UNITED NATIONS

ECONOMIC AND SOCIAL COUNCIL

Distr.
GENERAL

E/CN.3/362
9 January 1968

ORIGINAL: ENGLISH

STATISTICAL COMMISSION
Fifteenth session
Item 3(b) of the provisional agenda

# NATIONAL ACCOUNTS AND BALANCES

## PROGRESS IN RELATING THE SNA AND MPS

Report by the Secretary-General

68-00774

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# I. SUMMARY

1. Since the fourteenth session of the Statistical Commission, the work on defining the relationship between the System of National Accounts(SNA) and the Material Product System of Balances (MPS) and on extending the common ground between the two systems has progressed in four main directions.

2. In the course of the revision of the SNA and the development of the MPS, efforts have continued to bring about concordance in concepts, definitions and classifications between the two systems. Where this has proved to be undesirable or impracticable, attention has been devoted to incorporating the classifications and data in the revised SNA and developed MPS which are required in order to pass from one system to the other. These efforts have concentrated on flows in respect of the production and disposition of goods and services since many of the income and financial flows are too greatly influenced by institutional differences to be promising objects for meaningful intersystem comparisons. Nevertheless, in some of the work on increasing the common ground between the two systems described in this paper, income and financial flows have also been included.

3. Progress has also been made in improving and applying a conceptual frame and rules for comparisons between the two systems. Matrices have been drawn up on the structure of the revised SNA and MPS which identify the elements of interest for purposes of passing from one system to the other. A table has been derived from the two matrices which delineates the interconnexions between the flows of each system concerning the production and disposition of goods and services. And, in the case of the United States and the Federal Republic of Germany, preliminary estimates have been made in respect of selected aggregates of the MPS (the net material product and its disposition) based on available input-output tables for these countries.

4. The Conference of European Statisticians is engaged in detailed comparisons of the level and composition of selected aspects of the economic

activity of two countries - a market economy and a centrally planned economy - employing the concepts and definitions of the SNA and MPS in each case. Since the fourteenth session of the Statistical Commission a comparison of the final consumption of the population of Austria and Poland has been completed. A complete report on this comparison is to be submitted to the sixteenth session of the Conference of European Statisticians. France and Poland have agreed to undertake comparisons of the structure of their economies based on a standardized input-output table. The study will be carried out in terms of current prices, but is to include a comparison of the price structure and labour and capital inputs of the two countries.

5. In order to promote the uniform understanding in English, French and Russian, of the significance and relationship of the terms of the SNA and MPS, the Conference of European Statisticians is developing a list of standard terms in the three languages. The list is to consist of standard terms for the main concepts and items of each system in the original language of the system (English in the case of the SNA, Russian in the case of the MPS), standardized translations of these terms in the other languages, or suitable equivalents where literal translations are misleading or not too meaningful, and any commonly used synomyms for these terms in each of the languages, where applicable. The list is intended for use in international documents and disucssions. It should also be of assistance in using the national accounting publications of countries in anyof the three languages.

6. The list of standard terms is being devised by a Group of Rapporteurs under the auspices of the Working Group on National Accounts and Balances of the Conference. The Group has discussed a draft list of terms in English and Russian for the revised SNA and developed MPS. This list is to be put in final form; and standard French terms need to be added. It is also proposed to extend the list to include standard terms in respect of national accounting at constant prices, input-output tables, income distribution statistics and manpower balances.

7. The remainder of this paper describes first the ways in which the common ground between the SNA and MPS has been extended, second the improved conceptual frame for comparing the two systems, and third the use of this frame in making preliminary estimates of selected MPS aggregates in the case of the United States and the Federal Republic of Germany. It should be indicated here that this work has been made possible by the comprehensive information that has been furnished concerning the MPS.

## II. EXTENSION IN THE COMMON GROUND BETWEEN THE SYSTEMS

8. Much of the work of bringing the revised SNA and MPS closer together has been carried on under the auspices of the Working Group on National Accounts and Balances of the Conference of European Statisticians. The Working Group and its Groups of Rapporteurs have identified differences in scope, concepts and classifications between the two systems which could be eliminated or needed to be bridged. This has stimulated efforts to remove the unnecessary differences between the SNA and MPS or to provide the required links between them. The Working Group and its Groups of Rapporteurs have also approved common schemes of classification, e.g., of kind of economic activity, household goods and services, for use in the revised SNA and developed MPS and definitions in the case of the revised SNA which improved the correlation between the two systems.

### A. Production

9. The co-ordination between the SNA and MPS in the flows on the output of goods and services and value added has been improved substantially.

10. The extension in the scope of own-account production in the revised SNA to include the processing of primary products by farmers for their own consumption and the construction of roads and other facilities by self-help groups, eliminates an unessential difference between the two systems. In the case of the own-account production of households, the remaining divergence between the SNA and the MPS is the inclusion of imputed rents on owner-

occupied dwellings in gross output in the former but not in the latter. The major essential difference in the boundary of production between the two systems is of course the restriction of the MPS concept of production to the output of the branches of material production.

11. The proposed common classification of kind of economic activity for the two systems, the detailed categories of which may be grouped into the MPS classes of material and non-material production, provides an essential basis for passing from the SNA concept of production to the narrower MPS concept. The industrial classification of gross output and intermediate consumption called for in one of the input-output tables of the revised SNA (Standard table 3, Annex III of Chapter VIII, document E/CN.3/356[1/]) will yield the data required to estimate the aggregate social product and the net material product in the MPS sense.

12. In the case of the MPS, the data called for in the table "Income and expenditure connected with the rendering of services" of the latest available version of the system[2/] makes it possible to estimate gross output, as well as value added in these activities, in the SNA sense. If the non-material inputs into material production were set out in the MPS, it would then be possible to compile figures of the SNA gross domestic product.

