account, but it is probably feasible to gather these data in respect of employees only. Some countries may find it necessary to limit data on man-hours worked to employees in certain industries only. In using the employment series suggested in table 10 in measures of labour productivity, it would be advantageous to adjust the figures to a common basis in respect of the quality of the labour engaged. Adjustments of this type might be made by weighting the figures for each category of persons engaged by the relative average employee compensation during a given base period.

Tables 8 and 13 through 16

8.49. Constant-price data in respect of the sources of expenditure on the gross domestic product are sum-

marized in table 8. The various series on final consumption expenditure are classified according to the purpose or object of the outlays in tables 13 through 15. Table 16 deals with the classification of the constant-price data on gross capital formation. Unlike table 11, valuation in these tables is in purchasers' values.

8.50. Tables 13 and 14 on the classification of the final consumption expenditure of government and private non-profit bodies according to purpose are abbreviations of the corresponding current-price tables 4 and 5. The proposed classifications according to purpose are less detailed; and the items in respect of the non-commodity elements of the cost-composition and the sales of goods and services have been omitted. The simplifications are designed to restrict the task of issuing estimates of the real consumption outlays of government and private non-profit bodies to the most important series.

8.51. None the less, the compilation of reliable figures of the items called for in tables 13 and 14 is difficult. Perhaps the suitable, feasible procedure in most instances is to base the constant-price estimates of final consumption expenditure on the sum of estimates of real intermediate consumption and real primary inputs, reduced by real sales of goods and services, if significant. When compiling indicators of real primary inputs it would be desirable to take into account the consumption of fixed capital and changes in the mix of the employees engaged in the various services. The adjustment for changes in the employee-mix might be based on figures of average employment during the period of account, or similar measures, coupled with base-period compensation per unit of work measurement, for various occupations and grades. It is questionable whether reliable adjustments can be made for other factors contributing to labour productivity.

8.52. Table 15, on household consumption expenditure at constant prices, is similar to current-price table 6. While difficulties may be encountered in making estimates in constant prices of direct purchases abroad by resident households and purchases in the domestic market by non-resident households, these data are needed in estimating the real final consumption expenditure of resident households. Less detail in the object classification of final consumption in the domestic market is called for in table 15 than in table 6 in view of the problems of measurement.

8.53. Table 16 on the composition of the real gross domestic capital formation is a simplified version of table 7. Data on increases in stock classified according to kind of industry have been omitted in view of the lack of the detailed data required to make reliable estimates. The classifications according to type, of increases in stock and gross fixed capital formation, have also been abbreviated in the light of the problems of making estimates and the urgency with which series are required.

TABLES—INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

8.54. The supporting and supplementary tables to the income and outlay and capital finance accounts of the system are designed to serve a range of purposes.

Table 17 calls for data on factor incomes classified according to the kind of economic activity of the enterprise in which the incomes originate. Tables 18 and 19 summarize the income and outlay and capital transactions of the private and public sectors; and tables 20, 21 and 23 present these transactions for sub-divisions of non-financial corporate and quasi-corporate enterprises, general government and households. Table 22 concerns the purpose classification of selected income and outlay and capital transactions of general government; and tables 24 and 25 are devoted to detailed data in respect of transactions in financial claims.

Table 17

8.55. This table is of interest for such purposes as analysing factor shares in the light of the institutional arrangements for production in an economy. It is derived from the credit side of the accounts of the system in respect of the institutional sector of origin of the factor incomes generated in domestic production. A major function of these accounts is to link industries, the producers of government services and the producers of private non-profit services, on the one hand, and the institutional sectors of the system, on the other. The institutional sectors of origin in respect of corporate and quasi-corporate enterprises and the households with private non-financial unincorporated enterprises, are classified according to the kind of economic activity of the enterprises. As is indicated in the notes to the table, it can be elaborated in order to show the industries making up the various kinds of enterprises.

Tables 18 and 19

8.56. Tables 18 and 19 indicate the national and disposable income, the accumulation and the sources of finance of the private and public sectors. In addition, table 18 portrays the formation of the national income and income shares.

8.57. The upper panel of table 18 represents a highly consolidated summary of a selected aspect of the accounts for institutional sector of origin and institutional sector of receipt. The remainder of table 18 and table 19 support the Accounts III. In each case, use is made of the sub-division of each sector, or sub-sector, where appropriate, into private and public institutions. For purposes of the lower panel of table 18, disbursements are netted against receipts in summarizing the transactions in respect of current transfers in the Accounts III 3. In the case of table 19, the categories of capital transactions shown in the Accounts III 5 are practically all reproduced.

Tables 20 through 23

8.58. Tables 20, 21 and 23 divide the income and outlay and capital finance accounts for selected institutional sectors into tabulations for categories of transactors which may be expected to differ in source and disposition of income and in forms of accumulation and finance.

8.59. Tables 20 and 21 are derived from the Accounts III A and C respectively. The tables exhibit

the same categories of transactions as the corresponding accounts except that table 21 provides for the delineation of transactions between organs (levels) of general government. In case of each organ of general government, the transactions are to be recorded on a consolidated basis.

8.60. Table 23 calls for important data in respect of income shares and furnishes the link between the national accounts and more detailed statistics of income distribution. It is designed to exhibit the differences between socio-economic groups in patterns of receiving and disbursing income and accumulating tangible and financial assets. The table is derived from the household account of the system in respect of institutional sector of receipt instead of Account III E in order to present the desired data for these purposes. For example, instead of operating surplus, the entrepreneurial income of private non-financial unincorporated businesses is shown in table 23. In order to enhance the value of the table for studies of income shares, entrepreneurial income is sub-divided into income from owner-occupied dwellings and income from other businesses and compensation of employees is classified into wages and salaries and supplements.

8.61. Countries may not find it feasible in the near future to compile the data of table 23 in respect of the listed socio-economic categories of households. In these circumstances, in compiling the table for all households, entrepreneurial income should be classified into income from agricultural enterprises, non-agricultural enterprises and owner-occupied dwellings.

8.62. Table 22, on the classification of selected current and capital outlays of general government according to purpose, does not fit completely into the structure of the system. It is therefore a supplementary table. This is the case because capital transfers paid, not net capital transfers received, are to be recorded; and classification according to purpose is called for in the case of all the outlays to be tabulated. In order to enhance the values of the table for studies of the effects of the economic and social policies of the public authorities on the economy, it is restricted to payments which government bodies make to other sectors only.

Tables 24 and 25

8.63. Table 24 deals with transactions in financial assets and liabilities, classified in detail by type of claim and sub-sectors of the parties to the transactions. The main portion of the table, which encompasses transactions of residents in claims of, or on, residents and non-residents, is mainly designed to furnish information concerning the market and the classes of creditors in the case of each category of instruments. The inclusion in the table of the transactions of the rest of the world with residents ensures that the total value of transactions in financial assets will be equal to the total value of transactions in liabilities. The main portion of table 24 supports the lower panel of the Accounts III 5.

8.64. The lower panel of table 24 relates to transactions of residents in financial claims with non-residents only; and is designed to indicate the magnitude and composition of transactions in the international re-

serves, and offsets to these reserves, of a country. While practically all these transactions will be engaged in by the central bank and treasury of a country, other resident institutions may have transactions in international reserves. The international reserves, and offsets to these reserves, held by the central bank or treasury of a country cannot be uniquely defined in terms of the categories of financial claims. These transactions must in general be distinguished from other transactions in the same category of financial claims, instrument by instrument. It should be emphasized that the definitions of international reserves, and offsets to these reserves, to be used in tables 24 and 25 are set by the International Monetary Fund.

8.65. Table 25, on the financial transactions of the consolidated monetary system, is a supplementary table in this system. It is focused on the transactions in financial claims which are of particular importance in the analysis of monetary conditions and policies and the related aspects of the balance of payments. The central bank, other monetary institutions and the monetary functions of the treasury are therefore grouped together; and the financial transactions between residents and the rest of the world are distinguished from the financial transactions between residents at the first level of classification of claims. The classification of transactions in financial claims does not follow the scheme of classification of the system also because of the necessity of dividing the transactions with the rest of the world into flows in respect of international reserves, and offsets to these reserves, and other claims. In order to portray clearly the transactions between the monetary system and the rest of the economy, most of the transactions of the institutions covered in the table are to be consolidated.

EXTERNAL TRANSACTIONS

8.66. Table 26, on all the external transactions of an economy, details Account I 6. The table calls for detailed classifications of exports and imports of goods and services and of transactions in financial claims for purposes of analysis of the effect of the rest of the world on the economic conditions of a given country. For this purpose it is essential that the definitions and classifications used in the table be identical with those used for the same type of transactions between residents. It may be noted from table 26 that while c.i.f. valuation of imports of goods and services is stressed, provision is also made for f.o.b. valuation of these imports.

Statistical discrepancies

8.67. In compiling the standard accounts and tables, differences will no doubt be encountered in estimates which are made from the differing elements into which flows can be disaggregated. This is likely to occur in the case of such items as the gross domestic product, national and disposable income, saving and net lending. In the context of the full system, the gross domestic product should be independently estimated from the gross output and intermediate consumption of various categories of producers, the incomes generated in their activities, and the final outlays on goods and services.

Figures of national and disposable income are to be compiled from data on the receipt and disposition of incomes. As saving is the balancing item in the income and outlay account, the discrepancies between the two estimates of incomes may be exhibited in differing figures of saving. Net lending is the common balancing item in the case of the upper and lower panels of the capital finance account; and differences are likely to be encountered in figures of net lending derived from independent estimates of the flows of the two panels. Also in the case of financial transactions, as paragraphs 7.101 and 7.102 indicate, statistical discrepancies are likely to be encountered in independent estimates of a given category of financial assets and the corresponding liabilities.

8.68. Statistical discrepancies such as those mentioned above should, in principle, be eliminated. The eradication of the differences in estimates of the gross domestic product, saving, etc., should be based on intensive examination, and comparison of the reliability and accuracy of the various detailed series which enter into the divergent estimates. It may be necessary to study the scope, classifications, definitions, sources and methods of collection and compilation of the series. Such a scrutiny will furnish a sure basis for fixing on a single estimate only. It will also point to the directions in which the basic series of statistics used in national accounting should be improved and expanded. If it is not clear that one of the estimates, or some combination of the divergent estimates, in respect of the flow in question is most reliable and accurate, it may be best to give the differing estimates. The place and manner in which the discrepancy is shown should vary from one situation to another, depending on the relative quality of the basic statistics used in making the alternative estimates.

Use of the standard accounts and tables in compiling and presenting data

8.69. This section concerns the manner in which, and the orders of periodicity and priority with which, the standard accounts and tables might be used in compiling and presenting the data of the system. These questions are dealt with in light of the requirements for data which the standard accounts and tables are designed to serve, and the difficulties of compiling the data. The manner in which the standard accounts and tables might be used in presenting data is discussed first.

FORMS OF PRESENTING DATA

8.70. The data called for in the standard accounts and tables might be organized into tabulations in a number of ways. The form in which it will be desirable and convenient to compile and present the data, nationally and internationally, will depend on such circumstances as the kind of information which is to be furnished and emphasized, the audience to whom, and the requirements for which, the data are provided, and the medium and format in which the information is to be issued. In particular, the manner in which series of data are arrayed in a number of the standard tables is not intended to furnish guidelines in respect of the presentation of data. The main objective is to indicate the series which should be compiled.

8.71. Where, for example, attention is to be focused on the trends in given flows, rather than the links between the flows, the data in respect of each flow might be presented in a separate table though all of the flows are exhibited in a single standard table. If the series concerning each flow are to be classified in some detail and a considerable period of time is to be covered, devoting a separate table to the data on a single flow may be the convenient manner of presenting the series. Examples of the series called for in standard tables which it may be desirable to separate in this manner are the data of tables 1, 7b, 17, 21 or 23. This may also be the situation in the case of series of data in respect of various classes of transactors, for example, the sub-divisions of producers or institutional sectors, which have been grouped together in a single standard table.

8.72. On the other hand, when emphasis is being given to delineating the links and relationships between flows, or the way in which individual series combine to form aggregates, the relevant series of data for each period of time should of course be arrayed together, as in the standard accounts or tables. This is so in the case of all the standard accounts and such tables as tables 2 and 3, 11 and 12, or 24. The data of the standard accounts might conveniently be shown for many periods by placing the debit side of an account below the credit side, or by placing the two sides of an account on facing pages. A long period of time may also be portrayed in the columns of a single tabulation in the case of tables such as table 19. In the case of a few of the standard tables, for example, tables 4, 5 or 22, it may be convenient to list the relevant flows which are now shown in the columns under each row for purposes of exhibiting data for a number of years in the same table. However, it would be necessary to use a separate tabulation, or a portion of a single extended tabulation, in order to exhibit data for each period which is to be covered in the case of tables like tables 2, 3 or 24.

8.73. In compiling and issuing data for general use, it may often be desirable to present simpler versions of the pertinent standard tables. Cross-classifications of data in the standard tables might be eliminated or the detail of classifications of flows might be reduced. Tables 17 or 20 are examples of standard tables which might be simplified in these ways. Or, simplification might consist of exhibiting data which are of the greatest general interest, for example, the gross domestic product classified according to kind of economic activity in the case of table 1 or government final consumption expenditure classified according to purpose in the case of table 4.

FREQUENCY OF COMPILATION

Annual and less frequent compilation

8.74. Countries might aim at compiling annually all the standard accounts and tables which they wish to include in a fully developed system of national accounts. While the standard accounts and tables differ in the urgency with which they are required and in the

magnitude and difficulty of the task of compiling them, countries should find it valuable to have annual data in respect of all the accounts and tables.

8.75. On the whole, detailed series of data will be less urgently needed each year, and more burdensome to compile, than aggregated series of data. For example, the compilation annually of tables 3 and 12, on input-output data in current and constant prices, will often be less essential and more difficult than the preparation annually of tables 1 and 9, on value added in current and constant prices. Or, the data on the financial transactions of the detailed sub-sectors in table 24 will be less urgently required each year, and more burdensome to compile, than the data on these transactions in Accounts III 5. This will also be so in the case of table 23, on the income and outlay and capital transactions of sub-sectors of households, as compared to the Account III E, on these transactions for all households only.

8.76. In each of these instances, the more detailed tabulation supplements the less detailed compilation by giving information in respect of the structure of, and links between, the transactions which make up the more aggregative flows. The requirements for the more summary series each year will usually be more urgent, for example, for purposes of assessing major trends in economic conditions and devising general economic policies. However, if the more detailed series of data are available each year, they can be used in investigating the factors underlying the observed trends and in medium- or long-range economic planning. It is especially valuable to have the more detailed series of data annually when substantial changes are taking place in economic conditions. Moreover, in many instances the more detailed data will be needed for purposes of thorough and reliable compilation of the more summary series.

8.77. In gradually evolving the system of national accounts, it may however be desirable to compile the most detailed standard tables of the system and the detailed list of the classification in other tables less frequently than once every year, say once every three to five years. This will limit the task of annual compilation and may provide the more complete data needed for thorough, long-range economic analysis at tolerable intervals of time. Tables to be considered for compilation less frequently than annually might be (i) tables 2 and 3 and 11 and 12, the tables of the system on basic input-output data, (ii) tables 13 and 14, on the cost-composition of government and private final consumption expenditure at constant prices classified according to purpose, (iii) table 17, on factor incomes classified by kind of economic activity and institutional sector of origin, (iv) tables 19, 20 and 23, on the income and outlay and capital transactions of the public and private sectors and sub-divisions of non-financial corporate and quasi-corporate enterprises and households and (v) table 24, on the financial transactions of the detailed sub-sectors of the system. However, the task of compiling table 23 would be reduced and a number of series of data which are wanted each year would be furnished if the data were restricted to all households only. Also, many countries should find it advantageous to compile annually the simplified versions of tables 2 and 11 which are suggested in the notes to these tables.

Quarterly or semi-annual compilation

8.78. National accounting data are also wanted more often than once every year, preferably quarterly or at least half-yearly, for purposes of portraying and analysing the short-term economic situation. Significant shifts in economic conditions can take place during the course of a year and it is necessary to formulate policies in order to cope with short-term problems. So as to make it practicable to compile useful quarterly or semi-annual accounts and tables, the data should be restricted to the most essential series required for purposes of detecting important changes in economic conditions which will serve as a guide to devising short-range policy. Otherwise it will not be possible to issue the current data rapidly enough. The quarterly or half-yearly national accounting data might therefore be restricted to flows which best summarize the economic situation and which are unstable and strategic to short-term changes in economic conditions. In general, quarterly or semi-annual accounts and tables might be undertaken at an advanced stage in the evolution of the full system of accounts.

8.79. It therefore seems desirable to compile the Accounts I, the consolidated accounts for the nation, and table 8, on expenditures on the gross domestic product at constant prices, quarterly or semi-annually. These accounts, coupled with the table, will furnish the required short-term summary of economic conditions and data in respect of some of the strategic factors in changes in these conditions. More detailed current series than those in the Accounts I will probably be wanted in respect of some of the flows of these accounts. Exactly which items are to be further classified should reflect the character of the economy of a country and the kind of short-term policy instruments used. The following types of data might be considered for purposes of quarterly or semi-annual compilation.

(a) The gross domestic product valued in producers' values, at current and constant prices, classified according to kind of economic activity. The condensed list of the kind-of-activity classification shown in table 1 might be appropriate in the case of industrial activities. The major divisions of the classification might be used for other kinds of activity.

(b) The final consumption expenditure of households in the domestic market by type of expenditure, and perhaps object, as in tables 6 and 15, that is in current and constant prices. It may be appropriate to use the condensed list of the classification according to object, combining categories 5, 7 and 8.

(c) Gross fixed capital formation classified by kind of activity of the owner, and perhaps type, as in tables 7 and 16, that is at current and constant prices. The classification by kind of activity should be abbreviated as in the case of the series in the table or the gross domestic product outlined above.

(d) Income and outlay and capital transactions of central government and social security funds, as in table 21.

(e) The consolidated financial transactions of the monetary system, as in table 25.

Where the listed series are subject to marked seasonal variation, it may be desirable to present them in both unadjusted and adjusted form.

ORDERS OF PRIORITY OF COMPILATION

8.80. In developing the full set of standard accounts and tables, besides compiling certain tables less frequently than once every year, countries may find it essential to spread the development of new series of data over a number of years.

8.81. The order in which a country might undertake the compilation of new accounts and tables necessarily reflects her statistical arrangements and resources and economic and social circumstances. Extensions in the national accounts begin from the available basic data; and the directions in which, and pace with which, the accounts are elaborated reflect the statistical traditions and resources of the country. The economic and social circumstances of a country enter into determining the urgency with which the various national accounting series are required as well as the relative difficulties of gathering basic statistics.

8.82. The appropriate sequence for developing the standard accounts and tables of the full system will therefore differ from one country to another. All that can be attempted here is to outline two approaches to charting the sequence and to suggest two broad classes of priority for compiling the standard accounts and tables.

8.83. One sequence of developing the standard accounts and tables is to proceed from the tabulations which are designed to furnish summary data in respect of all aspects of an economy to the tabulations which are designed to furnish detailed data in respect of given aspects of the economy. For example, assigning a higher priority of compilation to the Accounts I, the consolidated accounts of the nation, than to the Accounts II or III, where the series are disaggregated; or compiling table 1, on value added according to kind of economic activity, and Accounts II A, on the supply and disposition of commodities, before attempting tables 3 and 2, on basic data for input-output analysis. An alternative sequence of evolving the national accounting system is to concentrate on all the tabulations, summary and more detailed, in respect of a given aspect of the economy before starting on the tabulations in respect of another aspect. For example, allocating a higher priority of compilation to all the standard accounts and tables on the supply and dispo-

sition of goods and services than the accounts and tables on income and outlay transactions. Various approaches which fall somewhere between these two alternatives may be devised; and may be most appropriate in given circumstances.

8.84. The first of the two approaches to evolving the standard accounts and tables appears to be preferable. The more summary series of all the accounts of the system will often be more urgently required, and less difficult to compile, than the more detailed series of given accounts. Coherent series of data, at least in summary form, in respect of all aspects of the economy are fundamental in assessing general economic conditions, formulating policies or delineating economic models. These series may be used to discern the strategic economic trends and relationships, match competing demands for, and the supply of, resources, and construct consistent aggregative models. These series of data also furnish a frame for the effective use of the more detailed series of national accounting data.

8.85. However, under some circumstances, it may be desirable to concentrate on elaborating a given aspect of the system of national accounts fully before starting work on the series at a moderate level of detail in respect of another aspect of the system. For example, in the case of a number of countries, it may be advantageous to devote attention to the compilation of the full range of data in respect of the supply and disposition of goods and services and external transactions before attempting the compilation of data on the transactions in various categories of financial claims.

8.86. It is thought that in either case the compilation of the more detailed series of the system should in most instances be assigned a lower order of priority than the compilation of the other series of the system. The series of data which might be assigned the lower order of priority in developing the full system are (i) tables 2 and 3 and 11 and 12, (ii) the data on the cost-composition of the final consumption expenditure of government and private non-profit bodies in tables 5 and 13 and 6 and 14, (iii) table 17, on factor incomes by kind of activity of enterprises, (iv) table 20, on the income and outlay and capital transactions of corporate and quasi-corporate enterprises by kind of activity, (v) the socio-economic classification of households in table 23 and (vi) table 24 and the data on the transactions in financial claims of private non-profit institutions and households in Accounts III D and E.

ANNEX 8.1

Coding of transactions in the standard accounts and tables

8.87. The coding of transactions in the standard accounts and tables is designed to indicate the account in which a given transaction is included and the class and category of the transaction.

8.88. The codes start with the one-digit number of the transactors' account in which the given transaction is included. For example, 1 stands for the production account and 5

Table 8.1. The codes for transactors' accounts

<i>Account</i>	<i>Code</i>
Production account .	1
Consumption expenditure account	2
Income and outlay account	3
Capital formation account	4
Capital finance account .	5
External transactions, all accounts	6

denotes the capital formation account. In addition, 6 is assigned to the accounts in respect of the external transactions of resident economic agents. The way in which the accounts are numbered is shown in table 8.1.

8.89. The second and third parts of the codes for transactions indicate the class and category of a given transaction. These portions of the codes are listed in table 8.2 below.

8.90. The second part of the codes, a one-digit number, identifies a class of transactions. For example, 1 signifies transactions in respect of the supply of goods and services and 6 refers to current unrequited transfers. The third portion of the codes, one- or two-digit numbers, identifies the category of a given class of transactions. For instance, 1.1 represents the supply (production) of commodities by domestic industries. In a few instances, a fourth set of one-digit numbers is used in order to sub-divide a given category of transactions.

Table 8.2. The codes for class and categories of transactions

<p>1. Supply of goods and services</p> <p>1.0. Gross output of goods and services</p> <p>1.1. Commodities produced, industries</p> <ul style="list-style-type: none"> 1.1.1. Characteristic products of specified industries which are produced by these industries 1.1.2. Characteristic products of specified industries which are produced by other industries 1.1.3. Other commodities which are produced by specified industries <p>1.2. Commodities produced, producers of government services</p> <p>1.3. Commodities produced, producers of private non-profit services to households</p> <p>1.4. Non-commodity sales, producers of government services</p> <p>1.5. Services produced for own use, producers of government services</p> <p>1.6. Non-commodity sales, producers of non-profit services to households</p> <p>1.7. Services produced for own use, producers of private non-profit services to households</p> <p>1.8. Domestic services of households</p> <p>1.10. Imports of goods and services</p> <p>1.11. Imports of commodities</p> <ul style="list-style-type: none"> 1.11.1. Imports of merchandise, c.i.f. <ul style="list-style-type: none"> i. Imports f.o.b ii. Transport services on merchandise imports by non-residents iii. Transport services on merchandise imports by resident industries iv. Insurance service charges on merchandise imports, services by non-residents v. Insurance service charges on merchandise imports, services by resident industries 1.11.2. Transport and communication 	<p>1.11.3. Insurance service charges</p> <p>1.11.4. Direct purchases abroad on capital account, producers of government services</p> <p>1.11.9. Miscellaneous commodities</p> <p>1.11.10. Adjustment of merchandise imports to change-of-ownership basis</p> <p>1.12. Imports of other goods and services</p> <ul style="list-style-type: none"> 1.12.1. Direct purchases abroad, resident households 1.12.2. Direct purchases abroad on current account, producers of government services <p>2. Disposition of goods and services</p> <p>2.1. Intermediate consumption, industries</p> <p>2.2. Intermediate consumption, producers of government services</p> <p>2.3. Intermediate consumption, producers of private non-profit services to households</p> <p>2.4. Final consumption expenditure in the domestic market, households</p> <p>2.5. Increase in stocks</p> <p>2.6. Gross fixed capital formation</p> <p>2.10. Exports of goods and services</p> <p>2.11. Exports of commodities</p> <ul style="list-style-type: none"> 2.11.1. Exports of merchandise, f.o.b 2.11.2. Transport and communication <ul style="list-style-type: none"> i. Transport services in respect of merchandise imports ii. Other transport services 2.11.3. Insurance service charges <ul style="list-style-type: none"> i. Insurance in respect of merchandise imports ii. Other insurance services 2.11.4. Direct purchases in the domestic market, extra-territorial bodies 2.11.9. Miscellaneous commodities
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Table 8.2 continues

Table 8.2. The codes for class and categories of transactions (*continued*)

2. Disposition of goods and services (<i>continued</i>)	the entrepreneurial income of quasi-corporate enterprises and disbursements of these withdrawals
2.11. Exports of commodities (<i>continued</i>)	
2.11.10. Adjustment of merchandise exports to change-of-ownership basis	
2.12. Exports of other goods and services	
2.12.1. Direct purchases in the domestic market, non-resident households	
2.20. Government final consumption expenditure	
2.30. Private final consumption expenditure	
2.31. Final consumption expenditure, private non-profit institutions serving households	
2.32. Final consumption expenditure, resident households	
3. Value added	
3.0. Gross domestic product	
3.1. Compensation of employees	
3.2. Operating surplus	
3.3. Consumption of fixed capital	
3.4. Indirect taxes	
3.4.1. Import duties	
3.4.2. Other indirect taxes	
3.5. Subsidies	
3.6. Commodity taxes, net	
4. Distributed factor income and national income	
4.0. National income	
4.1. Compensation of employees	
i. Wages and salaries	
ii. Employers' contributions to social security schemes in respect of their employees	
iii. Employers' contributions to private pension, family allowance, health and other casualty, insurance, life insurance and similar schemes in respect of their employees	
4.2. Compensation of employees receivable from the rest of the world, net	
4.3. Entrepreneurial income of private unincorporated non-financial enterprises	
4.4. Withdrawals from entrepreneurial income of quasi-corporate enterprises, disbursement	
4.5. Withdrawals from entrepreneurial income of quasi-corporate enterprises, receipt	
4.6. Property income payable	
4.6.1. Interest	
4.6.2. Dividends	
4.6.3. Rent	
4.7. Property income receivable	6
4.7.1. Interest	
4.7.2. Dividends	
4.7.3. Rent	
4.8. Property and entrepreneurial income, payable. Here, entrepreneurial income consists of withdrawals from the entrepreneurial income of quasi-corporate enterprises	
4.9. Property and entrepreneurial income, receivable. Here, entrepreneurial income consists of withdrawals from the entrepreneurial income of quasi-corporate enterprises	
4.10. Property and entrepreneurial income receivable, net. Here, entrepreneurial income refers to the difference between receipts of withdrawals from	
5. Casualty insurance transactions	
5.1. Net casualty insurance premiums payable, i.e., premiums reduced by the service charge	
5.2. Casualty insurance claims receivable	
5.3. Net casualty insurance premiums receivable, i.e., premiums reduced by the service charge	
5.4. Casualty insurance claims payable	
6.0. Unrequited current transfers and disposable income	
6.14.	
6.0. Disposable income	
6.1. Direct taxes	
6.1.1. Direct taxes on income	
6.1.2. Direct taxes not elsewhere classified	
6.2. Compulsory fees, fines and penalties	
6.3. Social security contributions	
6.4. Social security benefits	
6.5. Social assistance grants	
6.6. Current transfers to private non-profit institutions serving households	
6.7. Unfunded employee welfare contributions imputed	
6.8. Unfunded employee welfare benefits	
6.9. Current transfers n.e.c. made by general government to:	
6.9.1. Residents	
6.9.2. The rest of the world	
6.10. Current transfers n.e.c. received by general government from:	
6.10.1. Residents	
6.10.2. The rest of the world	
6.11. Current transfers n.e.c. made by other resident units to:	
6.11.1. Residents	
6.11.2. The rest of the world	
6.12. Current transfers n.e.c. received by other resident units from:	
6.12.1. Residents	
6.12.2. The rest of the world	
6.13. Current transfers n.e.c. paid, net. The difference between disbursements and receipts in respect of all the relevant categories 6.1 through 6.12 above which are not itemized in a given account or supporting table.	
6.14. Current transfers n.e.c. received, net. The difference between receipts and disbursements in respect of all the relevant categories 6.1 through 6.12 above which are not itemized in a given account or supporting table.	
6.21. Other current transfers (i.e. other than property and entrepreneurial income)	
6.21.1. Other current transfers paid	
6.22. Other current transfers received	
6.23. Other current transfers received, net	
7. Balancing items and transactions on capital account n.e.c. other than financial claims	
7.1. Saving	

Table 8.2. The codes for class and categories of transactions (*continued*)

7. Balancing items and transactions on capital account n.e.c. other than financial claims (<i>continued</i>)	8.5 Bonds, long-term and 9.5.
7.2. Surplus of the nation on current transactions, debit	8.6 Corporate equity securities, including capital participations and 9.6.
7.3. Surplus of the nation on current transactions, credit	8.7 Short-term loans n.e.c. and 9.7.
7.4. Purchases of land, net	8.8 Long-term loans n.e.c. and 9.8.
7.5. Purchases of intangible assets n.e.c., net	8.9 Net equity of households on life insurance reserves and and on pension funds 9.9.
7.6. Capital transfers received, net	8.10 Proprietors' net addition to the accumulation of and quasi-corporate enterprises 9.10.
7.7. Capital transfers paid	8.11 Trade credit and advances and 9.11.
7.8. Net lending, debit	8.12 Other accounts receivable and payable and 9.12.
7.9. Net lending, credit	8.13 Other and 9.13.
Transactions in financial claims: 8. Financial assets; 9. Liabilities	
8.0. Net acquisition of financial assets	
9.0. Net incurrence of liabilities	
8.1. Gold	
8.2. Currency and transferable deposits and 8.2.1 and 9.2.1. In national currency 9.2. 8.2.2 and 9.2.2. In foreign currency	
8.3. Other deposits and 8.3.1 and 9.3.1. In national currency 9.3. 8.3.2 and 9.3.2. In foreign currency	
8.4. Bills and bonds, short-term and 9.4.	

