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NATIONAL ACCOUNTS AND BALANCES

LINKS BETWEEN THE SYSTEM OF NATIONAL ACCOUNTS (SNA) AND THE
SYSTEM OF BALANCES OF THE NATIONAL ECONOMY (MPS)

Progress report on SNA/MPS comparisons

Report of the Secretary-General

SUMMARY

The present report contains a general description of the present status of
work on SNA/MPS comparisons and progress achieved since the twentieth session of
the Commission (paras. 2-10). Most of the report is devoted to the progress
achieved in further elaboration and clarification of the conceptual framework of
the intersystem comparisons and to specific suggestions with regard to further
steps needed (paras. 11-70). Special attention is given to proposed improvements
in the matrices and conversion tables, which constitute a core of the conceptual
framework. The report includes proposals for future work (paras. 71-77) and points
for discussion by the Commission (para. 78).

CONTENTS

INTRODUCTION

1.   Work on links between the revised System of National Accounts (SNA) and the improved version of the System of Balances of the National Economy (MPS) 1/ has been in progress since the early 1960s. At the early stages of this work the main efforts were devoted to analysis of concepts, definitions and classifications underlying these two systems of national accounting and, in particular, the production, consumption and capital formation accounts and balances which contain the aggregates that are most suitable for international comparison. Conceptual work was also carried out at that time on the common concept of the total consumption of the population as well as on terminology. A special glossary of major MPS/SNA terms was issued by the Conference of European Statisticians (WG.22/GR.1/7, Add.1) at the end of the 1960s. The findings of the work at this stage provided a good basis for further study, the ultimate objective of which was to develop a coherent conceptual framework for intersystem comparisons, ensuring consistent procedures in the conversion of the SNA categories into their MPS counterparts and vice versa. The principles of this framework are presented in the publication entitled Comparisons of the System of National Accounts and the System of Balances of the National Economy, Part One, Conceptual Relationships, 2/ published in 1977.

2.   In the 1970s the work on SNA/MPS links continued in several directions. First, efforts were made to supplement the theoretical findings described in the publication on comparisons referred to above, with numerical calculations carried out for a number of countries with both market and centrally planned economies. The results of this project, carried out by the Statistical Office, Department of International Economic and Social Affairs, United Nations Secretariat, in close co-operation with statistical offices of the participating countries, will appear in part two of that publication. The purposes of this work were many: to test the conceptual principles of linkage of the corresponding aggregates of the two systems, to accumulate experience in processing the primary data needed for intersystem comparisons, to ensure input for further work on elaboration of conceptual framework and, finally, to compile as accurately as possible estimates of GDP for countries using MPS and of net material product (NMP) for countries using SNA. One of the conclusions that has been drawn from the analysis is that the ratio between net domestic product and net material product fluctuates considerably from country to country, and therefore detailed information, preferably arranged in the form of an input/output table, is needed for comparison purposes if accurate estimates of the relationship of GDP to NMP are to be obtained.

3.   As a result of the work mentioned above, it is considered possible to start collecting data needed for intersystem comparisons on an annual basis, so that they can be published in Yearbook of National Accounts Statistics. The revised questionnaire on national accounts will contain a table designed for this purpose.

    1/ The basic publications describing these two systems of national accounting employed in countries with market and centrally planned economies are A System of National Accounts (Series F, No. 2, Rev.3) and Basic Principles of the System of Balances of the National Economy (Series F, No. 17) (United Nations publications, Sales Nos. E.69.XVII.3 and E.71.XVII.10).

    2/ United Nations publication, Sales No. E.77.XVII.6.

4.   Work also continued on developing further common aggregates of special interest. A document on total consumption of the population was considered by the Statistical Commission at its twentieth session (E/CN.3/512 and Corr.1 and 2). The Commission proposed further experimentation with statistical implementation in this area. 3/

5.   Efforts to investigate further conceptual differences between certain aggregates of the two systems continued - in particular, between capital formation flows, so that more detailed and precise adjustments could be worked out for linking purposes. A draft entitled "Comparative analysis of the SNA and MPS concepts of capital formation" has been circulated for comment.

6.   At the same time work continued on improving and elaborating the general conceptual framework of SNA/MPS comparisons set out in the publications on comparisons. 2/ Though the basic principles underlying this framework are believed to provide an adequate basis for intersystem comparisons, there are some areas in which the framework could be clarified, improved and elaborated. In particular, better co-ordination and consistency are needed among the basic components of the framework - that is, between the modified matrices of SNA and MPS, on the one hand, and the conversion tables, on the other hand, and among the various interrelated adjustments in the different conversion tables. Efforts were undertaken to improve and simplify the matrices, to clarify their role in the framework and to link them more closely with the conversion tables, in order to make the conversion procedure more precise, concise and clear. Certain inconsistencies and inaccuracies in the conversion tables were rectified and some additional adjustments (which had been overlooked before) were introduced. The conversion tables were supplemented with consistency checking rules which, as the illustrative calculations have demonstrated, can facilitate the achievement of better estimates. The present report describes progress in the work in this area. In particular, draft revised versions of the matrices and conversion tables are presented.

7.   Another aspect of work on SNA/MPS links to which the Statistical Office has started giving attention is a study of the feasibility for intersystem comparisons of the System of Indicators of Non-Material Services (SINS), developed recently by the Standing Commission on Statistics of the Council for Mutual Economic Assistance (CMEA). That system contains data on non-material activities which are not distinguised explicitly in the conventional balances of MPS and, therefore, as indicated in "Progress report on links between the System of National Accounts (SNA) and the System of Balances of the National Economy (MPS)" (E/CN.3/511), discussed by the Commission at its twentieth session, it can facilitate intersystem comparisons. However, SINS differs in some respect from the corresponding sections of SNA. In addition, it is not obvious how one should combine categories of SINS and the conventional balances of MPS to arrive at the categories of SNA. Therefore, certain work is thought to be necessary in order to clarify specifically how SINS can be adapted for intersystem comparisons. The work will be focused on the formulation of the specific steps needed, working out a complementary set of the conversion tables, using the categories distinguished in SINS. Progress in this work is reported below.

3/ Official Records of the Economic and Social Council, 1979, Supplement No. 3 (E/1979/23), para. 66.

8.   Work was also initiated on a review of national practices in compilation of the aggregates of the production, consumption and capital formation accounts and balances in the context of SNA/MPS comparisons. It is believed that the results of such a review could be useful in actual intersystem comparisons because the national accounting practices of countries with centrally planned economies and countries with market economies deviate from international recommendations. Work carried out so far includes brief descriptions of national practices in compilation of global product, intermediate consumption and net material product by the CMEA countries.

9.   As a result of the work on illustrative comparisons mentioned above, certain experience was accumulated on methods of processing the primary data needed for such an exercise, and a generalization of these methods is being prepared. In particular, special attention is given to the handling of certain items in the input/output tables, including secondary outputs, imports, import duties, subsidies and indirect taxes. The work in this area has just started, and no detailed account is given in the present report.

10.   To summarize, the purposes of this report are to review the present status of the study of SNA/MPS links, to suggest the basic directions for future elaboration of the conceptual framework of intersystem comparisons, to report progress achieved in the work since the twentieth session of the Commission and to formulate proposals with regard to future work. Special attention will be given to discussion of the proposed improvements of the matrices and conversion tables. This discussion will be preceded by a brief review of the basic approach used to construct the framework of intersystem comparisons, in order to clarify it and analyse its actual implementation.

I. DESCRIPTION OF PROJECTS IN PROGRESS

A. Further development of the conceptual framework of SNA/MPS comparisons

1. Brief review of the present framework of intersystem comparisons

11. The conceptual framework for SNA/MPS comparisons, as it is presented in Comparisons of the System of National Accounts and the System of Balances of the National Economy 2/ consists of three interrelated components:

(a) A detailed description of the differences between SNA and MPS aggregates relating to supply and disposition of goods and services and to incomes originating from production;

(b) Modified SNA and MPS matrices which display the general structure of the two systems and at the same time identify those flows or their components which are treated differently in order to show the specific adjustments needed for achieving comparability and

(c) A set of conversion tables which provide a framework for a transition from SNA categories to their MPS counterparts, and vice versa.

12. The basic adjustments shown in the conversion tables result from different definitions of the economic production boundary in the two systems. These differences are well known and need not be repeated here. A number of adjustments are also introduced in the conversion tables to take care of the difference in handling of certain items, such as business travel expenditures, outlays on cultural, recreational and medical services provided by enterprises to employees, losses of stocks etc. All adjustments are associated with differences in the concepts and definitions employed in the two systems. No attempt is made to take into account differences in institutional arrangements which may also have an impact on international comparability of national product data. 4/ Despite this shortcoming, the framework of intersystem comparisons set out in the publication on comparisons is believed to provide an adequate basis for the conversion of SNA categories into corresponding categories of MPS, and vice versa.

13. The basic principles of the framework were tested in the course of the illustrative calculations mentioned above, and their validity is not questioned. Yet, there are some areas where the framework can be clarified, improved and elaborated, including:

4/ There is no attempt made in the present report to elaborate on the impact of the differences in institutional arrangements on international comparability of national product data. That subject was discussed in detail in the article by Mach Jansen, entitled "Problems of international comparisons of national accounting aggregates between countries with different economic systems" (The Review of Income and Wealth (1973)).

(a) Achieving better co-ordination among the major components of the framework, and above all between the modified matrices and the conversion tables;

(b) Establishing a stricter consistency among interrelated adjustments in different conversion tables;

(c) Simplifying and refining the general structure of the modified matrices and clarifying their role and functions;

(d) Introducing two separate sets of conversion tables (instead of a single common set) linked with the respective matrices; one set is designed for computation of NMP for countries using SNA, and the other is to be used for calculation of GDP for countries using MPS;

(e) Introducing into the conversion tables additional adjustments and rectification of certain inconsistencies;

(f) Introducing special rules designed for checking consistency among interrelated items in the conversion tables.