## B. Final Demand

### 1. Final consumption

13. A number of developments in the revised SNA and MPS will bring the series of the two systems on final consumption closer together.

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1/ Proposals for The Revision of The SNA, 1952, August 1967, Statistical Commission, Fifteenth session; E/CN.3/356.

2/ Basic Principles of the Statistical Balance of the National Economy, Working Group on National Accounts and Balances, Conference of European Statisticians, Conf.Eur.Stats/WG.22/12.

14. Apart from the treatment of non-material services in the MPS sense, the scope of household consumption is now almost the same in the two systems. This results from the separation of private non-profit institutions serving households from households, the exclusion of an imputed bank service charge from household consumption, and the extension in the scope of the own-account production of households in the case of the SNA. The remaining difference is the inclusion of selected items of imputed rent on owner-occupied dwellings in household consumption in the SNA but not in the MPS.

15. The classification of household goods and services according to object in the revised SNA systematically distinguishes between outlays on goods and outlays on non-material services. It therefore furnishes the basis for converting data from the SNA concept of household consumption to the MPS concept. Because the scheme of classification draws this distinction, it can also be used in the MPS.

16. The classifications of the final consumption of general government and private non-profit bodies according to purpose in the revised SNA and MPS appear to be the same. The classification in the revised SNA of the total final consumption of these bodies, including outlays on food, tobacco, medicine, etc., according to the purpose the organization serve, contributes to the alignment.

17. With the data called for in one of the input-output tables of the revised SNA (standard table 2, Annex III of Chapter VIII, E/CN.3/356), figures may be compiled on the MPS concept of final consumption. Distinctions are drawn in this table between the goods and non-material services in the MPS sense which enter into the final consumption of households, general government and private non-profit institutions. In the case of the MPS, the tables "Income and expenditure connected with the rendering of services" and "Balance of the money incomes of the population and their expenditure" of document Conf.Eur.Stats/WG.22/12 will furnish most of the data concerning outlays on non-material services which are required to enlarge the MPS concept of final

consumption to the SNA concept.

2. Gross capital formation

18. The extension in the scope of gross capital formation in the revised SNA has narrowed the divergences between the SNA and MPS in this respect. The extension consists of the inclusion in gross fixed capital formation of outlays on afforestation and the development of orchards, rubber plantations and other holdings of fruit-bearing and sap-bearing plants which take a long time to become productive. The remaining difference between the two systems is in the classification of acquisitions of durable goods for military purposes. These acquisitions are classed as capital formation in the MPS but as consumption in the SNA.

C. Income Shares and National Income

19. The use in the revised SNA of the scheme of the scheme of industrial classification which distinguishes between material and otherproduction in the MPS sense in classifying the components of value added (i.e., employee compensation, operating surplus, consumption of fixed capital and net indirect taxes), provides the means for compiling figures of the MPS concept of national income. Data can also be compiled on the SNA concept of national income at market prices from the balances and tables of the developed MPS. The addition of information on the income and outlay of non-material activities and the population makes this possible.

20. Divergencies between the SNA and MPS remain in the case of the content of the various components of value added. In the SNA, but not the MPS, employee compensation includes employers' contributions to social security schemes, private pension funds and similar arrangements. These contributions would be included in operating surplus in the MPS. Because of this, as well as other considerations, employee compensation is to be classified into wages and salaries, employers' contributions to social security schemes, and employers' contributions to private pension and similar schemes in the case of the revised SNA. Consumption of fixed capital in the SNA is also

somewhat broader in scope than in the MPS as a result of the inclusion of a charge for the normal risk of accidental damage.

## III. A CONCEPTUAL FRAME FOR COMPARISONS

21. A conceptual frame for relating the revised SNA and the developed MPS, one to the other, is set out in Annex I. It presents (i) matrices for each system (tables 1 and 2) which indicate the similarities and differences between the two systems in the content and classification of flows and stocks and the over-all accounting structure and (ii) table 3a which delineates the interconnexions between the transactions of the SNA or MPS in respect of production, final consumption and capital formation and the transactions of the other systems. Table 3a indicates the elementary series of data needed in the case of each system in order to compile data on the production and the supply and use of the goods and services included in the production boundary according to the other system. The table also shows how the various series of data need to be classified for this purpose. Table 3a thus brings together the information set out in correlated parts of tables 1 and 2.

22. The conceptual frame in Annex I has been developed by the Statistical Office of the United Nations, using the work that was carried on under the auspices of the Conference of European Statisticians and a matrix for the MPS that was worked out by Mr. Arvay of the Hungarian Statistical Office[3/]. The character of the tables in Annex I and the differences and similarities in the flows and stocks of each system are described in the annex. Here

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3/ Rules for Conceptual Adjustments between the System of National Accounts and Balances in Use in Europe, Conf.Eur.Stats/WG.22/GR.1/1. Janos Arvay, "The Frame System of Balances of the National Economy", Hungarian Statistical Office Review, August-September 1966.

attention is focussed on a brief comparison of the structure of the systems and the limitations to the conceptual frame set out in Annex I.

A. Comparison of the Structure of the Two Systems

1. Production, consumption expenditure and capital formation

23. The greatest degree of similarity in structure between the revised SNA and MPS occurs in the case of transactions in the production and the supply and use of commodities. These flows are clearly separated from other transactions in each system, and are classified and treated similarly in the MPS and SNA.

24. The relevant accounts of the SNA are the production, capital expenditure and capital formation accounts. (See table 2 of Annex I.) The comparable parts of the MPS are portrayed in rows and columns 1 through 8 of table 1 in Annex I. They are the material balance, i.e., the balance of production, consumption and accumulation of the social product and the supporting table to this balance on input-output. The material balance concerns the production and import of material, goods and the disposition of these goods. The input-output table furnishes additional information on the primary inputs into (value added by) the production of the material goods.