Annex 8.2 follows

ANNEX 8.2
The standard accounts

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b. Final consumption expenditure of government services		156	Account 5. Capital finance account	159
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I. Consolidated accounts for the nation

ACCOUNT 1. GROSS DOMESTIC PRODUCT AND EXPENDITURE

1.3.1 Compensation of employees (3.3.1)	2.2.20 Government final consumption expenditure (3.2.20)
1.3.2 Operating surplus (3.3.2)	2.2.30 Private final consumption expenditure (3.2.30)
1.3.3 Consumption of fixed capital (5.3.3)	4.2.5 Increase in stocks (5.2.5)
1.3.4 Indirect taxes (3.3.4)	4.2.6 Gross fixed capital formation (5.2.6)
1.3.5 Less Subsidies (3.3.5)	1.2.10 Exports of goods and services (6.2.10)
	1.1.10 Less Imports of goods and services (— 6.1.10)
Gross domestic product	Expenditure on the gross domestic product

I. Consolidated accounts for the nation (continued)

ACCOUNT 3. NATIONAL DISPOSABLE INCOME AND ITS APPROPRIATION

3.2.20	Government final consumption expenditure (2.2.20)	3.3.1	Compensation of employees (1.3.1)
3.2.30	Private final consumption expenditure (2.2.30)	3.4.2	Compensation of employees from the rest of the world, net (6.4.1 — 6.3.1)
3.7.1	Saving (5.7.1)	3.3.2	Operating surplus (1.3.2)
		3.4.10	Property and entrepreneurial income from the rest of the world, net (6.4.9 — 6.4.8)
		3.3.4	Indirect taxes (1.3.4)
		3.3.5	Less Subsidies (1.3.5)
		3.6.23	Other current transfers from the rest of the world, net (6.6.22 — 6.6.21)
Appropriation of disposable income		Disposable income	

ACCOUNT 5. CAPITAL FINANCE

5.2.5	Increase in stocks (4.2.5)	5.7.1	Saving (3.7.1)
5.2.6	Gross fixed capital formation (4.2.6)	5.3.3	Consumption of fixed capital (1.3.3)
5.7.5	Purchases of intangible assets n.e.c. from the rest of the world, net (6.7.5)	5.7.6	Capital transfers from the rest of the world, net (6.7.6)
5.7.8	Net lending to the rest of the world (5.7.9)		
Gross accumulation		Finance of gross accumulation	
5.8.0	Net acquisition of financial assets ($6.8.0 + 5.9.0 - 6.9.0$)	5.7.9	Net lending to the rest of the world (5.7.8)
		5.9.0	Net incurrence of liabilities ($6.9.0 + 5.8.0 - 6.8.0$)
Net acquisition of financial assets		Net incurrence of liabilities plus net lending to the rest of the world	

ACCOUNT 6. ALL ACCOUNTS—EXTERNAL TRANSACTIONS

Current transactions			
6.2.10	Exports of goods and services (1.2.10)	6.1.10	Imports of goods and services (— 1.1.10)
6.4.1	Compensation of employees from the rest of the world (3.4.2 + 6.3.1)	6.3.1	Compensation of employees to the rest of the world (3.3.1*)
6.4.9	Property and entrepreneurial income from the rest of the world (3.4.10 + 6.4.8)	6.4.8	Property and entrepreneurial income to the rest of the world (6.4.9 — 3.4.10)
6.6.22	Other current transfers from the rest of the world (3.6.23 + 6.6.21)	6.6.21	Other current transfers to the rest of the world (6.6.22 — 3.6.23)
		6.7.3	Surplus of the nation on current transactions (6.7.2)
Current receipts		Disposal of current receipts	

Account 6 continues

I. Consolidated accounts for the nation (continued)

ACCOUNT 6. ALL ACCOUNTS — EXTERNAL TRANSACTIONS (continued)

Capital transactions			
		Receipts	Disbursements
6.7.2	Surplus of the nation on current transactions (6.7.3)	6.7.5	Purchases of intangible assets n.e.c. from the rest of the world; net (5.7.5)
6.7.6	Capital transfers from the rest of the world, net (5.7.6)	6.8.0	Net acquisition of foreign financial assets (5.8.0 — 5.9.0 + 6.9.0)
6.9.0	Net incurrence of foreign liabilities (5.9.0 — 5.8.0 + 6.8.0)		

Table 8.3. Consolidation of Accounts II or III to Accounts I

(In the case of the II Accounts, "A" or "C" preceding the summation sign and "n" following it indicate summation over all the accounts of each of the two classes of II Accounts. In the case of the III Accounts, "N" following the summations sign means summation over all the accounts in which the given transaction appears; and "n" at the end of the expression means summation over all categories of the given class of transactions)

Summation of entries of Accounts II to Accounts I

Consolidated accounts (I)		Production, consumption expenditure and capital formation accounts (II)
Compensation of employees	1.3.1	= CΣn 1.3.1 + D 1.3.1 + E 1.3.1 + F 1.3.1
Operating surplus	1.3.2	= CΣn 1.3.2
Consumption of fixed capital	1.3.3	= CΣn 1.3.3 + D 1.3.3 + E 1.3.3
Indirect taxes	1.3.4	= AΣn 1.3.4.1 + CΣn 1.3.4 + D 1.3.4 + E 1.3.4
Less Subsidies	1.3.5	= CΣn 1.3.5
Government final consumption expenditure	2.2.20	= Bb 2.2.20
Private final consumption expenditure	2.2.30	= Bc 2.2.31 + Bd 2.2.32
Increase in stocks	4.2.5	= AΣn 4.2.5
Gross fixed capital formation	4.2.6	= AΣn 4.2.6
Exports of goods and services	1.2.10	= AΣn 1.2.11 + Bd 2.2.12.1
Imports of goods and services	- 1.1.10	= AΣn 1.1.11 + Ba 1.1.12.2 + Bd 2.1.12.1

Summation of remaining entries of Accounts, II to zero

	Debit	Credit
Commodities produced	AΣn 1.1.1.1 + AΣn 1.1.1.2 AΣn 1.1.2 + AΣn 1.1.3	= CΣn 1.1.1.1 + CΣn 1.1.1.3 + D 1.1.2 + E 1.1.3
Intermediate consumption	CΣn 1.2.1 + D 1.2.2 + E 1.2.3	= AΣn 1.2.1 + AΣn 1.2.2 + AΣn 1.2.3 + Ba 1.2.2
Final consumption in the domestic market, households	Bd 2.2.4	= AΣn 2.2.4 + Ba 2.2.4
Non-commodity sales	Ba 1.1.4 + Ba 1.1.6 + Ba 1.1.8	= D 1.1.4 + E 1.1.6 + F 1.1.8
Services produced for own use, government services	Bb 1.1.5	= D 1.1.5
Services produced for own use, private non-profit services	Bc 1.1.7	= E 1.1.7

Table 8.3. Consolidation of Accounts II or III to Accounts I (*continued*)

Summation of entries of Accounts III to Accounts I		
Consolidated Accounts (I)		Income and Outlay and Capital Finance Accounts (III)
Government final consumption expenditure	3.2.20 =	C 3.2.20
Private final consumption expenditure	3.2.30 =	D 3.2.31 + E 3.2.32
Saving	3.7.1 =	ΣN 3.7.1
Operating surplus	3.3.2 =	ΣN 3.3.2
Compensation of employees	3.3.1 =	E 3.4.1
		+3.4.2
Property and entrepreneurial income from the rest of the world, net	3.4.10 =	ΣN 3.4.7 - ΣN 3.4.6 + ΣN 3.4.5 - A 3.4.4 - B 3.4.4
Indirect taxes	3.3.4 =	C 3.3.4
Less Subsidies	3.3.5 =	C 3.3.5 $\begin{cases} \Sigma N 3.5.2 - \Sigma N 3.5.1 + B 3.5.3 - B 3.5.4 + C 3.6.1 \\ + C 3.6.2 + C 3.6.3 - \Sigma N \text{ debit } 3.6.1 \\ - \Sigma N \text{ debit } 3.6.2 - E 3.6.3 + E 3.6.4 - C 3.6.4 \\ + E 3.6.5 - C 3.6.5 - D 3.6.5 + D 3.6.6 - C 3.6.6 \\ - E 3.6.6 + \Sigma N \text{ credit } 3.6.7 \\ - E 3.6.7 + E 3.6.8 - \Sigma N \text{ debit } 3.6.8 + C 3.6.10 \\ - C 3.6.9 + E 3.6.12 - E 3.6.11 - A 3.6.13 \\ - B 3.6.13 \end{cases}$
Other current transfers from the rest of the world, net	3.6.23 =	
Increase in stocks	5.2.5 =	ΣN 5.2.5
Gross fixed capital formation	5.2.6 =	ΣN 5.2.6
Purchases of intangible assets, n.e.c. from the rest of the world, net	5.7.5 =	ΣN 5.7.5
Net lending to the rest of the world	5.7.8 =	ΣN 5.7.8
Saving	5.7.1 =	ΣN 5.7.1
Consumption of fixed capital	5.3.3 =	ΣN 5.3.3
Capital transfers from the rest of the world, net	5.7.6 =	ΣN 5.7.6
Net acquisition of financial assets	5.8.0 =	ΣN 5.8.n
Net lending to the rest of the world	5.7.9 =	ΣN 5.7.9
Net incurrence of liabilities	5.9.0 =	ΣN 5.9.n
Summation of remaining entries of Accounts III to zero		
Debit		
Purchases of land, net	ΣN 5.7.4 =	0

NOTES TO THE ACCOUNTS I AND TABLE 8.3

Indirect taxes and subsidies

8.91. In certain instances an international body may receive indirect taxes from, or pay subsidies to, the industries of a country directly. In order to keep national income valued to include net indirect taxes equal to the sum of the gross domestic product less consumption of fixed capital plus net factor income received from abroad, it is desirable to route these flows to the international body (the rest of the world) through the general government sector of the country. The flows in question are then to be classed first as indirect taxes received (item 3.3.4), and subsidies paid, (item 3.3.5)

by the general government sector and second as the sector's current transfers n.e.c. to, and from, the rest of the world (items 6.9.2, and 6.10.2 in Account III C 3). In the case of the consolidated accounts of the nation, these current transfers are to be covered in item 3.6.23 in Account 3 and items 6.6.22 and 6.6.21 in Account 6. If the alternative of routing the flows in question directly to the rest of the world were to be adopted, the transactions would of course be shown as indirect taxes and subsidies (items 6.3.4 and 6.3.5, respectively) in Account I 6. In this case items 6.3.4 plus 3.3.4 would be equal to item 1.3.4; and items 6.3.5 plus 3.3.5 would be equal to item 1.3.5.

II. Production, consumption expenditure and capital formation accounts

A. COMMODITIES—ACCOUNTS 1, 2 AND 4

Illustrative account—b. Characteristic products of mining and quarrying, manufacturing, and electricity, gas and water

1.1.1.1 Industrial commodities from domestic industrial activity (Cb 1.1.1)	1.2.1 Intermediate consumption, industries (CΣn 1.2.1*)
1.1.1.2 Industrial commodities from other domestic industries	1.2.2 Intermediate consumption, producers of government services (D 1.2.2*)
1.1.2 Industrial commodities from producers of government services (D 1.1.2*)	1.2.3 Intermediate consumption, producers of private non-profit services to households (E 1.2.3*)
1.1.3 Industrial commodities from producers of private non-profit services to households (E 1.1.3*)	2.2.4 Final consumption expenditure in the domestic market, households (Bd 2.2.4*)
1.1.11 Imports of industrial commodities c.i.f.	4.2.5 Increase in stocks
1.3.4.1 Import duties, industrial commodities	4.2.6 Gross fixed capital formation
	1.2.11 Exports
Supply	Use

B. OTHER GOODS AND SERVICES—ACCOUNTS 1, 2 AND 4

a. Sales of other goods and services and direct imports of government services

1.1.4 Non-commodity sales, producers of government services (D 1.1.4)	1.2.2 Intermediate consumption, producers of government services (D 1.2.2*)
1.1.6 Non-commodity sales, producers of private non-profit services to households (E 1.1.6)	2.2.4 Final consumption expenditure in the domestic market, households (Bd 2.2.4*)
1.1.8 Domestic services of households (F 1.1.8)	
1.1.12.2 Direct purchases abroad on current account, producers of government services	
Supply	Use

b. Final consumption expenditure of government services

1.1.5 Services produced for own use (D 1.1.5)	2.2.20 Final consumption expenditure
Supply	Use

c. Final consumption expenditure of private non-profit services to households

1.1.7 Services produced for own use (E 1.1.7)	2.2.31 Final consumption expenditure
Supply	Use

II. Production, consumption expenditure and capital formation accounts (continued)

B. OTHER GOODS AND SERVICES — ACCOUNTS 1, 2 AND 4 (continued)

d. Final consumption expenditure of households

2.2.4 Final consumption expenditure in the domestic market, households (AΣn 2.2.4 + Ba 2.2.4)	2.2.32 Final consumption expenditure, resident households
2.1.12.1 Direct purchases abroad, resident households	2.2.12.1 Direct purchases in the domestic market, non-resident households
Supply	Use

C. INDUSTRIES—ACCOUNT 1, PRODUCTION ACCOUNT

Illustrative account—b. Mining and quarrying, manufacturing, and electricity, gas and water

1.2.1 Intermediate consumption (AΣn 1.2.1)	1.1.1.1 Characteristic products of industrial activity (Ab 1.1.1.1)
1.3.1 Compensation of employees	1.1.1.3 Other products
1.3.2 Operating surplus	
1.3.3 Consumption of fixed capital	
1.3.4 Indirect taxes	
1.3.5 Less Subsidies	
Gross input	Gross output

D. PRODUCERS OF GOVERNMENT SERVICES—ACCOUNT 1, PRODUCTION ACCOUNT

1.2.2 Intermediate consumption (AΣn 1.2.2 + Ba 1.2.2)	1.1.5 Services produced for own use (Bb 1.1.5)
1.3.1 Compensation of employees	1.1.4 Non-commodity sales (Ba 1.1.4)
1.3.3 Consumption of fixed capital	1.1.2 Commodities produced (AΣn 1.1.2)
1.3.4 Indirect taxes	
Gross input	Gross output

E. PRODUCERS OF PRIVATE NON-PROFIT SERVICES TO HOUSEHOLDS—ACCOUNT 1, PRODUCTION ACCOUNT

1.2.3 Intermediate consumption (AΣn 1.2.3)	1.1.7 Services produced for own use (Bc 1.1.7)
1.3.1 Compensation of employees	1.1.6 Non-commodity sales (Ba 1.1.6)
1.3.3 Consumption of fixed capital	1.1.3 Commodities produced (AΣn 1.1.3)
1.3.4 Indirect taxes	
Gross input	Gross output

Accounts II continue

II. Production, consumption expenditure and capital formation accounts (continued)

F. DOMESTIC SERVICES OF HOUSEHOLDS

1.3.1 Compensation of employees	1.1.8 Domestic services (Ba 1.1.8)
Gross input	Gross output

NOTES TO THE ACCOUNTS II

Classification of Accounts II A and C

8.92. The number of categories of industries and their characteristic products used in Accounts II A and C should be limited. For international purposes the categories should be kept to the minimum number that is required for purposes of annual summary data on the sources of demand for broad classes of commodities. The minimum list suggested is: (i) agriculture, hunting, forestry and fishing, (ii) mining and quarrying, manufacturing and electricity, gas and water, (iii) construction, (iv) wholesale and retail trade, restaurants and hotels, (v) transport, storage and communication and (vi) services. It may be desirable to separate mining and quarrying from other industrial activities because of the important role of this activity in the case of a number of developing countries.

Valuation

8.93. Commodities are to be valued at producers' values in the Accounts II. As is indicated earlier in this report, this mode of valuation enhances the analytical values of the data for such purposes as correlating the supply of, and demand for, commodities. Decomposing in Accounts II A, the purchasers' value of commodities disposed of to the various categories of demand into producers' values and distributive trade and transport margins is most practicable when the commodity-flow approach is used in estimating these series.

8.94. When, however, estimates of the dispositions of commodities are mainly based on statistics in respect of the various categories of demand, it is most practicable to use purchasers' valuation only. The use of purchasers' values is appropriate for purposes of studying the experience and behaviour of purchasers and co-ordinates the data in Accounts II A directly with the series on final consumption expenditure in tables 4, 5 and 6 and the data on gross capital formation in table 7. If purchasers' value only were to be used in these accounts, distributive trade and transport margins would be shown as debits in each Account II A, rather than entirely in Account II A on distributive-trade and transport services. As is indicated in chapter IV, the Accounts II A will then differ from the structure of the corresponding part of the system.

Memorandum item in respect of consumption of fixed capital

8.95. In the case of Accounts II C, D and E, which concern the production and cost-structure of industries and the

producers of government and private non-profit services, it will be valuable to add memoranda items to the accounts in respect of the figures of the consumption of fixed capital recorded in the books of the producers. These figures will in general differ from the estimates of the consumption of fixed capital which should be used in the national accounts. The character of these differences is of interest in analysing data on the operating surplus of industries and the cost-structure of government and private non-profit services and purposes.

Treatment of producers of private non-profit services in certain circumstances

8.96. Some countries may find it necessary to combine private non-profit bodies serving households with households during the early stage of introducing the new system. They may not have data on the intermediate consumption, sales to household, and other aspects of the production of private non-profit services. The modifications which it may then be necessary to make in Accounts II A, B and E might be as follows.

(a) A Accounts: Combine entries 1.2.3 "Intermediate consumption, producers of private non-profit services to households" and 2.2.4 "Final consumption expenditure in the domestic market, households"; and disregard entry 1.1.3 "Commodities from producers of private non-profit services to households";

(b) B Accounts: Consolidate the transactions of the private non-profit services and households in respect of the output and disposition of services and goods. Thus, omit entry 1.1.6 "Non-commodity sales of producers of private non-profit services to households" from Account II B a but add a debit entry in respect of the total value of the primary inputs of producers of private non-profit services. Account II B c is to be eliminated and Account II B d is to show private final consumption expenditure;

(c) E and F Accounts: Combine the two accounts; and give the primary inputs of the producers of private non-profit services as their cost-structure and output. Limit the cost structure and output to the primary inputs of the private non-profit institutions; in other words, omit entries 1.2.3 "Intermediate consumption", 1.1.6 "Non-commodity sales" and 1.1.3 "Commodities produced".

8.97. In any case, fraternal, sport, neighbourhood, etc clubs which engage the equivalent of less than two full-time employees are to be included among households. Any data which may be available concerning their activities should be dealt with in the accounts as is indicated above.

III. Income and outlay and capital finance accounts

A. NON-FINANCIAL ENTERPRISES, CORPORATE AND QUASI-CORPORATE

ACCOUNT 3. INCOME AND OUTLAY ACCOUNT

3.4.4 Withdrawals from entrepreneurial income of quasi-corporate enterprises	3.3.2 Operating surplus
3.4.6 Property income	3.4.5 Withdrawals from entrepreneurial income of quasi-corporate enterprises
1. Interest	3.4.7 Property income
2. Dividends	1. Interest
3. Rent	2. Dividends
3.5.1 Net casualty insurance premiums	3. Rent
3.6.1 Direct taxes	3.5.2 Casualty insurance claims
1. On income	3.6.7 Unfunded employee welfare contributions imputed
2. Not elsewhere classified	
3.6.2 Fines and penalties	
3.6.8 Unfunded employee welfare benefits	
3.6.13 Current transfers n.e.c., net	
3.7.1 Saving (A 5.7.1)	
Disbursements	
Receipts	

ACCOUNT 5. CAPITAL FINANCE ACCOUNT

5.2.5 Increase in stocks	5.7.1 Saving (A 3.7.1)
5.2.6 Gross fixed capital formation	5.3.3 Consumption of fixed capital
5.7.4 Purchases of land, net	5.7.6 Capital transfers, net
5.7.5 Purchases of intangible assets n.e.c., net	
5.7.8 Net lending (A 5.7.9)	
Gross accumulation	
5.8.1 Gold	5.7.9 Net lending (A 5.7.8)
5.8.2 Current and transferable deposits	5.9.4 Bills and bonds, short-term
5.8.3 Other deposits	5.9.5 Bonds, long-term
5.8.4 Bills and bonds, short-term	5.9.6 Corporate equity securities, including capital participations
5.8.5 Bonds, long-term	5.9.7 Short-term loans n.e.c.
5.8.6 Corporate equity securities, including capital participations	5.9.8 Long-term loans n.e.c.
5.8.7 Loans n.e.c. and 8	5.9.10 Proprietors' net additions to the accumulation of quasi-corporate enterprises
5.8.10 Proprietors' net additions to the accumulation of quasi-corporate enterprises	5.9.11 Trade credit and advances
5.8.11 Trade credit and advances	5.9.12 Other liabilities
5.8.12 Other financial assets and 13	and 13
Net acquisition of financial assets	
Net incurrence of liabilities plus net lending	

III. Income and outlay and capital finance accounts (continued)

B. FINANCIAL INSTITUTIONS

ACCOUNT 3. INCOME AND OUTLAY ACCOUNT

3.4.4 Withdrawals from entrepreneurial income of quasi-corporate enterprises	3.3.2	Operating surplus
3.4.6 Property income	3.4.5	Withdrawals from entrepreneurial income of quasi-corporate enterprises
1. Interest	3.4.7	Property income
2. Dividends		1. Interest
3. Rent		2. Dividends
3.5.1 Net casualty insurance premiums	3.5.2	3. Rent
3.5.4 Casualty insurance claims	3.5.3	Casualty insurance claims
3.6.1 Direct taxes	3.6.7	Net casualty insurance premiums
1. On income		Unfunded employee welfare contributions imputed
2. Not elsewhere classified		
3.6.2 Fines and penalties		
3.6.8 Unfunded employee welfare benefits		
3.6.13 Current transfers n.e.c., net		
3.7.1 Saving (B 5.7.1)		
	Disbursements	Receipts

ACCOUNT 5. CAPITAL FINANCE ACCOUNT

5.2.5 Increase in stocks	5.7.1	Saving (B 3.7.1)
5.2.6 Gross fixed capital formation	5.3.3	Consumption of fixed capital
5.7.4 Purchases of land, net	5.7.6	Capital transfers, net
5.7.5 Purchases of intangible assets n.e.c., net		
5.7.8 Net lending (B 5.7.9)		
	Gross accumulation	Finance of gross accumulation
5.8.1 Gold	5.7.9	Net lending (B 5.7.8)
5.8.2 Currency and transferable deposits	5.9.2	Currency issued by the central bank and transferable deposits
Of which by monetary institutions, liability of:	5.9.3	Other deposits
i. Resident institutions	5.9.4	Bills and bonds, short-term
ii. Rest of the world	5.9.5	Bonds, long-term
5.8.3 Other deposits	5.9.6	Corporate equity securities, including capital participations
5.8.4 Bills and bonds, short-term	5.9.7	Short-term loans n.e.c.
5.8.5 Bonds, long-term		Of which by monetary institutions to:
5.8.6 Corporate equity securities, including capital participations		i. Resident institutions
5.8.7 Short-term loans n.e.c.		ii. Rest of the world
i. Of which by the central bank, liability of the rest of the world	5.9.8	Long-term loans n.e.c.
5.8.8 Long-term loans n.e.c.	5.9.9	Net equity of households on life insurance reserves and on pension funds
5.8.10 Proprietors' net additions to the accumulation of quasi-corporate enterprises	5.9.10	Proprietors' net additions to the accumulation of quasi-corporate enterprises
5.8.11, 12 and 13 Other financial assets	5.9.11, 12 and 13	Other liabilities
	Net acquisition of financial assets	Net incurrence of liabilities plus net lending

III. Income and outlay and capital finance accounts (continued)

C. GENERAL GOVERNMENT

ACCOUNT 3. INCOME AND OUTLAY ACCOUNT

3.2.20 Final consumption expenditure	3.3.2 Operating surplus
3.4.6 Property income	3.4.5 Withdrawals from entrepreneurial income of quasi-corporate government enterprises
1. Interest on public debt	
3. Rent	
3.5.1 Net casualty insurance premiums	3.4.7 Property income
3.3.5 Subsidies	1. Interest
3.6.4 Social security benefits	2. Dividends
3.6.5 Social assistance grants	3. Rent
3.6.6 Current transfers to private non-profit institutions serving households	3.5.2 Casualty insurance claims
3.6.8 Unfunded employee welfare benefits	3.3.4 Indirect taxes
3.6.9 Current transfers n.e.c. to:	1. Import duties
1. Residents	2. Other indirect taxes
2. The rest of the world	3.6.1 Direct taxes
3.7.1 Saving (C 5.7.1)	1. On income
	2. Not elsewhere classified
	3.6.2 Compulsory fees, fines and penalties
	3.6.3 Social security contributions
	3.6.7 Unfunded employee welfare contributions imputed
	3.6.10 Current transfers n.e.c. from:
	1. Residents
	2. The rest of the world
<hr/>	
Disbursements	Receipts

ACCOUNT 5. CAPITAL FINANCE ACCOUNT

5.2.5 Increase in stocks	5.7.1 Saving (C 3.7.1)
5.2.6 Gross fixed capital formation	5.3.3 Consumption of fixed capital
5.7.4 Purchases of land, net	5.7.6 Capital transfers, net, from:
5.7.5 Purchases of intangible assets n.e.c., net	i. Residents
5.7.8 Net lending (C 5.7.9)	ii. The rest of the world
<hr/>	
Gross accumulation	Finance of gross accumulation
5.8.1 Gold	5.7.9 Net lending (C 5.7.8)
5.8.2 Currency and transferable deposits	5.9.2 Currency issued by the treasury and transferable deposits
Of which by central government, liability of:	5.9.3 Other deposits
i. Resident institutions	5.9.4 Bills and bonds, short-term
ii. Rest of the world	5.9.5 Bonds, long-term
5.8.3 Other deposits	5.9.7 Short-term loans n.e.c
5.8.4 Bills and bonds, short-term	5.9.8 Long-term loans n.e.c
5.8.5 Bonds, long-term	5.9.11 Other liabilities
5.8.6 Corporate equity securities, including capital participations	12 and 13
5.8.7 Short-term loans, n.e.c.	
5.8.8 Long-term loans, n.e.c.	
5.8.10 Proprietors' net additions to the accumulation of quasi-corporate government enterprises	
5.8.11 Other financial assets	
12 and 13	
<hr/>	
Net acquisition of financial assets	Net incurrence of liabilities plus net lending

Accounts III continue

III. Income and outlay and capital finance accounts (continued)

D. PRIVATE NON-PROFIT INSTITUTIONS SERVING HOUSEHOLDS

ACCOUNT 3. INCOME AND OUTLAY ACCOUNT

3.2.31	Final consumption expenditure	3.3.2	Operating surplus
3.4.6	Property income	3.4.7	Property income
	1. Interest		1. Interest
	3. Rent		2. Dividends
3.5.1	Net casualty insurance premiums	3.5.2	Casualty insurance claims
3.6.1	Direct taxes	3.6.6	Current transfers to private non-profit institutions
	1. On income	3.6.7	Unfunded employee welfare contributions imputed
3.6.2	2. Not elsewhere classified		
3.6.2	Fines and penalties		
3.6.5	Social assistance grants		
3.6.8	Unfunded employee welfare benefits		
3.7.1	Saving (D 5.7.1)		
	Disbursements		Receipts

ACCOUNT 5. CAPITAL FINANCE ACCOUNT

5.2.6	Gross fixed capital formation	5.7.1	Saving (D 3.7.1)
5.7.4	Purchases of land, net	5.3.3	Consumption of fixed capital
5.7.5	Purchases of intangible assets n.e.c., net	5.7.6	Capital transfers, net
5.7.8	Net lending (D 5.7.9)		
	Gross accumulation		Finance of gross accumulation
5.8.1	Gold	5.7.9	Net lending (D 5.7.8)
5.8.2	Currency and transferable deposits	5.9.7	Loans n.e.c.
5.8.3	Other deposits		and 8
5.8.4	Bills and bonds, short-term	5.9.11,	Other liabilities
5.8.5	Bonds, long-term	12 and	
5.8.6	Corporate equity securities, including capital participations	13	
5.8.7, 8, 11, 12	Other financial assets and 13		
	Net acquisition of financial assets		Net incurrence of liabilities plus net lending

III. Income and outlay and capital finance accounts (continued)

E. HOUSEHOLDS, INCLUDING PRIVATE UNINCORPORATED NON-FINANCIAL ENTERPRISES

ACCOUNT 3. INCOME AND OUTLAY ACCOUNT

3.2.32 Final consumption expenditure	3.4.1 Compensation of employees
3.4.6 Property income	3.3.2 Operating surplus
1 i. Consumer debt interest	3.4.5 Withdrawals from entrepreneurial income of quasi-corporate enterprises
1 ii. Other interest	
3. Rent	
3.5.1 Net casualty insurance premiums	3.4.7 Property income
3.6.1 Direct taxes	1. Interest
1. On income	2. Dividends
2. Not elsewhere classified	3. Rent
3.6.2 Compulsory fees, fines and penalties	3.5.2 Casualty insurance claims
3.6.3 Social security contributions	3.6.4 Social security benefits
3.6.6 Current transfers to private non-profit institutions	3.6.5 Social assistance grants
3.6.7 Unfunded employee welfare contributions imputed	3.6.8 Unfunded employee welfare benefits
3.6.11 Current transfers n.e.c. to:	3.6.12 Current transfers n.e.c. from
1. Residents	1. Residents
2. The rest of the world	2. The rest of the world
3.7.1 Saving (E 3.7.1)	
Disbursements	Receipts

ACCOUNT 5. CAPITAL FINANCE ACCOUNT

5.2.5 Increase in stocks	5.7.1 Saving (E 3.7.1)
5.2.6 Gross fixed capital formation	5.3.3 Consumption of fixed capital
5.7.4 Purchases of land, net	5.7.6 Capital transfers, net
5.7.5 Purchases of intangible assets n.e.c., net	
5.7.8 Net lending (E 3.7.9)	
Gross accumulation	Finance of gross accumulation
5.8.1 Gold	5.7.9 Net lending (E 3.7.8)
5.8.2 Currency and transferable deposits	5.9.7 Short-term loans n.e.c.
5.8.3 Other deposits	5.9.8 Long-term loans n.e.c.
5.8.4 Bills and bonds, short-term	5.9.11 Trade credit and advances
5.8.5 Bonds, long-term	5.9.12 Other liabilities
5.8.6 Corporate equity securities, including capital participations	and 13
5.8.7 Loans n.e.c.	
and 8	
5.8.9 Net equity of households on life insurance reserves and on pension funds	
5.8.10 Proprietors' net additions to the accumulation of quasi-corporate private enterprises	
5.8.11 Trade credit and advances	
5.8.12 Other financial assets	
and 13	
Net acquisition of financial assets	Net incurrence of liabilities plus net lending

NOTES TO THE ACCOUNTS III

Basis of recording transactions

8.98. In general, transactions between transactors of the same sector should be recorded in the items of the Accounts III. In the case of general government, however, the transactions between the various transactors of the sector in respect of the same flow are to be netted out, that is consolidated. This approach is adopted so that the transactions between general government bodies and others are not obscured by the numerous but unimportant transactions from the point of view of economic analysis which take place between organs of government. As for other sectors, the receipts (sales) and disbursements (purchases) in respect of a given item involved in transactions between general government bodies and transactors of other sectors should be recorded on a gross basis unless netting is explicitly called for in an account. Receipts (sales) and disbursements (purchases) of the same transactor in respect of an item should not be netted, one against the other, except in the case of transactions in financial assets and liabilities. In the case of financial transactions, purchases and sales of the same type of assets, or the acquisition and redemption of the same type of liabilities, are to be netted, one against the other.