14. It should be noted that one of the shortcomings of the framework is that the role of the matrices is not sufficiently clear. They are not integrated organically with the conversion tables, they are not used for identification of the specific adjustments needed for conversion nor are they used for ensuring consistency among the different conversion tables relying on different sources of information. In some cases, they include categories which are of little or no interest in the context of intersystem comparisons, and in many cases the entries introduced in the matrices do not have any impact on the conversion tables. On the other hand, in some cases they do not include categories which are important for intersystem comparisons.

15. The conversion procedure would benefit if all the adjustments distinguished in the conversion tables could first be easily identified in and then extracted from the respective matrices. In other words, the entries in the matrices referring to relevant flows should appear in the conversion tables. The latter would present a convenient framework for systematic regrouping of the entries contained in the matrices. The content of each adjustment could be more easily defined and understood, and a stricter consistency among interrelated items could be ensured.

16. One way to achieve this is to introduce two separate sets of conversion tables (instead of a single common one) - one being linked with the SNA modified matrix, and the other being linked with the MPS modified matrix. This would make it possible to define all adjustments strictly in accordance with the categories, terminology and institutional characteristics typical for each system. In common conversion tables 5/ certain adjustments may look logical when regarded

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    5/ A common conversion table is one used both for calculation of GDP for countries using MPS and for calculation of NMP for countries using SNA.

from, for instance, the SNA side but may seem ambiguous when looked at from the MPS side. For example, it is understandable when it is suggested that the cost of services provided by private non-profit bodies be deducted from the SNA categories of final demand, but to require the addition of the same item for countries using MPS may not make sense at all, because the category of non-profit bodies is not distinguished in MPS nor does it exist in reality in countries with centrally planned economies. Another example in this area relates to the SNA category of final consumption financed by Governments but allocated to households when the latter are allowed to choose the units providing services. While it is easy to understand why it is proposed that this item be subtracted from the SNA categories of final demand, it is difficult to interpret the addition of such an item for countries using MPS, because no counterpart of this category exists. A last example relates to the handling of transfer costs on purchases of land, mineral deposits etc. While from the SNA side the subtraction of those costs from GDP is a clear step needed to derive NMP, the opposite move from the MPS side is confusing, because in countries with centrally planned economies such items as land, mineral deposits etc. cannot be sold.

17. Establishing closer links between the modified matrices and the conversion tables will make it possible to rectify certain inconsistencies and inaccuracies in Comparisons of the System of National Accounts and the System of Balances of the National Economy, Part I, Conceptional Relationships. 6/ For example, it is not clear there whether a distinction is made between expenditures on cultural services etc. to employees in the material sphere, on the one hand, and the material part of those expenditures in both spheres of the economy, on the other. Thus, while in table 5.1, relying on value-added data, these expenditures are correctly added to operating surplus in the SNA sense to arrive at the primary income of enterprises, no corresponding adjustments are provided with regard to intermediate input in table 5.3, relying on gross output and intermediate consumption data. It is not clear, furthermore, that the adjustment relating to this item in table 5.2 (relying on final demand data) really refers to the material part of these expenditures in both spheres. Another example of inconsistency relates to adjustments associated with the consumption of fixed capital. In table 5.1 consumption of fixed capital is correctly deducted from gross domestic product to arrive at a net basis, but in table 5.2 the similar adjustment is wrongly restricted to consumption of fixed assets employed in the material sphere. In table 5.3 losses of stocks are added to intermediate consumption in the MPS sense to derive the corresponding category of SNA, but at the same time they are added among other things to primary incomes of enterprises in the MPS sense to arrive at operating surplus in the SNA sense, an inconsistent treatment.

18. Some simplification and improvement in the structure of the modified matrices would be expedient, including further aggregation of certain sections which are of less interest in the context of intersystem comparisons; for example, sections relating to redistribution of income, capital finance accounts and the rest of the world accounts. Certain subdivisions can be omitted from the income and outlay

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6/ United Nations publication, Sales No. E.77.XVII.6.

accounts - for example, the breakdown of expenditures on cultural and recreational services etc. into components of cost which is also contained in the production account section of the matrix. On the other hand, a number of additional adjustments are needed in the conversion tables, and in order to identify them properly, corresponding entries should be introduced in the modified matrices. In the SNA matrix, in particular, there should be additional entries for the following items:

(a) Expenditures on public relations, designed to improve goodwill of business units; these expenditures are treated in SNA as intermediate consumption whereas in countries with centrally planned economies they are normally financed out of profit and are therefore allocated to final consumption;

(b) Undepreciated value of scrapped fixed assets (reduced by receipts from the sale of scrap). This item is allocated in MPS to intermediate material consumption and therefore excluded from net material product; in SNA, domestic product (both gross and net) intermediate consumption excludes this item;

(c) Transfer costs for purchases of intangible assets, land, mineral deposits etc. by enterprises. In SNA these costs are allocated to either intermediate consumption (purchases of intangible assets) or gross capital formation. In MPS these expenditures, to the extent they exist, are regarded as redistributive flows;

(d) Tips, treated in SNA as a part of compensation of employees but regarded in MPS as redistribution flows.

19. These adjustments would improve comparability of data on national product as a whole. Additional adjustments could be introduced to improve comparability of the structure of national product. These are:

(a) General government contributions to joint military projects;

(b) Material aid to foreign Governments;

(c) Government expenditures on military durables;

(d) Expenditures on goods and services by foreign missions, embassies etc.

These expenditures are, as a rule, allocated to different categories of final demand in the two systems. For example, in SNA material aid to foreign Governments is shown as a component of cost of general government services which is included in final consumption expenditures, but in MPS it is allocated to net exports; in SNA contributions to joint military projects are included in the intermediate consumption of general government services and therefore in final consumption, while in MPS such expenditures may be treated partially as exports (imports), as capital formation or final consumption, depending on the character of the outlays (capital, current) and on the place (country) where they are embodied into tangible assets. Contributions in monetary form are considered as redistribution payments. Purchases of goods and services by foreign

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missions, embassies and so on are allocated to exports in SNA, but to final
consumption in MPS; purchases by embassies and missions of the given country
abroad are allocated to imports in SNA, but disregarded in MPS, because the
latter employs a territorial basis for the registration of all transactions.
Certain adjustments, at least in theory, would also seem to be necessary with
regard to depreciation allowances of rented fixed assets, largely dwellings.

20. Finally, consistency checking rules are needed for implementing the
conversion tables. These rules are conceived of as a set of statements of
relationships among categories of the conversion tables. As the numerical
comparisons have demonstrated, the application of these rules can help to avoid
serious inconsistencies and inaccuracies. The paragraphs below outline more
specific suggestions on improvements of the framework, the general character
of which was described above. Particular attention will be focused on improved
versions of the modified SNA and MPS matrices and the corresponding conversion
tables. The discussion of these topics will, however, be preceded by some
paragraphs, the purpose of which is to clarify the basic approach used in the
construction of the framework of intersystem comparisons, as it is conceived in
the publication on comparisons referred to in paragraph 17. Special attention
will be given to the role of the modified matrices.

2. Clarification of the basic approach

21. In the simplest form the basic approach used in the construction of the
framework for intersystem comparison can be described as consisting of the
following steps:

(a) Identification in the two systems of the indicators with respect to
which international comparisons are economically meaningful and statistically
feasible;_

(b) Description of the differences in concepts, definitions, classifications
and methods of valuation of the aggregates chosen for comparison;

(c) Construction of the matrix (or matrices) in which the flows and stocks
treated differently in the two systems are clearly identified and isolated;

(d) Construction of conversion tables where adjustments are made to move
from the SNA categories to their MPS counterparts, and vice versa; the
conversion procedure shown in the conversion tables constitutes a special
regrouping of the relevant entries in the matrix. Thus, the matrix provides
a precise identification of the specific adjustments, the character of which
is not always clear from mere verbal description of the conceptual differences
between two systems. In addition, extracting the adjustments from such a
coherent system of accounts and entries as the matrices are facilitates achieving
consistency among interrelated adjustments.

22. The simplest form of the matrix is a table of 3x3 dimension, depicting the
economy as consisting of three sectors, namely, activities producing material
goods; activities producing non-material goods; sector of final demand. Following

the familiar arrangement of an input/output table, such a system can be set out
as follows:

$$A = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix} \qquad (1)$$

Each element in this matrix has a precise meaning. For example, the first row
and column relate to material production: the entries in the **row** refer to the
disposition of material goods, and the entries in the column show the cost
structure of the output of material activities. Thus, a_{11} denotes material
input into activities producing material goods; a_{12}, material input into activities
producing non-material services, a_{13}, material goods absorbed by the final demand
sector; a_{21}, input of non-material services into the material sphere; a_{31}, all
other costs in the material sphere. Similar explanations can be given to
other entries of matrix A. Now it is clear that net output for each system
can be expressed in terms of the entries of matrix A; denoting MPS net output
by B, we have $B = a_{21} + a_{31}$, and denoting SNA net output by C, we have $C = a_{31} + a_{32}$.
Now, if we denote matrix $S = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$, matrix $T = \begin{bmatrix} 1 \\ 0 \end{bmatrix}$, matrix $K = \begin{bmatrix} 1 & 0 \\ 1 & 0 \\ 0 & 1 \end{bmatrix}$, and

matrix $M = \begin{bmatrix} 1 & 0 \\ 0 & 1 \\ 0 & 1 \end{bmatrix}$, then B and C can easily be derived from matrix A by regrouping

its appropriate elements. This regrouping procedure can be presented as follows:

$$B = S'M' \, A \, M \, T$$

$$C = S'K' \, A \, K \, T$$

The structure of matrix A also makes it possible to pass from B to C, and
vice versa. For example, the adjustments needed to pass from net output in the
SNA sense to its MPS counterpart can be presented as follows:

$$C - a_{32} + a_{21} = B \qquad (2)$$

and if the conversion procedure relies on the final demand data, then the equation
depicting the linkage should be presented as follows:

$$C - a_{23} + a_{12} = B \qquad (3)$$

23. Matrix A can of course be presented in a more detailed form so that
distinctions between the two systems in the definition of production boundaries
and in the treatment of some other flows can be displayed in a more systematic
way. Such an elaborated matrix can be used to identify the most important
adjustments needed for conversion. It should be noted at this point that all
adjustments derived from such a matrix would be consistent with each other because
they would be extracted from a coherent system. An example of a more detailed
matrix is shown below.