25. The distinctions drawn in the SNA and MPS in respect of the supply and uses of commodities and the cost structure of production, are essentially similar. In each system, uses are sub-divided into intermediate consumption, final consumption and gross capital formation; and the boundaries between these uses are on the whole similarly defined. Cost structures are divided in like fashion into intermediate and primary inputs (value added). However consumption of capital assets is treated as part of intermediate inputs in the MPS but as part of value added in the SNA. And, there are other less important differences between the SNA and MPS in the way in which value added is sub-divided into categories of transactions.

26. The major divergence between the two systems in respect of the transactions under discussion is of course the difference in the way in which

the production boundary is drawn. The difficulties of assesing the effects of this difference on the flows relating to production and the supply and use of commodities are alleviated by the emphasis in both systems on the classification of these transactions according to kind of economic activity.

2. Income and outlay and capital finance

27. The income and outlay and capital finance accounts of the SNA and the financial balance of the MPS have essentially the same role in the structure of each system. The accounts or the balance set out all transactions other than those on the production and the supply and use of goods and services falling within the boundary of production. These transactions relate to the redistribution of incomes and other transfers, lending and borrowing, and the finance of consumption and accumulation. However the structure of income and outlay and capital finance accounts and the structure of the financial balance differ substantially.

28. The flows of the financial balance are not entirely separated into current and capital transactions; and the concept of saving is not used. As a result, unlike the SNA, the sources of finance of consumption and accumulation or current and capital transfers are not separated, one from the other. Nor are external and internal sources of finance (e.g., the contraction of liabilities as compared to transfers) always distinguished, one from the other.

29. The classification of transactors used in the financial balance of the MPS also differs substantially from the classification used in the income and outlay and capital finance account of the revised SNA. This classification is an institutional classification in the latter system. A classification according to kind of economic activity and an abbreviated institutional classification are used in the former system.

3. Balance sheets

30. The balance sheet on wealth in the MPS is restricted to reproducible tangible assets. The balance-sheet accounts of the revised SNA cover all

forms of wealth. The classifications of transactors also differ in the same fashion as is described in paragraph 29 above.

B. Limitations in the Comparison

31. The comparison of the revised SNA and MPS in Annex I does not indicate certain difference between the systems which arise from institutional arrangements and related circumstances.

32. Table 3a does not set out entries which show the special treatment of external trade in the MPS. The Group of Experts of the Conference of European Statisticians on Links between the SNA and MPS considered that divergencies between the two systems arising from this treatment should not be taken into account in adjustment tables, since they reflect institutional differences.

33. Income originating in unincorporated enterprises (including personal plots) and income received from the ownership of copyrights, patents etc. are included in entrepreneurial income and property income, respectively, in the SNA. These items are recorded under primary incomes of the population in the MPS. It should be noted that income received from the ownership of inherited copyrights, patents etc. are treated as redistributive receipts. Since these divergencies reflect institutional differences, they are omitted from table 3a.

34. Differences between the two systems in the method of valuation of the same flows are not shown in the matrices on table 3a. For instance, renumeration in kind is valued at retail prices including turnover tax in the case of the MPS but at producer prices in the case of the SNA. Stocks are valued at replacement cost in the SNA while increases in material circulating assets are valued mainly at original cost in the MPS.

35. Table 3a does not include items allowing for the fact that imputations, particularly the imputations for rent of owner-occupied dwellings, are not included in the MPS. In principle, the rent imputation should be taken into account in comparisons, but considerable difficulty may be encountered in

practice in making this imputation in the case of countries using the MPS.

## IV. PRELIMINARY ESTIMATES OF NET MATERIAL PRODUCT FOR THE UNITED STATES AND THE FEDERAL REPUBLIC OF GERMANY

36. The results of an experiment with the use of the conceptual framework set out in Annex I for purposes of passing from selected aggregates of the SNA to the correlated aggregates of the MPS, are shown in Annex II. Preliminary estimates of the net material product classified according to final use have been made in respect of the United States for 1958 and the Federal Republic of Germany for 1960. The points of departure for making these estimates were published input-output tables for each of the countries. Because of the detail in classification of transactors and transactions in these input-output tables, they have proved to be a valuable means for converting series in respect of the gross national or domestic product to series in respect of the net material product. The sources of data and procedures utilized for this purpose, and the problems encountered, are also described in Annex II.

## V. FUTURE WORK

37. Further improvement in the correlation between the MPS and the SNA may be reflected in the new, latest version of the developed MPS. A number of additions to and changes in the MPS are under consideration, namely: i) clarification and more detailed description of the main concepts, ii), integration of input-output tables into the system, iii) inclusion of tables and balances in constant prices and of a table relating to the total consumption of the population, iv) introduction of a distinction between marketed services, non-marketed services accruing to the population, and other services.

38. The Working Group on National Accounts and Balances of the Conference of European Statisticians recommended that a conceptual document on SNA/MPS links be prepared after the adoption of the revised SNA and MPS. The Working

Group agreed that the Group of Rapporteurs on SNA/MPS links should be reconvened in order to consider this document and proposals concerning the inter-system adjustments that might be included as supplements from time to time, the questionnaires for the international reporting of data according to the SNA and MPS.

39. The trilingual list of national accounting terms (in English, French and Russian) also needs to be completed.

40. It is proposed that work should continue on improving the conceptual frame for purposes of relating the SNA and MPS which is set out in Annex I in the light of the comments of the Statistical Commission. Estimates of the production and expenditure flows of SNA countries according to MPS concepts should also be made for a number of additional countries. It is also proposed to extend the excercise to cover corresponding estimates for MPS countries according to SNA concepts.