Supplementary entries

8.99. While an effort has been made to list entries in the Accounts III in respect of probable transactions, transactions may occur which are not provided for. For example, incorporated enterprises, general government or private non-profit institutions may establish pension funds for their employees which do not satisfy the criteria for inclusion in the subsector "Insurance companies and pension funds". In these instances, an entry in respect of the liability "Net equity of households on pension funds" would be required in the capital finance accounts of the bodies.

8.100. It may also be desirable to add entries to the Accounts III in order to classify certain categories of transactions further. Additions to the items exhibited in the Accounts III which warrant consideration are indicated below.

(a) Interest. It may be useful to distinguish interest earned by (imputed to) households on their equity in life insurance reserves and on pension funds, from other forms of interest. For this purpose, entries 3.4.6.1 in Account III B and 3.4.7.1 in Account III E should of course be divided into the two categories of interest. Alternatively, consideration might be given to sub-dividing item 10 (entry 3.4.7.1) in table 23, on the income and outlay and capital transactions of households, in this fashion;

(b) Saving. Where a significant number of enterprises in a country are branches or subsidiaries of non-residents, it will be valuable to sub-divide the saving, entries 3.7.1 and 5.7.1, of the relevant institutional sector(s) in order to indicate the amount of saving of (direct investment in) these corporate and quasi-corporate enterprises. The division of saving into the retained income of foreign-owned branches and subsidiaries and the saving of other corporate and quasi-corporate enterprises may be of interest in the case of financial and/or non-financial enterprises.

Memorandum items

8.101. The analytical values of the Accounts III will be enhanced if memoranda to these accounts are furnished in respect of the items listed below.

(a) Direct taxes on income. While direct taxes on income are to be generally recorded as of the date when they are due without penalty, it will be of interest to have figures of these taxes which are recorded as of the time the income on which the taxes are levied was earned. It may be feasible to compile such data in the case of corporate and quasi-corporate enterprises. Where this is the case, the data might be exhibited as memoranda to Accounts III A 3 and B 3;

(b) Increase in stocks. The value of the physical change in stock which enters into the national accounts will in general differ substantially from the figures of the value of the change in stocks recorded in the books of business enterprises. For purposes of studies of the behaviour of these enterprises, as well as the evaluation of the data in respect of stocks in the national accounts, it will be valuable if the following data are furnished as memoranda to the capital finance accounts of non-financial corporate and quasi-corporate enterprises and households: The book value of the increase (decrease) in stocks; and the main estimates made in order to adjust the book values to the figures given in the national accounts;

(c) Consumption of fixed capital. The national accounting and book figures of consumption of fixed capital should, in most instances, also differ significantly. It will therefore be of interest if the following data are presented as memoranda to the capital finance accounts of each of the institutional sectors: the book values of the consumption of fixed capital; and the results of the main steps taken in adjusting the book values to the data in the national accounts.

Classification of financial assets and liabilities

8.102. The classification of financial claims is defined in table 8.2. Some countries may find it desirable to raise a separate heading for mortgages in respect of the financial transactions of the institutional sectors other than general government. Mortgages are now classified in the category "Long-term loans n.e.c."

Treatment of private non-profit institutions serving households in certain circumstances

8.103. As in the case of the accounts in respect of the supply and disposition of goods and services, during the early stage of introducing the new system, some countries will find it necessary to include private non-profit institutions serving households in the same institutional sector as households. Where this is the case, not only will the Accounts III D be omitted but it may be necessary to consolidate the transactions of the private non-profit bodies and households in the case of certain important items, for example, current and capital transfers between the two groups of transactors.

ANNEX 8.3
Supporting and supplementary tables

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Annex 8.3 tables follow

SUPPORTING TABLES IN CURRENT PRICES TO II. PRODUCTION, CONSUMPTION EXPENDITURE
AND CAPITAL FORMATION ACCOUNTS

Table 1. Gross domestic product and factor incomes, by kind of economic activity

Kind of economic activity		Gross output (Producers' values)	Inter-mediate con-sump-tion	Gross domestic product (Producers' values)	Indirect taxes less subsidies	Consump-tion of fixed capital	Domestic fac-tor in-comes	Compen-sation of em-ployees	Operat-ing sur-plus		
Condensed list (ISIC divisions and major division)	More detailed list (ISIC major groups)	Flow	1.1.0	1.2.1 1.2.2 1.2.3	1.3.0	1.3.4 -1.3.5	1.3.3	1.3.1 +1.3.2	1.3.1	1.3.2	
			(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
a. Industries											
1. Agriculture, hunting, forestry and fishing											
11. Agriculture and hunting		111; 112; 113									
12. Forestry and logging		121; 122									
13. Fishing		130									
2. Mining and quarrying		210; 220; 230; 290									
3. Manufacturing											
31. Food, beverages and tobacco		311-312; 313; 314									
32. Textiles, wearing apparel and leather industries		321; 322; 323; 324									
33. Wood and wood products, including furniture		331; 332									
34. Paper and paper products, printing and publishing		341; 342									
35. Chemicals and chemical, petroleum, coal, rubber and plastic products		351; 352; 353; 354; 355; 356									
36. Non-metallic mineral products except petroleum and coal		361; 362; 369									
37. Basic metal industries		371; 372									
38. Fabricated metal products, machinery and equipment		381; 382; 383; 384; 385									
39. Other manufacturing industries		390									
4. Electricity, gas and water		410; 420									
5. Construction		500									
6. Wholesale and retail trade and restaurants and hotels											
61. Wholesale and retail trade		610; 620									
62.											
63. Restaurants and hotels		631; 632									
7. Transport, storage and communication											
71. Transport and storage		711; 712; 713; 719									
72. Communication		720									
8. Finance, insurance, real estate and business services											
81. Financial institutions		810									
82. Insurance		820									
83. Real estate and business services		831; 832; 833									
9. Community, social and personal services											
92. Sanitary and similar services		920									
93. Social, recreational and related community services		931 and 932; 933; 934; 935 and 939; 941; 942 and 949									
95. Personal and household services		951-952; 953-959									
Sub-total 1/											

1/ In the case of intermediate consumption, the gross domestic product, domestic factor incomes and operating surplus, the sub-total includes in addition to the sum of the entries above, an amount equal to the intermediate consumption imputed to the nominal unit which pays out the imputed service charge of banks and similar financial intermediaries. This amount is positive in the case of intermediate consumption and negative in the case of the gross domestic product, domestic factor incomes and operating surplus.

Table 1 (*continued*). Gross domestic product and factor incomes, by kind of economic activity

Kind of economic activity		Gross output (Producers' values)	Intermediate con-sump-tion	Gross domestic product (Producers' values)	Indirect taxes less subsi-dies	Consump-tion of fixed capital	Domestic fac-tor in-comes	Compen-sation of em-ployees	Operat-ing sur-plus		
Condensed list (ISIC divisions and major division)	More detailed list (ISIC major groups)	Flow	1.1.0	1.2.1 1.2.2 1.2.3	1.3.0	1.3.4 -1.3.5	1.3.3	1.3.1 +1.3.2	1.3.1	1.3.2	
			(la)	(lb)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
b. Producers of Government Services											
1. Agriculture, hunting, forestry and fishing											
11. Agriculture and hunting	11										
12. Forestry and logging	121 only										
13. Fishing	130										
4. Electricity, gas and water	Perhaps 420. Water works and supply										
7. Transport, storage and communication	71. Transport only										
8. Finance, insurance, real estate and business services	Perhaps 81. Financial institutions										
9. Community, social and personal services											
91. Public administration and defence	911; 912; 913; 914; 915; 916										
92. Sanitary and similar services	920										
93- Social, recreational and related community services	931; 932; 933; 934; 935 and 939; 941; 942 and 949										
Sub-total											
c. Producers of Private Non-profit Services to Households											
93- Social, recreational and related community services: producers of private non-profit services to households	931; 932; 933; 934; 935 and 939; 941; 942 and 949										
95. Domestic services of households	953										
d. Totals											
Total											
Import Duties				xxxx		xxxx	xxxx	xxxx	xxx		
Total											

Table 2. Supply and disposition of commodities

Source of supply or disposition			Flow	Characteristic products of specified kind of activity of industries 1/ (Basic values)							Commodity taxes, net
				11	12	13	210	...	61- 62	...	
Supply of commodities	Industries where produced, according to kind of activity	11. Agriculture and hunting 12. Forestry and logging 13. Fishing 210. Coal mining . . 311-312. Food manufacturing (More detailed list of Table 1 for ISIC major divisions 2 through 5) 61-62. Wholesale and retail trade (Condensed list of Table 1 for major divisions 6 through 9 except major groups 951-952 and excluding division 91. 951 Repair services n.e.c. and and 952. laundries	1.1.1								
Supply of commodities		Producers of government services	1.1.2								
Supply of commodities		Producers of private non-profit services to households	1.1.3								
Imported		Import duties	1.3.4.1								
	C.i.f. value	Competitive Complementary	1.1.11								
Disposition of supply of commodities		Intermediate consumption, industries 2/	1.2.1								
Disposition of supply of commodities		Intermediate consumption, producers of government services	1.2.2*								
Disposition of supply of commodities		Intermediate consumption, producers of private non-profit services to households	1.2.3								
Disposition of supply of commodities		Final consumption in the domestic market, households	2.2.4*								
Disposition of supply of commodities		Increase in stocks	4.2.5								
Disposition of supply of commodities		Gross fixed capital formation, industries	4.2.6i								
Disposition of supply of commodities		Gross fixed capital formation, producers of government services	4.2.6ii								
Disposition of supply of commodities		Gross fixed capital formation, producers of private non-profit services to households	4.2.6iii								
Disposition of supply of commodities		Exports	1.2.11								

1/ Kind of activity as in the rows for the supply of commodities from industries.

2/ Includes the intermediate consumption of the nominal unit to which the imputed service charge of banks and similar financial institutions is assigned.

Table 3. Gross output and input of industries

Gross output and input			Kind of activity of industries 1/					
			Flow	11	12	13	210
Gross output of industries	Gross output (Basic values)		1.1.1					
	Commodity taxes, net		1.3.6					
Gross input of industries	Intermediate consumption 2/ Characteristic products of specified kind of activity of industries (Basic values)	11. Agriculture and hunting						
		12. Forestry and logging						
		13. Fishing						
		210. Coal mining						
		.						
		.						
		311-312. Food manufacturing (More detailed list of Table 1 for ISIC major divisions 2 through 5)						
		61-62. Wholesale and retail trade	1.2.1					
		.						
		.						
		.						
		(Condensed list of Table 1 for major divisions 6 through 9 except 951-952 and excluding division 91)						
		951 and Repair services n.e.c. and 952 laundries						
		Commodity taxes, net	1.3.6					
		Compensation of employees	1.3.1					
		Operating surplus	1.3.2					
		Consumption of fixed capital	1.3.3					
		Indirect taxes, net	1.3.4- 1.3.5					

1/ Kind of activity as in the rows for the intermediate consumption of characteristic products of specified kind of activity of industries.

2/ Includes the intermediate consumption of the nominal industry to which the imputed service charge of banks and financial institutions is assigned.

Table 4. Government final consumption expenditure according to cost-composition and purpose

Condensed list	More detailed list	Cost-composition							Final consump-tion expendi-ture	
		Compensa-tion of em-ployees	Consump-tion of fixed capital	Intermediate consumption			Other outlays less non-commodity sales and commodities produced			
				Total	Commodities	1.2.2.				
(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
1. General public services	1.1; 1.2; 1.3; 1.4 ^{2/}									
2. Defence	2									
3. Education	3.1 ^{3/} ; 3.2 ^{3/} ; 3.3 ^{3/}									
4. Health	4.1 ^{3/} ; 4.2 ^{3/} ; 4.3 ^{3/}									
5. Social security and welfare services	5.1 ^{3/} ; 5.2 ^{3/}									
6. Housing and community amenities	6.1; 6.2; 6.3									
7. Other community and social services	7.1; 7.2									
8. Economic services	8.1 ^{3/} ; 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8									
9. Other purposes ^{4/}	9.1; 9.2; 9.3; 9.4									
Total										

- 1/ Separate data should be given in respect of outlays on durable and non-durable goods acquired for purposes of defence. It will be valuable to classify the expenditure on these durable goods into outlays on construction projects and other items.
- 2/ Outlays on research and scientific endeavors may be included in categories of the purpose classification in addition to 1.4. Data in respect of the total outlays for purposes of research and scientific endeavors should be given as a memorandum item.
- 3/ At least these categories of the more detailed list should be shown separately where feasible.
- 4/ Includes expenditure in connexion with public debt, disasters and other calamities, consumption of fixed capital, etc. which cannot be allocated to any of the purpose categories listed above.

Table 5. Final consumption expenditure of private non-profit bodies serving households according to cost-composition and purpose

Purpose of outlays	Cost-composition				Final consump-tion expendi-ture
	Compen-sation of em-ployees	Consump-tion of fixed capital	Inter-mediate consump-tion	Other outlays less non-com-modity sales and com-modi-ties produced	
Flow	1.3.1	1.3.3	1.2.3	1.3.4- (1.1.6+1.1.3)	2.2.31
(1)	(2)	(3)	(4)	(5)	(6)
1. Research and scientific institutes					
2. Education					
3. Medical and other health services					
4. Welfare services					
5. Recreation and related cultural services					
6. Religious organizations					
7. Other and 8.					
Total					

Table 6. Composition of final consumption expenditure of households

a. By Type of Expenditure			
Item 1 2 3 4 5 6	Flow 2.2.4*	Commodities purchased Durable goods Semi-durable goods Non-durable goods Services Other goods and services purchased	
7	2.2.4	Final consumption in the domestic market	
8	2.1.12.1	Direct purchases abroad by resident households	
9	-2.2.12.1	Less Purchases in the domestic market by non-resident households	
10	2.2.32	Final consumption expenditure (Item 7+8+9)	
b. Final Consumption Expenditure in the Domestic Market by Object			
Object			
Condensed list		More detailed list	
1.	Food, beverages and tobacco	1.1; 1.2; 1.3; 1.4	
2.	Clothing and footwear	2.1; 2.2	
3.	Gross rent, fuel and power	3.1; 3.2	
4.	Furniture, furnishings and household equipment and operation	4.1; 4.2; 4.3; 4.4; 4.5; 4.6	
5.	Medical care and health expenses	5.1; 5.2; 5.3; 5.4; 5.5	
6.	Transport and communication	6.1; 6.2; 6.3	
7.	Recreation, entertainment, education and cultural services	7.1; 7.2; 7.3; 7.4	
8.	Other goods and services	8.1; 8.2; 8.3; 8.4; 8.5; 8.6	
Final consumption expenditure in the domestic market (Flow 2.2.4)			

Table 7. Composition of gross capital formation

a. By Type of Capital Goods	
1. Residential building	
2. Non-residential building	
3. Other construction except land improvement	
4. Land improvement and plantation and orchard development	
4.1 Land improvement	
4.2 Plantation, orchard and vineyard development	
5. Transport equipment	
6. Machinery and equipment	
6.1 Agricultural machinery and equipment	
6.2 Other	
7. Breeding stock, draught animals, dairy cattle and the like	
Gross fixed capital formation (Flow 4.2.6)	
1. Goods producing industries	
1.1 Materials and supplies	
1.2 Work-in-progress	
1.3 Livestock except breeding stock, dairy cattle and the like	
1.4 Finished goods	
2. Wholesale and retail trade	
3. Other industries	
4. Government services	
Increase in stocks (Flow 4.2.5)	
Gross capital formation (Flows 4.2.6+ 4.2.5)	

Table 7 (*continued*). Composition of gross capital formation

b. By Kind of Economic Activity					
Kind of economic activity		Gross capital formation	Gross fixed capital formation	Increase in stocks ^{1/}	
Condensed list (ISIC divisions and major divisions)	More detailed list (ISIC major groups and divisions)	Flow	4.2.6+ 4.2.5	4.2.6	4.2.5
(1a)	(1b)		(2)	(3)	(4)
a. Industries					
1. Agriculture, hunting, forestry and fishing					
11. Agriculture and hunting	11				
12. Forestry and logging	12				
13. Fishing	130				
2. Mining and quarrying	210; 220; 230; 290				
3. Manufacturing					
31. Food, beverages and tobacco	311-312; 313; 314				
32. Textiles, wearing apparel and leather industries	321; 322; 323; 324				
33. Wood and wood products, including furniture	331; 332				
34. Paper and paper products, printing and publishing	341; 342				
35. Chemicals and chemical, petroleum, coal, rubber and plastic products	351; 352; 353; 354; 355; 356				
36. Non-metallic mineral products except petroleum and coal	361; 362; 369				
37. Basic metal industries	371; 372				
38. Fabricated metal products, machinery and equipment	381; 382; 383; 384; 385				
39. Other manufacturing industries	390				
4. Electricity, gas and water					
41. Electricity, gas and steam	410				
42. Water works and supply	420				
5. Construction	500				
6. Wholesale and retail trade and restaurants and hotels	61-62; 63				
7. Transport, storage and communication					
71. Transport and storage	711; 712; 713; 719				
72. Communication	720				
8. Finance, insurance, real estate and business services					
81. Financial institutions	810				
82. Insurance	820				
83. Real estate and business services	831; 832; 833				

Table 7 (continued). Composition of gross capital formation

b. By Kind of Economic Activity				
Kind of economic activity Condensed list (ISIC divisions and major divisions)	More detailed list (ISIC major groups and divisions)	Gross capital formation	Gross fixed capital formation	Increase in stocks ^{1/}
		Flow	4.2.6+ 4.2.5	4.2.6
(1a)	(1b)	(2)	(3)	(4)
9. Community, social and personal services	92; 93; 94; 95			
Sub-total				
b. Producers of Government Services				
1. Agriculture, hunting, forestry and fishing				
11. Agriculture and hunting	11			
12. Forestry and logging	121 only			
13. Fishing	130			
4. Electricity, gas and water	Perhaps 420. Water works and supply			
7. Transport, storage and communication	71. Transport only			
8. Finance, insurance, real estate and business services	Perhaps 81. Financial institutions			
9. Community, social and personal services				
91. Public administration and defence	910			
92. Sanitary and similar services	920			
93. Social, recreational and related	931 and 932; 933;			
94. community services	934; 935 and 939; 94			
Sub-total				
c. Producers of Private Non-Profit Services to Households				
93. Social, recreational and related	931 and 932; 933;			
94. community services	934; 935 and 939; 94			
Total				

^{1/} Increases in stocks are not applicable in the case of producers of private non-profit services to households or in the case of producers of government services except public administration and defence.

NOTES TO TABLES 1 THROUGH 7

Classification schemes

8.104. The schemes of classification used in supporting tables 1 through 7 are defined in tables set out in chapters V and VI. The classification according to kind of economic activity used in tables 1 through 3 and 7 is shown in table 5.2. The purpose classifications of tables 4 and 5 are exhibited in tables 5.3 and 5.4. The classification of household goods and services in table 6 is delineated in table 6.1 and the classifications of increases in stocks and gross fixed capital formation according to type in table 7 are given in tables 6.2 and 6.3, respectively.

Supplementary data on own-account production of commodities

8.105. In view of the significance of subsistence and other own-account production of commodities in the case of certain countries, it will be useful to have data on the output and disposition of commodities which are produced for own use in the form of memoranda to selected tables. Listed below are the series of such data which are of considerable interest.

(a) Table 1. Value of gross output, and the coupled value added, produced on own account in the case of all industries and in the case of agriculture and hunting, forestry and logging, fishing and construction;

(b) Table 6. Value of commodities produced on own account included in the final consumption expenditure of households in respect of all goods and services and food, beverages and tobacco and gross rent, fuel and light;

(c) Table 7. Value of fixed assets produced on own account in respect of total gross fixed capital formation, residential buildings, non-residential buildings and other construction, land improvement and plantation development, and breeding stock, draught animals and dairy cattle; and in the case of industries, producers of government services and producers of private non-profit services to households.

Tables 1 and 3

8.106. It may be useful to exhibit the bank service charge which is imputed as the intermediate consumption of the nominal industry as a distinct item in these tables. In that case the coupled negative value added and operating surplus of the nominal industry should also appear in the tables as distinct entries.

Tables 2 and 3

8.107. It has already been said in paragraphs 8.93 and 8.94 above that some countries may not find it feasible to compile annual data on the dispositions of commodities valued at producers' values. They will find the valuation at basic values called for in table 2, on the supply and disposition of commodities, even less practicable in compiling these series of data annually. In addition to the mode of valuation, serious difficulties may be encountered in the annual compilation of table 2 because of (i) the cross-classification of the gross output of commodities according to category of commodities and the kind of activity of the industries producing the commodities and (ii) the distinction between complementary and competitive imports. This distinction should be based on a detailed comparison of imports and domestic production. The use in table 3 of basic values and a cross-classification of intermediate inputs according to category of commodities and kind of activity of the consuming industries will probably make it impracticable for some countries to compile this table annually.

8.108. In view of the values of compiling annual data on the supply and disposition of commodities, a much simplified

table for this purpose, table 2a below, is recommended for use when the annual compilation of table 2 is impracticable. Purchasers' values only are used in table 2a in valuing the dispositions of commodities and abbreviated classifications are employed in the case of categories of commodities and dispositions. It may in some cases be necessary to combine the columns "Intermediate consumption" and "Increases in stock" into a single column "Other dispositions". As was emphasized a number of times earlier in this report the treatment of trade and transport margins in table 2a is inconsistent with the structure of the system.

8.109. Repair services n.e.c. and laundries and dry cleaning establishments are singled out from the combined category for the other personal, social or community services, in tables 2 and 3. This is recommended because unlike the other services, repair services and laundries contribute to the material product in the System of Balances of the National Economy (MPS). Tables 2 and 3 call for the data which are required in order to link the production and final-use accounts of the system and the MPS.

Supplementation of tables 4 through 6

8.110. For such purposes as studies of the role, activities and costs of various organs of government, it will be valuable to prepare table 4 in respect of the central government and state and local governments annually, or at least somewhat less frequently.

8.111. In order to furnish the basis for compiling complete figures of the food, beverages and tobacco, clothing, medicines and pharmaceuticals, and shelter consumed by the population, it will be desirable to present data in the form of memoranda to the tables which supplement the series listed in tables 4 through 6. Outlays on these goods will be included in the data in respect of some categories of expenditure which do not relate explicitly to food, beverages and tobacco, clothing, etc. Supplementary data should be furnished in respect of the outlays on food, beverages and tobacco, clothing, and medicines and pharmaceuticals which are included in the expenditure on medical, health and welfare services (i.e., in hospitals, nursing homes and other health and welfare institutions) in the case of each of the tables. Also of interest in the case of food, beverages and tobacco, are the outlays for these purposes included in expenditures in restaurants, cafés and hotels, the eating and drinking facilities of social clubs, and the boarding facilities of educational institutions. It would be desirable to furnish supplementary figures as well of the outlays on dormitory lodging included in outlays on education.

8.112. Data are called for on commodities classified according to degree of durability in the case of table 6 only. Supplementary memoranda to tables 4 and 5 on this topic will be of value for purposes of ascertaining the value of durable goods included in consumption expenditure. In the case of intermediate consumption of government services, it will be desirable to furnish supplementary figures of the outlays on the acquisition, renovation and capital repair of durable goods which are included in expenditure on defence, sub-divided into construction works and other durable goods. In the case of private non-profit bodies serving households, the supplementary data should relate to the semi-durable and durable goods acquired for donation to households since all other durable goods are covered in fixed capital formation.

8.113. It will also be desirable, if possible, to furnish supplementary figures to table 4 concerning government final consumption expenditure and its cost-composition in respect of scientific investigations and research. In addition to the expenditures included in category 1.4 "General research", outlays on particular types of research are likely to be included under a number of other headings, for example, education, health, housing, and the economic services.

Table 2a. Supply and disposition of commodities

Commodities according to characteristic products of specified industries	Supply				Total supply and disposition (Purchasers' values)	Disposition (Purchasers' values)					
	Gross output (Producers' values)	Imports		Trade and transport margins		Intermediate consumption	Final consumption of households in the domestic market	Increases in stocks	Fixed capital formation	Exports	
		c.i.f. values	Import duties								
Flow	1.1.1* 1.1.2* 1.1.3	1.1-11	1.3.4.1	1.1.1*		1.2.1* 1.2.2** 1.2.3	2.2.4*	4.2.5	4.2.6	1.2.11	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1. Agriculture, hunting, forestry and fishing 2. Mining and quarrying 3. Manufacturing 31. Food, beverages and tobacco 32. Textiles, wearing apparel and leather products 33. Wood and wood products, including furniture 34. Paper and paper products, printing and publishing 35. Chemicals and chemical, petroleum, coal, rubber and plastic products 36. Non-metallic mineral products except petroleum and coal 37. Basic metal products 38. Fabricated metal products, machinery and equipment 39. Other manufacturing industries 4. Electricity, gas and water 5. Construction 7. Transport, storage and communication ^{1/} 82. Restaurants and hotels and services											

^{1/} In this case, transport services cover passenger services only.

Combination of tables 5 and 6

8.114. As was indicated in paragraph 8.96, some countries may find it necessary to consolidate the transactions of households and private non-profit bodies serving them. Then, any entries in respect of sales by private non-profit bodies to households would be eliminated; their intermediate consumption (column 4 of table 4) would be included with the entries in respect of commodities purchased by households (items 1 through 5 of table 6); and the rest of the cost-structure of the non-profit services would be summarized in item 6 of table 6. The figures of the classification of the final consumption expenditure of the private non-profit bodies according to purpose would be consolidated with the corresponding data in respect of households in the lower panel of table 6. This is feasible as the categories of the two classifications are in one-to-one correspondence. In consolida-

ting these series, it may not be possible to follow the recommendation that the outlays of a private non-profit body on items such as food, clothing, etc. should be classified according to the main purpose served by it instead of to food, clothing, etc.