Matrix A*

			1	2	3	4	5	6	7	8	9
Commodities	Material goods	1			a_{13}	a_{14}			a_{17}	a_{18}	a_{19}
	Non-material services	2			a_{23}	a_{24}					
Industries	Producing material goods	3	a_{31}	a_{32}							
	Producing non-material services	4	a_{41}	a_{42}							
Value added, net		5			a_{53}	a_{54}					
Depreciation		6			a_{63}	a_{64}			$-a_{67}$		
Final disposition		7					a_{75}				
Dummy accounts	Business travel expenses	8			a_{83}	a_{94}					
	Expenditures on cultural etc. services provided to employees by enterprises	9			a_{93}	a_{94}					

24. In matrix A^*, a disaggregated version of matrix A, some features of SNA are introduced which are of special interest for intersystem comparisons - for example, a distinction is drawn between commodities and industries, gross value added is subdivided into net value added and consumption of fixed assets etc. Two dummy accounts are introduced to display the differences in treatment of certain flows. At the same time, the distinction between material goods and non-material services is retained. It is worth noting that the distinction between industries subdivided into categories producing material goods and activities producing non-material services, on the one hand, and commodities subdivided into material goods and non-material services, on the other hand, can be important and meaningful in the context of actual comparisons. The latter not infrequently rely on input/output tables where the above-mentioned distinction is observed and where various methods of handling of secondary products are used. In fact, special measures should be undertaken in cases when industries of the material sphere produce as secondary products non-material services, and vice versa when industries of the non-material sphere produce material goods as secondary products. A separate account for the depreciation of fixed assets is introduced to make it possible to pass from domestic product, computed on the gross basis, to net material product, defined to exclude consumption of fixed assets.

25. The dummy accounts for travel expenses and expenditures on provision of cultural and recreational services etc. by enterprises to their employees make it possible to obtain data on both the commodity structure of those expenditures and on their distribution among industries. Both types of data are essential for intersystem comparisons, because the different conversion tables require different types of data.

26. Following the familiar procedure of regrouping data, outlined above, let us denote GDP as

$$G = a_{53}+a_{54}+a_{63}+a_{64} \qquad (4) \text{ or}$$

$$G = a_{17}+a_{18} \qquad (5) \text{ or}$$

$$G = (a_{31}+a_{32}+a_{41}+a_{42})-(a_{13}+a_{14}+a_{23}+a_{24}) \qquad (6).$$

Net material product (NMP) can be denoted in a similar fashion as follows:

$$N = a_{53}+a_{23}+a_{83}+a_{93} \qquad (7) \text{ or}$$

$$N = a_{17}+a_{14}+a_{18}+a_{19}-a_{65} \qquad (8) \text{ or}$$

$$N = (a_{31}+a_{41})-(a_{13}+a_{63}) \qquad (9).$$

Now, by contrasting equations (4) (5) (6) and (7) (8) (9) we can derive a transition from GDP to NMP, or vice versa. Thus, if the transition is to be carried out on the basis of data on value added, the adjustments needed are:

$$G-a_{54}-a_{63}-a_{64}+a_{23}+a_{83}+a_{93}=N \qquad (10).$$

If the transition is based on final demand data, the adjustments needed are:

$$G - a_{18} + a_{14} + a_{18} + a_{19} - a_{65} = N \qquad (11)$$

and finally, if the transition is to be carried out on the basis of gross output and intermediate consumption data, the adjustments needed are:

$$G - (a_{32} - a_{42} - a_{14} - a_{24}) + a_{23} - a_{63} - (a_{84} + a_{94}) + (a_{83} + a_{93}) \qquad (12).$$

27. It is important to stress at this point that since all the entries in equations (10), (11) and (12) are extracted from matrix A*, which is a coherent system of accounts, all adjustments in all equations are consistent among themselves, and this ensures the consistency of the final estimates of NMP and GDP. It is easy to note that in (12), after the adjustments are made for the coverage of gross output and intermediate consumption in the non-material sphere, the residual adjustments are identical to those in (10). Therefore, the third approach relying on gross output and intermediate consumption data can be regarded as a subvariant of the first approach, relying on value-added data. Yet in practice, all three approaches are believed to be useful, even if international comparability of gross output and intermediate input data is not sought. For the actual derivation of NMP (GDP), as practice has demonstrated, it is important to use all the data available for the given purpose because this makes it possible to check the estimates of NMP (GDP) obtained on the basis of various approaches.

28. In practice, however, the construction of a detailed common matrix such as matrix A* can be difficult and impractical. Therefore, instead of constructing a common matrix, two modified matrices can be compiled separately for SNA and MPS. This approach naturally leads to the construction of two separate sets of conversion tables, the advantages of which are described above. The modification of the matrices in question consists largely of the systematic isolation of the flows, which are treated differently in the two systems, introduction of a set of dummy accounts for the same purpose and aggregation of the accounts which are of no interest for intersystem comparisons. The purposes of such modified matrices can be summarized as follows:

(a) To identify more precisely and systematically the flows which should be taken into account in the conversion table; in other words, to translate the verbal description of the intersystem conceptual differences into more precise and concise matrix form;

(b) To provide the basis for the construction of the conversion tables; in other words, to provide the input for the conversion tables in terms of specific adjustments which can be easily identified in the relevant entries of the matrices and which can be more easily understood if taken in the context of the general structure of the system;

(c) To facilitate the achievement of consistency among the various adjustments in the different conversion tables and therefore of consistency among

the estimates of GDP (NMP) derived on the basis of the different approaches, and to identify those flows and their components for which data are not readily available in each system; dummy accounts serve this purpose.

29. The modified matrices are particularly useful in identifying the exact adjustments needed in the framework of individual conversion tables. For example, while it is obvious that value added originating in the non-material sphere should be added to net material product to derive GDP for a country using MPS, it is less clear that the corresponding adjustment should consist of deduction of the value of non-material services consumed by the material sphere from NMP; the matrix helps to identify this adjustment. Another example relates to transfer costs on purchases of land and mineral deposits. Transfer costs should be deducted from SNA capital formation to arrive at the corresponding MPS category in the conversion table relying on final demand data, but it is not obvious what adjustment should be introduced in the conversion table relying on gross output and intermediate input and so forth. The modified matrices facilitate identification of specific adjustments in the above-mentioned and similar cases, because they contain comprehensive data on all of the flows (in the respective system) that are of interest in the context of intersystem comparisons.

3. The improved version of the modified matrices and of the conversion tables designed to derive net material product for countries using SNA

30. Now we can turn to a review of the proposed revised versions of the modified matrices and conversion tables which incorporate the changes outlined above in general terms. As indicated, two separate sets of conversion tables are proposed. For the revised SNA modified matrix (see table 1), the basic changes can be summarized as follows: The revised matrix contains only 30 sectors, instead of 41. The reduction is achieved by aggregation of certain accounts which are not directly involved in the conversion procedure and which are believed to overload the matrix with superfluous details. For example, accounts for producers of general government services and producers of private services were combined because treatment of output of these activities is essentially the same in the context of international comparisons; the institutional sectors of receipt of income are combined with the institutional sectors of origin, because these accounts are of less interest for international comparisons; dummy accounts for expenditures on cultural services, etc. provided by enterprises to employees are omitted from the income and outlay accounts, because it is thought to be sufficient to have such dummy accounts in the production accounts. There are some other aggregations and simplifications which can be seen in the matrix and therefore need not be repeated here. On the other hand, the modified SNA matrix includes a number of new items which identify additional flows that are treated differently in MPS. In particular, dummy accounts are introduced for the following categories: (a) expenditures on public relations, designed to improve the goodwill of business units; (b) transfer costs on purchases by enterprises and other producers of intangible assets, land, mineral deposits etc.; (c) tips; and (d) undepreciated value of scrapped fixed assets. At this stage of work it was decided not to introduce additional dummy accounts with regard to flows for which different treatment in the two systems, affects only the structure of gross domestic product (net material product).