# ANNEX I. CONCEPTUAL FRAMEWORK FOR INTERSYSTEM COMPARISONS

## A. INTRODUCTION

1. Tables 1 and 2 of this appendix are matrices illustrating the structure of the developed MPS and the revised SNA, respectively, which are designed to focus attention on the areas of coincidance and divergence between the two systems. The appendix also includes table 3a and 3b. Table 3a indicates the links between the flows of the SNA in respect of the production and use of goods and services, material and non-material in the MPS sense, and the flows of the MPS. It is derived from the illustrative matrices of tables 1 and 2. Table 3b identifies the elementary flows which make up each entry in Table 3a.

## B. The Illustrative Matrices

2. Tables 1 and 2 delineate the structure of the MPS and SNA, respectively, based on the latest documents[1/] available at the time this paper is being written. In order to make it practicable to use the matrices to exhibit differences between the two systems in the composition of similar flows, in particular on the production and use of goods and services, the classifications of each of the systems have been abbreviated, or omitted in some instances, where not essential to the purpose at hand. To delineate the divergencies in the content or treatment of given flows, classifications, and the associated entries, are set out in the matrices which are not always shown in the system in question. Examples are the entries "selected uniforms received free of charge by employees" and "receipts on employees' official missions" in the case of Table 1 (rows and columns 11 and 12, respectively) and the corresponding entries in table 2 (rows and columns 9 and 11, respectively).

3. The paragraphs below outline the structure and concepts of the MPS and SNA, as illustrated in tables 1 and 2, and emphasize the divergencies in the composition and treatment of given flows. More attention is devoted to

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1/ The documents are Conf.Eur.Stats/WG.22/12 in the case of the MPS and E/CN.3/356 in the case of the SNA.

the matrix concerning the MPS since matrices are used to describe the structure of the revised SNA in available documents.

1. The MPS matrix

a. Production (rows and columns 1 through 8)

4. The data in respect of production cover the supply and disposition of material goods and the activities of the material sphere of activity only. Transactions in respect of non-material services are of course excluded from these balances but included in the production accounts of the SNA.

5. Rows and columns 1 through 3 show the disposition and supply of material goods, respectively. The entries in rows 1 through 3 are valued at purchasers' prices, including transport charges, trade margins and turnover taxes. The entries at the intersection of columns 1 through 3 and rows 4 through 8 which relate to the output of the material sphere of economic activity are valued at producers' prices.

6. Included among the entries in respect of gross output is the contribution of external trade, as a branch of material production, to the social product. (T' at the intersections of columns 1 through 3 and row 8).

7. T' is equal to the difference between imports and exports valued at domestic prices, i.e., the prices at which external trade enterprises sell to, and buy from, domestic units, (I - E) reduced by the balance of imports and exports (F). F is the difference between imports and exports, converted into national currency by means of official exchange rates, $(I_o - E_o)$ multiplied by the coefficient $\frac{I}{I_o}$ if imports exceeds exports, or the coefficient $\frac{E}{E_o}$ if exports exceeds imports. These conventional coefficients are assumed to reflect the ratio between domestic and world prices for imports and exports, respectively. Thus, if F were zero, i.e. $I_o = E_o$, T' would be equal to the external trade balance expressed in domestic prices. Usually, F is not equal to zero; and T' equals $\frac{I}{I_o}(E_o - E)$ if imports exceeds exports, or $\frac{E}{E_o}(I_o - I)$ if exports exceed imports.

8. In addition to the gross output of external trade (T'), exports valued at domestic prices (I and E) and the trade balance (F) are set out in the matrix. I and E are shown in row and column 53, as a source and use of supply of material goods, respectively. In order to have a balance between the sources and uses of goods valued at domestic prices, negative entries (- T'), corresponding to the gross output of external trade, appear in row 54. The other portion of the trade balance (F) is shown as a redistributive income received by the state budget, in row 20 and column 53.

9. Rows and columns 4 through 8 deal with the gross output and cost structure of the branches of material production. Each branch relates to production which is homogeneous in respect of the technology and cost structure of all its output, irrespective of the enterprises where the production actually occurs. It may be noted that intermediate inputs consist of material goods only.

b. Value added net of depreciation (rows and columns 9 through 19)

10. This section of the matrix deals with the distribution of the value added generated in production to the factors of production. Value added in this case is net of the consumption of fixed assets, which is included in intermediate inputs. In the MPS the distribution of value added net of depreciation is called the primary distribution of the national income. Some of the flows into which value added is divided in the matrix are not in fact separately identified in the MPS. The flows are set out in the matrix in order to indicate the differences between the MPS and SNA in the composition of the main elements of primary incomes.

11. Rows and columns 9 through 14 show the elements which accrue to the population and the disposition of this income to the financial balance of the population. Income akin to wages and salaries are such items as year-end and other special bonuses in connexion with employment, which while included in the primary income of the population in the MPS; are included in wages and salaries in the SNA. Among the payments included in primary income of the

population in the MPS, but not in wages and salaries in the SNA, are the value of civilian work uniforms provided to employees which are often used as ordinary wear, and the reimbursed expenses incurred by employees on official travel. These items are part of the intermediate consumption of the employing units in the SNA. These outlays of producing units have therefore been segregated in tables 1 and 2.

12. Rows and columns 15 through 19 concern the portion of value added net of depreciation, i.e., net operating surplus in the SNA sense and primary income of enterprises in the MPS, which accrues to enterprises, and the inclusion of these elements of income in the financial balance of the enterprises. The net operating surplus of enterprises includes a number of elements which are not part of the operating surplus, net of consumption of fixed capital, in the SNA. These components of net operating surplus in the MPS are identified in rows and columns 16 through 19. It should be noted that the capital losses in row and column 19 are losses such as damage and destruction of capital assets as a result of fire, flood and the like, abandoned construction projects and similar events.

c. Financial balance (rows and columns 20 through 32)

13. While the financial balance deals with all current and capital receipts and disbursements, it focuses on the redistribution of the national income, in other words, of net value added. The main classifications of this balance concern the type of redistributive transaction and the class of economic agent engaged in receiving and disbursing funds.