Supplementary classifications in table 7

8.115. For purposes of certain analytical requirements in respect of data on gross fixed capital formation classified according to the kind of economic activity of the owner of the fixed assets, it may be desirable to sub-divide column 3 of part b of table 7 into four columns: Construction projects (Categories 1 through 4.1 of the classification of fixed assets by type), Transport equipment (Category 5), Machinery and other equipment (Category 6), and Plantation development and breeding stock, etc. (Categories 4.2 and 7).

TABLES IN CONSTANT PRICES FOR II. PRODUCTION, CONSUMPTION EXPENDITURE

AND CAPITAL FORMATION ACCOUNTS

Table 8. Constant-price value and price indexes of the gross domestic product, by type of expenditure

a. Value in Constant Prices		
Item	Flow	
1.	2.2.20	Government final consumption expenditure
2.	2.2.30	Private final consumption expenditure
3.	4.2.5	Increase in stocks
4.	4.2.6	Gross fixed capital formation
5.		Final consumption and gross capital formation
6.	1.2.10	Exports of goods and services
7.	1.1.10	<u>Less imports of goods and services</u>
8.	1.3.0	Gross domestic product at purchasers' values

b. Correlative Price Index Numbers		
Item	Flow	
9.	2.2.20	Government final consumption expenditure
10.	2.2.30	Private final consumption expenditure
11.	4.2.6	Gross fixed capital formation
12.		Final consumption and gross capital formation
13.	1.2.10	Exports of goods and services
14.	1.1.10	Imports of goods and services
15.	1.3.0	Gross domestic product at purchasers' values

Table 9. Gross domestic product at constant prices, by kind of economic activity

Kind of economic activity Condensed list (ISIC division and major division)	More detailed list (ISIC major group or division)	Gross domestic product (Producers' values)	Gross domestic product (Basic values) ^{1/}	
		Flow	1.3.0	
		(1a)	(1b)	(2)
a. Industries				
1. Agriculture, hunting, forestry and fishing				
11. Agriculture and hunting	11			
12. Forestry and logging	12			
13. Fishing	130			
2. Mining and quarrying	210; 220; 230; 290			
3. Manufacturing				
31. Food, beverages and tobacco	311-312; 313; 314			
32. Textiles, wearing apparel and leather industries	321; 322; 323; 324			
33. Wood and wood products including furniture	331; 332			
34. Paper and paper products, printing and publishing	341; 342			
35. Chemicals and chemical, petroleum, coal, rubber and plastic products	351; 352; 353; 354; 355; 356			
36. Non-metallic mineral products, except petroleum and coal	361; 362; 369			
37. Basic metal industries	371; 372			
38. Fabricated metal products, machinery and equipment	381; 382; 383; 384; 385			
39. Other manufacturing industries	390			
4. Electricity, gas and water	410; 420			
5. Construction	500			
6. Wholesale and retail trade and restaurants and hotels				
61. Wholesale and retail trade	61-62			
62.				
63. Restaurants and hotels	631; 632			
7. Transport, storage and communication				
71. Transport and storage	71			
72. Communication	720			
8. Finance, insurance, real estate and business services	81 and 82; 83			
9. Community, social and personal services	92; 93; 94; 951 and 952; 953 and 959			
Sub-total 2/				
b. Producers of Government Services				
1. Agriculture and hunting, forestry and fishing	110; 121; 130			
4. Electricity, gas and water	Perhaps 420. Water works and supply			
7. Transport, storage and communication	71. Transport only			
8-9. Services				
91. Public administration and defence	910			
92. Sanitary and similar services	920			
93. Social, recreational and related community services	93-94 and perhaps 81. Financial institutions			
94. and 8.				
Sub-total				

Table 9 (*continued*). Gross domestic product at constant prices, by kind of economic activity

Kind of economic activity		Gross domestic product (Producers' values)	Gross domestic product (Basic values ^{1/})
Condensed list (ISIC division and major division)	More detailed list (ISIC major group or division)	Flow	1.3.0
(la)	(lb)	(2)	(3)
c. Producers of Private Non-Profit Services to Households			
93- Social, recreational and related community services: producers of private non-profit services to households	93-94		
94.			
95. Domestic services of households	953		
d. Totals			
Total			
Import duties			
Total			

- 1/ Approximate or true basic values or approximate or true factor values, depending on the relative urgency of requirements and feasibilities.
- 2/ In addition to the sum of the entries above, the sub-total includes the negative of the intermediate consumption charged to the nominal industry in respect of imputed service charge of banks and similar financial intermediaries.

Table 10. Employment by kind of economic activity

Kind of economic activity		Average number of persons employed during year		Man-hours worked by employees
Condensed list	More detailed list	All persons	Employees	
(1a)	(1b)	(2)	(3)	(4)
a. Industries				
The categories of the condensed and detailed list are the same as the categories shown in Table 9				
Sub-total				
b. Producers of Government Services				
The categories of the condensed and detailed list are the same as the categories shown in Table 9				
Sub-total				
c. Producers of Private Non-profit Services to Households				
The categories of the condensed and detailed list are the same as the categories shown in Table 9				
d. Total				

Table 11. Supply and disposition of commodities at constant prices

Source of supply or disposition		Characteristic products of specified kind of activity of industries 1/ (Basic values)								Commodity taxes, net
		Flow	11	12	13	210	.	.	61-62	
Supply of commodities	Industries where produced, according to kind of activity	11. Agriculture and hunting 12. Forestry and logging 13. Fishing 210. Coal mining . . 311-312. Food manufacturing (More detailed list of Table 9 for ISIC major divisions 2 through 5) 61-62. Wholesale and retail trade (Condensed list of Table 9 for major divisions 6 through 9 except major groups 951-952 and excluding division 91. 951 Repair services n.e.c. and and 952. laundries	1.1.1							
	Producers of government services	1.1.2								
	Producers of private non-profit services to households	1.1.3								
Imported	Import duties	1.3.4.1								
	C.i.f. value	Competitive Complementary	1.1.11							
Disposition of supply of commodities	Intermediate consumption, industries 2/	1.2.1								
	Intermediate consumption, producers of government services	1.2.2*								
	Intermediate consumption, producers of private non-profit services to households	1.2.3								
	Final consumption in the domestic market, households	2.2.4*								
	Increase in stocks	4.2.5								
	Gross fixed capital formation, industries	4.2.6i								
	Gross fixed capital formation, producers of government services	4.2.6ii								
	Gross fixed capital formation, producers of private non-profit services to households	4.2.6iii								
	Exports	1.2.11								

1/ Kind of activity as in the rows for the supply of commodities from industries.

2/ Includes the intermediate consumption of the nominal unit to which the imputed service charge of banks and similar financial institutions is assigned.

Table 12. Gross output and input of industries at constant prices

Gross output and input			Kind of activity of industries 1/							
			Flow	11	12	13	210		
Gross output of industries			Gross output (Basic values)	1.1.1						
			Commodity taxes, net	1.3.6						
Gross input of industries	Intermediate consumption ^{2/}	Characteristic products of specified kind of activity of industries (Basic values)	11. Agriculture and hunting							
			12. Forestry and logging							
			13. Fishing							
			210. Coal mining							
			.							
			311-312. Food manufacturing (More detailed list of Table 9 for ISIC major divisions 2 through 5)							
			61-62. Wholesale and retail trade	1.2.1						
			.							
			.							
			.							
			(Condensed list of Table 9 for major divisions 6 through 9 except 951-952 and excluding division 91)							
			951 and Repair services n.e.c. and 952. laundries							
			Commodity taxes, net	1.3.6						
			Domestic factor incomes	1.3.1+ 1.3.2						
			Consumption of fixed capital	1.3.3						
			Indirect taxes, net	1.3.4- 1.3.5						

1/ Kind of activity as in the rows for the intermediate consumption of characteristic products of specified kind of activity of industries.

2/ Includes the intermediate consumption of the nominal industry to which the imputed service charge of banks and financial institutions is assigned.

Table 13. Government final consumption expenditure at constant prices, by purpose

Purpose of outlays	Final consumption expenditure	Intermediate consumption
	Flow	2.2.20
(1)	(2)	(3)
1. General public services		
2. Defence		
3-7. Social, recreational and related community services of which:		
3. Education		
4. Health		
5. Social security and welfare services		
8. Economic services		
Total <u>1/</u>		

1/ In addition to the categories listed, the total includes the outlays in respect of category 9, "Other purposes", which cannot be allocated to any of the purpose categories listed above.

Table 14. Final consumption expenditure at constant prices of private non-profit bodies serving households, by purpose

Purpose of outlays	Final consumption expenditure	Intermediate consumption
	Flow	2.2.31
(1)	(2)	(3)
1. Research and scientific institutes		
2. Education		
3. Medical and other health services		
4. Welfare services		
5-8. Other purposes		
Total		

Table 15. Composition of final consumption expenditure of households at constant prices

a. By Type of Expenditure		
Item	Flow	
1.	2.2.4*	Commodities purchased
2.		Durable goods
3.		Semi-durable goods
4.		Non-durable goods
5.		Services
6.	2.2.4*	Other goods and services purchased
7.	2.2.4	Final consumption in the domestic market
8.	2.1.12.1	Direct purchases abroad by resident households
9.	-2.2.12.1	<u>Less</u> Purchases in the domestic market by non-resident households
10.	2.2.32	Final consumption expenditure (Items 7+8+9)

b. Final Consumption in the Domestic Market by Object		
Object		
Condensed list	More detailed list	
(1a)	(1b)	
1. Food, beverages and tobacco	1.1; 1.2; 1.3; 1.4	
2. Clothing and footwear	2.1; 2.2	
3. Gross rent, fuel and power	3.1; 3.2	
4. Furniture, furnishings and household equipment and operation	4.1; 4.2; 4.3; 4.4; 4.5 and 4.6	
5. Medical care and health expenses	5.1; 5.2; 5.3; 5.4 and 5.5	
6. Transport and communication	6.1; 6.2; 6.3; 6.4	
7. Recreation, entertainment, education and cultural services	7.1; 7.2; 7.3; 7.4	
8. Other goods and services	8.1; 8.2; 8.3; 8.4; 8.5 and 8.6	
Final consumption in the domestic market (Flow 2.2.4)		

Table 16. Composition of gross domestic capital formation at constant prices

a. By Type of Capital Goods		
1. Residential building 2+3. Non-residential building and other construction except land improvement 5. Transport equipment 6. Machinery and equipment 4+7. Land improvement and plantation and orchard development and breeding stock, draught animals, etc.		
Gross fixed capital formation (Flow 4.2.6)		
1. Goods producing industries 1.1 Materials and supplies 1.2 Work-in-progress 1.3 Livestock except breeding stock, dairy cattle and the like 1.4 Finished goods 2. Wholesale and retail trade 3. Other industries 4. Government services		
Increase in stocks (Flow 4.2.5)		
Gross capital formation (Flows 4.2.6+4.2.5)		
b. By Kind of Economic Activity		
Kind of economic activity		Gross fixed capital formation
Condensed list (ISIC divisions and major divisions)		Flow 4.2.6
(1a)		(2)
a. Industries		
1. Agriculture, hunting, forestry and fishing		11; 12; 13
2. Mining and quarrying		210; 220; 230; 290
3. Manufacturing		311-312; 313; 314
31. Food, beverages and tobacco		321; 322; 323; 324
32. Textiles, wearing apparel and leather industries		
33. Wood and wood products, including furniture		331; 332

Table 16 (*continued*). Composition of gross domestic capital formation at constant prices

b (Cont'd). By Kind of Economic Activity		
Kind of economic activity		Gross fixed capital formation
Condensed list (ISIC divisions and major divisions)	More detailed list (ISIC major groups and divisions)	Flow
(1a)	(1b)	(2)
34. Paper and paper products, printing and publishing	341; 342	4.2.6
35. Chemicals and chemical, petroleum, coal, rubber and plastic products	351; 352; 353; 354; 355; 356	
36. Non-metallic mineral products, except petroleum and coal	361; 362; 369	
37. Basic metal industries	371; 372	
38. Fabricated metal products, machinery and equipment	381; 382; 383; 384; 385	
39. Other manufacturing industries	390	
4. Electricity, gas and water		8
41. Electricity, gas and steam	410	91
42. Water works and supply	420	
5. Construction	500	92
6. Wholesale and retail trade and restaurants and hotels	61-62; 63	93
7. Transport, storage and communication		91
71. Transport and storage	711; 712; 713; 719	8
72. Communication	720	5
8. Finance, insurance, real estate and business services	81 and 82; 83	
9. Community, social and personal services	92; 93 and 94; 95	
Sub-total		

Table 16 (*continued*). Composition of gross domestic capital formation at constant prices

Kind of economic activity		Gross fixed capital formation Flow
Condensed list (ISIC divisions and major divisions)	More detailed list (ISIC major groups and divisions)	
(1a)	(1b)	(2)
b. Producers of Government Services		
1. Agriculture, hunting, forestry and fishing	1	
4. Electricity, gas and water	Perhaps 420. Water works and supply	
7. Transport, storage and communication	71. Transport only	
8-9. Services		
91. Public administration and defence	91	
92. Sanitary and similar services	92	
93- Social, recreational and related community services	93 and 94; perhaps 81. Financial institutions	
Sub-total		
c. Producers of Private Non-Profit Services to Households		
93- Social, recreational and related community services	93 and 94	
d. Total		

NOTES TO TABLES 8 THROUGH 16

Tables 9, 11 and 12

8.116. In constant-price tables 8, and 13 through 16, valuation is at purchasers' values only. While in table 9 valuation at producers' values is emphasized, provision is made for the use of approximate or true basic values or factor values. In tables 11 and 12, use is made of approximate basic values, strictly speaking, though the tables furnish the basis for computing data valued at each of the other modes of valuation.

8.117. Table 9 can most easily be compiled when value added is valued at producers' values. As is indicated in the mathematical annex to chapter IV, these constant-price data would be fully consistent with valuing the constant-price series which concern the disposition of goods and services at purchasers' values. However, the use of producers' values can affect the usefulness of the constant-price data for such purposes as analysing the relative productivity and use of real resources, when marked differences occur in the relative share of net indirect taxes in the value added of industries. Indirect taxes and subsidies of the commodity-tax type might largely account for these differences and might relate primarily to commodities which are disposed to the final uses. In these circumstances the use of true basic values, in addition to producers' values, in table 9 would not be too difficult and would result in data which are suitable for the aforementioned purposes and furnish a correct measure of the final product. If, however, commodity-type taxes and subsidies relating to commodities used as intermediate inputs are important, additional valuation in table 9 at true basic values is burdensome. As is shown in the mathematical annex to chapter IV, it involves use and inversion of input-output matrices such as are portrayed in tables 11 and 12 in order to trace basic values through the chain of indirect and direct intermediate inputs into industries. The use, in these cases, of approximate basic values in table 9 is much simpler. However, in addition to rectifying only part of the deficiencies of producers' values mentioned above, the approximate basic values can result in a distorted measure of the real gross domestic product. Ideally, in addition to producers' values, true or approximate factor values may be wanted in table 9 for such purposes as measuring the joint productivity of labour and capital and the use of real resources. However, constant-price data at true or approximate factor values are even more difficult and burdensome to compile than constant-price series at true or approximate basic values. Besides the problems of compilation raised by valuation at basic values, these modes of valuation involve the factoring into quantity and price components of indirect taxes and subsidies which often are not proportional to the quantity or value of commodities produced.

8.118. In tables 11 and 12, the sources of expenditure on commodities as well as the gross output of commodities are valued at approximate basic values and value added, net of consumption of fixed capital, is valued at approximate factor values. The difficulties which countries will encounter in compiling these tables are probably increased by the cross-classifications of the gross output and intermediate consumption of commodities according to category of commodities and kind of activity of industries. Nonetheless, efforts should be made to compile tables 11 and 12 annually since they furnish a valuable framework for applying the techniques of double deflation and commodity flows to estimating the data of the other constant-price tables. If it is not feasible to compile tables 11 and 12 each year, they should be compiled once every three to five years, and abbreviated versions of the tables should be compiled annually. Table 2a in the notes to tables 1 through 8 should be used as the simplified version of table 11. Table 12 might be simplified by (i) valuing intermediate consumption at purchasers' values, (ii) valuing gross output and value added at producers' values and not segre-

gating consumption of fixed capital and (iii) reducing the detail in the classifications of industries.

Data on employment

8.119. So as to furnish figures which may be used in conjunction with the data of the system on the output of goods and services (e.g., in measures of labour productivity), table 10 calls for data on the employment of all persons engaged in the domestic production of a country, whether or not they are resident in the country. The data in respect of number of persons engaged should therefore cover the working proprietors and unpaid family workers of unincorporated units and homeworkers, as well as employees.

8.120. For the same purpose, the data on the average number of persons engaged and employees during a period of account should be derived from figures of employment during at least each month of the period. In the case of the employees in all, or at least certain, kinds of economic activities (e.g., the mining, manufacturing, construction and transport industries), it should be feasible to compile more exact data of the amount of time spent at work. The column "Man-hours worked by employees" is provided for recording these data.

8.121. The value of the suggested data on employment as a measure of the labour used would be enhanced if the series were weighted by a measure of the relative quality of the various categories of persons engaged. The weights might be proportioned to the average employee compensation, or wages and salaries paid to each category during a given base year.

Supplementary data to tables 13 through 15

8.122. As in the case of the comparable current-price tables, tables 4 through 6, it will be desirable to furnish supplementary data to tables 13 through 15 in respect of the outlays on food, beverages and tobacco, clothing, medicines and pharmaceuticals and shelter which are included in expenditure classified to other categories of the object classification of household goods and services and the purpose classifications of government and private non-profit bodies serving households. A full discussion of these supplementary series is given in paragraph 8.111 of the notes on the current-price tables.

8.123. It will also be advantageous to furnish supplementary figures to table 13 in respect of the durable goods included in intermediate consumption for defence and to table 14 in respect of the non-durable, semi-durable and durable goods included in the intermediate consumption of the private non-profit bodies. The details of this question are discussed in paragraph 8.113 of the notes on the corresponding current price tables.

Combination of tables 14 and 15

8.124. As in the case of the current-price tables to which they correspond, some countries may find it necessary to combine table 14 with table 15. In these circumstances, the same procedure should be followed as where tables 5 and 6 are combined. These procedures are described in paragraph 8.114 of the notes on the current-price tables.

Supplementary classifications in table 16

8.125. As in the case of table 7, it may be desirable to sub-divide the constant-price data on gross fixed capital formation classified according to kind of economic activity of the owner of the assets into four columns: Construction projects (Categories 1 through 4.1 of the classification of fixed assets by type), Transport equipment (Category 5), Machinery and other equipment (Category 6), and Plantation development and breeding stock, etc. (Categories 4.2 and 7).

SUPPORTING AND SUPPLEMENTARY TABLES TO III. INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

Table 17. Domestic factor incomes according to kind of economic activity and institutional sector of origin

a. Corporate, Quasi-Corporate and Private Unincorporated Enterprises						
Kind of economic activity (ISIC divisions and major divisions)	Non-financial corporate and quasi-corporate enterprises and financial institutions				Households including private non-financial unincorporated enterprises	
	Private		Public		Compensation of employees	Operating surplus
	Compensation of employees	Operating surplus	Compensation of employees	Operating surplus		
Flow	3.3.1	3.3.2	3.3.1	3.3.2	3.3.1	3.3.2
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Agriculture, hunting, forestry and fishing 11. Agriculture and hunting 12. Forestry and logging 13. Fishing 2. Mining and quarrying 3. Manufacturing 31. Food, beverages and tobacco 32. Textiles, wearing apparel and leather industries 33. Wood and wood products, including furniture 34. Paper and paper products, printing and publishing 35. Chemicals and chemical, petroleum, coal, rubber and plastic products 36. Non-metallic mineral products, except petroleum and coal 37. Basic metal industries 38. Fabricated metal products, machinery and equipment 39. Other manufacturing 4. Electricity, gas and water 5. Construction 6. Wholesale and retail trade and restaurants and hotels 7. Transport, storage and communication 71. Transport and storage 72. Communication 8. Finance, insurance, real estate and business services 81. Financial institutions 82. Insurance 83. Real estate and business services 9. Community, social and personal services						
b. All Institutional Sectors of Origin						
Institutional sector of origin	Compensation of employees			Operating surplus		
Flow	3.3.1			3.3.2		
Non-financial corporate and quasi-corporate enterprises Private Public Financial institutions Private Public Households including private non-financial unincorporated enterprises General government Private non-profit institutions serving households						
Total						

Table 18. National and disposable income

a. National Income		
Item	Flow	
1	3.3.1	Compensation of employees
2	3.3.2	Operating surplus
3	3.3.1+3.3.2	Domestic factor income
4	3.4.2	Compensation of employees from the rest of the world, net
5	3.4.10	Property and entrepreneurial income from the rest of the world, net
6	3.3.4-3.3.5	Indirect taxes <u>less</u> subsidies
7	3.4.0	National income at market prices

b. Distribution of National and Disposable Income		
Item	Flow	Type of transaction
1	3.4.1	Compensation of employees
2		Civilian labour force
3		i. Wages and salaries
4		ii. Employers' contribution to social security schemes
5		iii. Employers' contribution to private pension, family allowance, insurance and similar schemes
6		Members of armed forces
7		i. Wages and salaries
8		ii. Employers' contribution to social security, private pension, family allowance, insurance and similar schemes
9	3.4.10	Property and entrepreneurial incomes receivable, net
10		Non-financial corporate and quasi-corporate enterprises and financial institutions
11		Private
12		Public
13		General government
14		Private non-profit institutions serving households
15		Households
16	3.4.3+3.4.5	Entrepreneurial income
17	3.4.7-3.4.6	Property income, net
18	3.3.4-3.3.5	Indirect taxes <u>less</u> subsidies
19	3.4.0	National income at market prices (1+9+18)
20	3.6.13	Other current transfers received, net
21		Non-financial corporate and quasi-corporate enterprises and financial institutions
22		Private
23		Public
24		General government
25		Private non-profit institutions serving households
26		Households
27	3.6.0	Disposable income
28		Non-financial corporate and quasi-corporate enterprises and financial institutions
29		Private
30		Public
31		General government
32		Private non-profit institutions serving households
33		Households

Table 19. Capital transactions of the private and public institutions

Type of transaction			Private institutions	Public institutions
Item	Flow	(1)	(2)	(3)
1	5.7.1	Saving		
2	5.3.3	Consumption of fixed capital		
3	5.7.6	Capital transfers received, net		
4		Finance of gross accumulation		
5	5.2.5	Increase in stocks		
6	5.2.6	Gross fixed capital formation		
7	5.7.4	Purchases of land, net		
8	5.7.5	Purchases of intangible assets n.e.c., net		
9	5.7.8 or 5.7.9	Net lending 4-(5 through 8) or 10-26		
10	5.8.0	Net acquisition of financial assets		
11	5.8.1	Gold		
12	5.8.2	Currency and transferable deposits Of which by:		
13		i. Monetary institutions		
14		ii. Central government		
15		iii. Other sectors		
16	5.8.3	Other deposits		
17	5.8.4	Bills and bonds, short-term		
18	5.8.5	Bonds, long-term		
19	5.8.6	Corporate equity securities, including capital participations		
20	5.8.7	Short-term loans n.e.c.		
21	5.8.8	Long-term loans n.e.c.		
22	5.8.9	Net equity of households on life insurance reserves and on pension funds		
23	5.8.10	Proprietors' net additions to the accumulation of non-resident quasi- corporate enterprises 1/		
24	5.8.11	Trade credit and advances		
25	5.8.12+5.8.13	Other financial assets		
26	5.9.0	Net incurrence of liabilities		
27	5.9.2	Currency and transferable deposits		
28	5.9.3	Other deposits		
29	5.9.4	Bills and bonds, short-term		
30	5.9.5	Bonds, long-term		
31	5.9.6	Corporate equity securities, including capital participations		
32	5.9.7	Short-term loans n.e.c.		
33	5.9.8	Of which incurred by monetary institutions		
34	5.9.9	Long-term loans n.e.c.		
35	5.9.10	Net equity of households on life insurance reserves and on pension funds		
36	5.9.11	Non-resident proprietors' net additions to accumulation of resident quasi- corporate enterprises 1/		
37	5.9.12+5.9.13	Trade credits and advances		
38		Other liabilities		

1/ This type of transactions between resident quasi-corporate enterprises and the resident proprietors are eliminated as a result of the use of consolidation in these instances.

Table 20. Income and outlay and capital transactions of non-financial corporate and quasi-corporate enterprises, by kind of economic activity

Item	Flow	Type of transaction	Categories of kind of economic activity in Table 17 omitting ISIC divisions 81 and 82 and the divisions of ISIC major division 1
		(1)	
1	3.3.2	Operating surplus	
2	3.4.7+3.4.5	Property income and withdrawals from entrepreneurial income of quasi-corporate enterprises	
3	3.5.2	Casualty insurance claims	
4	3.6.7	Unfunded employee welfare contributions imputed	
5		Current receipts	
6	3.4.4	Withdrawals from entrepreneurial income of quasi-corporate enterprises	
7	3.4.6	Property income	
8	3.5.1	Net casualty insurance premiums	
9	3.6.1	Direct taxes	
10	3.6.2	Fines and penalties	
11	3.6.8	Unfunded employee welfare benefits	
12	3.6.13	Current transfers n.e.c., net	
13	3.7.1 or 5.7.1	Saving 5-(6 through 12)	
14	5.3.3	Consumption of fixed capital	
15	5.7.6	Capital transfers received, net	
16		Finance of gross accumulation (13+14+15)	
17	5.2.5	Increase in stocks	
18	5.2.6	Gross fixed capital formation	
19	5.7.4	Purchases of land, net	
20	5.7.5	Purchases of intangible assets n.e.c., net	
21	5.7.8 or 5.7.9	Net lending 16-(17 through 20) or 22-33	
22	5.8.0	Net acquisition of financial assets	
23	5.8.1	Gold	
24	5.8.2	Currency and transferable deposits	
25	5.8.3	Other deposits	
26	5.8.4	Bills and bonds, short-term	
27	5.8.5	Bonds, long-term	
28	5.8.6	Corporate equity securities, including capital participations	
29	5.8.7+5.8.8	Loans n.e.c.	
30	5.8.10	Proprietors' net additions to the accumulation of quasi-corporate enterprises	
31	5.8.11	Trade credit and advances	
32	5.8.12+5.8.13	Other financial assets	
33	5.9.0	Net incurrence of liabilities	
34	5.9.4	Bills and bonds, short-term	
35	5.9.5	Bonds, long-term	
36	5.9.6	Corporate equity securities, including capital participations	
37	5.9.7	Short-term loans n.e.c.	
38	5.9.8	Long-term loans n.e.c.	
39	5.9.10	Proprietors' net additions to the accumulation of quasi-corporate enterprises	
40	5.9.11	Trade credit and advances	
41	5.9.12+5.9.13	Other liabilities	

Table 21. Income and outlay and capital transactions of the sub-sectors of general government

Type of transaction			Central govern- ment	State and local govern- ment	Social security funds
Item	Flow	(1)	(2)	(3)	(4)
1	3.3.2	Operating surplus			
2	3.4.5	Withdrawals from entrepreneurial income of quasi-corporate government enterprises			
3	3.4.7	Property income			
4	3.5.2	Casualty insurance claims			
5	3.3.4	Indirect taxes			
6	3.6.1	Direct taxes			
7	3.6.2	Compulsory fees, fines and penalties			
8	3.6.3	Social security contributions			
9	3.6.7	Unfunded employee welfare contributions imputed			
10	3.6.10.1	Current transfers from other sub-sectors of general government			
11	3.6.10.2	Current transfers n.e.c. from the rest of the world			
12		Current receipts			
13	3.2.20	Final consumption expenditure			
14	3.4.6	Property income			
15	3.5.1	Net casualty insurance premiums			
16	3.3.5	Subsidies			
17	3.6.4	Social security benefits			
18	3.6.5	Social assistance grants			
19	3.6.8	Unfunded employee welfare benefits			
20	3.6.9.1	Current transfers to other sub-sectors of general government			
21	3.6.9.2	Current transfers n.e.c. to the rest of the world			
22		Current disbursements			
23	3.7.1 or 5.7.1	Saving (12-22)			
24	5.3.3	Consumption of fixed capital			
25	5.7.6*	Capital transfers received from other sectors, net			
26	5.7.6*	Capital transfers received from other sub-sectors of general government, net			
27	5.7.6*	Capital transfers received from the rest of the world, net			
28		Finance of gross accumulation			

Table 21 (*continued*). Income and outlay and capital transactions of the sub-sectors of general government

Type of transaction			Central govern- ment	State and local govern- ment	Social security funds
Item	Flow	(1)	(2)	(3)	(4)
29	5.2.5+5.2.6	Gross capital formation			
30	5.7.4	Purchases of land, net			
31	5.7.5	Purchases of intangible assets n.e.c., net			
32	5.7.8 or 5.7.9	Net lending 28-(29 through 31) or 33-44			
33	5.8.0	Net acquisition of financial assets			
34	5.8.1	Gold			
35	5.8.2	Currency and transferable deposits			
36	5.8.3	Other deposits			
37	5.8.4	Bills and bonds, short-term			
38	5.8.5	Bonds, long-term			
39	5.8.6	Corporate equity securities, in- cluding capital participation			
40	5.8.7	Short-term loans n.e.c.			
41	5.8.8	Long-term loans n.e.c.			
42	5.8.10	Proprietors' net addition to the accumulation of quasi-corporate government enterprises			
43	5.8.11, 12 and 13	Other financial assets			
44	5.9.0	Net incurrence of liabilities			
45	5.9.2	Currency issued by the Treasury and transferable deposits			
46	5.9.3	Other deposits			
47	5.9.4	Bills and bonds, short-term			
48	5.9.5	Bonds, long-term			
49	5.9.7	Short-term loans n.e.c.			
50	5.9.8	Long-term loans n.e.c.			
51	5.9.11, 12 and 13	Other liabilities			

Table 22. Selected outlays of general government by purpose

(Consolidated)

Purpose of outlay		Final consumption expenditure	Subsidies	Social security benefits, social assistance grants and unfunded employee welfare benefits	Other current unrequited transfers	Gross capital formation	Capital transfers	Net loans made and bills, bonds and corporate equity securities acquired and net additions to the accumulation of quasi-corporate government enterprises	
Condensed list	More detailed list	Flow	3.2.20	3.3.5	3.6.4+ 3.6.5+ 3.6.8	3.6.6+ 3.6.9	5.2.5+ 5.2.6	5.8.4 through 5.8.8 and 5.8.10	
(1a)	(1b)		(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. General public services	1.1; 1.2; 1.3; 1.4 ^{1/}								
2. Defence	2								
3. Education	3.1 ^{2/} ; 3.2 and 3.3 ^{3/}								
4. Health	4.1 ^{2/} ; 4.2 ^{2/} ; 4.3 ^{2/}								
5. Social security and welfare services	5.1 ^{2/} ; 5.2 ^{2/}								
6. Housing and community amenities	6.1; 6.2; 6.3								
7. Other community and social services	7								
8. Economic services	8.1; 8.2; 8.3; 8.4; 8.5; 8.6; 8.7; 8.8								
9. Other purposes ^{2/}	9								
Total									

^{1/} Outlays on research and scientific endeavors may be included in categories of the purpose classification in addition to 1.4. Data in respect of the total of a given type of outlays for this purpose should be given as memoranda items.