Table 1. SMA modified matrix

			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
Production	Commodities	material goods		a_{23}	a_{24}	a_{25}	a_{26}	a_{27}	a_{28}	a_{29}	$a_{2,10}$	$a_{2,11}$	$a_{2,12}$											$a_{2,23}$	$a_{2,24}$	$a_{2,25}$					$a_{2,30}$
		non-material services (3)	$a_{3,2}$										$a_{3,12}$	$a_{3,13}$																	$a_{3,30}$
	Activities	Industries producing material goods (4)	$a_{4,2}$																												
		Industries producing non-material services (5)																													
		Other producers (6)		$a_{6,3}$	$a_{6,4}$	$a_{6,5}$																									
	Dummy accounts	Expenditures on cultural etc. services to employees (7)		$a_{7,3}$	$a_{7,4}$	$a_{7,5}$																									
		Business travel expenditures (8)		$a_{8,3}$	$a_{8,4}$																										
		Expenditures on public relations (9)		$a_{9,3}$	$a_{9,4}$																										
		Losses of stocks (10)		$a_{10,3}$	$a_{10,4}$																										
		Transfer costs (11)		$a_{11,3}$	$a_{11,4}$																										
Consumption	Expenditures	Household material goods (12)																					$a_{12,21}$								
		Household non-material services (13)																					$a_{13,21}$								
		Purposes of general government, private bodies (14)		$a_{14,3}$	$a_{14,4}$	$a_{14,5}$				$a_{14,9}$																					
	Incomes and outlays	Compensation of employees — Wages and salaries (15)		$a_{15,3}$	$a_{15,4}$	$a_{15,5}$																									
		Tips (16)		$a_{16,3}$	$a_{16,4}$	$a_{16,5}$																									
		Contributions to social insurance (17)		$a_{17,3}$	$a_{17,4}$	$a_{17,5}$																									
		Operating surplus of unincorporated units (18)		$a_{18,3}$	$a_{18,4}$						$a_{18,10}$																				
		Part of profit equal to undepreciated value of scrapped fixed assets (19)	$a_{19,1}$	$a_{19,3}$	$a_{19,4}$											$a_{19,15}$	$a_{19,16}$														
		Other components (20)		$a_{20,3}$	$a_{20,4}$																										
Accumulation	Gross capital formation	Consumption of fixed assets (21)														$a_{21,14}$	$a_{21,15}$	$a_{21,16}$	$a_{21,17}$												
		Transfers (22)															$a_{22,15}$	$a_{22,16}$	$a_{22,17}$	$a_{22,18}$	$a_{22,19}$										
		Institutional sectors (23)																				$a_{23,20}$	$a_{23,21}$								
		Work in progress in construction (24)																										$a_{24,26}$			
		Replacement of losses of fixed assets (25)																									$a_{25,25}$	$a_{25,26}$			
		Other components of gross fixed capital formation (26)																													
		Increase in stocks (27)																													
	Capital transfers (28)																														$a_{28,29}$
	Financial assets (29)																														$a_{29,29}$
	Institutional sectors																														
	Rest of the world (30)		$a_{30,1}$	$a_{30,2}$			$a_{30,5}$						$a_{30,11}$	$a_{30,12}$							$a_{30,19}$											

The accounts for such flows - for example, material aid to foreign Governments etc. - can be introduced in the final version of the modified matrix, which is to be worked out later, in the light of the comments by the Commission.

31. It was found useful to retain in the revised matrix both the distinction between goods and services and activities, and within these, the distinctions between commodities and "other goods and services", and between industries and "other producers". However, for simplification purposes, the entries referring to the commodities produced by "other producers" are omitted. Industries are, of course, subdivided into material and non-material categories, whereas commodities are broken down into material goods and non-material services. Such an arrangement makes it possible to draw a clear line between the flows of material goods and non-material services, on the one hand, and to identify components of input (both intermediate and primary) associated with production of material goods and of non-material services, on the other hand.

32. It is worth noting that in the aggregated rest-of-the-world accounts purchases of goods and services by non-resident households in the given country and by residents abroad are distinguished. This will make it possible to identify the adjustments needed because of differences in treatment of these flows in the two systems. Though similar entries are distinguished in the matrix with regard to the purchases of goods and services by foreign missions, embassies etc., including corresponding adjustments in the conversion tables is not proposed at this stage. It is understood that they can be introduced later along with the other additional adjustments, which have impact only on the structure of GDP (NMP).

33. The proposed SNA modified matrix is believed to provide an adequate basis for construction of the revised set of conversion tables designed to derive estimates of net material product for countries with market economies. The entries distinguished in this matrix are regrouped in three conversion tables (tables 2-4) to derive NMP on the basis of value added data, final demand, data and gross output and intermediate consumption data, respectively. Owing to this procedure, interrelated adjustments in the different conversion tables are believed to be consistent with each other. This ensures identical estimates of NMP in all three conversion tables. Only brief explanatory comments are believed to be necessary with regard to the schemes of the conversion tables. They are given below.

34. In contrast to the version of this table set out in part one of Comparison of the System of National Accounts and the System of Balances of the National Economy 7/ table 2 is designed exclusively to derive NMP for countries using SNA, and not the reverse. (This comment also applies to tables 3 and 4.) Table 2 includes a number of additional adjustments, such as the material part of expenditures on public relations by enterprises of material and non-material spheres (column 10), undepreciated value of scrapped fixed assets (column 18), transfer costs on purchases of land, mineral deposits etc. (column 16) and purchases of goods and services by residents abroad and by non-residents in the given country (columns 11 and 12). On the other hand, some adjustments distinguished in the above-mentioned publication are dropped - for instance, final consumption of households financed by government, because there is no need to provide a separate adjustment for this category.

7/ United Nations publication, Sales No. E.77.XVII.6.

Table 2. Conversion of the SNA categories of final demand into corresponding categories of the MPS

Column definitions (Adjustments needed to convert the SNA categories into their MPS counterparts):

1. Value of non-material services (commodities) consumed by households (−)
2. Non-commodity sales to households (−)
3. Services produced for own consumption of "other producers" (−)
4. Intermediate material input by industries of non-material sphere (+)
5. Intermediate material input by "other producers" (+)
6. Consumption of fixed assets by industries of non-material sphere (+)
7. Consumption of fixed assets by "other producers" (+)
8. Material part of business travel expenditures (+)
9. Material part of expenditures on cultural services to employees (+)
10. Material part of expenditures on public relations (+)
11. Purchases of goods and services by residents abroad (−)
12. Purchases of material goods by non-residents in the given country (+)
13. The excess of purchases by residents abroad over purchases by non-residents in the country (−)
14. The replacement of losses of fixed assets (−,+)
15. The work in progress in construction (−,+)
16. Transfer costs on purchases of land, mineral deposits (−)
17. Consumption of fixed assets (−)
18. Undepreciated value of scrapped fixed assets (−)
19. Losses of stocks (+)
20. Material part of transfer costs on purchases of land etc. (+)
21. Net exports of non-material services (−)
22. Categories of the MPS

Categories of the SNA (A)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Categories of the MPS (22)
Final consumption of households	$a_{2,12}$	$a_{5,12}$				$a_{20,4}$*		a_{17}			$a_{30,11}+a_{30,12}$	$a_{11,30}$										Personal material consumption (A−1−2+6+8−11+12)
Other final consumption			$a_{5,13}$	$a_{1,4}$	$a_{1,5}$	$a_{20,4}$**	$a_{20,5}$		a_{16}	$a_{1,8}$										$a_{1,10}$		Other final consumption (A−3+4+5+6+7+9+10+20)
Gross fixed capital formation														$-a_{1,24}$	$-a_{1,25}$	$a_{10,25}$	$a_{20,29}$	$a_{18,5}+a_{18,4}$				Net fixed capital formation (A+14+15−16−17−18)
Increase in stocks															$a_{1,25}$							Increase in stock (A−15)
Net exports													$a_{30,11}+a_{30,12}-a_{11,30}-a_{12,30}$								$a_{2,30}-a_{30,2}$	Net exports (A−13−21)
														$a_{1,24}$					$a_{23}+a_{24}$			Losses (A+14+19)
Gross domestic product	$a_{2,12}$	$a_{5,12}$	$a_{5,13}$	$a_{1,4}$	$a_{1,5}$	$a_{20,4}$	$a_{20,5}$	a_{17}	a_{16}	$a_{1,8}$	$a_{30,11}+a_{30,12}$	$a_{11,30}$	$a_{30,11}+a_{30,12}-a_{11,30}-a_{12,30}$	$a_{1,24}$		$a_{10,25}$	$a_{20,29}$	$a_{18,5}+a_{18,4}$	$a_{23}+a_{24}$	$a_{1,10}$	$a_{2,30}-a_{30,2}$	Net material product

* A 20,4 = depreciation of dwellings

**A 20,4 = consumption of fixed assets in non-material sphere, except for depreciation of dwellings

(−) = Minus;   (+) = plus,   (+,−) = shift from one category to another

Table 3. Conversion of the SMA categories of value added into corresponding categories of the MPS

	A	Adjustments needed to convert SMA categories into their MPS counterparts														16
Categories of the SMA		(−) 1 Compensation of employees in industries of non-material sphere	(−) 2 Compensation of employees in "other producers"	(−) 3 Operating surplus, including net indirect tax in industries of non-material sphere	(−) 4 Contributions to social insurance in industries of material sphere	(−) 5 Tips in industries of material sphere	(+) 6 Purchases of non-material services by industries of material sphere	(+) 7 Expenditures on cultural etc. services to employees by industries of material sphere	(+) 8 Expenditures on public relations by industries of material sphere	(+) 9 Losses of stocks in material sphere	(+) 10 Transfer costs in material sphere	(+) 11 Business travel expenditures in material sphere	(+) 12 Consumption of fixed assets	(−) 13 Undepreciated value of scrapped fixed assets in material sphere	14 Operating surplus of unincorpor-ated enterprises	15 Wages and salaries as input to transfer cost	Categories of the MPS
Compensation of employees	$Q_{1,4,4} + Q_{6,4} + Q_{8,4}$	$Q_{1,4,4}$															Primary incomes of population (A-1-2+4-5+11-14-15)
	$Q_{1,4,5} + Q_{1,4,5}$		$Q_{1,4,5}$														
Operating surplus including indirect taxes, net	$Q_{1,7,4} + Q_{6,4} + Q_{8,4} + Q_{9,0}$			$Q_{1,7,4} + Q_{6,4} + Q_{8,4} + Q_{9,0}$	$-Q_{1,4,3}$	$Q_{1,5,3}$	$Q_{2,3}$	$Q_{6,3}$	$Q_{8,3}$	$Q_{9,3}$	$Q_{10,3}$	$Q_{7,3}$		$Q_{4,3}$	$-Q_{7,3}$ $Q_{4,3}$	$Q_{4,0}$ $Q_{4,0}$	Primary incomes of enterprises (A-4+6+7+8+9+10-13+14)
				$Q_{1,4,3}$	$Q_{1,5,3}$	$Q_{2,3}$	$Q_{6,3}$	$Q_{8,3}$	$Q_{9,3}$	$Q_{10,3}$			$Q_{4,3}$	−		(A-12)
Consumption of fixed assets													$Q_{4,29}$				
Gross domestic product	$Q_{1,4,4} + Q_{6,4} + Q_{8,4} + Q_{1,4,5} + Q_{1,5,3} + Q_{1,4,4}$					$Q_{1,5,3}$	$Q_{2,3}$	$Q_{6,3}$	$Q_{8,3}$	$Q_{8,3}$	$Q_{10,3}$	$Q_{7,3}$	$Q_{4,29}$	$Q_{4,3}$	−	$Q_{4,0}$	Net material product