14. Rows and columns 20 through 27 exhibit the classification of redistributive transactions. These transactions cover all financial receipts and disbursements since in addition to the redistributive transactions which are specifically identified (e.g., sale of non-material services, receipts and disbursements of the state budget), the net changes in financial claims (cash holdings, deposits, lending or borrowing, purchases of bonds) reflect the financial counterparts of transactions in primary incomes, final

consumption, fixed capital formation, etc.. The transactions in financial claims are viewed as redistribution in time.

15. The redistributive transactions in respect of the sales of non-material services and wages and salaries from the non-material sphere recorded in rows and columns 22 and 23 are of course flows on the production account of the SNA. This is also the case for certain of the transactions included in the receipts and disbursements of the state budget and the financial system.

16. Since in the matrix the receipts and disbursements of the financial system must be equal, an entry (m) for the issue (withdrawal) of money is provided as a balancing item at the intersection of row 21 and column 24. The entry is also designed to achieve equality between the entries for the change in cash holdings in row and column 24. The entries f and l, at the intersections between row 20 and column 21 and row 21 and column 20, respectively, show the transfers between the state budget and the financial system. The entry n, at the intersection of row 20 and column 25, represents the transfer of deposits to and from the state budget.

17. The entries in rows and columns 28 through 32 relate to all current and capital receipts and disbursements of resident and non-resident economic agents; and are similar in character to the entries of the income and outlay and capital finance accounts of the institutional sectors in the SNA. All receipts and disbursements except in cash, bank deposits and other lending or borrowing are recorded on a gross basis. The latter three items are recorded on a net basis; and are in a sense balancing items between the other incomings and outgoings.

18. The economic units of the non-material sphere are classified into those rendering services to individuals e.g., health, education, (I gr.) and those rendering services to the community as a whole, e.g., the state, the financial system (II gr). The material inputs of the former group is part of the final consumption of the population; the material inputs of the latter

group makes up collective final consumption. Foreign units (tourists, diplomats, missions etc.) are shown separately in order to indicate clearly the treatment of their receipts and disbursements. In the MPS, purchases of non-residents in a given country are included in final consumption expenditure, rather than the exports, of the country; and purchases of residents abroad are not covered in the balances of the country at all.

d. Disposition of the material product (rows and columns 33 through 49)

19. The way in which the national income and output of material goods is disposed of to final uses and the classes of economic agents making the outlays are indicated in rows and columns 33 through 49. The categories of final use indicated are final consumption expenditure and gross capital formation or net capital formation and consumption of fixed assets. The additional final use of the material product is exports, shown in column 53. Allowances for the consumption of fixed assets are of course a source of financing the acquisition of material goods, but not part of national income.

20. Rows and columns 33 through 39 concern the final consumption outlays on material goods. While in the MPS the final consumption of the population and the services of the non-material sphere include the consumption of fixed assets (called non-productive fixed assets in the MPS), for the sake of convenience, these entries are shown at the intersections of rows 48 and 49 and columns 28 and 30 through 32, instead of in the entries C at the intersections of rows 38 and 39 with these columns. Thus the final consumption expenditure shown in the matrix is exclusive of the depreciation charges of these services.

21. In order to delineate the differences between the MPS and SNA in the composition of household consumption, rows and columns 36 and 37, on selected uniforms received free of charge and purchases of material goods covered by reimbursements on employees' official missions, have been introduced in the matrix. These items are included in the final consumption of the population in the MPS, but in the intermediate consumption of producing units in the SNA.

The total final consumption of the population includes in addition the entries at the intersection of rows 33 through 37 with column 28, the material consumption expenditure of the non-material services of group I.

22. Rows and columns 40 through 49 concern capital formation. Net capital formation as well as gross capital formation and depreciation are delineated.

23. Net capital formation is shown according to type of asset and branches of the economy in rows 40 through 43 and according to the transposition of gross capital formation into net capital formation in these columns. A separate row is provided for expenditure on military goods because these outlays are part of general government consumption expenditure in the MPS. Attention should be called to the fact that work put in place on uncompleted construction projects is classed as increases in circulating material assets (stocks).

24. Gross capital formation is set out according to type of asset in rows 44 through 47 and according to type of material goods involved in the columns. Increases in circulating material assets occur in the material sphere only.

25. The entries in respect of consumption of fixed assets in rows and columns 48 and 49 show charges for depreciation and adjustments to these charges made when fixed assets are scrapped. Depreciation of fixed assets is computed at original cost of the assets, and does not cover losses due to unforeseen obsolescence and accidental damage or destruction. The adjustments to the charges for depreciation made in the case of scrapped assets are equivalent to the depreciated value of the fixed assets reduced by the value of the resulting scrap. The adjustment therefore compensates in part for the omission of unforeseen obsolescence from depreciation charges. The entries at the intersection of rows 48 and 49 with columns 4-8 concern productive fixed assets while those at the intersection of these rows with columns 28 through 32 relate to non-productive fixed assets.

e. Opening and closing assets, revaluations and capital losses (rows and columns 0, 50-52 and 55).

26. The value of material assets, fixed and circulating, at the beginning

and end of a period of account are shown in rows and columns 0 and 55, respectively. These assets are classified according to type and holding branches of the economy. The links between the opening and closing values are furnished by the entries during the period of account in respect of net capital formation, value of scrap from scrapped fixed assets, revaluations and capital losses. The revaluations entered in row 51 are made in stocks of material goods when new prices are set. The capital losses entered in row 52 concern the losses in fixed assets caused by fires, floods, etc. and the stoppage of construction projects.