^{2/} Includes expenditure in connection with public debt, disasters and other calamities, consumption of fixed capital, etc. which cannot be allocated to any of the purpose categories listed above.

^{3/} At least these categories of the more detailed list should be shown separately where feasible.

**Table 23. Income and outlay and capital transactions of sub-sectors of households,
including private non-financial unincorporated enterprises**

Item	Flow	(1)	(2)	Households headed by:			
				All house- holds	Proprietors of unincor- porated enterprises ex- cept owners of owner- occupied dwellings only	Employees	
					Agricul- tural		
Item	Flow	(1)	(2)	(3)	(4)	(5)	(6)
1	3.4.1	Compensation of employees					
2		i. Wages and salaries					
3		ii. Employers' contributions to social security schemes					
4		iii. Employers' contributions to private pension, family allowance, insurance and similar schemes					
5	3.4.3	Entrepreneurial income of the unincorporated enterprises					
6		i. Owner-occupied dwellings					
7		ii. Other					
8	3.4.5	Withdrawals from entrepreneurial income of quasi-corporate enterprises					
9	3.4.7	Property income					
10		1. Interest					
11		2. Dividends					
12		3. Rent					
13	3.5.2	Casualty insurance claims					
14	3.6.4	Social security benefits					
15	3.6.5	Social assistance grants					
16	3.6.8	Unfunded employee welfare benefits					
17	3.6.12.1	Current transfers n.e.c. from residents					
18	3.6.12.2	Current transfers n.e.c. from the rest of the world					
19		Current receipts					
20	3.2.32	Final consumption expenditure					
21	3.4.6.1	Consumer debt interest					
22	3.5.1	Net casualty insurance premiums					
23	3.6.1.1	Direct taxes on income					
24	3.6.1.2	Direct taxes n.e.c.					
25	3.6.2	Compulsory fees, fines and penalties					
26	3.6.3	Social security contributions					
27	3.6.6	Current transfers to private non-profit institutions					
28	3.6.7	Unfunded employee welfare contributions imputed					
29	3.6.11.1	Current transfers n.e.c. to residents					
30	3.6.11.2	Current transfers n.e.c., to the rest of the world					
31		Current disbursements					
32	3.7.1 or 5.7.1	Saving (19-31)					
33	5.3.3	Consumption of fixed capital					
34	5.7.6	Capital transfers received, net					
35		Finance of gross accumulation (32+33+34)					
36	5.2.5	Increase in stocks					
37	5.2.6	Gross fixed capital formation					
38	5.7.4	Purchases of land, net					
39	5.7.5	Purchases of intangible assets n.e.c., net					
40	5.7.8 or 5.7.9	Net lending 35-(36 through 39) or 41-42					
41		Net acquisition of financial assets					
42		Net incurrence of liabilities					

Table 24. Financial transactions of the detailed sub-sectors

Table 24 (continued). Financial transactions of the detailed sub-sectors

Financial assets of:															Type of claim and debtor and creditor ^{3/}	Liabilities of	
The rest of the world	Households headed by:			Private non-profit institutions serving households	General government			Financial institutions					Non-financial corporate and quasi-corporate enterprises		Total	Column 1 through 18 in respect of financial assets	
	Persons in other status	Employees	Proprietors of unincorporated enterprises except owners of owner-occupied dwellings only		Social security funds	State and local government	Central government	Other financial institutions	Insurance cooperatives and pension funds	Other monetary institutions	Central bank	2/	3/	2/	3/		
(1B)	(17)	(16)	(15)	(14)	(13)	(12)	(11)	(10)	(9)	(8)	(7)	(6)	(5)	(4)	(3)	(2)	(1) Item
b. Foreign Financial Assets and Liabilities ^{4/}																	
															1 Gold		
															2-4 Currency, deposits and short-term bills and bonds		
															i International reserves or offsets		
															ii Other claims		
															5-13 Other financial assets or liabilities		
															i International reserves or offsets		
															ii Other claims		

1/ Privately owned and/or controlled.

2/ Publicly owned and/or controlled.

3/ The sub-division of the categories of claims according to sector of debtor relates to transactions in respect of all types of financial assets. The sub-division of the categories of claims according to sector of creditor relates to transactions in currency and transferable deposits, other deposits and short-term and long-term loans only.

4/ The definitions of international reserves and of offsets to these reserves are those of the International Monetary Fund and the collection internationally of these data is the responsibility of the Fund.

Table 25. Financial transactions of the monetary system
(Consolidated)

Item	Flow	Type of claim and debtor or creditor
1	5.7.9	Net lending (4-41)
2		i. To the rest of the world (5-42)
3		ii. To other resident sectors (16-50)
4	5.8.0	Net acquisition of financial assets
5		In respect of the rest of the world
6	5.8.1	Gold
7		Other international reserves
8	5.8.2*	i. Convertible currencies, transferable and other deposits
9	and 3*	ii. Reserve position in IMF
10	5.8.3*, 7* and 8*	iii. Foreign central government bills and bonds, short-term
11	5.8.4*	iv. Other types of financial assets ^{2/}
12	5.8.4*	Other bills and bonds, short-term
13	5.8.5*	Bonds, long-term
14	5.8.7* and 8*	Loans n.e.c.
15	5.8.6*, 10* 11*, 12* and 13*	Other foreign financial assets
16		In respect of residents
17	5.8.4*	Bills and bonds, short-term
18		i. Non-financial corporations
19		ii. Financial institutions
20		iii. Central government
21		iv. State and local government
22	5.8.5*	Bonds, long-term
23		i. Non-financial corporations
24		ii. Financial institutions
25		iii. Central government
26		iv. State and local government
27	5.8.6*	Corporate equity securities, including capital participations
28	5.8.7*	Short-term loans n.e.c.
29		i. Non-financial corporate and quasi-corporate enterprises
30		ii. Financial institutions
31		iii. Central government
32		iv. State and local government
33		v. Other resident sectors
34	5.8.8*	Long-term loans n.e.c.
35		i. Non-financial corporate and quasi-corporate enterprises
36		ii. Financial institutions
37		iii. Central government
38		iv. State and local government
39		v. Other

Table 25 (continued). Financial transactions of the monetary system¹
 (Consolidated)

Item		Type of claim and debtor or creditor	
40	5.8.11* 12* and 13*	Other financial assets, including counterpart of currency issued by Treasury in Items 43 and 51 below	
41	5.9.0	Net incurrence of liabilities	
42		To the rest of the world	
43	5.9.2* and 3*	Currency, transferable and other deposits	
44		Other offsets to international reserves ^{2/}	
45	5.9.4*	Other bills and bonds, short-term	
46	5.9.5*	Bonds, long-term	
47	5.9.6*	Corporate equity securities, including capital participations	
48	5.9.7* and 8*	Loans n.e.c.	
49	5.9.10*, 11*, 12* and 13*	Other liabilities to non-residents	
50		To residents	
51	5.9.2*	Currency and transferable deposits held by: i. Central government ii. Other	
52		Other deposits	
53		Counterpart of Central governments' gold and international reserve holdings in Items 6 and 7 above	
54	5.9.3*	Bills and bonds	
55		Corporate equity securities, including capital participations	
56	5.9.4* and 5*	Loans n.e.c.	
57	5.9.6*	Other liabilities to residents	
58	5.9.7* and 8*		
59	5.9.10*, 11*, 12* and 13*		

^{1/} Includes the Central bank, other monetary institutions, and the monetary functions of the Treasury.

^{2/} The definitions of international reserves and offsets to these reserves are those of the International Monetary Fund and the collection internationally of these data is the responsibility of the Fund. The other types of foreign financial assets included in the international reserves are other claims on the rest of the world which are held by the Central bank and as part of the monetary functions of the Treasury and which are considered to be part of the international reserves. The offsets to international reserves in addition to currency and deposits may include loans from the Fund, issued of certain bonds and certain loans received from foreign Central banks or governments.

NOTES TO TABLES 17 THROUGH 25

The classification of financial assets and liabilities

8.126 In tables 19 through 21 and in table 24, financial assets and liabilities are classified as in the scheme defined in table 7.2. The detail in which this classification is shown has been adapted to the character and purposes of the table in which it appears. The detailed categories of the classification are used in part a of table 24; and the main categories of the classification, a few of which are combined, are used in tables 19 through 21. The category "Currency and transferable deposits" is however sub-divided in table 19 so that the holdings of these financial assets by monetary institutions and the central government may be omitted in calculating the money supply.

8.127 The classification of the financial assets and liabilities in part b of table 24 and in table 25 differs in some respects from the scheme in table 7.2. This is because part b of table 24 and table 25 concern transactions in financial assets and liabilities which make up the international reserves of a country or offsets to these reserves. The design of table 25 so that it will provide the most useful data for purposes of dealing with monetary and balance-of-payments questions has also resulted in the departures from the classification scheme of table 7.2.

8.128 In both tables, financial assets and liabilities are classified first into foreign and domestic claims and second into type of claim. At the second level of classification, it is not possible to follow the scheme of table 7.2 in the case of foreign claims because the same type of claim (instrument) may be, or may not be, part of the international reserves of a country, or offsets to these reserves. For example, convertible, but not nonconvertible, foreign currencies, most holdings of transferable deposits in non-resident banks, but not the working balances of the treasury or "payment agreement balances" of the central bank, and short-term bills and bonds of foreign central governments or central banks, but not other instruments of this type, are classed as international reserves. Or, certain types of foreign long-term central government bonds held by the treasury or central bank and specific loans granted by the treasury or the central bank may be part of the international reserves. The same situation holds in respect of offsets to the international reserves. The definitions of international reserves, and offsets to international reserves, to be used in part b, table 24 and in table 25 are established by the International Monetary Fund. The Fund is responsible for the collection internationally of these data.

Basis of recording transactions

8.129 Unless it is indicated otherwise, transactions between transactor units of the same sector, or sub-sector, should be recorded in the case of each of the items of the tables relating to income and outlay and capital transactions. It should be noted that in table 21, the central government, each of the state and local governments, and each social security fund are to be dealt with as single transactor units. While transactions in most items are to be consolidated in the case of table 25, transactions in bills and short-term bonds, long-term bonds and corporate equity securities which are the liabilities of transactors included in the monetary system and the financial assets of other transactors in the monetary system should not be netted, one against the other.

Table 17

8.130 Countries may find it useful to elaborate table 17 in order to show the interaction between the industrial classification of industries and the industrial classification of enterprises. For this purpose, each of the columns of part a of table 17 in respect of private and public quasi-corporate enterprises and the private non-financial unincorporated enter-

prises of the household sector might be sub-divided into columns in respect of the kind of activity (perhaps at about the same level of detail of classification as for enterprises in table 17) of the industries which make up these enterprises. Such a table would consist of data in respect of compensation of employees and operating surplus cross-classified according to the kind of activity of industries and the kind of activity and institutional sector of the parent enterprises. Or, in order to reduce the size of the table considerably, domestic factor incomes only might be exhibited cross-classified in this fashion.

Table 20

8.131 As is indicated in paragraph 8.101 of the notes to Accounts III, it would be desirable, if feasible, to exhibit the following supplementary data to table 20, in respect of non-financial corporate and quasi-corporate enterprises classified according to kind of economic activity.

- i. Direct taxes on income. Figures of these taxes recorded as of the time the income on which the taxes are levied, are earned.
- ii. Saving. Sub-division of saving into the saving of enterprises which are foreign-owned branches and subsidiaries and the saving of other enterprises.
- iii. Consumption of fixed capital and increase in stocks. Figures of the value of the consumption of fixed capital and the increase in stocks as recorded in the books of the enterprises.

Supplementary entry in tables 20 and 21

8.132 As is pointed out in paragraph 8.99 of the notes on Accounts III, while an effort has been made to list entries in these tables in respect of probable transactions, it may be necessary to add an entry in respect of the liability "Net equity of households on pension funds" where non-financial corporate or quasi-corporate enterprises or government organs have established pension reserves for their employees which do not satisfy the criteria for inclusion in the sub-sector "Insurance companies and pension funds".

Table 23

8.133 In classifying households by socio-economic status, heads of households, the only business of which is the ownership of owner-occupied dwellings, are not to be classed as "Proprietors of unincorporated enterprises". Households, the heads of which own other kinds of unincorporated businesses, whether quasi-corporate or not, are to be included in this socio-economic category and are to be classified into agricultural and non-agricultural, based on the main kind of activities of the enterprises owned. The entrepreneurial income from owner-occupied dwellings is to be distinguished from the entrepreneurial income from the other types of unincorporated enterprises on a functional basis. It may be desirable to replace the column "Persons in other status" by two columns: "Inactive persons living in private households" and "Institutional population".

8.134 In the case of a number of countries, the basic statistics in respect of households which are required in order to compile table 23 may not be available for some time to come. Under these circumstances, the table should be compiled in respect of all households only; and item 5 of the table "Entrepreneurial income of the unincorporated enterprises" should be subdivided into "i. Owner-occupied dwellings, ii. Agricultural enterprises, iii. Non-agricultural enterprises".

8.135 Where it is not possible to compile separate income and outlay and capital finance accounts for households and private non-profit institutions serving them, it will be necessary to combine, or even consolidate, their transactions in table 23.

SUPPORTING TABLE TO ALL ACCOUNTS

Table 26. External transactions

Item	Flow	Type of transation	
1	6.2.11.1	Exports of merchandise, f.o.b.	
2	6.2.11.2	Transport and communication	
3		i. In respect of merchandise imports	
4		ii. Other	
5	6.2.11.3	Insurance service charges	
6		i. In respect of merchandise imports	
7		ii. Other	
8	6.2.11.4	Direct purchases in the domestic market, extra-territorial bodies	
9	6.2.11.9	Miscellaneous commodities	
10	6.2.11.10	Adjustment of merchandise exports to change-of-ownership basis	
11	6.2.12.1	Direct purchases in the domestic market, non-resident households	
12	6.2.10	Exports of goods and services	
13	6.4.1	Compensation of employees	
14	6.4.9	Property and entrepreneurial income ^{1/}	
15	6.6.22	Other current transfers from the rest of the world: i. To general government	
16		ii. To other resident sectors	
17			
18		Current receipts	
19	6.1.11.1	Imports of merchandise,c.i.f.	
20	6.1.11.1i	Imports, f.o.b.	
21	6.1.11.1ii	Transport services on merchandise imports by non-residents	
22	6.1.11.1iii	Transport services on merchandise imports by resident industries	
23	6.1.11.2	Other transport and communication services by non-residents	
24	6.1.11.1iv	Insurance service charges on merchandise imports, services by non-residents	
25	6.1.11.1v	Insurance service charges on merchandise imports, services by resident industries	
26	6.1.11.3	Other insurance service charges, services by non-residents	
27	6.1.11.4	Direct purchases abroad on capital account, government services	
28	6.1.11.9	Miscellaneous commodities	
29	6.1.11.10	Adjustment of merchandise imports to change-of-ownership basis	
30	6.1.12.1	Direct purchases abroad, resident households	
31	6.1.12.2	Direct purchases abroad on current account, government services	
32	6.1.10	Imports of goods and services	

Table 26 (continued). External transactions

Item	Flow	Type of Transaction	
33 34 35 36 37	6.3.1 6.4.8 6.6.21	Compensation of employees Property and entrepreneurial income ^{1/} Other current transfers to rest of the world i. By general government ii. By other resident sectors	
38		Current disbursements	
39	6.7.3 or 6.7.2	Surplus on current transactions (18-38)	
40 41 42 43	6.7.6 6.7.5	Capital transfers from the rest of the world, net i. To general government ii. To other resident sectors <u>Less</u> Purchases of intangible assets, n.e.c. from the rest of the world, net	
44	6.7.8 or 6.7.9	Net lending 39+40+43 or 45-63	
45		Net acquisitions of foreign financial assets	
46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62	6.8.1 6.8.2 6.8.3 6.8.4 6.8.5 6.8.6 6.8.7 6.8.8 6.8.10 6.8.11 6.8.9,12 and 13	Gold Currency and transferable deposits Other deposits Bills and bonds, short-term Bonds, long-term Corporate equity securities, including capital participations ^{1/} i. Subsidiaries abroad ii. Other incorporated units abroad Short-term loans n.e.c. i. Subsidiaries abroad ii. Other non-resident units Long-term loans n.e.c. i. Subsidiaries abroad ii. Other non-resident units Proprietors' net additions to accumulation ^{1/} of quasi-corporate non-resident enterprises Trade credit and advances Other financial assets in respect of non- residents	
63		Net incurrence of foreign liabilities	

Table 26 (*continued*). External transactions

Item	Flow	Type of Transaction	
64	6.9.2	Currency and transferable deposits	
65	6.9.3	Other deposits	
66	6.9.4	Bills and bonds, short-term	
67	6.9.5	Bonds, long-term	
68	6.9.6	Corporate equity securities, including capital participations	
69		i. Subsidiaries of non-residents ^{1/}	
70		ii. Other resident incorporated units	
71	6.9.7	Short-term loans n.e.c.	
72		i. Subsidiaries of non-residents	
73		ii. Other resident units	
74	6.9.8	Long-term loans n.e.c.	
75		i. Subsidiaries of non-residents	
76		ii. Other resident units	
77	6.9.10	Non-resident proprietors' net additions to accumulation of resident quasi-corporate enterprises ^{1/}	
78	6.9.11	Trade credits and advances	
79	6.9.9, 12 and 13	Other liabilities to non-residents	

^{1/} Data should also be furnished in memoranda to the table on the saving (retained income) of subsidiaries and branches of residents which are located abroad and of the resident subsidiaries and branches of non-residents.

Chapter IX

ADAPTATION OF THE FULL SYSTEM TO THE DEVELOPING COUNTRIES

Purpose and content of the chapter

9.1. The full system of national accounts described in the preceding chapters of this report should furnish suitable goals for methodically evolving the national accounts, and series of basic statistics, of a country, irrespective of her stage of economic and social development. However, it will take a number of the developing countries many years to build the body of statistics required to compile the standard accounts and tables of the system, all of which are needed for purposes of evaluating, planning and furthering economic growth and social improvement. More detailed international guidance than is given in chapter VIII concerning the sequence in which the system of national accounts might be worked out, should therefore be of assistance to these countries. Modifications in selected series of data in the full system of national accounts, in the light of the lack of reliable basic statistics, may also facilitate the compilation of urgently needed national accounting data. Furthermore, until their economic and social development reaches a relatively advanced stage, a number of developing countries may find certain supplementary classifications, accounts or tables to the full system of value in planning, evaluating and promoting growth.

9.2. This chapter is intended to suggest a number of ways in which developing countries might find it useful to adapt the full system of national accounts described in the earlier chapters, in the light of their own needs and circumstances. Unlike the recommendations of the preceding chapters, the modified and supplementary classifications, accounts and tables discussed in this chapter are not intended as international guidelines for the national accounting of the developing countries. Instead, these suggestions are designed to indicate the lines along which certain classifications, accounts or tables might be devised if it is considered to be advantageous to adapt the aspect in question of the recommended full system of national accounting. Moreover, some of the proposals made in this chapter are, to some extent, experimental; and this report does not furnish the full conceptual underpinning of some of the suggested supplementary accounts. Nonetheless, the simplifications in, and additions to, the classifications and tabulations of the full system suggested in this chapter arise from the characteristics and circumstances of many developing countries. While the special classifications, accounts and tables discussed in this chapter will not in general be the subject of the recurrent international reporting of national accounting data by the developing countries, some of them may

be dealt with in special international studies. The recommendations of this chapter in respect of the order of priority in which developing countries might work on the standard accounts and tables of the full system are also not intended as the international standards. These suggestions are designed to be of general assistance to the countries in deciding on the sequence in which they will expand their work on national accounts, and basic statistics, in the light of their own requirements and circumstances.

9.3. The first topic discussed in this chapter is the aspects of the special situation and certain policies of a number of developing countries which give rise to the simplified and supplementary classifications, accounts and tables suggested in this chapter. Next, these classifications and tabulations are described in relation to these circumstances of the developing countries and the structure recommended for the full system of national accounts. Annex 9.1 of this chapter gives the suggested simplified and supplementary accounts and tables. Dealt with last is the order of priorities suggested for starting work on the various accounts and tables of the system of national accounting. The order of priorities is listed in annex 9.2; and is discussed in the text in the light of the needs for, and the difficulties of compilation of, the various series of national accounting data.

Some special circumstances of the developing countries

9.4. The developing countries differ in such circumstances as the stage of economic development reached, endowment in respect of natural and human resources, and economic and social institutions and attitudes. The countries therefore have differing avenues of, and obstacles to, economic and social development; and they employ various institutional arrangements, economic and social policies, and programmes for this purpose. These circumstances should be reflected in the aspects of national accounting which are emphasized and given priority and in the details of the classifications and tabulations used in national accounting. Nonetheless the economic and social situation of many developing countries exhibits certain characteristic and similar features which may call for special classifications and tabulations in national accounting for purposes of dealing with questions of economic and social development. The gravity of the need for the supplementary information will differ from one country to another, reflecting among other conditions the stage of economic and social development already reached.

THE DUALISM OF THE ECONOMIES

9.5. A basic feature of many developing countries is the existence of what is sometimes called "dualism", that is the existence, side-by-side, of traditional and more recent modes of living, social and economic organization, and carrying on production. The technology, organization and productivity of the two modes of production, and the attitudes, habits and institutional arrangements of the people involved, differ to such an extent that the situation may be described as the existence, side-by-side, of differing, loosely connected economies and societies. Not infrequently, these differences in economic and social characteristics follow the geography of a country; for example, they occur between rural and urban areas.

9.6. Development often does not take place in a uniform manner or pace throughout a developing country; and may accentuate the differences between the various parts of a country. The urban areas of the economy, or the areas of location of new large-scale mining and/or manufacturing, may grow very rapidly; this growth may spread to areas in proximity; but the distant rural areas may stagnate. When the economic expansion of a number of regions of a country is very rapid, any extensive subsistence agriculture and ancient modes of living, even in the more distant rural areas, may wither away.

9.7. An important difference between these disparate parts of a developing country is likely to be the role and type of market served by each, for example production of goods for subsistence, for sale as exports or in the national market, or for sale in the immediate locality. The export industries of a developing country often furnish a dynamic factor in development. The industrial and agricultural producers who supply the country as a whole are also likely to contribute to, and reflect, the development taking place in the economy. The small manufacturing units or artisans, especially in rural areas, and agriculturists who supply local needs, may make up a stagnant section of the economy. Agriculture, which is primarily subsistence in character, is likely to decrease as economic development proceeds.

THE ROLE OF EXTERNAL TRADE

9.8. External trade is not only an important source of demand for key products in the case of a number of developing countries. It is also the source of the capital goods needed to expand and rationalize production. And the proceeds from exports, or foreign loans and other aid, are the means through which these imports are financed.

THE DYNAMIC KINDS OF ECONOMIC ACTIVITY

9.9. The economies of a number of developing countries are characterized by a limited number of agricultural or industrial activities which use advanced technology, organization and management in production. These activities are likely to be producing goods for export or for sale on the national markets; and may set the pace of the economic growth of the country. The production activities will frequently be based

on the availability of given mineral or agricultural resources; and be a major source of the demand for machinery and capital equipment. While the requirements of these activities for skilled labour and management will be substantial relative to other producers, they may not afford great new employment opportunities. The productivity of the labour employed in the relatively large-scale, new units will usually be considerably higher than the average for the economy as a whole.

THE ROLE OF THE PUBLIC SECTOR

9.10. In many developing countries, the public sector plays a vital and direct role in economic growth. New, heavily capitalized public enterprises may account for a large share of the production of selected kinds of industrial activity; and are likely to provide the power, transport and communication facilities of the country. Government probably will make substantial investment in the infrastructure for development of the economy; and adopt a number of other measures to stimulate economic growth. An aspect of the government's effort will often be the detailed assessment, planning and programming of over-all economic and social development and growth, as well as the formulation and administration of policies in respect of certain kinds of production, etc., and of specific projects.

Supplementary classifications

THE TWO SCHEMES OF CLASSIFICATION

9.11. For purposes of analysing the structure of, and trends in, a number of the developing economies, it will be valuable to supplement the classification of industries according to kind of activity in the full system with the following: classification into modern (recent) and traditional modes (that is, technologies, organization and management) of production; and division into privately and publicly owned or controlled establishments. These two schemes of classification should be used independently in the further classification of kind of economic activity.

9.12. Separate use of the two additional schemes of classification should yield the most useful data for analytical purposes; and will fit best into the structure of the system. Modern modes of production or publicly owned or controlled establishments are likely to be concentrated in selected kinds of activity. Information is wanted on the prevalence of, and the differences in the size, cost-structure, productivity, stock of fixed assets and related characteristics between, modern and traditional units and private and public industries. Since publicly controlled establishments are likely to employ modern modes of production, using the supplementary schemes of classification in conjunction one with the other would unnecessarily complicate the tabulations.

9.13. The supplementary classifications are not required in respect of enterprises since proxy classifications are already included in the full system. The institutional sectors for corporate and quasi-corporate enterprises, on the one hand, and households including non-financial private unincorporated enterprises, on

the other, usually furnish suitable distinctions between modern and traditional modes of carrying on economic activity. And the institutional sectors for the corporate and quasi-corporate units are sub-divided into public enterprises and private enterprises.

THE USE OF THE SCHEMES OF CLASSIFICATION

Mode of production

9.14. The kinds of activity for which it may be most useful to draw distinctions between modern and traditional modes of production are agriculture, each class of manufacturing, construction and perhaps wholesale and retail trade and transport. The two types of establishments, differing markedly in technology, scale and organization of production, are likely to exist side-by-side in the case of these kinds of activity. In the case of other activities, practically all the establishments may be either traditional or modern in character.

9.15. In the case of the kinds of activity mentioned above, the series of data of the full system which it may be most useful to classify according to the mode of production of establishments are included in the following supporting tables of annex 8.3: tables 1 and 9, on the gross domestic product by kind of economic activity, at current and constant prices; tables 3 and 12, on the gross output and input of industries, at current and constant prices; tables 7 and 16, on the composition of gross capital formation, at current and constant prices; and table 10, on employment according to kind of economic activity. These tabulations will furnish information on such topics as the prevalence, factor shares, rate of growth and use of resources of modern and traditional-type establishments. The classification according to these modes of production should also be useful for purposes of drawing distinctions between the sources of data, reliability and accuracy of the estimates in respect of the flows under discussion.

Private and public establishments

9.16. In developing countries where public enterprises play an important part in the production of goods and services, it will also be of considerable interest to classify the series of data called for in tables 1 and 9, 3 and 12, 7 and 16 and 10 into privately and publicly owned or controlled establishments. This classification might be used in the case of each kind of economic activity where there is one or more public establishments. Publicly owned or controlled establishments are part of government enterprises or public corporations while privately owned or controlled establishments are part of private corporate, quasi-corporate or unincorporated enterprises. The classification of the suggested series of data will yield information on the characteristics of, and trends in, publicly and privately owned establishments, one relative to the other, in the case of each kind of economic activity.

CRITERIA FOR CLASSIFICATION BY MODE OF PRODUCTION

9.17. The classification of establishments according to mode of production should be based on criteria

such as the resources, facilities and technology used in the activities, the manner in which production is organized and managed, and the scale of the operations. All production carried on in household premises should be classed as traditional; traditional-type establishments will often be part of unincorporated units. In the case of mining, manufacturing and construction, the use of power equipment of two horsepower or less might also be taken to indicate traditional modes of production. Little power equipment of course indicates a lack of capital equipment and the reliance on hand labour. Though the criterion of size should vary from one kind of activity to another, and perhaps from one country to another, the engagement of less than five persons might frequently be a suitable dividing line between the two modes of production. This criterion should be of value in drawing the distinction between the traditional and modern-type establishments in the case of all of the kinds of activity to which the classification is to be applied.