$A_{19,10}$ = operating surplus as part of transfer costs

Table 4.   Conversion of the SNA gross output and intermediate consumption data into corresponding categories of the MPS

Categories of the SNA	Adjustments needed to convert the SNA categories into their MPS counterparts													Categories of the MPS
	(-) Gross output of non-material services produced by industries	(-) Gross output of "other producers"	(-) Transfer costs on purchases of intangible assets, land etc.	(-) Intermediate input by industries of non-material sphere	(-) Intermediate input by "other producers"	(-) Business travel expenditures by industries of material sphere	(-) Expenditures on cultural etc. services to employees in material sphere	(-) Expenditures on public relations in material sphere	(-) Transfer costs in material sphere	(-) Losses of stocks in material sphere	(-) Purchases of non-material services by material sphere	(+) Consumption of fixed assets in material sphere	(+) Undepreciated value of scrapped fixed assets in material sphere	
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Gross output	a_{42}	$a_{5.12} + a_{5.13}$	$a_{1.10} + a_{2.10} + a_{14.10} + a_{19.10}$											Global product (A-1-2-3)
Intermediate consumption				$a_{14} + a_{24} + a_{64} + a_{74} + a_{94} + a_{10.4}$	$a_{15} + a_{25} + a_{65} + a_{75}$	a_{73}	a_{63}	a_{83}	$a_{10.3}$	a_{93}	a_{23}	$a_{20.3}$	$a_{18.3}$	Intermediate material input (A-4-5-6-7-8-9-10 -11+12+13)
Gross domestic product	a_{42}	$a_{5.12} + a_{5.13}$	$a_{1.10} + a_{2.10} + a_{14.10} + a_{19.10}$	$a_{14} + a_{24} + a_{64} + a_{74} + a_{94} + a_{10.4}$	$a_{15} + a_{25} + a_{65} + a_{75}$	a_{73}	a_{63}	a_{83}	$a_{10.3}$	a_{93}	a_{33}	$a_{20.3}$	$a_{18.3}$	Net material product

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35.   On the whole, table 2 presents the conversion procedure in a more detailed form than its counterpart in the publication on comparisons. All adjustments included in table 2 are believed to be consistent with those shown in the other conversion tables. In addition, it should be noted that all adjustments are defined in conformity with the categories and terminology of SNA. (This last comment also applies to tables 3 and 4.)

36.   Compared with the version of this table in the above-named publication, table 3 includes additional adjustments with regard to expenditures on public relations, undepreciated value of scrapped fixed assets, tips and transfer costs. Certain inconsistencies and ambiguities are rectified. For example, losses of stocks are added to (not subtracted from) operating surplus in the SNA sense to arrive at primary incomes of enterprises in the MPS sense.

37.   Compared with the version of this table in the publication cited in paragraph 34, table 4 includes additional adjustments designed to improve comparability of intermediate consumption flows. Certain inconsistencies are also rectified. It is understood that table 4 represents in fact a subvariant of table 3 from a conceptual point of view. Yet in practice it can be helpful for the derivation of NMP along with tables 2 and 3. As indicated above, the intention is to introduce some additional adjustments which have impact only on the comparability of the structure of GDP (NMP) at later stages of the work. There are some differences between the two systems in the scope of subsidiary activities carried out by households that are included. For example, in SNA, contrary to MPS, it is recommended that consumption of own-produced shoes, clothes, etc. be included in household consumption (and GDP) in cases where producers of such items normally sell them in the market. In developed countries, these differences are likely to be insignificant from a quantitative point of view and they are disregarded in the conversion tables. Both for this reason and because data are seldom available, no adjustments were introduced in the conversion tables with regard to treatment of waste material purchased from households; valuation of capital consumption; scope of capital consumption (notably with regard to roads, dams etc.); the borderline between direct and indirect taxes; treatment of purchases and sales abroad of goods which do not cross the border of the country concerned; and treatment of transactions in monetary gold.

38.   Now we can pass to discussion of the rules which are designed to check consistency among the interrelated items in the conversion tables. These rules represent equations describing relationships between corresponding adjustments in the different conversion tables. The most essential rules are formulated below; they relate to conversion tables 2, 3 and 4:

   (a) Gross output of non-material services, shown in table 4, columns 1 and 2, should equal the sum of the following items:

(i) Final consumption expenditures on non-material services by households, general government and private non-profit organizations, shown in table 2, columns 1, 2 and 3;

(ii) Net exports of non-material services, shown in table 2, column 2;

(iii) Purchases of non-material services by the material sphere, shown in table 4, column 11;

(iv) Purchases of non-material services by the non-material sphere, shown in table 4, columns 4 and 5, among the items of intermediate input by non-material activities;

(v) Input of non-material services by dummy industries, shown in table 1;

(b) Gross output of non-material services (commodities), shown in table 4, column 1, should equal the sum of the following items:

(i) Intermediate inputs by industries producing non-material services, shown in table 4, column 4;

(ii) Consumption of fixed assets in industries producing non-material services (commodities), shown in table 2, column 6;

(iii) Compensation of employees in industries producing non-material services, shown in table 3, column 1;

(iv) Operating surplus including indirect taxes, net, in industries producing non-material services, shown in table 3, column 3;

(c) A similar equation is valid regarding the output of non-material services provided by "other producers";

(d) Gross output of non-material services produced by "other producers", shown in table 2, column 2, should equal the sum of:

(i) Non-commodity sales to households, shown in table 2, column 2;

(ii) Value of non-material services consumed by general government and private non-profit bodies, shown in table 2, column 3;

(e) Consumption of fixed assets, shown in table 3, column 12, should equal the sum of:

(i) Consumption of fixed assets employed in the material sphere, shown in table 4, column 12;

(ii) Consumption of fixed assets employed in the non-material sphere, shown in table 2, columns 6 and 7;

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(f) Business travel expenditures in industries producing material goods, shown in table 3, column 11, should equal the sum of the material and the non-material components of these expenditures in both spheres, shown respectively in table 2, column 8, and in table 1, reduced by business travel expenditures in the non-material sphere, shown in table 4, columns 4 and 5, among other items of intermediate input into the non-material sphere;

(g) Similar equations can be presented for:

(i) Expenditures by the material sphere on cultural etc. services to employees;

(ii) Expenditures on public relations in the material sphere;

(h) Transfer costs, shown in table 4, column 3, should equal the sum of the following items:

(i) Transfer costs charged to intermediate input by industries producing material goods, shown in table 3, column 10;

(ii) Transfer costs charged to intermediate input by industries of the non-material sphere, shown in table 4, column 4, among other items of intermediate input into the non-material sphere;

(iii) Transfer costs associated with purchases of land, mineral deposits, buildings, etc. and allocated to capital formation, shown in table 2, column 16;

(i) Transfer costs shown in table 4, column 3, should equal the sum of:

(i) Wages and salaries entering this flow, shown in table 3, column 15;

(ii) Operating surplus associated with this cost, shown in table 3, column 3, among other categories of operating surplus in the non-material sphere;

(iii) Purchases of goods and services entering this flow, shown in table 2, column 20 (material goods) and in table 1 (input of non-material services);

(j) Losses of stocks, shown in table 2, column 19, should equal the sum of the following items:

(i) Losses of stocks in the material sphere, shown in table 3, column 9;

(ii) Losses of stocks in the non-material sphere, shown in table 4, column 4, among other items of intermediate input by industries producing non-material services;

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(k)   The excess of the purchases of goods and services by residents abroad over the purchases of similar items by non-residents in the given country, shown in table 2, column 13, should equal purchases of goods and services by residents abroad, shown in table 2, column 11, reduced by:

(i)   Purchases of non-material services in the given country, shown in table 2, column 12; and

(ii) Purchases of non-material services by non-residents, shown in table 1;

(l)   The undepreciated value of scrapped fixed assets employed in the material sphere, shown in table 3, column 13, should equal undepreciated value of scrapped fixed assets, shown in table 2, column 18, reduced by the undepreciated value of scrapped fixed assets employed in the non-material sphere, shown in table 3, column 3, among the various categories of the operating surplus originating in the non-material sphere.

(m)   The difference between gross output of non-material services, shown in table 4, columns 1 and 2, and intermediate consumption in the non-material sphere, shown in table 4, columns 4 and 5, should equal the sum of compensation of employees, operating surplus including net indirect taxes and consumption of fixed assets, shown in table 3, columns 1, 2, 3 and 12.

39.   Work on the revised modified MPS matrices and conversion tables designed to derive gross domestic product for centrally planned economies is also being carried out by the Statistical Office. For lack of space, the tentative tables prepared as a result of this work are not included in the present report.

B.   Feasibility of application of the System of Indicators of Non-material Services, developed by member countries of the Council for Mutual Economic Assistance, for intersystem comparisons

1.   Introduction

40.   So far discussion has concentrated on the problems which arise in linking the relevant SNA accounts with the corresponding conventional balances of MPS. The paragraphs below deal with another facet of this subject - namely the feasibility of adaptation of the System of Indicators of Non-material Services (SINS), recently developed by the CMEA Standing Commission on Statistics, for intersystem comparisons. As indicated above, SINS contains data on non-material services, which can facilitate the derivation of gross domestic product for countries using MPS. At the same time, it is worth pointing out that although the general structure of SINS is somewhat similar to the corresponding sections of SNA, there are some differences between these two systems which may be important for international comparisons. They relate to the coverage of non-material activities, their classification, the treatment of particular items and so forth. On the other hand, there are some overlapping areas between MPS and SINS, and it is not obvious how the appropriate categories of SINS and MPS should be combined to arrive at the relevant aggregates of SNA.