2. The SNA Matrix

27. Since the matrix for the SNA is described in detail in document E/CN.3/356, here attention will be called to those elements of table 2 which concern differences between the SNA and MPS.

a. Production (rows and columns 2 through 16)

28. Since all goods and services are covered in the accounts in respect of production and the supply and use of these items, distinctions are drawn in the table 2 in respect of activities of the material and non-material spheres and material goods and non-material services, in the MPS sense. In addition to industries of the non-material sphere, the services of private non-profit institutions serving households and general government of course also produce non-material services in the MPS sense. Dummy accounts shown in rows and columns 9 through 12 for items such as expenditure on sports, entertainment provided by enterprises, outlays on military goods because these items are treated differently in the SNA and the MPS. The differences in treatment are described above in the discussion of the MPS matrix. The services of non-profit institutions serving households and of general government are classified into two groups, as in the MPS, for purposes of laying the basis for comparisons of the classification of final consumption expenditure between the two systems.

b. Consumption (rows and columns 17 through 34)

29. So as to separate final consumption of material goods in the MPS sense and other final consumption, the classification of household goods and

services shown in rows and columns 17 through 20 draws this distinction. The scheme of classifying household goods and services of the revised SNA is designed so that the detailed categories may be reassembled on this basis. It is not necessary to draw this distinction in the case of the purposes of private non-profit institutions and general government, which are shown in rows and columns 21 and 22. The distinction is already made in the case of the intermediate consumption of the services of these bodies.

30. A number of the classifications of value added isolate divergencies in the composition of the components of value added between the two systems.

31. In the case of compensation of employees, employers' contributions to social security schemes and private pension funds and tips are included in the SNA but not in the MPS. The first two items, which are to be distinguished from wages and salaries in the revised SNA, are part of operating surplus (primary income of enterprises) in the MPS. The last item is classed as a redistributive transfer in the MPS.

32. Since in the MPS, the primary income of enterprises is net of losses arising from unforeseen obsolescence of fixed assets, the entry for operating surplus in the SNA has been divided into the two components in rows and columns 27 and 28.

33. Provisions for accidental damage of fixed assets and adjustments in depreciation charges in the light of these differences between current replacement and original cost, have been separated from consumption of fixed assets in rows and columns 30 and 31. In the MPS, value added net of depreciation includes losses in fixed assets due to accidental damage. These losses are classed as a particular form of final use of net value added, i.e., of national income. Also in the MPS, depreciation charges are based on original cost of the fixed assets.

c. Accumulation (rows and columns 35 through 43)

34. In the case of the accounts on accumulation, gross capital formation is broader in scope in the SNA than in the MPS. The elements included in gross

capital formation in the SNA, but not the MPS, are shown in rows and columns 37 and 38. Transfer costs on purchases of land and other non-reproducible tangible assets and purchases (sales) of newly created art objects are classed as part of redistributive transactions in the MPS.

## C. Tables 3a and 3b

35. Table 3a is designed to indicate how transactions in respect of the production and the supply and use of goods and services in the SNA sense are classified in the SNA and in the MPS. For example, it may be seen from table 3a that the intermediate consumption in the SNA of material goods by producers of the material sphere, may be classed as intermediate consumption, part of the primary income of the population and part of the primary income (operating surplus) of enterprises in the MPS. On the other hand, intermediate consumption in the MPS is part of intermediate consumption only in the SNA. In order to indicate the similarities and differences in the treatment of transactions in question in the two systems, the flows of the SNA and MPS have been sub-divided into elements which fall into a single category of transactions in the case of each system. The SNA and MPS categories may be identical or different.

36. The elementary flows which are classified in Table 3a are identified in Table 3b. For example, while intermediate inputs of material goods in the MPS sense, are classed as intermediate consumption in the SNA, they may be classed as intermediate consumption, various forms of final consumption and capital formation in the MPS. Thus, $m_1$, $m_2$ ..... $m_7$ are set out at the intersection of row 1 with column 1 through 7 in Table 3b. The SNA has been used to determine the range of transactions which needed to be decomposed and classified since the accounts in respect of production and the supply and use of goods and services are broader in scope in the SNA than in the MPS.

37. The matrix tables 1 and 2 furnish the basis for determining how

the transactions of the SNA and MPS should be divided into elementary flows and how the stub and head of table 3a should be classified. As table 3a, as well as table 3b indicate, it is necessary to divide up a given category of transactions of the SNA or MPS into all the elements which are treated differently in the other system. These sub-divisions are set out within the framework of each system in tables 1 and 2. Table 3a brings the information in tables 1 and 2 together in order to exhibit the links between the transactions of the SNA or MPS production, consumption expenditure and capital formation accounts and the transactions of the other system.