Supplementary accounts and tables

9.18. Great disparities in the characteristics and trends of various parts of a developing economy may result in the need for special national accounting data in respect of some of the groups of transactors. These data should be of value in measuring the prevalence and character of each portion of the economy, evaluating its potentiality for, and contribution to, economic and social development, and assessing the experience and problems of the group of transactors as the economy progresses. Portions of an economy for which it may be useful to compile special series of data may be geographic and/or economic areas, kinds of economic activity which are leading or backward elements in economic growth, and the public sector.

9.19. The special national accounting data can be presented in the form of tables, that is classifications of selected series of data according to area, etc., or in the form of sets of accounts. It will generally be simpler to use tables than sets of accounts because the flows dealt with in tables can be restricted to those in respect of which information is most urgently needed and most easily gathered and compiled. On the other hand, sets of accounts integrate data on all aspects of the economic activities of groups of transactors into an articulated frame. The accounts therefore furnish a means of studying and relating all aspects of the economic structure and experience of a specific group of transactors. The accounts also are of assistance in formulating and carrying out the systematic collection of data concerning the given group of transactors.

9.20. Supplementary tables to the production and capital formation accounts in respect of establishments which differ in scale and technology of production and in respect of public and private industries have already been discussed above. This section of the chapter deals with supplementary sets of accounts in respect of selected areas, key kinds of economic activity and the public sector. It starts with a discussion of sets of accounts and tables in respect of areas. The three sets of accounts are set out in annex 9.1.

Areas

TYPES OF AREAS

9.21. A number of developing countries may find it of value to compile special national accounting data in respect of selected rural and urban areas, or even all of the rural and urban portions, of their economy.

9.22. The rural areas of most developing countries will account for a major part of the population and production of their economy. Traditional modes of production may characterize a substantial part of the agricultural activity carried on in these areas; and practically all of the subsistence production of a country will take place there. The rural areas are a major source of the labour for the expanding industries of a country; are the subject of increasing attention in efforts to raise levels of productivity and living. The character, and the experience in the course of development, of the various rural areas of a developing country may differ significantly. The differences may reflect such circumstances as the kinds of agricultural production engaged in, the proximity to urban areas and the extent of subsistence production, the pattern of land tenure and the organization of production.

9.23. In general, rural areas might be defined in terms of the density of population and the prevalence of agricultural pursuits. If it is not feasible to use density of population of the unit-area of classification, the magnitude of its population might be used. The unit-area of classification should be entire, small governmental administrative areas such as localities, that is villages, fishing camps, etc., groups of villages, or districts or counties. Using governmental administrative areas will be of material assistance in dealing with the transactions of government and in compiling data in respect of other transactions. While the units of classification should be small, it will, in general, be desirable to aggregate the unit-areas into groups for purposes of compiling and presenting the most useful national accounting data. The members of each group might be contiguous or non-contiguous. It may, for example, be of value to group together all rural areas where much of the agricultural production is subsistence in character, irrespective of the geographic location of the areas; or the rural areas of the regions of a country. The regions might be delineated in the light of economic criteria or geographic governmental administrative areas. It may also often be useful to sum data in respect of all the rural areas of a country.

9.24. Urban areas are likely to exhibit marked economic growth and increasing populations, and thus difficult social problems, in the course of economic development. The expansions in manufacturing production, and the increasing commercial activity which is a concomitant of economic development, are likely to be centred in urban areas. Much of the rise in the capital formation of a developing country may also take place there. These areas form the heart of the monetary part of the economy. While all the urban areas of a developing country may play a dynamic role in economic development, the predominant kinds of economic activity, the pace and pattern of growth, and the character of the economic and social problems to

be resolved are likely to differ from one area to another.

9.25. The corollary of the suggested definition of rural areas is that the urban areas should be defined in terms of density of population and the prevalence of non-agricultural pursuits of entire, small governmental administrative areas. The unit-area of observation might be localities such as the town, city, districts or counties. As in the case of rural areas, the use of governmental administrative areas should ease the difficulties and burden of compiling national accounting data and enhance the usefulness of the accounts for purposes of planning and administration. The types of non-agricultural pursuits which are of particular interest in identifying urban areas are manufacturing, the distributive trades, and financial and commercial services. If it is not feasible to use the density of population as a criterion in the definition of urban areas, the magnitude of the population of the locality, etc., might be used. In the case of urban areas, it may be valuable to compile national accounting data in respect of both individual large, important cities and aggregations of urban areas according to economic or governmental administrative-geographic regions of the country. Tabulations summarizing the data in respect of all urban areas of a country may also be of interest for some analytical purposes.

SUPPLEMENTARY TABLES

9.26. The flows which it may be of considerable analytical value to classify according to categories of rural and urban areas are included in the production, consumption expenditure and capital formation accounts and the income and outlay accounts of the full system. The supporting tables in which these flows are presented are (i) tables 1 and 9, in respect of the gross domestic product at current and constant prices, (ii) tables 6 and 15, concerning the household final consumption expenditure at current and constant prices, (iii) tables 7 and 16, on the gross capital formation at current and constant prices, (iv) table 10, on employment according to kind of economic activity and (v) table 18, on national and disposable income. It may be noted that these suggested tables include most of supplementary tables suggested for purposes of classifying series of data according to mode of production or according to public and private establishments. It is likely to be especially difficult, and perhaps impracticable, to compile data classified according to areas in respect of the main flows of table 18. In each case it may be of interest to show the main aggregate, or aggregates, and its most important elements called for in the table, classified according to categories of rural and urban areas. It may also be of interest to use a condensed version of the classification according to kind of economic activity, mode of production and class of producers in respect of selected urban areas in the case of tables 1 and 9 and 7 and 16. A simplified version of the classification of household consumption expenditure by object in tables 6 and 15 in the case of certain categories of rural and urban areas will be of value in analysing levels of living in various parts of the country.

THE CHARACTER AND STRUCTURE OF ACCOUNTS IV

9.27. In addition to supplementary tables, it may be of analytical and instrumental value to compile supplementary sets of accounts in respect of categories of rural or urban areas. The Accounts IV in annex 9.1 illustrate the set of accounts which a developing country might find it useful to work out in respect of contiguous or non-contiguous rural areas. The illustrative accounts should in most respects be useful for purposes of dealing with urban areas as well. The essential differences between the Accounts IV shown in the annex and the set of accounts which might be devised in respect of urban areas relate to the predominant kinds of economic activity and the significance of subsistence production. The character and structure of accounts would remain the same.

9.28. As in the full system, the Accounts IV concern the transactions of the economic agents resident in the area to which the accounts relate. With the exception of certain government services, the definitions of resident economic agents in the full system might be used. Except for these government bodies, the accounts then relate to all the production which takes place in the given area and all the other transactions of residents of the area.

9.29. Under this alternative, the production, consumption expenditure, capital formation and other transactions of government services located in the area which do not primarily serve residents of the area are excluded in order to avoid overstating the services which are available to the residents. The units of the central and provincial or state authorities located in the area which do not primarily serve the residents, for example, military camps, tax collecting departments, are considered to be extra-territorial enclaves. A share of the activities of these government bodies is not to be allocated to the area; and transactions between residents of the area and these bodies are considered to be external transactions.

9.30. The alternative to this treatment of the government bodies in question is to attribute at least their production and capital formation to the areas where they are located. An appropriate share of the consumption expenditure of these government services might be, or might not be, allocated to the area in which each is located. Whatever production of gross output of the bodies for their own use is not assigned to the area would be classed as an export of the area. The income and outlay of the area in question would then show transfers of the receipts, if any, of the given government bodies to the parent central or provincial or state government and transfers from these organs back to the government bodies in order to finance any portion of their consumption expenditure which is allocated to the area in question. The capital finance account of the area would portray nominal capital transfers from the parent organ to the resident government bodies under discussion for purposes of financing their fixed capital formation.

9.31. The illustrative Accounts IV are a closed, articulated system of accounts; and are based on the entire range of accounts in the full system. The accounts are similar in structure to the consolidated accounts of

the nation, the Accounts I, except that Account I 1 has been deconsolidated into two simplified accounts: one in respect of the supply and use of goods and services; and the other concerning the gross output and cost-structure of resident producers. The structure and flows of the Accounts IV is, as far as is possible, consistent with the full system. The only significant deviation in structure is the combination of transactions in commodities and other goods and services into a single account. As compared to the full system, the Accounts IV exhibit a number of simplifications in the classification of transactors and transactions and in the treatment of transactions. These simplifications are designed to make the compilation of the accounts feasible while providing for the essential information for purposes of economic and social analysis. Examples of these simplifications in the flows of the full system are the use of gross operating surplus and gross saving and the consolidation into a single flow of a number of categories of current transfers. So that it will be feasible to account for the transactions of residents of the area under study with non-residents, it is suggested that these transactions also be recorded on a highly consolidated basis. The simplifications and other modifications suggested in the illustrative Accounts IV are discussed below.

THE PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

9.32. As is the case of the Accounts II A and B of the full system, the illustrative Account IV A a is the result of consolidating the production, consumption expenditure and capital formation accounts of the system. However, in contrast to the Accounts II, the transactions in commodities and other goods and services are dealt with in a single account. This should simplify the compilation of data; and has the advantage of portraying the full supply of goods and services from domestic production in a single account, as in the case of the accounts in respect of resident producers. The Account IV A a also differs from the comparable accounts of the full system in that commodities are to be valued at purchasers' values.

9.33. The illustrative Account IV A b is formed by combining the production accounts of producers in the full system. While this will reduce the burden of compiling the account, it should yield the essential information on the production which is carried on in an area. The structure of the account is fully consistent with the structure of the comparable accounts of the full system. The account includes a special classification of gross output into production for own account and production for sale in the case of commodities and other goods and services. This classification is designed to measure the extent of, and trends in, subsistence and other non-marketed production in rural areas. The categories, operating surplus and consumption of fixed capital are combined into a single flow, gross operating surplus, in view of the difficulties of making reliable estimates of the consumption of fixed capital at early stages of statistical development. The gross operating surplus of the producers is classified according to whether they produce for the market mainly or own-account mainly.

THE INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

9.34. While the classifications of income and outlay and capital transactions in the full system are considerably simplified, the Accounts IV B are, in most respects, consistent with the structure of the full system. The exception to this is the recording of gross operating surplus in the income and outlay account. Saving is also recorded gross of consumption of fixed capital in the case of the income and outlay and capital finance accounts of the Accounts IV, but this procedure does not involve a modification in the structure of the full system.

9.35. Other major reductions in the detail of classification, as compared to the full system, which are introduced in the Accounts IV B, relate to current transfers and transactions in financial claims. Income and outlay transactions in respect of casualty insurance and unrequired transfers, except direct taxes on income and similar payments to government bodies, are recorded in a single item, on a consolidated (net) basis. The capital finance account is truncated, exhibiting net borrowing only, in order to avoid the difficulties of compiling data in respect of transactions in various financial assets and liabilities.

9.36. On the other hand, so as to separate monetary and non-monetary transactions, the Accounts IV B call for the additional classification of the gross disbursements and receipts of property income into transactions in kind and in money. This classification is suggested in view of the importance of share cropping in the case of many developing countries. It may be found desirable to add supplementary classifications in the case of other flows. For example, the gross operating surplus of producers might be subdivided into enterprises producing mainly for the market and units producing mainly for their own consumption or capital formation. The distinction between the two categories of producers might be based on whether or not more than half, three-quarters, etc., of their gross output is for sale in the market. The flows in respect of final consumption expenditure and gross fixed capital formation in Accounts IV B, in addition to these flows in Accounts IV A, might be classified into items produced on own account and items purchased. The sub-division of aforementioned flows into marketed and non-marketed should distinguish between the sources and reliability of the estimates, as well as between monetary and non-monetary transactions.

Key kinds of activity

THE KINDS OF ACTIVITY

9.37. Developing countries may find it valuable to compile supplementary sets of accounts in respect of kinds of economic activity which yield the important exports of their economy or which play a leading role in economic development by supplying import substitutes, or other goods in considerable demand, to the national market. The set of accounts should yield a body of coherent data on all the transactions of the selected kinds of producers so that the structure, experience

and practices of their production of commodities, their distribution and saving of income, and their financing of capital formation may be analysed together. The information should be of assistance in analysing the trends, potentialities and problems of growth in the case of these kinds of economic activity.

9.38. The key kinds of economic activity will of course vary from one developing country to another. These activities may be types of agriculture, mining or manufacturing. As part of planning and improving the infrastructure of a developing country, it may be advantageous to compile the accounts in respect of strategic forms of transport or in respect of construction. In view of the importance of agricultural production in the case of the developing countries, it may be useful to compile a set of accounts in respect of all agricultural production. In general, a separate set of accounts might be prepared for each key kind of economic activity. The Accounts V in annex 9.1 are intended to illustrate the set of accounts which might be compiled.

CHARACTER AND STRUCTURE OF ACCOUNTS V

9.39. So as to correlate the production and capital formation, receipts and disposition of income, and other sources of finance of a key kind of activity, the same transactors should be dealt with in all the accounts of the Accounts V. It may therefore be desirable to cover all of the transactions of the owners of establishments any of which mainly engage in the key kind of economic activity in question. As a result the Accounts V will include the establishments of the aforementioned owners which are not mainly engaged in the key kind of activity; and at least all of the key kind of activity that it is feasible to identify and segregate will be covered.

9.40. The owners of the establishments which would be of interest if the Accounts V are compiled may be corporate or quasi-corporate enterprises or members of households in the case of private non-financial unincorporated businesses. As in the full system, the establishment is to be the statistical unit in the case of the production and capital formation accounts; and the enterprise or the household of the owners of the unincorporated units is to be the statistical unit in the case of the income and outlay and capital finance accounts. In accordance with the institutional sectoring of the full system of national accounts, the Accounts V therefore contain two sets of income and outlay and capital finance accounts.

9.41. The Accounts V contain the same accounts as the full system of national accounts; and these accounts are consistent with the structure and content of the full system in practically all respects. The sole significant deviation is the use of gross operating surplus and gross saving in the income and outlay accounts. The classifications of the full system are also modified in a few instances, in the light of the circumstances in which the Accounts V may be compiled. The set of accounts does not form a closed, fully articulated system since an account on the transactions of the transactors covered with other economic agents is not included. Thus Accounts V are sector accounts.

THE PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

9.42. The two Accounts V A, one on the supply and disposition of the commodities produced by the establishments covered in the accounts and the other on the cost-structure and gross output of these establishments, are like the production accounts of the full system for commodities and industries. The consumption expenditure and capital formation accounts of the system enter into these accounts at the points of intersection with the production account for the commodities in question. In general, the former accounts will relate to transactors who are not covered in the Accounts V.

9.43. Account V A a covers transactions in all the commodities produced by the establishments covered in the Accounts V, whether these commodities are, or are not, the characteristic products of the given key kind of economic activity, but the imports of only those commodities which are the characteristic products of the key kind of economic activity. The same domestic production is therefore covered in Account V A a and Account V A b; and links are forged between the sources of demand for the gross output and the cost-structure of the establishments covered in the Accounts V A. The gross output of the establishments covered in the accounts is classified into the commodities which are the characteristic products of the key kind of economic activity and other commodities. In addition, the characteristic commodities of the key kind of activity are divided into those produced by establishments mainly engaged in this activity and units of the owners of the preceding establishments which are not mainly engaged in the key kind of activity.

9.44. It may be advantageous to compile two sets of Accounts V A: one for establishments mainly engaged in the key kind of industry; and the other for the remaining establishments of the enterprises covered in the accounts. Use is to be made of producers' values in the case of the gross output of the establishments covered in both the Accounts V A.

THE INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

9.45. While the Accounts V B are consistent with the structure of the full system of national accounts, the segregation of the transactors to be covered in the accounts does not correspond exactly to the classification of the full system in respect of the kind of economic activity of non-financial corporate and quasi-corporate enterprises or of households. The accounts cover not only enterprises mainly engaged in the key kind of economic activity but also the owners of any establishments which mainly engage in the key kind of activity. In the case of the full system, however, non-financial corporate and quasi-corporate enterprises and the households of owners of unincorporated enterprises are classified according to the main kind of activity of these enterprises.

9.46. In the case of the households of owners of non-financial unincorporated enterprises, but not the corporate and quasi-corporate enterprises, the income

and outlay and capital finance accounts of the full system are substantially simplified in the Accounts V. In the income and outlay account of the households, transactions in casualty insurance and in most categories of current transfers, which are exhibited separately in the corresponding account of the full system, are consolidated into the entry "Current transfers n.e.c., net". The exceptions are transactions in direct taxes on income and social security. In the capital finance account of the households, the detail of classification of transactions in financial claims has been markedly abbreviated. Saving and operating surplus are also to be entered gross of depreciation.

The public sector

REQUIREMENTS FOR DATA

9.47. In view of the important role which the public authorities have in the economic development of most developing countries, the countries may find it desirable to compile a set of accounts in respect of the public sector, that is, public enterprises and government services. The accounts would portray the role of the public authorities in supplying goods and services to the economy and the demands on the resources for production which the public authorities make. The accounts would also delineate the means of financing production, consumption and capital formation used by the public authorities, their contribution to inflationary or deflationary pressures and their role in the redistribution of incomes. For a number of these purposes it will be useful to compile the supplementary tables outlined in paragraph 9.16 in respect of public enterprises and the standard accounts and tables of the full system relating to general government and the public sector. The set of accounts under discussion here, the Accounts VI of annex 9.1, bring together and interrelate the main data in respect of the various transactions of public enterprises and general government bodies.

CHARACTER AND STRUCTURE OF ACCOUNTS VI

9.48. The Accounts VI fit into the framework of the full system of national accounts. The production accounts of public enterprises (industries) and producers of government services are separated; and the same detail of classification of transactions is suggested in the case of the Accounts VI as in the full system. The basic data required for compiling the accounts should be available from the accounting records and budgets of public enterprises and the public authorities. The Accounts VI do not represent a closed system of accounts; they are like sector accounts.

THE PRODUCTION ACCOUNTS

9.49. The suggested Accounts VI on goods and services are restricted to the production accounts of public enterprises and government services because it is impracticable to compile figures of the disposition of their gross output except the production of the government services for their own use. The structure and content of the suggested production accounts are the same as in the full system. The valuation of the

production-account flows in respect of public industries and government services is also as in the full system.

THE INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

9.50. The suggested Accounts VI B a on income and outlay and capital transactions represent a combination of the corresponding accounts of the full system of national accounts in respect of public non-financial corporate and quasi-corporate enterprises, public financial institutions and general government. The transactions of the public enterprises and general government organs are to be consolidated so as to avoid showing the numerous transactions between these units which have little, if any, economic significance and to indicate clearly the transactions of the public sector with the rest of the economy. In order to facilitate the analysis of the relative roles of corporate and quasi-corporate public enterprises and general government in the transactions of the public sector, separate income and outlay and capital finance accounts in respect of each of these parts of the public sector are included in the Accounts VI B. While the transactions of general government organs are to be consolidated in the case of the Accounts VI B c, the transactions of corporate and quasi-corporate public enterprises are to be combined in the case of Accounts VI B b. This corresponds with the treatment of the transactions of general government organs and public enterprises in the full system. It should be recalled that while the full system does not call for a standard account or table in respect of the income and outlay and capital transactions of corporate and quasi-corporate public enterprises as a distinct category, it does include a standard account and a more detailed supporting table in respect of these transactions in the case of general government. Some developing countries may consider it desirable to compile separate income and outlay and capital finance accounts in respect of each of the sub-divisions of the public sector, that is corporate and quasi-corporate non-financial public enterprises, financial public institutions, central government, state and local government, and social security funds.

Supplementary tables

9.51. In addition to the tables described in paragraphs 9.15, 9.16 and 9.26 above, which result from the introduction of supplementary classifications into the supporting tables of the full system of national accounts, developing countries may find it valuable to compile the two supplementary tables set out in annex 9.1. Table 27 is designed to summarize information in respect of the relative importance of the marketed and non-marketed portions of the gross output of an economy. Table 28 is primarily intended to be a simplification of table 2 of the full system so that it may be feasible to compile urgently needed data on the supply and use of commodities at early stages of statistical development.

TABLE 27

9.52. Table 27 is designed to summarize the share in the gross output of an economy of market and

subsistence producers and of marketed and non-marketed gross output. It also calls for data on the way in which the marketed and non-marketed goods and services are disposed of. The table should be of value in assessing the circumstances in which production for own account and for the market is carried on, and in relating the supply of the money to the goods and services purchased with money. Further, the table may be of use in evaluating the reliability of data in respect of gross output.

9.53. Table 27 requires classifications which are supplementary to the classifications of the full system and which have already been used in the Accounts IV. Industries are classified into those mainly producing for the market and those not mainly producing for the market; and the commodities produced by each category of industries are classified according to whether marketed or not marketed. The classification of industries is required because while production for own account by units mainly producing for themselves should be considered to be part of the non-monetary portion of an economy, this type of production by industries mainly producing for the market should be classed as part of the monetary segment. As is indicated in paragraph 27 above, the dividing line between the two categories of industries is somewhat arbitrary; and should be set by each country in the light of its own economy.

TABLE 28

9.54. Table 28 should be of value for analytical and instrumental purposes. It calls for data which may be used to study the structure of, and trends in, an economy in terms of the gross output of goods and services and the pattern of the supply of, and demand for, goods and services. It also furnishes a frame for the use of commodity flows in making and cross-checking estimates at current and constant prices in respect of the gross output of, value added in the production of, and intermediate and final expenditures on, goods and services. It may be found useful to compile table 28 at constant prices, as well as at current prices.

9.55. Table 28 is a much simplified version of standard tables 2, in current prices, and 11, in constant prices, of the full system of national accounts; and represents an extension of table 2 a, which is presented in the notes to tables 1 through 7 of annex 8.3. Purchasers' values are not partitioned into producers' values, distributive-trade and transport margins and commodity taxes, net, in the case of the data called for in respect of the dispositions of commodities. Distributive-trade and transport services are, in effect, not considered to be distinct commodities; and the value of these services or of commodity taxes, net, is not to be shown in the case of each type of disposition. Instead, these values are to be exhibited in the series in respect of the supply of commodities, as addition to the producers' values of each category of commodities. Table 28 deviates from the structure of the full system in this respect only. The other simplifications in standard tables 2 and 11 made in table 28, due primarily to the omission of the classification of the intermediate consumption of industries according to kind of economic activity, represent straightforward combinations of categories of the full system.

9.56. Table 28 also calls for an extension of tables 2 and 11 to include data in respect of the supply and disposition of goods and services other than commodities. This is one of the important ways in which table 28 differs from table 2 a of annex 8.3. The other main difference between tables 28 and 2 a are the separation of the intermediate consumption of industries, government services and private non-profit services; and the provision of columns in respect of the final consumption of the non-profit services. As a result, table 28 relates to the supply and disposition of all goods and services; and may be used as a frame for compiling complete figures of value added and final consumption expenditure.

Orders of priority in compilation

GENERAL CONSIDERATIONS

9.57. The sequence in which it is suggested that developing countries might start the compilation of the standard accounts and supporting and supplementary tables of the full system of national accounts is set out in annex 9.2. Since the supplementary accounts and tables discussed in this chapter are not intended to be recommendations as to the tabulations to be prepared by developing countries in general, they are not covered in the list of priorities. Four orders of priority are used to suggest the sequence in which the standard accounts and tables might be worked out.

9.58. The suggested list of priorities is designed to furnish guidelines as to the sequence in which a developing country may find it desirable to develop its system of national accounts and the associated economic statistics. The list is the result of weighing the difficulties of gathering the basic series needed to estimate national accounting data against the urgency with which the national accounting series are required. Each country will of course find it necessary to adapt the suggested priorities to its own needs and circumstances.

9.59. The highest priority has been assigned to the compilation of the accounts and tables which are urgently needed and which may be prepared from basic data that are, for the most part, already available in the case of a number of developing countries. Where the urgently required basic series are not yet available, it is suggested that the highest priority be assigned to gathering these series.

PRIORITY 1

9.60. Priority 1 covers the consolidated accounts of the nation and many of the flows of the deconsolidated production accounts and the associated tables in current prices. Also included in the first order of priority are data on external transactions, the activities of government and the financial transactions of the monetary system.

9.61. The main aggregates of the consolidated accounts furnish a summary of the dimensions and workings of an economy. So as to make it feasible to compile the consolidated accounts during the course of

the first stage in developing the system, it may be necessary to use concepts of operating surplus and saving which are gross of consumption of fixed capital.

9.62. The production accounts of Accounts II, and the related tables, furnish vital data for planning and furthering the production of goods and services which are essential to development. Commodity statistics may be available at a relatively early stage of statistical advancement. As a consequence, Priority 1 has been assigned to a simplified version of table 2, on the supply and disposition of goods and services, and to the production accounts and associated supporting tables on the goods producing industries, transport and distribution.

9.63. In the case of government bodies, the income and outlay accounts, as well as the production accounts, and a number of the series in the associated tables, have been assigned the first order of priority. Basic materials for making these estimates should be available in government budget and accounting records. The first order of priority has also been given to the accounts on the income and outlay and gross accumulation of corporate and quasi-corporate non-financial enterprises and the capital finance account of financial institutions. The administration of company and banking laws and regulations should yield the required data for compiling these tabulations.

PRIORITY 2

9.64. The second order of priority has been allocated to information which is also urgently required but which involves the gathering of more difficult basic data. Included in the second orders of priority of compilation are the remainder of the Accounts II and a number of the more detailed supporting tables to the production, consumption expenditure and capital formation accounts; the main series of data in constant prices; and essential but difficult series on income and outlay and capital transactions. It is also suggested that at this stage in evolving the system of national accounts, efforts be made to prepare suitable estimates of the consumption of fixed capital.

PRIORITIES 3 AND 4

9.65. Third and fourth orders of priority have been assigned to the parts of the full system of national accounts which are not urgently required or which are particularly difficult to compile. For example, included in these orders of priority are the estimates in respect of the capital finance account, as well as the associated supporting tables, of households. The basic data required to compile these estimates are particularly difficult and costly to gather. Though the input-output tables of the full system are of considerable value in economic planning and programming, these tables are included here in view of the problems of compiling them. Complete series of data on transactions in financial assets and liabilities have been assigned the lower orders of priority since some of these data are probably less urgently needed than other data of the full system in the case of the developing countries; and are much more difficult to gather.