41. The paragraphs below describe briefly some basic features of SINS, discuss its differences from SNA, outline the steps needed for the adaptation of SINS for intersystem comparisons and, in particular, consider tentative schemes for conversion tables making use of the categories in SINS.

2. Brief description of SINS

42. The System was conceived as a set of interrelated balances and aggregates describing various aspects of the economic process in the non-material sphere which would supplement the conventional balances of MPS. The purposes of SINS are many-fold. It was developed to provide a conceptual basis for collecting and publishing internationally comparable figures on economic activities in the non-material sphere, to assist the CMEA member countries in organizing and developing further this branch of statistics, to facilitate international comparisons and, above all, to establish closer links between SNA and MPS. In principle, SINS has been conceived to include a wide range of interrelated balances and aggregates on the sources and disposition of non-material services; value added originating in the non-material sphere; the cost structure of the gross output of non-material services; incomes and outlays of the units of the non-material sphere; capital investments, stocks of fixed assets and inventories in the non-material sphere; and so forth. However, at present, the detailed definitions are worked out only for the tables on sources and disposition of non-material services and their cost structure. The definitions for other aggregates will be worked out later. According to the programme of work for 1980-1981 approved by the CMEA Standing Commission on Statistics, priority will be given to the definitions relating to income and outlay balances. Special attention will also be given to the methods of compilation of the aggregates at constant prices of the sources and disposition of non-material services.

43. The System is regarded as a further elaboration of the indicators of non-material services shown in the conventional balances of MPS - in particular, the balance of production, distribution, redistribution and final disposition of national income. In the framework of SINS these indicators - e.g., sales and purchases of non-material services - are developed further, presented in a more detailed form and supplemented by other information. What is more important, they are organized in the form of interrelated tables (balances) which ensure co-ordination and consistency among the corresponding aggregates. The System is based on the most essential conceptual and methodological principles of MPS; it rests, in particular, on the assumption that all economic activities should be subdivided into those producing material goods and those furnishing non-material services, only material activities being regarded as directly contributing to national product. At the same time, it is recognized in SINS that for certain aspects of economic analysis it would be useful to combine material goods and non-material services in one broad aggregate akin to GDP.

44. The System comprises branches of the non-material sphere in conformity with the latest version of the CMEA classification by kind of economic activity; the exceptions are relatively minor. The non-material sphere is defined to include:

ISIC a/ codes

1. Housing, communal and personal services

    1.1 Maintenance of dwellings and related
         services   8310 (part)

    1.2 Hotels   6320

    1.3 Sewage and sanitary services   9200

    1.4 Maintenance of parks, recreational
         centres etc.   9490 (part)

    1.5 Protection against fire   9100 (part)

    1.6 Renting of consumer durables   9490 (part)

    1.7 Personal services   9591, 9592

    1.8 Other personal services, not elsewhere
         classified   9599

2. Science, research and development   9320, 8624

    2.1 Science and research

    2.2 Other scientific services (geological
         prospecting, meteorological services)

3. Education services   9310

4. Art and culture   9412, 9413, 9414, 9420

5. Medical services, sports, tourism and
    social insurance   933, 9490 (part), 9340

6. Financial services   810, 820

7. General government services   910, 934, 935, 8321, 8322

8. Other non-material activities   939

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a/ International Standard Industrial Classification of All Economic Activities.

45. It is worth noting that the major categories of the above classification are defined largely as composed of establishments engaged in a certain type of activity. In many cases legal entities in the non-material sphere consist only of one establishment, but when the situation is different efforts are made to split the unit into homogeneous establishments. If, for example, an organization of the non-material sphere has a subsidiary agricultural plot, the latter is reallocated to agriculture. Similarly non-material establishments belonging to enterprises of the material sphere are usually isolated and allocated to appropriate branches of the non-material sphere.

46. It should be noted that, although from the MPS point of view all flows associated with the provision of non-material services are regarded as redistribution, in the framework of SINS a clear distinction is made between payments for services and other redistributive flows. This distinction is essential in defining gross output of non-material services and the corresponding categories of their disposition.

47. Bearing in mind the above points, we can turn to a brief review of the schemes of the two balances of SINS which are of interest for intersystem comparisons. The scheme of the balance of sources and disposition of non-material services can be presented as follows:

1.   Gross output of non-material services

2.   Imports

3.   Resources (1 + 2)

4.   Purchases of non-material services by enterprises of the material sphere (intermediate consumption)

5.   Purchases of non-material services by units of the non-material sphere

6.   Consumption of non-material services by households, of which:

   (a) Consumption of non-material services purchased for money, and

   (b) Consumption of non-material services received free of charge

7.   Consumption of non-material services furnished to society as a whole

8.   Exports

9.   Total disposition (4 + 5 + 6 + 7 + 8)

48. The general scheme of this table is somewhat similar to a supporting table of SNA, entitled "Supply and disposition of commodities". However, the counterpart of SNA "Other goods and services" is also included in SINS, in addition to SNA "commodities". The structure of the table has been conceived to facilitate derivation of items needed for both national product and total consumption of the population.

49. The scheme of the balance devoted to the cost structure of non-material services provided by non-budgetary units can be presented as follows:

1. Intermediate material input

2. Consumption of fixed assets

3. Purchases of non-material services

4. Wages and salaries and items akin to wages and salaries

5. Contribution to social insurance

6. Profits

7. Turnover tax

8. Gross output (1 through 7)

A similar table is provided for gross output of services provided by budgetary units. The table also takes into account the needs of intersystem comparisons. In contrast to the conventional balances of MPS, it includes data on operating surplus, including turnover tax, in addition to the data on compensation of employees engaged in non-material activities.

3. Review of the differences between SINS and SNA and tentative schemes of the conversion tables

50. Although the general structure of the tables and the general content of the major aggregates of SINS are quite similar to the corresponding tables and aggregates of SNA, the two systems differ from each other in the coverage of activities, classifications and treatment of some items. The paragraphs below review briefly the most essential distinctions relating to the gross output and disposition of non-material services, and their cost structure.

51. One important distinction relates to the scope of non-material activities covered; for example, in SINS, in contrast to SNA, ownership of dwellings occupied by their owners is disregarded; in SNA, domestic services carried out by individuals are included, but in SINS they are omitted; in SNA it is recommended that activities carried out by self-employed actors, composers etc. be included, but in SINS the activities of such self-employed persons are excluded. On the other hand, SINS embraces provision by enterprises of cultural and recreational services to employees, but in SNA no imputations are made for these activities. This distinction affects the categories of gross output and intermediate and final consumption. In SINS, gross output of cultural services etc. to employees is allocated on the disposition side of the tables to final consumption expenditures by households, whereas in SNA those expenditures are classed as intermediate.

52. There are significant differences in classifications by kind of economic activity and in the way the aggregates of disposition are subdivided. For example, in SINS final consumption of non-material services by households is subdivided into (a) consumption of non-material services purchased for money and (b) consumption of non-material services furnished free of charge; in addition to this, the category of "consumption of non-material services furnished to society as a whole" is distinguished. In SNA final consumption expenditure on non-material services is split between private final consumption expenditures and government final consumption expenditures. The difference is that in SINS, contrary to SNA, current expenditures by government on health, education and similar social needs are allocated to final consumption by households.

53. More specific differences in the content of the basic categories of the supply and disposition of non-material services in the two systems are discussed below.

(a) Gross output

54. Some differences in the content of gross output of non-material services are the result of the above-mentioned differences in the scope of non-material activities covered. Thus, gross output of non-material services in SINS is less than that in SNA by (a) the value of imputed rent of owner-occupied dwellings, (b) the value of domestic services provided by individuals, and (c) the value of services provided by self-employed actors, composers etc. but somewhat more by the imputed value of cultural and medical services etc. provided to employees by enterprises. Differences in treatment of tips also affect the measurement of gross output; in SINS, in contrast to SNA, tips are not regarded as payments for factor services. There are some differences in the methods of valuation of certain types of non-material services; for example, some peculiarities exist with regard to financial intermediaries. In SNA, gross output of financial institutions is equated to the excess of interest received over that paid on deposits, plus actual service charges. On the disposition side of the account, the value of financial services is allocated to intermediate consumption. In SINS, gross output of banks and similar institutions is valued at cost and allocated to final consumption expenditures. Similar differences exist with regard to the gross output of insurance companies. In SNA, gross output of insurance is equated to the difference between premiums received and claims paid. In SINS, gross output of insurance companies is valued at cost. In SNA, on the disposition side of the account, service charges paid to casualty insurance companies are allocated to intermediate consumption in the case of producers and to final consumption in the case of households; service charges for life insurance are allocated in SNA to final consumption. In SINS, gross output of insurance companies in all cases is allocated to final consumption of non-material services furnished to society as a whole. There are also some differences with regard to the methods of valuation of general government services. For example, while, in principle, these services are valued in both systems at current cost, in SNA, current cost is defined to include capital outlays on military durables, contributions to joint military projects, material aid to foreign Governments etc., whereas in MPS these are considered to be capital outlays.

(b) Intermediate consumption

55. In SINS a distinction is made between intermediate consumption of non-material services by producers of both material goods and non-material services, on the one hand, and intermediate consumption by the units of the non-material sphere on the other. While the differences with regard to the content of the former category are relatively small in the two systems, the distinctions with regard to the latter category are bigger. In SNA, contrary to SINS, intermediate consumption by units of the non-material sphere is defined to include business travel expenditures, expenditures on public relations designed to improve goodwill of business units, transfer costs on purchases of intangible assets, and losses of stocks. Expenditures on goods and services in connexion with cultural services etc. to employees by enterprises of the material sphere are included in the intermediate consumption of the organizations of the non-material sphere in SINS, but in intermediate consumption of the industries producing material goods in SNA. As indicated above, intermediate consumption of producers of general government services includes, in SNA, (a) purchases of durable goods for military purposes, (b) contributions to joint military projects and (c) material aid to foreign Governments. In SINS these items do not appear at all, but in MPS they are allocated to various categories of final demand.