# Table 1 MATRIX ILLUSTRATING THE STRUCTURE OF THE MPS [1/,2/,3/]

| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Opening assets | | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| Production | Material goods | Products of agriculture | 1 | | | | | U | U | U | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | Products of industrial activity and construction | 2 | | | | | U | U | U | U | U | | | | | | | | | | | | | | | | | | | | | | | | | | U | U | U | | U | U | | | | | | | | | | | | | | | | | | 2 |
| | | Products of other activity | 3 | | | | | U | U | U | U | U | | | | | | | | | | | | | | | | | | | | | | | | | | U | | U | | U | U | | | | | | | | | | | | | | | | | | 3 |
| | Material sphere | Agriculture | 4 | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| | | Industrial activity and construction | 5 | | | P | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| | | Other activity | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| | | Trade and transport | 7 | | T' | T' | T' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| | | External trade | 8 | | T' | T' | T' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| Value added | Primary incomes of population | Wages and salaries | 9 | | | | | W | W | W | W | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 |
| | | Incomes akin to wages and salaries | 10 | | | | | W | W | W | W | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
| | | Selected uniforms free of charge | 11 | | | | | W | W | W | W | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 |
| | | Receipts on employees' official missions | 12 | | | | | W | W | W | W | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 |
| | | Other supplements in kind | 13 | | | | | W | W | W | W | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 13 |
| | | Value added from personal plots | 14 | | | | | W | W | W | W | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 14 |
| | Primary incomes of enterprises | Profits and turnover taxes | 15 | | | | | Y | Y | Y | Y | Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 |
| | | Social insurance contributions | 16 | | | | | Y | Y | Y | Y | Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 |
| | | Purchases of non-material services | 17 | | | | | Y | Y | Y | Y | Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 17 |
| | | Expenses of sport, entertainment, etc | 18 | | | | | Y | Y | Y | Y | Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 |
| | | Capital losses | 19 | | | | | Y | Y | Y | Y | Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 |
| Finance balance | Redistribution of national income | State budget | 20 | | | | | | | | | | | | | | | | | | | | | | f | | | | n | | t | F | F | F | | | | | | | | | | | | | | | | | | | | | | F | | 20 |
| | | Financial system | 21 | | | | | | | | | | | | | | | | | | | | | l | | | m | | | | G | G | G | G | G | | | | | | | | | | | | | | | | | | | | | 21 |
| | | Sale of non-material services | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | H | H | H | J | H | | | | | | | | | | | | | | | | | | | | | 22 |
| | | Wages and salaries from non-material sphere | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | J | J | | | | | | | | | | | | | | | | | | | | 23 |
| | | Increase in cash holidays | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | K | K | K | K | K | | | | | | | | | | | | | | | | | | | | | 24 |
| | | Increase in deposits | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | K' | K' | K' | K' | K' | | | | | | | | | | | | | | | | | | | | | 25 |
| | | Increase in other lending and borrowing | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | S | S | S | @ | S | | | | | | | | | | | | | | | | | | | | | 26 |
| | | Purchases of bonds, etc | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | | 27 |
| | Receipts and disbursements | Population | 28 | | | | | | | | | | W | W | W | W | W | W | | | | | | L | M | | J | Q | Q' | S | | | | | | | | | | | | | | | | | | | | | | | | | | 28 |
| | | Units of material sphere | 29 | | | | | | | | | | | | | | | | Y | Y | Y | Y | Y | L | M | | | Q | Q' | S | | | | | | | | | | | | | | | | | | | | | | | | | | 29 |
| | | Units of non-material sphere - I gr | 30 | | | | | | | | | | | | | | | | | | | | | L | M | H | | Q | Q' | S | | | | | | | | | | | | | | | | | | | | | | | | | | 30 |
| | | Units of non-material sphere - II gr | 31 | | | | | | | | | | | | | | | | | | | | | L | M | H | | Q | Q' | S | | | | | | | | | | | | | | | | | | | | | | | | | | 31 |
| | | Non-resident units | 32 | | | | | | | | | | | | | | | | | | | | | | M | | | Q | Q' | S | | | | | | | | | | | | | | | | | | | | | | | | | | 32 |
| Disposition of the material product | Final consumption expenditure | Purchases of goods | 33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | | | | C | | | | | | | | | | | | | | | | | | | | | 33 |
| | | Material goods received in kind | 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | | | | | | | | | | | | | | | | | | | | | | | | | | 34 |
| | | Goods from personal plots | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | | | | | | | | | | | | | | | | | | | | | | | | | | 35 |
| | | Selected uniforms received free of charge | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | | | | | | | | | | | | | | | | | | | | | | | | | | 36 |
| | | Material goods purchased with incomes on employees' official missions | 37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | | | | | | | | | | | | | | | | | | | | | | | | | | 37 |
| | | Material construction in non-material sphere - I gr | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | | | | | | | | | | | | | | | | | | | | | | | 38 |
| | | Material construction in non-material sphere - II gr | 39 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | C | C | | | | | | | | | | | | | | | | | | | | 39 |
| | Net capital formation (Fixed assets) | Activities of material sphere | 40 | Ao | | | | | | | | | | | | | | | | | | | | | | | | | | | | B | | | | | | | | | | | | | | | | | | | | | | | | | | 40 |
| | | Activities of non-material sphere | 41 | Ao | | | | | | | | | | | | | | | | | | | | | | | | | | | B | | | B | B | B | | | | | | | | | | | | | | | | | | | | 41 |
| | | Circulating material assets | 42 | Ao | | | | | | | | | | | | | | | | | | | | | | | | | | | | B | | | | | | | | | | | | | | | | | | | | | | | | | | 42 |
| | | Expenditure on military goods | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | B | | | | | | | | | | | | | | | | | | | | | | 43 |
| | Gross capital formation | Fixed assets put to use | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | V | V | | | | | | | | | | | | 44 |
| | | Capital repairs | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | V | V | | | | | | | | | | | | 45 |
| | | Increase in circulating material assets | 46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | V | | | | | | | | | | | | 46 |
| | | Expenditure on military goods | 47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | V | | | | | | | | | | | | 47 |
| | Fixed-asset consumption | Depreciation | 48 | | | | | D | D | D | D | D | | | | | | | | | | | | | | | | | | | D | | | D | D | D | | | | | | | | | | | | | | | | | | | | | | | | 48 |
| | | Adjusted value of scrapped fixed assets | 49 | | | | | O | O | O | O | O | | | | | | | | | | | | | | | | | | | O | | | O | O | O | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| | Value of scrap from scrapped fixed assets | | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -N | -N | N | | | | | | | | | | | | 50 |
| | Revaluation | | 51 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | R | | | | | | | | | | | | 51 |
| | Capital losses | | 52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | Z | Z | | | | | | | | | | | | | | | | | | -Z | -Z | | | | | | | | | | | | 52 |
| | Imports | | 53 | | I | I | I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 53 |
| | Adjustment for external transactions | | 54 | | -T' | -T' | -T' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | -T' | | 54 |
| | Closing assets | | 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | $A_2$ | $A_2$ | $A_1$ | | | | | | | | | | | | | 55 |
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | |

## Notes to Table 1

1/ The system illustrated in the matrix is described in Basic Principles of the Statistical Balance of the National Economy, Working Group on National Accounts and Balances, Conference of European Statisticians, Conf.Eur. Stats/WG.22/12.