ANNEX 9.1

Supplementary accounts and tables

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Account 3. Income and outlay account	222	
Account 5. Capital finance account	223	
b. Corporate and quasi-corporate public enterprises		
Account 3. Income and outlay account	223	
Account 5. Capital finance account	224	
c. General government (consolidated)		
Account 3. Income and outlay account	224	
Account 5. Capital finance account	225	
Table 27. Gross output of goods and services		226
Table 28. Supply and disposition of goods and services		227

IV. Accounts for selected areas — illustrative accounts for a rural area

A. PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

a. Goods and services — Accounts 1, 2 and 4

1.1.1.1	Characteristic products of agriculture and hunting, forestry and fishing (b 1.1.1)	1.2.1 through 1.2.3
	i. Produced on own account	Intermediate consumption, industries, producers of government services and producers of private non-profit services (b 1.2.1 through b 1.2.3)
	ii. Other	
1.1.1.3	Characteristic products of other industries in area (b 1.1.3)	2.2.30
	i. Produced on own account	Private final consumption expenditure (3.2.30)
	ii. Other	j. Household consumption of commodities produced on own account
1.1.2	Gross output of other goods and services (b 1.1.2 through b 1.1.8)	2.2.20
through 1.1.8		ii. Other
		Government final consumption expenditure (3.2.20)
		4.2.5 Increase in stocks (5.2.5)
		4.2.6 Gross fixed capital formation (5.2.6)
		i. In commodities produced on own account
		ii. In commodities purchased
		1.2.10— Exports of goods and services out of the area, net (6.2.10—6.1.10)
		1.1.10 of the area, net (6.2.10—6.1.10)
Supply		Disposition

b. Producers — Account 1. Production account

1.2.1 through 1.2.3	Intermediate consumption, industries, producers of government services and producers of private non-profit services (a 1.2.1 through a 1.2.3)	1.1.1.1 Gross output of characteristic products of agriculture and hunting, forestry and fishing (a 1.1.1.1)
		i. For own account
		ii. Other
1.3.1	Compensation of employees (3.3.1)	1.1.1.3 Gross output of characteristic products of other industries (a 1.1.1.3)
1.3.4—	Indirect taxes, net [3.3.4+(6.3.4—	i. For own account
1.3.5	6.3.5)]	ii. Other
1.3.2+	Gross operating surplus (3.3.2+3.3.3)	1.1.2 through 1.1.8 Gross output of other goods and services (a 1.1.2 through 1.1.8)
1.3.3	i. Producers mainly producing for own account	i. For own account
	ii. Enterprises mainly producing for market	ii. Other
Gross input		Gross output

Accounts IV continue

IV. Accounts for selected areas — illustrative accounts for a rural area (continued)

B INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

Account 3 Income and outlay account

3 2 30 Private final consumption expenditure (2 2 30)	3 3 2+ Gross operating surplus (1 3 2+ 3 3 3)
3 2 20 Government final consumption expenditure (2 2 20)	3 3 1 Compensation of employees (1 3 1)
3.4 6 Property income [3.4 7+(6 4 6— 6 4 7)]	3 4 2 Compensation of employees from outside the area, net (6 4 2)
i. In kind	3 4 7 Property income [3.4 6—(6 4 6— 6 4 7)]
ii. In money	i. In kind
3.6 1 Direct taxes and the like, net (6.6.1 through 6 6 3)	ii. In money
3 6 3	3 3 4 Indirect taxes received by local government of area (1.3 4—6 3.4)
3.3 3+ Gross saving (5 3 3+5 7 1) 3 7 1	3 6 23 Other current transfers, net (6 6 23)

Disbursements

Receipts

Account 5 Capital finance account

5 2 5 Increase in stocks (4 2 5)	5 3 3+ Gross saving (3 3 3+3 7 1)
5 2 6 Gross fixed capital formation (4.2.6)	5 7.1 5.7.6 Capital transfers, net (6 7 6) 5.7.9 Net borrowing (6 7 8)
Gross accumulation	Finance of gross accumulation

C ALL ACCOUNTS

Account 6 External transactions

6.2 10— Exports of goods and services out 6.1.10 of the area, net (1.2 10—1.1.10)	6 4.6— Property income, net (3 4 6—3 4.7) 6 4.7
6 4.2 Compensation of employees from outside the area, net (3.4.2)	6.6.1 Direct taxes and the like, net (3.6.1 through 3 6 3)
6 6 23 Other current transfers, net (3.6.23)	6 6 3
6 7 6 Capital transfers, net (5.7.6)	6 3.4— Indirect taxes, net, to central and state governments [(1 3.4—1.3.5)— 3 3.4]
6 7 8 Net borrowing (5.7.9)	6 3.5

Receipts

Disbursements

V. Accounts for key kind(s) of economic activity

A. PRODUCTION, CONSUMPTION EXPENDITURE AND CAPITAL FORMATION ACCOUNTS

a Commodities — Accounts 1, 2 and 4

1.1.1.1 Characteristic products of key industry(ies) produced by establishments in the key industry(ies) (b 1.1.1.1)	1.2.1 through 1.2.3	Intermediate consumption: industries, producers of government services and producers of private non-profit services
1.1.1.2 Characteristic products of key industry(ies) produced by other establishments of covered enterprises (b 1.1.1.2)	2.2.4	Final consumption expenditure in the domestic market, households
1.1.1.3 Other products of the establishments of covered enterprises (b 1.1.1.3)	4.2.5	Increase in stocks
1.1.1.4 Competitive imports with characteristic products of key industry(ies)	4.2.6	Gross fixed capital formation
	1.2.11	Exports
Supply		Disposition

b Industries — Account 1. Production account

1.2.1 Intermediate consumption	1.1.1	Characteristic products of key industry(ies) produced by establishments in the key industry(ies) (a 1.1.1.1)
1.3.1 Compensation of employees	1.1.1.2	Characteristic products of key industry(ies) produced by other establishments of covered enterprises (a 1.1.1.2)
1.3.2+ Gross operating surplus		
1.3.3		
1.3.4 Indirect taxes	1.1.1.3	Other products of the establishments of covered enterprises (a 1.1.1.3)
1.3.5 Less Subsidies		
Gross input		Gross output

B. INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

a Corporate and quasi-corporate enterprises covered in key kind(s) of economic activity

Account 3. Income and outlay account

3.4.4 Withdrawals from entrepreneurial income of quasi-corporate enterprises	3.3.2	Operating surplus (1.3.2*)
3.4.6 Property income	3.3.3	Consumption of fixed capital (1.3.3*)
1 Interest	3.4.7	Property income
2 Dividends		1 Interest
3 Rent		2 Dividends
3.6.1 Direct taxes and the like	3.5.2	3 Rent
and		Casualty insurance claims
3.6.2	3.6.7	Unfunded employee welfare contributions imputed
3.6.8 Unfunded employee welfare benefits		
3.6.13 Current transfers n.e.c., net		
{3.7.1 Saving (a 5.7.1)		
{3.3.3 Consumption of fixed capital (a 5.3.3)		
Disbursements		Receipts

Accounts V continue

V. Accounts for key kind(s) of economic activity (continued)

B. INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS (continued)

a. Corporate and quasi-corporate enterprises covered in key kind(s) of economic activity (continued)

Account 5. Capital finance account

5.2.5 Increase in stocks	5.7.1	Saving (a 3.7.1)
5.2.6 Gross fixed capital formation	(5.3.3)	Consumption of fixed capital (a 3.3.3)
5.7.4+ Purchases of land and intangible assets, net	5.7.6	Capital transfers, net
	5.7.9	Net borrowing (a 5.7.8)
Gross accumulation		Finance of gross accumulation
5.7.8 Net borrowing (a 5.7.9)	5.9.4	Bills and bonds, short-term
5.8.1 Gold	5.9.5	Bonds, long-term
5.8.2 Currency and transferable deposits	5.9.6	Corporate equity securities, including capital participations
5.8.3 Other deposits	5.9.7	Short-term loans n.e.c.
5.8.4 Bills and bonds, short-term	5.9.8	Long-term loans n.e.c.
5.8.5 Bonds, long-term	5.9.10	Proprietors' net additions to the accumulation of quasi-corporate enterprises
5.8.6 Corporate equity securities, including capital participations	5.9.11	Trade credit and advances
5.8.7 Loans n.e.c.	5.9.12	Other liabilities
and 8	and 13	
5.8.11 Trade credit and advances		
5.8.12 Other financial assets		
and 13		
Net acquisition of financial assets plus net borrowing		Net incurrence of liabilities

b. Households of proprietors of unincorporated enterprises of the key kind(s) of economic activity

Account 3. Income and outlay account

3.2.32 Final consumption expenditure	3.4.1	Compensation of employees
3.4.6 Property income	3.3.2+	Gross operating surplus (1.3.2*)
1i. Consumer debt interest	3.3.3	+1.3.3*)
1ii. Other interest	3.4.7	Property income
3. Rent		1. Interest
3.6.1 Direct taxes and the like		2. Dividends
and 2		3. Rent
3.6.3 Social security contributions	3.6.4	Social security benefits
3.7.1+ Gross saving (b 5.7.1+b 5.3.3)	3.6.14	Current transfers, n.e.c., net
3.3.3		
Disbursements		Receipts

V. Accounts for key kind(s) of economic activity (continued)

B. INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS (*continued*)

b. Households of proprietors of unincorporated enterprises of the key kind(s) of economic activity (*continued*)

Account 5. Capital finance account

5.2.5 Increase in stocks	5.7.1+ Gross saving (b 3.7.1+b 3.3.3)
5.2.6 Gross fixed capital formation	5.3.3
5.7.4+ Purchases of land and intangible assets, net	5.7.6 Capital transfers, net
5.7.5	5.7.9 Net borrowing (b 5.7.8)
<hr/>	
Gross investment	
<hr/>	
5.7.8 Net borrowing (b 5.7.9)	5.9.7 Short-term loans n.e.c.
5.8.2 Currency and transferable deposits	5.9.8 Long-term loans n.e.c.
5.8.3 Other deposits	5.9.11 Trade credit and advances
5.8.7 Loans n.e.c. and 8	5.9.12 Other liabilities and 13
5.8.11 Trade credit and advances	
5.8.n Other financial assets	
<hr/>	
Net acquisition of financial assets plus net borrowing	Net incurrence of liabilities

Accounts VI follow

VI. Accounts for the public sector

A PRODUCTION ACCOUNTS

Account 1a. Production account — public enterprises

1.2.1	Intermediate consumption	1.1.1	Characteristic products of kind of activity of the public enterprises
1.3.1	Compensation of employees	1.1.3	Other products of the public enterprises..
1.3.2	Operating surplus		
1.3.3	Consumption of fixed capital		
1.3.4	Indirect taxes		
1.3.5	<i>Less Subsidies</i>		
	Gross input		Gross output

Account 1b Production account — producers of government services

1.2.2	Intermediate consumption	1.1.5	Services produced for own use
1.3.1	Compensation of employees	1.1.4	Non-commodity sales
1.3.3	Consumption of fixed capital	1.1.2	Commodities produced
1.3.4	Indirect taxes		
	Gross input		Gross output

B INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

a. Public sector (consolidated)

Account 3. Income and outlay account

3.2.20	Government final consumption expenditure (lb.1.5)	3.3.2	Operating surplus of public enterprises (1a.3.2)
3.4.6	Property income	3.4.7	Property income
1.	Interest	1.	Interest
2.	Dividends	2.	Dividends
3.	Rent	3.	Rent
3.5.1	Casualty insurance claims	3.5.3	Net casualty insurance premiums
3.3.5	Subsidies	3.3.4	Indirect taxes
3.6.4	Social security benefits	3.6.1	Direct taxes
3.6.5	Social assistance grants	3.6.2	Compulsory fees, fines and penalties
3.6.8	Unfunded employee welfare benefits	3.6.3	Social security contributions
3.6.9 and 11	Current transfers n.e.c. to: 1. Residents 2. The rest of the world	3.6.7	Unfunded employee contributions imputed
3.7.1	Saving (5.7.1)	3.6.10 and 12	Current transfers n.e.c. from: 1. Residents 2. The rest of the world
	Disbursements		Receipts

VI. Accounts for the public sector (continued)

B INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS (continued)

a Public sector (consolidated) (continued)

Account 5. Capital finance account

5.2.5 Increase in stocks 5.2.6 Gross fixed capital formation 5.7.4 Purchases of land and intangible assets n.e.c., net and 5	5.7.1 Saving (5.7.1) 5.3.3 Consumption of fixed capital (1a.3.3+1b.3.3) 5.7.6 Capital transfers, net from: 1. Residents 2. The rest of the world 5.7.9 Net borrowing (5.7.8)
Gross accumulation	Finance of gross accumulation
5.7.8 Net borrowing (5.7.9) 5.8.1 Gold 5.8.2 Currency and transferable deposits 5.8.3 Other deposits 5.8.4 Bills and bonds, short-term 5.8.5 Bonds, long-term 5.8.6 Corporate equity securities, including capital participations 5.8.7 Short-term loans n.e.c. 5.8.8 Long-term loans n.e.c. 5.8.11 Trade credit and advances 5.8.12 Other financial assets and 13	5.9.2 Currency and transferable deposits 5.9.3 Other deposits 5.9.4 Bills and bonds, short-term 5.9.5 Bonds, long-term 5.9.6 Corporate equity securities, including capital participations 5.9.7 Short-term loans n.e.c. 5.9.8 Long-term loans n.e.c. 5.9.9 Net equity of households on life insurance reserves and on pension funds 5.9.11 Trade credit and advances 5.9.12 Other liabilities and 13
Net acquisition of financial assets plus net borrowing	Net incurrence of liabilities

b. Corporate and quasi-corporate public enterprises

Account 3. Income and outlay account

3.4.4 Withdrawals from entrepreneurial income of quasi-corporate enterprises 3.4.6 Property income 1. Interest 2. Dividends 3. Rent 3.5.1 Net casualty insurance premiums 3.5.4 Casualty insurance claims 3.6.1 Direct taxes 3.6.2 Fines and penalties 3.6.8 Unfunded employee welfare benefits 3.6.11 Current transfers n.e.c 3.7.1 Saving (5.7.1)	3.3.2 Operating surplus of public enterprises (1a.3.2*) 3.4.7 Property income 1. Interest 2. Dividends 3. Rent 3.5.3 Net casualty insurance premiums 3.5.2 Casualty insurance claims 3.6.7 Unfunded employee welfare contributions imputed 3.6.12 Current transfers n.e.c.
Disbursements	Receipts

VI. Accounts for the public sector (continued)

B. INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS (*continued*)

b. Corporate and quasi-corporate public enterprises (*continued*)

Account 5. Capital finance account

5.2.5	Increase in stocks	5.7.1	Saving (3.7.1)
5.2.6	Fixed capital formation	5.3.3	Consumption of fixed capital (1a.3.3)
5.7.4 and 5	Purchases of land and intangible assets n.e.c., net	5.7.6 5.7.9	Capital transfers, net Net borrowing (5.7.8)
Gross accumulation		Finance of gross accumulation	
5.7.8	Net borrowing (5.7.9)	5.9.2	Currency and transferable deposits
5.8.1	Gold	5.9.3	Other deposits
5.8.2	Currency and transferable deposits of:	5.9.4	Bills and bonds, short-term
	i. Monetary institutions	5.9.5	Bonds, long-term
	ii. Other	5.9.6	Corporate equity securities, including capital participations
5.8.3	Other deposits	5.9.7	Short-term loans n.e.c.
5.8.4	Bills and bonds, short-term	5.9.8	Long-term loans n.e.c.
5.8.5	Bonds, long-term	5.9.9	Net equity of households on life insurance reserves and on pension funds
5.8.6	Corporate equity securities, including capital participations	5.9.11	Trade credit and advances
5.8.7	Short-term loans n.e.c.	5.9.12 and 13	Other liabilities
5.8.8	Long-term loans n.e.c.		
5.8.11	Trade credit and advances		
5.8.12 and 13	Other financial assets		
Net acquisition of financial assets plus net borrowing		Net incurrence of liabilities	

c General government (consolidated)

Account 3. Income and outlay account

3.2.20	Final consumption expenditure (1b.1.5)	3.3.2	Operating surplus (1a.3.2*)
3.4.6	Property income	3.4.5	Withdrawals from entrepreneurial income of quasi-corporate enterprises
	1. Interest	3.4.7	Property income
	3. Rent		1. Interest
3.5.1	Net casualty insurance premiums		2. Dividends
3.3.5	Subsidies		3. Rent
3.6.4	Social security benefits	3.5.2	Casualty insurance claims
3.6.5	Social assistance grants	3.3.4	Indirect taxes
3.6.8	Unfunded employee welfare benefits		1. Import duties
3.6.9	Current transfers n.e.c. to:		2. Other indirect taxes
	1. Residents	3.6.1	Direct taxes
	2. The rest of the world		1. Direct taxes on income
3.7.1	Saving (5.7.1)	3.6.2	2. Direct taxes n.e.c.
		3.6.3	Compulsory fees, fines and penalties
		3.6.7	Social security contributions
		3.6.10	Unfunded employee welfare contributions imputed
			Current transfers n.e.c. from:
			1. Residents
			2. The rest of the world
Disbursements		Receipts	

VI. Accounts for the public sector (continued)

B. INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS (*continued*)

c General government (consolidated) (*continued*)

Account 5. Capital finance account

5.2.5 Increase in stocks	5.7.1 Saving (3.7.1)
5.2.6 Gross fixed capital formation	5.3.3 Consumption of fixed capital (1b.3.3)
5.7.4 Purchases of land and intangible assets n.e.c., net	5.7.6 Capital transfers, net from: 1. Residents 2. The rest of the world
	5.7.9 Net borrowing (5.7.8)
Gross accumulation	Finance of gross accumulation
5.7.8 Net borrowing (5.7.9)	5.9.2 Currency issued by Treasury and transferable deposits
5.8.1 Gold	5.9.3 Other deposits
5.8.2 Currency and transferable deposits of: i. Central government	5.9.4 Bills and bonds, short-term
ii. Other	5.9.5 Bonds, long-term
5.8.3 Other deposits	5.9.7 Short-term loans n.e.c.
5.8.4 Bills and bonds, short-term	5.9.8 Long-term loans n.e.c.
5.8.5 Bonds, long-term	5.9.11 Trade credit and advances
5.8.6 Corporate equity securities, including capital participations	5.9.12 Other liabilities
5.8.7 Loans, n.e.c.	and 13
and 8	
5.8.10 Proprietors' net additions to accumulation of quasi-corporate enterprises	
5.8.12 Other financial assets	
and 13	
Net acquisition of financial assets plus net borrowing	Net incurrence of liabilities

Tables 27 and 28 follow

Table 27. Gross output of goods and services

Item	Flow	Transaction	
a. Industries			
1	1.1.1*	Gross output of industries not mainly producing for the market	
2		i. Final consumption of owners and unpaid family workers	
3		ii. Increase in stocks	
4		iii. Fixed capital formation on own account	
5		iv. Sold to others	
6	1.1.1*	Gross output of industries mainly producing for the market	
7		i. Final consumption of owners and unpaid family workers	
8		ii. Increase in stocks	
9		iii. Fixed capital formation on own account	
10		iv. Sold to others	
11	1.1.1	Total gross output	
b. Other Producers			
12		Gross output of government services	
13	1.1.5	i. For final consumption on own account	
14	1.1.2*	ii. For fixed capital formation on own account	
15	1.1.2* and 1.1.4	iii. Sold to others	
16		Gross output of private non-profit services	
17	1.1.7	i. For final consumption on own account	
18	1.1.3*	ii. For fixed capital formation on own account	
19	1.1.3* and 1.1.6	iii. Sold to others	
20	1.1.8	Domestic services of households	
21	1.1.0	Total gross output of goods and services	

Table 28. Supply and disposition of goods and services

Classification of goods and services	Supply of goods and services				Total supply and disposition (Purchasers' values)	Disposition (Purchasers' values)							
	Domestic-ally pro-duced (Produc-ers' values)	Imported		Trans-port and distri-bu-tion margins (Produc-ers' values)		Inter-mediate consump-tion, produc-ers of govern-ment services	Household final consump-tion ex-pen-diture in the domestic market or private final con-sump-tion expendi-ture	Govern-ment final consump-tion expen-diture	Increase in stocks	Fixed cap-it-al forma-tion	Ex-ports (f.o.b)		
		C.i.f. values	Import duties										
Flow	1.1.0*	1.1.10	1.3.4.1	1.1.0*	1.1 or 1.2	1.2.1	1.2.2	1.2.3	2.2.30	2.2.20	4.2.5	4.2.6	1.2.10
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(a) Commodities													
Characteristic commodities of the categories of the kind of activity of industries to be shown in Standard Table 2 1/													
(b) Other Goods and Services ^{2/}													
1. Produced by government services		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2. Produced by private non-profit services		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
3. Domestic services of households		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
4. Direct purchases abroad by government services on current account		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
5. Direct purchases abroad by resident households less Direct purchases by non-resident households in the domestic market		xxx		xxx		xxx	xxx	xxx		xxx	xxx	xxx	
Total													

1/ Any commodities produced by government services or private non-profit services to households included among the characteristic products of a kind of activity of industries should be separately identified.

2/ Other goods and services at purchasers' values.

ANNEX 9.2

Suggested order of priority of compilation

	Order of priority	Order of priority	
STANDARD ACCOUNTS			
I Consolidated accounts for the nation	1	D. Private non-profit institutions serving households	1
II Production, consumption expenditure and capital formation accounts:		Account 3. Income and outlay account	3
A Commodities—Accounts 1, 2 and 4	2-3	Account 5. Capital finance account	4
Separate accounts for characteristic products of: (a) Agriculture, hunting, forestry and fishing. (b) Mining and quarrying (separately where important), manufacturing and electricity, gas and water, (c) Construction, (d) Wholesale and retail trade, (e) Restaurants and hotels, (f) Transport, storage and communication and (g) Services		E. Households, including private non-financial unincorporated enterprises	1
B. Other goods and services—Accounts 1, 2 and 4		Account 3. Income and outlay account	3
a Sales of other goods and services and direct imports of government services	3	Account 5. Capital finance account	4
b Final consumption expenditure of government services	1	a Gross accumulation	3
c Final consumption expenditure of private non-profit services to households	1	b Financial assets and liabilities	4
d Final consumption expenditure of households	1		
C. Industries—Account 1, Production account		STANDARD TABLES	
Separate accounts for:			
1. Agriculture, hunting, forestry and fishing; Mining and quarrying (separately if important), manufacturing and electricity, gas and water; Construction; Wholesale and retail trade; Transport, storage and communication	1	Supporting tables in current prices to II. Production, consumption expenditure and capital formation accounts:	
2. Restaurants and hotels; and Services	2-3	Table 1. Gross domestic product and factor incomes by kind of economic activity	1-2
D. Producers of government services—Account 1, Production account	1	Table 2. Supply and disposition of commodities— Simplified version as, for example, in table 28	1
E. Services of private non-profit services to households—Account 1. Production account	2-3	Table 2. Supply and disposition of commodities— Standard table	3
F. Domestic services of households—Account 1, Production account	3	Table 3. Gross output and input of industries	3
III. Income and outlay and capital finance accounts:		Table 4. Government final consumption expenditure according to cost-composition and purpose	1-2
A. Non-financial enterprises, corporate and quasi-corporate		Table 5. Final consumption expenditure of private non-profit bodies serving households according to cost-composition and purpose	3-4
Account 3 Income and outlay account	1	Table 6. Composition of final consumption expenditure of households	1
Account 5. Capital finance account		a. By type of expenditure	2
a. Gross accumulation	1-2	b. Final consumption expenditure in the domestic market by object	3
b. Financial assets and liabilities	3	Table 7. Composition of gross capital formation	1
B. Financial institutions		a. By type of capital goods	1
Account 3 Income and outlay account	1-2	b. By kind of economic activity	2-3
Account 5. Capital finance account	1-2		
C. General government		<i>Tables in constant prices for II. Production, consumption expenditure and capital formation accounts:</i>	
Account 3. Income and outlay account	1	Table 8 Constant-price value, and price indexes of the gross domestic product, by type of expenditure	2
Account 5 Capital finance account	1-2	Table 9. Gross domestic product at constant prices by kind of economic activity	2-3
a. Gross accumulation	1	Table 10. Employment by kind of economic activity	2-3
b. Financial assets and liabilities	1-2	Table 11. Supply and disposition of commodities in constant prices—Simplified version as, for example, in table 28	2-3
		Table 11. Supply and disposition of commodities— Standard table	4
		Table 12. Gross output and input of industries in constant prices	3-4
		Table 13. Government final consumption at constant prices, by purpose	3-4

STANDARD TABLES (continued)	<i>Order of priority</i>	Order of priority	
<i>Tables in constant prices for II. Production, consumption expenditure and capital formation accounts (continued):</i>			
Table 14. Final consumption expenditure at constant prices of private non-profit bodies serving households by purpose	4	a. National income at market prices b. Distribution of national and disposable income	1 2-3
Table 15. Composition of final consumption expenditure of households at constant prices		Table 19. Capital transactions of the private and public sectors	3-4
a. By type of expenditure	2-3	Table 20. Income and outlay and capital transactions of non-financial corporate and quasi-corporate enterprises, by kind of economic activity	3-4
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GLOSSARY OF MAIN TERMS

Accrual basis. The item, for example, outlay, income, obligation, other flow, is recorded as of the time at which it is incurred or earned.

Accumulation. The acquisition of fixed assets, stocks of non-durable goods, land, mineral deposits and other non-reproducible tangible assets, financial assets, patents, copyrights and other intangible assets during a period of account *less* the incurrence of liabilities. This is gross accumulation. Net accumulation is gross accumulation during a period of account reduced by the consumption of fixed capital during the period.

Activities. Industries, producers of government services, producers of private non-profit services to households and domestic services rendered by one household to another.

Activity accounts. Production accounts of industries, producers of government services, producers of private non-profit services to households, and the domestic service of households, in respect of their gross output of goods and services and their intermediate consumption, primary inputs and indirect taxes *less* subsidies.

Actuarial reserves in respect of life insurance. The net equity of life insurance policy holders in the reserves of the companies. It consists of reserves set aside to cover the risk of insuring during a period of account, pre-payments for the risks of insuring during future periods, and other elements of the saving of policy holders involved in life insurance policies.

Ancillary government enterprises. Government enterprises, such as munitions factories, the mint, government printing works, building or transport maintenance and management administrations, which deliver all, or most of, their production (gross output) to other government bodies.

Assets. Ownership of machinery, equipment, furniture, buildings and other durable reproducible goods, stocks of non-durable goods, land, monuments and other non-reproducible tangible assets, copyrights, leases, concessions, financial claims on other parties and other intangible assets.

Balance sheet account. Account showing the assets, liabilities and net worth of an institutional unit, or class of such units, as of a given date.

Bank service charge. Imputed charge in respect of banking services equal, in practice, to the excess of property income accruing to banks and similar financial institutions, over the interest accruing to depositors. In concept, the property income of banks taken into account should be from investment of deposits only.

Basic values, approximate. Producers' values, that is the value on the market at the establishments of the producer, of the gross output of commodities, industries, etc. *less* the commodity taxes, net, in respect of the gross output; or the sum of the value of the primary inputs, indirect taxes, net, except commodities taxes, net, and the purchasers' value of the intermediate inputs in respect of the gross output. The value added of industries in approximate basic values is equal to their gross output in approximate basic values *less* their intermediate inputs in purchasers' values.

Basic values, true. Producers' values of the gross output of commodities, industries, etc *less* the commodity taxes, net, in respect of the gross output and the direct and indirect intermediate inputs; or the sum of the value of the primary inputs, indirect taxes, net, except commodity taxes, net, and the true basic values of the intermediate inputs in respect of the gross output. The value added of industries in true basic values is equal to their gross output in true basic values *less* their intermediate inputs in true basic values, including the distributive-trade and transport margins on these intermediate inputs.

Bill. A security that gives the holder the unconditional right to receive a stated fixed sum on a specified date, and is issued and traded at a discount, depending on the rate of interest and the time of maturity.

Bond. A security that gives the holder the unconditional right to a fixed money income, and, except for perpetual bonds, to an unconditional right to a stated fixed sum on a specified date or dates.

Branch. Part of an enterprise situated in another location, for example, in another country, than the main body of the enterprise which is not a separate legal entity.

Capital finance account. Account relating to the capital transactions, that is accumulation and its financing, of the resident institutional units.

Capital formation. See Gross capital formation and Net fixed capital formation.

Capital gain or loss. Increases or decreases in the value of the assets of institutional and other units which are due to changes in market prices, discovery of new mineral deposits and other natural resources, natural growth of timber, depletion of mineral deposits, unforeseen obsolescence, theft, major catastrophes and other events except the purchase and sale of assets, the normal wear and tear, accidental damage and losses in tangible assets, the writing off of bad debts and other flows which are recorded in the transaction accounts.

Capital repairs. Major alterations in, or additions to, machinery, equipment, structures or other fixed assets which significantly extend their expected life-time of use, productivity, or the character or volume of the services they render.

Capital transactions account. The standard account relating to the transactions of the nation with the rest of the world in respect of financial assets and liabilities and other sources of the finance of gross accumulation.

Capital transfers. Unrequited transfers which are designed to finance the gross capital formation, other forms of accumulation, or long-term expenditure of the recipient, which are made out of the wealth or saving of the donor, or which are non-recurrent (quite irregular) for either party to the transaction.

Cash basis. The item, for example, outlay, income, other receipt, is recorded as of the time at which the payment is actually made or received.

Central bank. The publicly owned and/or controlled bank which is a monetary authority of a country, that is, issues the currency, not infrequently holds and manages the international reserves, and has liabilities in the form of demand deposits of other banks and often of the government of the country.

Central government. All departments, offices, establishments and other bodies classified under general government, which are agencies or instrument of the central authority of a country, except separately organized social security funds irrespective of whether they are covered in, or financed through, ordinary or extraordinary budgets, or extra-budgetary funds.

C.i.f. value. The value in the market at the customs frontier of a country of her imports of merchandise, other goods, etc. including all charges for transporting and insuring the goods from the country of export to the given country but excluding the cost of unloading from the ship, aircraft, etc unless it is borne by the carrier.

Commodities. Goods and services normally intended for sale on the market at a price that is designed to cover their cost of production. Includes all goods and services produced by industries, all imported goods and services except direct purchases abroad by government and households, and that part of the gross output of producers of government services and of private non-profit services to households which is sold on the conditions characteristic of sales of commodities.

Commodity accounts. Accounts relating to the supply of commodities from domestic production and imports and their disposition to intermediate and final uses.

Commodity taxes, net. Preferably, indirect taxes less subsidies, each of which are proportional to the quantity, or the value, of commodities produced or sold. At least, indirect taxes less subsidies, each of which differ from one disposition to another of a commodity or from one commodity to another of the same class.

Compensation of employees. All payments by resident producers of wages and salaries to their employees, in kind and in cash, and of contributions, paid or imputed, in respect of their employees to social security schemes and to private pension, family allowance, casualty insurance, life insurance and similar schemes.

Competitive imports. Imports of goods and services which are also produced in the importing country.

Complementary imports. Imports of goods and services which are not produced in the importing country.

Compulsory fees. Payments by households to the public authorities for services the primary purpose of which is to serve as an instrument of government policy and which are obligatory and unavoidable in the only circumstances in which they are useful, such as fees for passports, driving tests, dog licences, airport duties and fees for court services.

Consumer durables. Goods acquired by households which have an expected life-time of considerably more than one year and a relatively high value, such as motor cars, refrigerators and washing machines. Dwellings are excluded since they are classed as the fixed assets of an industry.

Consumer semi-durables. Goods acquired by household which have an expected life-time of use of one year or somewhat more or are not of relatively great value, such as clothing, linens, base-metal cutlery, garden tools, baskets, custom jewellery, electric toasters, hot plates.

Consumption of fixed capital. The value, at current replacement cost, of the reproducible fixed assets except the roads, dams and other forms of construction other than structures of the producers of government services used up during a period of account as a result of normal wear and tear, foreseen obsolescence and the normal rate of accidental damage. Unforeseen obsolescence, main catastrophes and the depletion of natural resources are not taken into account.

Contributions to social security, pension and similar schemes. Payments to social security, pension and similar schemes, considered to be made in their entirety by employees

Corporate enterprises. Corporations, joint stock companies, co-operatives, limited liability partnerships and other financial and non-financial enterprises which by virtue of legislation, administrative regulations or registration, are recognized as business entities independent of their owners.