(c) Final consumption of non-material services

56. This is defined in SNA, in contrast to SINS, to include, among other things, imputed rent of owner-occupied dwellings, the value of domestic services performed by individuals, the value of services performed by self-employed actors, composers, etc. On the other hand, final consumption in SINS is defined to include some items which in SNA are regarded as intermediate, for example, payments for non-material services (hotels) made by households on business trips and the value of services furnished by financial intermediaries and insurance companies.

57. There are some differences between SINS and SNA in the scope of value added and its major components. Most of them are associated with the differences in coverage of gross output and intermediate consumption discussed above, and need not be repeated here. It is worth noting that all aggregates of SINS are recorded on a territorial basis. This means that gross output of non-material services is defined to include the value of services provided by foreign embassies, missions, international organizations etc. located in the territory of the given country, but to exclude similar organizations of the given country abroad.

(d) Tentative schemes for conversion tables relying on SINS

58. The above review of the basic differences between SNA and SINS can serve as a basis for constructing conversion tables relying on the categories in SINS to derive estimates of gross domestic product for countries using MPS. In these conversion tables efforts are made to combine and match aggregates (or their components) in the conventional balances of MPS and SINS, and at the same time to take into account the most significant deviations of SINS from SNA. At this

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Conversion table A. Derivation of gross domestic product on
the basis of value added as specified
in SINS

Number	Category	Adjustment	Source of data
1	Net material product		
2	Compensation of employees in the non-material sphere	(+)	SINS, table on cost structure of the gross output of non-material services
3	Contributions to social insurance in the non-material sphere	(+)	"
4	Operating surplus, including net indirect taxes, in the non-material sphere	(+)	"
5	Imputed rent of owner-occupied dwellings, net	(+)	To be estimated
6	Value of domestic services carried out by individuals	(+)	"
7	Compensation of self-employed actors, composers etc.	(+)	"
8	Tips in the non-material sphere	(+)	"
9	Value of non-material services consumed in the material sphere	(-)	SINS, table on sources and disposition of non-material services
10	Value of financial services allocated in SINS to final consumption	(-)	"
11	Service charges of casualty insurance companies allocated in SINS to final consumption	(-)	"
12	Business travel expenditures (a) In the material sphere	(-)	MPS balance of production and disposition of the global product
	(b) In the non-material sphere	(-)	SINS, table on cost structure of the gross output of non-material services

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Conversion table A (continued)

Number	Category	Adjustment	Source of data
13	Expenditures on public relations		
	(a) In the material sphere	(-)	MPS financial balance
	(b) In the non-material sphere	(-)	SINS
14	Losses of stocks		
	(a) In the material sphere	(-)	MPS balance of production and disposition of the global product
	(b) In the non-material sphere	(-)	"
15	Purchases of goods and services in connexion with provision of cultural etc. services to employees	(-)	MPS financial balance
16	Undepreciated value of scrapped fixed assets employed in the material sphere	(-)	MPS material balance
17	Value added originating in embassies and missions of the given country abroad	(+)	To be estimated
18	Value added originating in foreign embassies and missions	(-)	"
19	Consumption of fixed assets		
	(a) In the material sphere	(+)	MPS material balance
	(b) In the non-material sphere	(+)	SINS, table on cost structure of the gross output of non-material services

Gross domestic product
(1+2+3+4+5+6+7+8-9-10-11-12-13-14-15-16+17-18+19)

Conversion table B. Derivation of gross domestic product on
the basis of final demand data shown in
SINS

Number	Category	Adjustment	Source of data
1	Net material product		
2	Consumption of non-material services by households (purchased for money)	(+)	SINS, table on sources and disposition of non-material services
3	Consumption of non-material services by households (obtained free of charge)	(+)	"
4	Consumption of non-material services furnished to society as a whole	(+)	"
5	Exports of non-material services, net	(+)	"
6	Value of non-material services furnished by financial intermediaries and insurance companies (allocated in SINS to final consumption)	(-)	"
7	Material input in the non-material sphere including depreciation of fixed assets	(-)	SINS, table on cost structure of the gross output of the non-material sphere
8	Imputed rent of owner-occupied dwellings	(+)	To be estimated
9	Value of domestic services carried out by individuals	(+)	"
10	Value of services furnished by self-employed actors, composers etc.	(+)	"
11	Material part of business travel expenditures (in both spheres of the economy)	(-)	MPS balance of production and disposition of global product
12	Non-material part of business travel expenditures allocated in SINS to final consumption	(-)	SINS, table on sources and disposition of non-material services
13	Cost of cultural and recreational services provided by enterprises to employees	(-)	"

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Conversion table B (continued)

Number	Category	Adjustment	Source of data
14	Tips	(+)	To be estimated
15	Losses of stocks	(-)	MPS balance of production and disposition of global product
16	Value of services provided by embassies and missions of the given country abroad	(+)	To be estimated
17	Value of services provided by foreign embassies, missions in the given country	(-)	"
18	Consumption of fixed assets in both spheres	(+)	MPS balance of production and disposition of global product
19	Undepreciated value of scrapped fixed assets employed in the material sphere	(+)	"

Gross domestic product
(1+2+3+4+5-6-7+8+9+10-11-12-13+14-15+16-17+18+19)

stage the conversion tables include only those adjustments needed to calculate gross domestic product as a whole; they can be elaborated later to embrace adjustments needed for comparability at the level of major categories of GDP. Two types of conversion tables are distinguished: one which makes use of value-added data, and another which relies on disposition of non-material services. In both cases, references are made to the exact table of SINS or the conventional MPS from which the adjustments needed are extracted. It should be noted, however, that data for some items are not contained in either SINS or MPS; they have to be estimated separately. Some additional adjustments would be needed to achieve comparability at the level of the major subdivisions of GDP. Some items normally shown in MPS under net exports would have to be shifted to final consumption expenditures etc.

C. Review of national practices in compilation of selected SNA/MPS aggregates

59. In practice, the definitions used in national statistics may deviate on certain points from those recommended in SNA or MPS. In some cases countries participating in intercountry comparisons may find it more appropriate to carry out the comparisons on the basis of their own national concepts. In most cases, however, the application of international standards is preferable. In any case, it is obvious that the best results can be achieved if the framework of comparisons relying on internationally unified concepts and definitions is supplemented by a detailed description of the methods of compilation of the relevant aggregates employed in the participating countries. In the light of the above, it was thought to be appropriate to conduct a review of national practices in compilation of the major aggregates of the national accounts and balances in the context of intersystem comparisons. One of the major purposes of this exercise is to identify the treatment in actual practice of those flows that are of interest for intersystem comparisons. The paragraphs below are devoted to a brief description of national practices in the compilation of global product, intermediate consumption and net material product in CMEA countries employing MPS. A similar review of practices of countries employing SNA has been in progress for some years and was reported to the Commission at its twentieth session (E/CN.3/507).

60. The peculiarities in compilation of the aggregates are of a dual nature. The first group can be defined as clear deviations from the recommendations approved by the CMEA Standing Commission on Statistics. The second group represents divergences in national practices owing to the non-specific character of the international guidelines or complete lack of them. The review shows that most of the departures from recommended procedures relate to comparatively small items and issues, such as the allocation of certain activities, treatment of selected items, mode of valuation of some categories of output and input etc. It should be noted that in many cases the countries supplying figures to the CMEA secretariat for publication or for international comparisons provide special adjustments to their own national data to achieve international comparability. For example, such adjustments are normally made with regard to the treatment of passenger

transportation and communication serving households. No significant divergences in national practices are observed in the application of the fundamental methodological principles of MPS relating to the division of the economy into two spheres, basic methods of computation of major aggregates, the schemes of the balances etc.

61. In some cases the differences in national practices reflect traditions, peculiarities in the organization of statistical services, in the application of data for planning and management, in the relative importance of certain items for the economy, or difficulties in obtaining statistical data; in some cases the countries take steps to adapt general recommendations to changing economic conditions or to the structure of their own economies. The brief review of national practices, given below, is devoted to such topics as the boundaries between the two spheres of the national economy, the treatment of selected items of gross output and intermediate consumption, subsistence activities of households, subsidies etc.

62. Generally speaking, the countries follow the recommendations contained in the latest CMEA classification by kind of economic activity. There are, however, some differences in the allocation of certain activities such as transportation of passengers and communication serving households, computer centres, cleaning and dyeing, movie production, agricultural services etc. Thus, while it is recognized that for practical reasons both transportation of goods and transportation of passengers may have to be included in the material sphere, some countries (Czechoslovakia, Mongolia, the Union of Soviet Socialist Republics) do allocate transportation of passengers to the non-material sphere. A similar situation exists with regard to communication; the same countries include in the material sphere only communication serving material activities. Another example of divergences in the allocation of activities relates to computer centres. According to the CMEA classification by kind of economic activity, these are to be classified as material activities. In practice, however, in Czechoslovakia, Hungary and Mongolia they are allocated to the non-material sphere. In the Soviet Union, only those computer centres serving enterprises of the material sphere are allocated to the material sphere. While the majority of CMEA countries regard dyeing, cleaning and laundering as belonging to the material sphere, in Czechoslovakia and Mongolia those activities are allocated to the non-material sphere. In the Soviet Union cleaning is classified as a material activity, and laundering as a non-material one.

63. There are some differences in the allocation of agricultural services. For example, veterinary services are excluded from material production in Hungary and Mongolia. Some differences exist in the allocation of the units engaged in designing. While the majority of the countries include these services in the material sphere, in Mongolia and the Union of Soviet Socialist Republics they are allocated to the non-material sphere, except for those engaged in construction. Mention should be made of the differences in the scope of subsistence activities of households that are included in the material sphere. All the CMEA countries include in global product the output of agricultural products produced on personal plots of households, both for the market and for own consumption, as well as construction on own account. In addition to this, the majority of the countries

include processing of agricultural products by households - that is, production of butter, wine, vegetable oil and so forth. In the German Democratic Republic and Hungary these activities are not, however, included. Many - but not all - the CMEA countries include in material product the collection by households of wild berries, mushrooms and firewood, and fishing and hunting. These activities are covered in Bulgaria, Cuba, Mongolia, Poland and the Soviet Union. In Czechoslovakia and the German Democratic Republic only the marketed part of the output of these activities is included. In Bulgaria the global product includes the value of homemade cloth. In Romania processing of purchased fabrics is included in material production. Collection of wastes and secondary material is included in the material sphere in Czechoslovakia, the German Democratic Republic, Poland and the Soviet Union.

64. The paragraphs below are intended to introduce some other differences in national practices. Some differences, for instance, are observed in the treatment of the output of agricultural services and in their valuation. For example, in Bulgaria and Czechoslovakia, only the output of non-budgetary organizations is included in the global product, whereas the output of budgetary units is equated to zero, the material outlays of the latter being added to the intermediate material consumption of the agricultural sector. In the German Democratic Republic a somewhat similar approach is employed, but the material outlays of budgetary units are included in final consumption. In Mongolia and the Soviet Union the value of agricultural services is not included in global product at all. In Romania agricultural services of both budgetary and non-budgetary units are included in global product, the services of budgetary units being valued at cost and allocated to intermediate material consumption.

65. The differences in the treatment of non-productive expenditures on geological and prospecting services associated with specific projects affect the content of both global product and net material product. In Bulgaria and the Soviet Union these expenditures are included in the global product but shown on the disposition side of the material balance as losses. In Hungary and Poland they are included in global product but on the disposition side of the balance are allocated to final consumption. In Czechoslovakia, the German Democratic Republic and Mongolia they are not included in global product, and in Cuba and Romania only the material part of the expenditures in question is added to intermediate material consumption.

66. There are some differences in computation of the gross output of the external trade, because MPS provides two alternative approaches. 8/ Although the results of the computation by the two methods are expected to give close results, in practice this may not be the case. The method that is considered to be the primary one and which is similar to that used in SNA is employed in Cuba, Hungary, Mongolia and Poland. The alternative method is used in Bulgaria, Czechoslovakia, Romania and the Soviet Union.

8/ See Basic Principles of the System of Balances of the National Economy (United Nations publication, Sales No. E.71.XVII.10), paras. 1.142-1.143.

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67.   Some comments should be made on the methods of valuation of the global product and especially its non-marketed part. For example, while Cuba, Czechoslovakia, Poland and the Soviet Union follow the MPS recommendations and value the non-marketed part of agricultural output at average producers' prices, in the German Democratic Republic retail trade prices are used; in Bulgaria this part of the output of agriculture is valued at state procurement prices; in Hungary state procurement prices are used on the supply side of the balance, but on the disposition side retail trade prices are employed and a special reconciliation item is introduced.

68.   Some differences exist in the treatment of factor income received from abroad. In general, the majority of the CMEA countries employ the territorial basis of registration of the global product and net material product. This means that the net material product includes net output produced by foreign enterprises located on the territory of the given country but excludes net output of enterprises of the given country located abroad. Some countries, however, deviate from this principle. For example, in Czechoslovakia and Hungary output of construction activities produced by domestic enterprises of these countries is included in both global product and net material product. In Bulgaria, a category of "distributed net material product" is distinguished, and it is defined to include among other things factor incomes received by Bulgarian enterprises abroad.

69.   Some differences exist with regard to the content of intermediate consumption. Some of these are associated with the differences in the content of global product and need not be discussed here. Some further distinctions are reviewed below:

(a)   While a majority of the CMEA countries include current expenditures on development of new products in intermediate consumption, in Czechoslovakia and Poland they are allocated to capital formation.

(b)   Expenditures on uniforms which can be worn both on and off the job are not normally included in intermediate consumption, but in Cuba, Czechoslovakia, Mongolia and Romania, they are included.

(c)   The undepreciated value of scrapped fixed assets (reduced by the value of the materials obtained as a result of scrapping) is allocated to intermediate material input in Cuba, Czechoslovakia, the German Democratic Republic, Romania and the Union of Soviet Socialist Republics; in other countries this item is excluded.

(d)   Expenditures on cultural and recreational services provided by enterprises in the material sphere to their employees are normally not excluded from net material product; however, in the German Democratic Republic these expenditures are added to intermediate inputs.

(e)   Some differences are observed with regard to the treatment of capital repairs. While, according to MPS, capital repairs should be added to capital formation, in Hungary and Poland they are included, at least partially, in intermediate consumption.

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(f) There are some divergences with regard to the treatment of wear and tear
of some types of fixed assets, such as roads and bridges. In Bulgaria and the
Soviet Union, for example, depreciation allowances with regard to these types
of fixed assets are included in final consumption expenditures. In Hungary and
Poland no depreciation allowances are computed for these assets, except for
railway tracks and bridges. In Cuba, Czechoslovakia and Mongolia, wear and tear
of these fixed assets is included in intermediate consumption.

70. The above review is inevitably incomplete and the continuation of work
in this area is planned. As indicated above, the purposes of this review were
to demonstrate that a knowledge of national practices in compilation of
national accounts and balances can be very useful in the context of actual
intersystem comparisons, the methodology of which relies on the internationally
unified concepts and definitions.

II. PROPOSALS FOR FUTURE WORK

71. Further work on the elaboration and improvement of the conceptual framework for intersystem comparisons is planned. The results of the work described above are in most cases tentative and incomplete. It is proposed that efforts to finalize both the SNA and MPS modified matrices and the corresponding conversion tables along the lines discussed in chapter I above continue, taking into account specific comments by the Commission with regard to the structure of the matrices and conversion tables and the additional adjustments proposed. A report containing the final version of the revised conceptual framework for intersystem comparisons can be prepared for the consideration of the Commission at its twenty-second session.

72. The work on the adaptation of SINS for intersystem comparisons should also be completed so that the final versions of the conversion tables making use of the categories shown in SINS can be presented in the same report. These conversion tables should permit computation not only of total GDP but also its major components. This will require the introduction of a number of additional adjustments that were disregarded in the tentative versions of the conversion tables outlined above. Special attention should be given to application of SINS for conceptual and statistical derivation of the total consumption of the population. In the course of the work, account should be taken of the further development of SINS by the CMEA Standing Commission on Statistics.

73. The work on surveying national practices in the compilation of production, consumption and capital formation accounts and balances in the context of intersystem comparisons should be expanded so that a comprehensive description of differences in the methods of computation of major categories of supply and disposition of goods and services and incomes originating from production can be prepared in the light of requirements of intersystem comparisons. The description should include as many countries as possible. It is recognized that the concepts used in national statistics deviate on certain points from those in international recommendations. Perhaps in some cases countries participating in international comparisons may find it more convenient to carry out the comparisons on the basis of national concepts rather than to convert them to those formulated in the international systems, but in most cases it is advantageous to carry out comparisons on the basis of standardized concepts, and therefore all significant deviations from international guidelines should be taken into consideration. Continuation of this work requires even closer co-operation between the Statistical Office and the national statistical offices. Some questionnaires will have to be sent to the countries to collect more detailed information on national practices.

74. Efforts should be made to expand work on numerical illustrative comparisons. The purposes of these exercises remain the same: to test the conceptual framework; to accumulate experience in the processing of the primary data needed for the calculations; to investigate alternative and additional sources of data needed for intersystem comparisons; to ensure further input for the work on elaboration of the conceptual framework of SNA/MPS comparisons; to compile as accurately as possible estimates of gross domestic product for countries with centrally planned economies

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and net material product for countries with market economies. The number of countries for which the calculations are made should be increased to 40-50. As has been done so far, the calculations should be carried out by the Statistical Office in close co-operation with national statistical offices. As a part of this work, the bilateral intersystem comparisons should be promoted further under the auspices of the Conference of European Statisticians. A positive experience of Hungary/France comparisons has demonstrated clearly the advantages of calculations carried out by joint teams of national statisticians from interested pairs of countries, each pair containing one SNA-user and one MPS-user. Such joint exercises make it possible to collect more detailed information for calculations and also to attempt to take into account not only conceptual but also institutional differences. The expansion of this work will make it possible to complete work on generalization of the methods of processing primary data needed for intersystem comparisons.

75. The questionnaire for countries with centrally planned economies should be supplemented by special tables which would permit derivation of gross domestic product for those countries. As indicated above, a similar table showing derivation of net material product for countries with market economies has already been introduced in the SNA questionnaire.

76. The work on establishing links between the United Nations and CMEA classifications by kind of economic activity should continue, with the objective of completing the conversion key between corresponding categories of these classifications. This work can be carried out by the Statistical Office and the Economic Commission for Europe in close co-operation with CMEA.

77. In terms of conceptual and methodological work, efforts to study the relationships between SNA institutional sectors and corresponding sectors of MPS and between major categories of the income and outlay accounts and balances should continue.

III. POINTS FOR DISCUSSION

78. The Commission may wish to discuss the directions in which the conceptual framework of SNA/MPS comparisons may be elaborated further, particularly with respect to the improved modified matrices, conversion tables and additional adjustments needed to ensure conversion (see paras. 30-39). It may also wish to give some attention to the feasibility of adapting SINS for intersystem comparisons and to tentative schemes of the conversion tables relying on SINS (see paras. 40-58). The Commission may wish to comment on the specific steps proposed for elaborating the conceptual framework and on the proposed work programme (see paras. 71-77).