Corporate equity securities. Instruments and records acknowledging claims to the residual value, that is the net worth, and residual income of incorporated enterprises, after the claims of all creditors have been met.

Current accounts. Accounts relating to the production and the supply and disposition of goods and services, and the receipt and disbursement of incomes.

Current repairs and maintenance. Outlays which make good breakages in fixed assets and keep them in good working order. Includes outlays on new parts and attachments of fixed assets which have an expected life of use of one year or somewhat more but which are short-lived relative to the fixed asset itself, or are of relatively small value.

Current transactions account. The standard account relating to the transactions of the nation with the rest of the world in respect of current receipts and disbursements.

Current transfers. Transfers of income between transactors. The transfers are made from the current income of the payer and add to the current income of the recipient for such purposes as consumption expenditure.

Direct purchases abroad by producers of government services. Purchases, less sales of goods and services in a foreign country for the extra-territorial agencies of, and other direct uses abroad by, the government of a country. Included is the excess of the contributions of a country to the joint military installations and other specific common defence projects over the expenditures on goods and services for these purposes in the domestic territory of the given country.

Direct purchases abroad by resident households. Expenditures abroad by resident persons of a country, such as tourists, ships' crews, border and seasonal workers and diplomatic and military personnel, on goods and services, including local transportation. Excludes the expenditures of travelling resident businessmen, government officials, crews, etc. which are reimbursable by their employer or are a business expense.

Direct purchases in the domestic market, extra-territorial bodies. Purchases less sales of goods and services by extra-territorial civilian or military bodies stationed in a country. Included is the excess of the expenditures of joint military installations and other specific common defence projects on goods and services in the domestic territory of the given country over her contributions to the outlays on these defence arrangements. These purchases are included in the exports of miscellaneous commodities of the country where the purchases are made.

Direct purchases in the domestic market by non-resident households. Expenditures in the domestic market of a country by non-resident persons such as are mentioned above, on goods and services. Excludes the expenditures of travelling non-resident businessmen, government officials, etc. which are reimbursable by their employer or are a business expense.

Direct taxes on income. Levies by public authorities at regular intervals, except social security contributions, on income from employment, property, capital gains or any other source. Real estate and land taxes are included if they are merely an administrative procedure for the assessment and collection of income tax.

Direct taxes n.e.c. Levies by public authorities at regular intervals on the financial assets and the net, or total, worth of enterprises, private non-profit institutions and households; and on the possession, or use, of goods by individuals and households.

Disposable income. The income of the nation, institutional units, etc. from all sources after deduction of all current transfers paid. It is equivalent to the national income at market prices *plus* net current transfers other than property and entrepreneurial income received.

Disposable income and its appropriation account. The standard consolidated income and outlay account for the nation.

Dividends. Income payable and receivable in respect of corporate equity securities and other forms of participation in equity of corporate enterprises and co-operatives.

Domestic factor incomes. The compensation of employees and operating surplus originating in domestic production; in other words, included in the value added of resident producers.

Domestic product. See Gross domestic product.

Domestic product and expenditure account. The standard consolidated production, consumption expenditure and capital formation account for the nation.

Domestic services of households, account. Account relating to the production of domestic services rendered by one household to another.

Domestic territory. In addition to the territory lying within the political frontiers of a country, excluding her overseas territories and possessions, (i) ships and aircraft operated by residents of the country entirely, or primarily, between two or more countries; (ii) fishing vessels, oil and natural gas rigs, and floating platforms operated by residents of the country wholly, or mainly, in international waters or engaged in extraction in areas in which the country has the exclusive right of exploitation by virtue of international agreements or pronouncements; and (iii) the embassies, consulates and military establishments of the country located abroad.

Durable consumer goods. See Consumer durables.

Employees. All persons engaged in the activities of business units, government bodies and private non-profit institutions, except the proprietors and their unpaid family members in the case of unincorporated businesses. Members of the armed forces are included, irrespective of the duration and type of their service.

Employers' contributions to private pension, family allowance, health and other casualty insurance, life insurance and similar schemes. Paid and imputed contributions by employers on the account of their employees to private funds, reserves or other schemes in respect of pensions, family allowances, lay-off and severance pay, maternity leaves,

workmen's compensation, health and other casualty insurance, life insurance and the like.

Employers' contributions to social security schemes. Contributions of employers on the account of their employees to social security schemes classed as government services.

Enterprise-type unit. Statistical unit in respect of corporate and quasi-corporate enterprises which, narrowly defined, is the legal entity in the case of corporate enterprises and the smallest unit with complete profit-and-loss and balance-sheet accounts in the case of quasi-corporations and which, broadly defined, is the family of incorporated and/or quasi-corporate enterprises which, as a result of ties of ownership, are controlled and managed by the same interests. An intermediate statistical unit between these two extremes is the family of corporate and/or quasi-corporate enterprises for which consolidated profit-and-loss and balance-sheet statements are available.

Entrepreneurial income. The income of an enterprise from production (operations) and property, including the ownership of other enterprises, *less* the property income payable by the enterprise except dividends.

Establishment. In concept, the combination of activities and resources directed by a single owning or controlling entity towards the production of the most homogeneous collection of goods and services, usually in a single location but sometimes over a wider geographic area, for which separate data can be compiled in respect of the production and all the intermediate inputs, labour and capital resources employed for this purpose, directly and in support of, or ancillary to, the production. In national accounting for a country as a whole, it is the homogeneity in respect of the output of goods and services which should be stressed, and not proximity in location.

Exports of goods and services. In concept, all transfers of the ownership of goods from residents of a country to non-residents and services provided by resident producers of the country to non-residents. In practice, the exports of goods may consist of the outward movement of merchandise across the customs frontier of a country and of other goods across the boundaries of her domestic territory, including the direct purchases in the country of extra-territorial organizations and non-resident persons. Since the imports of merchandise into a country are to be valued at c.i.f., the exports of services of the country should also include the charges in respect of the imports for the transport and insurance services provided by resident producers of the given country.

External transactions accounts. Accounts setting out the current and capital transactions of the nation with the rest of the world.

Factor cost. See Factor values.

Factor incomes. Compensation of employees by, and operating surplus of, producers. The net domestic product is often valued at factor incomes.

Factor values, approximate. In the case of the gross output of commodities, industries, etc. producers' values *less* the indirect taxes, net, in respect of the commodities, industries, etc.; or the sum of the primary inputs and the purchasers' value of the intermediate inputs. In the case of the value added of industries, the gross output of the industries valued at approximate factor values *less* the purchasers' value of the intermediate inputs into the industries.

Factor values, true. In the case of gross output of commodities, industries, etc. the producers' value *less* the sum

of the indirect taxes, net, in respect of the commodities, industries, etc and the direct and indirect intermediate inputs into the production of the commodities, industries, etc; or the accumulation of the primary inputs, that is compensation of employees. consumption of fixed capital and operating surplus, in respect of the commodities, industries, etc and the direct and indirect intermediate inputs. The value added of industries at true factor values is equal to the true factor value of their gross output less the true factor value of their intermediate inputs (consumption).

Final consumption expenditure accounts. Accounts relating to the final consumption of goods and services by resident households, government services and private non-profit services to households

Final consumption expenditure of government services. The value of goods and services produced for their own use on current account, that is the value of their gross output less the sum of the value of their commodity and non-commodity sales and the value of their own-account capital formation which is not segregated as an industry. The value of their gross output is equal to the sum of the value of their intermediate consumption of goods and services, compensation of employees, consumption of fixed capital and indirect taxes.

Final consumption expenditure of households. The outlays of resident households on new durable and non-durable goods and services less their net sales of second-hand goods, scraps and wastes.

Final consumption expenditure of households in the domestic market. The outlays which resident and non-resident households make in the domestic territory of a country, on new goods and services less their net sales there of second-hand goods, scraps and wastes.

Final consumption expenditure of private non-profit services to households. The value of goods and services produced for own use on current account, that is the value of their gross output reduced by the sum of the value of their commodity and non-commodity sales. The value of their gross output is equal to the sum of the value of their intermediate consumption of goods and services, compensation of employees, consumption of fixed capital and indirect taxes.

Final use of goods and services. The disposition of goods and services to final consumption expenditure, gross fixed capital formation, increases in stocks and exports

Financial assets or liabilities. The gold, currency and other claims on (obligations of) other parties owned by an economic agent; or the claims on (obligations of) an economic agent owned by other parties.

Financial claims. See Financial assets or liabilities.

Financial institutions. Enterprises which are primarily engaged in financial transactions in the market, consisting of both incurring liabilities and acquiring financial assets

Fixed assets. Durable goods except land, mineral deposits, timber tracts and similar non-reproducible tangible assets, employed in production by resident industries, producers of government services for civilian purposes, and producers of private non-profit services to households, including owner-occupied dwellings, permanent family dwellings for military personnel, breeding stock, draught animals and dairy cattle

Fixed capital. See Fixed assets.

Fixed capital formation. See Gross fixed capital formation and Net fixed capital formation.

Flow-of-fund table. A table showing transactions in financial claims between institutional units

Flows. Economic transactions during a period of account.

F.o.b. value. The value in the market at the customs frontier of a country of her exports of merchandise and other goods, including all costs of transporting the goods to the customs frontier, export duties and the cost of loading the goods on to the carrier unless the latter cost is borne by the carrier

Foreign branch. Branch of a non-resident parent enterprise which is treated as a resident enterprise of the country of location.

General government. All departments, offices, organizations and other bodies which are agencies or instruments of the central, state or local public authorities, whether accounted for or financed in, ordinary or extraordinary budgets or extra-budgetary funds. Included are non-profit institutions which while not an integral part of a government, are wholly, or mainly, financed and controlled by the public authorities or primarily serve government bodies; all social security arrangements for large sections of the population imposed, controlled or financed by a government; and government enterprises which mainly produce goods and services for government itself or primarily sell goods and services to the public on a small scale. Excluded are other government enterprises and public corporations

Goods and services. Commodities and other goods and services

Government consumption expenditure. See Final consumption expenditure of government services

Government enterprises. Unincorporated public enterprises, that is enterprises owned and controlled by the public authorities which do not hold or manage financial assets and liabilities apart from their working balances and business accounts payable and receivable

Gross accumulation. The sum of gross capital formation, net purchases of land, net purchases of intangible assets except financial claims and net lending. Also see Accumulation

Gross capital formation. Gross fixed capital formation and increase in stocks

Gross domestic product at purchasers' values or producers' values. The producers' value of the gross outputs of resident producers, including the distributive-trades and transport, less the purchasers' values of their intermediate consumption (in other words, the producers' values of the value added of the resident producers) plus import duties. Also equal to the total of the gross expenditure on the final uses of the domestic supply of goods and services valued at purchasers' values less imports of goods and services valued c.i.f.; or the sum of the compensation of employees, consumption of fixed capital, operating surplus and indirect taxes, net, of resident producers and import duties.

Gross fixed capital formation. The outlays (purchases and own-account production) of industries, producers of government services and producers of private non-profit services to households, on additions of new durable goods (commodities) to their stocks of fixed assets less their net sales of similar second-hand and scrapped goods. Excluded are the outlays of government services on durable goods for military use. Included are acquisitions of reproducible and non-reproducible durable goods, except land, mineral deposits, timber tracts and the like, for civilian use; work-in-progress on construction projects; capital repairs; outlays on the improvement of land and on the development and extension

of timber tracts, plantations, vineyards, etc which take considerably more than a year to become productive, until they become productive; the acquisition of breeding stock, draught animals, dairy cattle and the like; and the transfer costs in connexion with purchases and sales of land, mineral deposits, timber tracts, etc.

Gross input The sum of intermediate consumption, primary inputs and indirect taxes, net; it is equal in value to gross output valued at producers' values

Gross output of industries In general, the value in the market of all the goods and services (commodities) produced during a period of account, including work-in-progress and products for use on own account. Valuation is usually at producers' values, that is the market value at the establishment of the producer, or at approximate basic values, that is producers' values less the relevant commodity taxes, net. The gross output is equivalent to the gross margins, that is the differences between the sales and purchase values of the goods sold, in the case of the distributive trades; the insurance service charge in the case of casualty and life insurance; and the sum of the actual and imputed service charges in the case of banks and similar financial institutions.

Gross output of producers of other goods and services. The gross output of the producers of government services and private non-profit services to households is equivalent to the purchasers' values of the intermediate consumption compensation of employees, consumption of fixed capital and indirect taxes of these producers. The gross output of domestic services rendered by households consists of the compensation of employees only.

Households as consumer Individuals in their capacity as consumers, including fraternal groups, social clubs and similar bodies with the equivalent of less than two full-time employees.

Households, including private non-financial unincorporated enterprises. Resident households, all unincorporated enterprises primarily engaged in non-financial activities which are owned and/or controlled by resident individuals and are not classified as quasi-corporate enterprises, and fraternal groups, social clubs and similar bodies with the equivalent of less than two full-time employees.

Households as a statistical unit. Private and institutional households are distinguished. Private households may consist of a single individual who makes his own housekeeping arrangements or a group of individuals who live together and pool at least some of their income in order to provide themselves with housing, food and other essentials of living (housekeeping concept). An alternative to the housekeeping concept is the family concept — a group of individuals related by blood, marriage or adoption, who satisfy the preceding conditions. Institutional households consist of a group of persons living together, sharing their meals, and bound by a common public or general objective and/or ruled and controlled by an authority outside the group.

Imports of goods and services. In concept, all transfers of the ownership of goods from non-residents of a country to residents and services provided by non-resident producers to residents of the country. In practice, the imports of goods may consist of the inward movement of merchandise across the custom's frontier of a country and of other goods across the boundaries of her domestic territory, including the direct purchases of the government services and residents of the country abroad. Since imports of merchandise are valued c.i.f., imports also include the charges of resident

producers for transport and insurance services in respect of these imports.

Imputed service charge for casualty insurance. The difference between premiums received and claims paid in respect of a given form of casualty insurance.

Imputed service charge for life insurance. In the case of a given form of life insurance, the excess of premiums received over the sum of claims paid and additions to the actuarial reserves, excluding interest on these reserves accruing to policy holders.

Imputed service charge of pension funds. The administrative expenses of the funds.

Income and outlay accounts. Accounts showing the receipt and disbursement of incomes by resident institutional units.

Increase in stocks. In principle, the market value at the owning establishment of the physical change during a period of account in stocks of materials, supplies, work-in-progress except on construction projects, finished products, livestock raised for slaughter and merchandise held by resident industries, and in stocks of strategic materials and emergency stocks of important products held by government services. In practice, the closest feasible approximation may be the difference between the levels of these stocks at the beginning and end of the period, both valued at approximate average prices ruling over the period, perhaps valuing commodities processed internally at explicit costs.

Indirect taxes. Taxes assessed on producers in respect of the production, sale, purchase or use of goods and services, which they charge to the expenses of production. Also included are import duties and the operating surplus, reduced by the normal margin of profits of business units, of fiscal and similar monopolies of government.

Industries. All resident establishments and similar units, public as well as private, which produce goods and services for sale at a price which is normally intended to cover their cost of production; government units engaged in selling goods and services to the public which are characteristically commodities though as a matter of policy, the prices set for the items do not approximate the costs of production; activities such as ancillary government enterprises, owner-occupied dwellings, subsistence farming or community construction projects, which produce similar goods or services and use similar processes and resources as the typical industries though they do not produce for the market; resident units which both acquire financial assets and incur liabilities in the market; and private non-profit bodies which mainly serve enterprises and are entirely, or mainly, financed or controlled by enterprises.

Institutional sectors. Classification of transactors into the sectors used for the income and outlay, capital finance and balance sheet accounts.

Insurance companies. Entities which mainly engage in providing life, accident, sickness, fire, or other casualty insurance, including separately organized schemes established by fraternal, friendly and other societies, by banks or by the public authorities in order to provide insurance on a voluntary basis.

Insurance service charge. See Imputed service charge for casualty insurance and Imputed service charge for life insurance.

Intangible assets. Financial assets, leases, mineral concessions, patents, copyrights and similar assets not matched by liabilities.

Interest. Actual and imputed income payable or receivable in respect of bank and other deposits, bills, bonds and other loans, and equities in life insurance actuarial reserves and in pension funds

Intermediate consumption of industries. Non-durable goods and services (commodities) used up in production, including repair and maintenance of the capital stock, research, development and prospecting, indirect outlays on financing capital formation, such as floatation costs for loans, and transfer costs involved in purchases and sales of land, intangible assets and financial claims

Intermediate consumption of producers of government services. Acquisitions (purchases and transfers in kind) of new goods and services (mainly commodities) on current account, less net sales of similar second-hand goods and scraps and wastes therefrom, including durable goods acquired primarily for military purposes

Intermediate consumption of producers of private non-profit services to households. Acquisitions (purchases and transfers in kind) of new non-durable goods and services (commodities) less net sales of similar second-hand goods and scraps and wastes therefrom. Excluded are second-hand goods received for distribution to households without renovation or alteration

Intermediate input. See Intermediate consumption of industries, of producers of government services and of producers of private non-profit services to households

Land. Land and embodied improvements, mineral and other sub-soil deposits, forests, timber tracts, inland waters and fisheries but not structures or other construction works located on the land

Liabilities. See Financial assets or liabilities

Loan. A direct transaction between borrower and lender, where the lender receives no security evidencing the transaction, or a non-negotiable document. Included are transactions which are essentially loans, though the debtors may issue a security, for example, bonds specifically issued by the government to the central bank as security for a note, liens and mortgages created as security for a loan

Long-term bills and bonds. Bills and bonds with original maturity of one year or more

Monetary institutions. The central bank and all other banks which have liabilities in the form of deposits payable on demand and transferable by cheque or otherwise usable in making payments

National income at market prices. The sum of compensation of resident employees, the excess of the property and entrepreneurial income receivable by resident economic agents over the property and entrepreneurial income payable by them, and indirect taxes reduced by subsidies

Net acquisitions of financial assets. The value of acquisitions of financial assets less the dispositions of financial assets by transactors

Net casualty insurance premiums. Total premiums less the imputed service charge in respect of the casualty insurance

Net equity of households on life insurance reserves. See Actuarial reserves in respect of life insurance

Net equity of households on pension funds. The net worth of the pension fund

Net fixed capital formation. Gross fixed capital formation less consumption of fixed capital

Net incurrence of liabilities. The incurrences of liabilities less the redemption of these liabilities by transactors

Net indirect taxes. Indirect taxes less subsidies

Net lending. The excess of net acquisitions of financial assets by transactors over their net incurrence of liabilities

Net purchases of intangible assets except claims. The excess of purchases of intangible assets not matched by liabilities reduced by the included commissions, legal fees and other transfer costs, over the proceeds of their sales

Net worth. The excess of the real and financial assets owned by an institutional unit over its liabilities to parties other than owners of the equity of the institutional unit

Non-durable goods. Goods with an expected life-time of less than one year

Non-financial enterprises, corporate and quasi-corporate. Corporate and quasi-corporate enterprises mainly engaged in activities other than providing financial and insurance services

Operating surplus. Gross output at producers' values less the sum of intermediate consumption, compensation of employees, consumption of fixed capital and indirect taxes reduced by subsidies

Other deposits. All claims other than currency and transferable deposits, on the monetary system, other financial institutions and government that are represented by evidence of deposit

Other financial institutions. Entities other than monetary institutions or life insurance companies and pension funds which primarily engage in financial transactions on the market, consisting of both incurring liabilities and acquiring financial claims on others

Other goods and services. Goods and services which are not normally sold in the market at a price intended to cover their cost of production. These items consist of most of the gross output of producers of government services and non-profit services to households, the domestic services rendered by one household to another, and direct purchases abroad by households and government services

Other goods and services account. Account relating to the supply and disposition of other goods and services

Other monetary institutions. All banks except the central bank, which have liabilities in the form of deposits payable on demand and transferable by cheque or otherwise used in making payments

Payable-receivable basis. An item is payable at the time the payer has a contractual or legal obligation to pay it; or, in the case of unrequited transfers other than taxes, fines, etc. assessed by the public authorities, the payment is made. An item is receivable at the time the recipient has a contractual or legal right to receive it, or, in the case of unrequited transfers other than taxes, fines, etc. assessed by the public authorities, the item is received

Pension funds. Separately organized schemes established for purposes of insuring incomes on retirement for specific groups of employees, which are not part of government social security arrangements and engage in financial transactions in the capital market

Primary inputs. The sum of compensation of employees, operating surplus and consumption of fixed capital

Private consumption expenditure. Final consumption expenditure of households and private non-profit institutions serving households

Private enterprises. Enterprises in which private parties own all, or a majority, of the shares, other capital participation or equity and which private parties control

Private non-profit institutions serving enterprises. Private non-profit bodies which mainly serve enterprises and are not wholly, or mainly, financed or controlled by enterprises

Private non-profit institutions serving households. Institutions not entirely, or mainly, financed and controlled by organs of general government, which primarily furnish social and community services to households free of charge, or at sales prices which do not fully cover their cost of production and which employ the equivalent of two or more full-time employees

Producers Industries. Producers of government services, producers of non-profit services to households and domestic services rendered by one household to another

Producers of government services. All departments, establishments and other bodies of central, state and local governments which engage in such activities as administration, defence, health, educational and social services, and promotion of economic growth whether accounted for, or financed in ordinary or extra-ordinary budgets or extra-budgetary funds. Includes social security schemes in respect of large sections of the community imposed, controlled or financed by government, non-profit institutions entirely, or mainly financed and controlled by general government or mainly serving general government, and embassies, consulates and military establishments of a country located abroad.

Producers of private non-profit services to households. Bodies which mainly furnish social and community services to households free of charge, or at sales prices which are not intended to cover fully the costs of producing the services, and which are not entirely, or mainly, financed and controlled by the public authorities. Neighbourhood, sport, social and similar clubs which employ less than the equivalent of two or more employees are excluded. Also excluded are the subsidiary commercial activities of private non-profit institutions, such as eating and drinking facilities, publishing and selling postcards and books, if the scale of these activities is relatively large, owning and letting dwellings and owning and providing dwellings to staff.

Producers' values. The value in the market of the gross output of commodities, industries, etc. at the establishment of the producers; or the sum of the values of direct inputs, intermediate inputs at purchasers' values and indirect taxes less subsidies in respect of the commodities, industries, etc. The value added of industries at producers' values is equal to gross output of the industries at producers' values less the purchasers' values of the intermediate consumption in respect of the gross output.

Production accounts. Commodity and activity accounts.

Property income. Actual and imputed transfers of income accruing from the ownership of financial assets, agricultural and other land, patents, copyrights, concessions and similar intangible assets.

Proprietors' net addition to the accumulation of quasi-corporate enterprises. The net additions which the owners make to the funds and other resources of quasi-corporate enterprises for purposes of the capital accumulation of these enterprises.

Public corporations. Corporations wholly, or mainly, owned and/or controlled by the public authorities. All public financial institutions are treated as corporations.

Public enterprises. Government enterprises and public corporations. In either case organizations which are entirely, or mainly, owned and/or controlled by the public authorities consisting of establishments which by virtue of their kind of

activities, technology and mode of operation are classed as industries.

Purchasers' values. The cost of goods and services in the market to the point of delivery to the purchaser. Equals producers' values plus the trade and transport margins appropriate to the purchaser in question

Quasi-corporate enterprises. Relatively large ordinary partnerships, sole proprietorships and government enterprises which have complete profit-and-loss statements and complete balance sheet accounts on the financial assets and liabilities, as well as the real assets, involved in the business. All unincorporated enterprises which are financial intermediaries and all unincorporated enterprises owned by non-residents are treated as quasi-corporations.

Rent. Net rents for the use of land for agricultural and other purposes are included in income from property. Rents for buildings, machinery, equipment, etc. are treated as payments for a commodity-type service

Requited current transfers. Transfers of income which involve a *quid pro quo* (are contractual), for example, income from property and entrepreneurship, premiums reduced by service charges and claims in respect of casualty insurance, and payments and receipts accruing from uninsured injuries or damages, or breaches of contract.

Resident government bodies. Central, state and local government bodies of a country located in its domestic territory, and the embassies, consulates and military establishments of a country located abroad. International organizations located in the territory of a country are considered non-resident.

Resident households and individuals. All individuals living within the domestic territory of a country, except foreign visitors in the country for less than one year for purposes such as recreation, holidays, medical care, study tours, conferences, sport events; crew members of foreign vessels on lay-over; commercial travellers and seasonal workers in the country for less than one year; official, diplomatic and consular representatives and members of the armed forces of a foreign country; and employees of international bodies who are not citizens of the country and are on a mission of less than one year in duration.

Resident industries, other producers and similar units. Units engaged in production on the domestic territory of a country, including branches of foreign enterprises.

Resident non-profit institutions. Non-profit institutions located in the domestic territory of a country.

Revaluation account. An account on the revaluations and other entries which are required to link the entries in the balance sheet account of institutional units at the end of a period of account with the entries in their balance sheet account at the beginning of the period of account and the transactions on their capital finance account during the period of account.

Royalty. Payment for concessions, the use of patented or copyrighted materials, and similar rights; treated as income from property.

Saving. The difference between the current receipts and the current disbursements; the balancing item on the income and outlay account.

Short-term bills and bonds. Bills and bonds with original maturity of less than one year.

Social assistance grants. Cash grants to individuals and households, by public authorities, private non-profit institutions and corporate and quasi-corporate enterprises, except social security benefits and unfunded employee welfare benefits.

Social security benefits. Payments made to individuals under social security schemes, usually out of a special fund.

Social security funds. Schemes imposed, controlled or financed by the public authorities for purposes of providing social security benefits for the community, or large sections of the community, which are separately organized from the other activities of the public authorities and hold their assets and liabilities separately from them

State and local government. All departments, offices, establishments and other bodies included under general government which are agencies or instruments of state, provincial, district, municipal or other organs of government except the central authority.

Statistical units. The units of observation and classification used for each category of transactor.

Subsidiary. An incorporated enterprise, the majority of the equity of which is owned by another enterprise. The term is used in this report in respect of resident incorporated enterprises which are subsidiaries of foreign units or foreign subsidiaries of resident units.

Subsidies. All grants on current account made by government to private industries and public corporations; and grants made by the public authorities to government enterprises in compensation for operating losses when these losses are clearly the consequence of the policy of the government to maintain prices at a level below costs of production

Surplus of the nation on current transactions. The excess of receipts on current account over disbursements on current account in respect of the transactions of a country with the rest of the world.

Tangible assets. Ownership of fixed assets, stocks of non-durable goods, land, mineral deposits, timber tracts and the like.

Trade and transport margins. The value of the transport and distributive-trade services provided in delivering commodities from the establishments of the producers to the end-use purchasers. The sum of the producers' values of commodities and the trade and transport margins is equal to the purchasers' value of commodities.

Trade credit and advances. Credit extended in respect of sale (purchase) of goods and services; and advances for the production of goods and services in progress or to be undertaken.

Transactors. The resident economic agents of the system.

Transactor units. See Statistical units.

Transfer costs. Dealers' margins in respect of second-hand goods, scrap, land, etc., transport and installation charges in respect of second-hand goods; legal fees in respect of transactions in land, old buildings, leases, brokers' commissions in respect of transactions in land, second-hand buildings, financial claims and other intangible assets; and similar expenditures.

Transferable deposits. Deposits that are exchangeable on demand at par and without penalty or restrictions and that are transferable by cheque, or are otherwise commonly used to make payments.

Transfers. See Current transfers and Capital transfers.

Transfers in kind. Transfers of food, clothing, military equipment, etc. from one government to another; gifts in kind to resident and non-resident private non-profit institutions serving households; migrants' transfers of household and personal goods; and gifts in kind between resident and non-resident households

Unfunded employee welfare benefits. Pensions, family allowances, severance and lay-off pay, maternity leave pay, workmen's and disability compensation, reimbursements for medical expenses and other casualties which employers pay directly to their former or present employees without having special funds, reserves or insurance for these purposes

Unfunded employee welfare contributions imputed. The imputed contributions which are included in compensation of employees in respect of the obligations of employers to pay directly to his employees pensions, family allowances, severance and lay-off pay and other employee welfare benefits where the employers do not have special funds, reserves, insurance for these purposes

Unincorporated enterprises. Individual proprietorships and partnerships which are not treated as quasi-corporate enterprises and which are included in the same institutional sector as their owner(s).

Unrequited current transfers. Transfers of income which do not involve a *quid pro quo* and which are non-contractual in character, for example, direct taxes, social security benefits and contributions, social assistance grants, grants between governments to finance the military or other consumption expenditure or budgetary deficit of a government, and grants to finance the current operating expenses of private non-profit institutions.

Value added at factor values. See Factor values, approximate and true.

Value added at producers' values. See Producers' values

Wages and salaries. All payments which employees receive in respect of their work, whether in cash or in kind, and before deduction for contributions to social security, withholding taxes and the like. Includes military pay, commissions, tips, bonuses, cost-of-living and dearness allowances, fees to ministers of religion and members of boards of directors, and the cost to the employers of food, lodging, ordinary clothing, etc. which they provide free of charge, or at a reduced cost, to their employees

Wages and salaries in kind. Goods and services acquired or produced by industries, producers of government services and producers of private non-profit services to households which are provided to their employees free of charge, or at markedly reduced cost, and are of clear and direct benefit to the employees

Withdrawals from entrepreneurial income of quasi-corporate enterprises. Actual payments made to the proprietors out of the operating and property income of quasi-corporate enterprises. The withdrawals may be negative, that is the proprietors may provide funds to the enterprise to compensate for operating losses.

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