2/ In devising the illustrative matrix use has been made of the article by Janos Arvay, "The Frame System of Balances of the National Economy", Statistical Review, Hungarian Statistical Office, August-September 1966.

3/ The symbols used in Table 1 are given below.

### Symbols Used in Table 1

| | | |
|---|---|---|
| A | - | Assets, net |
| B | - | Net capital formation |
| C | - | Final consumption, excluding consumption of fixed assets |
| D | - | Depreciation of fixed assets |
| E | - | Export |
| F | - | Payments to the state budget |
| f | - | Payments to the state budget from other institutions of the financial system |
| G | - | Payments into other institutions of the financial system |
| H | - | Purchases of non-material services |
| I | - | Import |
| j | - | Wages and salaries from non-material sphere |
| K | - | Increase in cash holding |
| K' | - | Increase in deposits |
| L | - | Receipts from state budget |
| l | - | Receipts from state budget by other institutions of the financial system |
| n | - | Temporary transfer of deposits to state budget |
| M | - | Receipts from other institutions of the financial system |
| m | - | Issue or withdrawal of currency |

N - Value of scrapped

O - Adjusted value of scrapped fixed assets, i.e. depreciated value of the assets reduced by value of the scrap obtained

P - Gross output of industries excluding trade and transport

Q - Decrease in cash holding

Q' - Decrease in deposits

R - Stock revaluation

S - Increase in lending (borrowing)

T - Gross output of trade and transport

T' - Gross output of external trade

U - Use of supply of material goods

V - Gross capital formation

W - Primary incomes of employees

X - Purchases of bonds, etc.

Y - Primary incomes of enterprises

Z - Capital losses

Table 2. Matrix Illustrating the Structure of the Revised SNA[1/,2/]

| | | | | | 1 | 2 3 4 | 5 | 6 7 8 | 9 10 11 12 | 13 14 15 16 | 17 18 19 20 | 21 | 22 | 23 24 25 26 | 27 28 | 29 30 31 | 32 | 33 | 34 | 35 36 37 38 | 39 40 41 42 | 43 | 44 | 45 | 46 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Opening balance sheet | | | | 1 | | | | | | | | | | | | | | | | | | $A_o$ | | | |
| Production | Commodities | Products of agriculture | | 2 | | | | U U U | | U U U U | U U U U | | | | | | | | | U U | | | U U | | |
| | | Products of other material activity | | 3 | | | | U U U | U U U U | U U U U | U U U U | | | | | | | | | U U U | | | U U | | |
| | | Products of non-material services | | 4 | | | | U U U | U U | U U U U | U U U | | | | | | | | | U | | | U | | |
| | | Commodity taxes | | 5 | | | | X X X | | X X X X | X X X X | | | | | | | | | X X X X | | | X | | |
| | Activities | Industries | Agriculture | 6 | | M M | X | | | | | | | | | | | | | | | | | | |
| | | | Other material activity | 7 | | M | X | | | | | | | | | | | | | | | | | | |
| | | | Non-material services | 8 | | M | X | | | | | | | | | | | | | | | | | | |
| | | Dummy accounts | Selected uniforms free of charge | 9 | | | | d d d | | d d d $d_o$ | | | | | | | | | | | | | | | |
| | | | Military goods | 10 | | | | | | | | | | | | | | | | | | | | | |
| | | | Expenses of employees' official missions | 11 | | | | $d_1$ $d_1$ $d_1$ | | $d_1$ $d_1$ $d_1$ $d_1$ | | | | | | | | | | | | | | | |
| | | | Expenses of sport, entertainment, etc provided by enterprises | 12 | | | | $d_2$ $d_2$ $d_2$ | | $d_2$ $d_2$ $d_2$ $d_2$ | | | | | | | | | | | | | | | |
| | | Other activities | Services of private non-profit institutions serving households | I gr 13 | | | | | | | 0 | | | | | | | | | | | | | | |
| | | | | II gr 14 | | | | | | 0 | | 0 | | | | | | | | | | | | | |
| | | | Services of general government | I gr 15 | | | | | | | 0 | | | | | | | | | | | | | | |
| | | | | II gr 16 | | M | X | | | | | | 0 | | | | | | | | | | | | |
| Consumption | Final consumption expenditure | Household goods and services | Food, beverages, tobacco | 17 | | | | | | | | | | | | | | C | | | | | | |
| | | | Clothing, footwear, etc | 18 | | | | | | | | | | | | | | C | | | | E | | |
| | | | Other material goods | 19 | | | | | | | | | | | | | | C | | | | | | |
| | | | Non-material services | 20 | | | | | | | | | | | | | | C | | | | | | |
| | | Purposes of private non-profit institutions | | 21 | | | | | | | | | | | | | | C | | | | | | |
| | | Government purposes | | 22 | | | | | | | | | | | | | | C | | | | | | |
| | Income and outlay | Value added | Compensation of employees | Wages and salaries | 23 | | | W W W | | W W W W | | | | | | | | | | | | | | |
| | | | | Contributions to social security schemes | 24 | | | W W W | | W W W W | | | | | | | | | | | | | | |
| | | | | Contributions to private pension funds, etc. | 25 | | | W W W | | | | | | | | | | | | | | | | | |
| | | | | Tips | 26 | | | W W W | | | | | | | | | | | | | | | | |
| | | | Operating surplus | Net of capital loss from unforeseen obsolescence of fixed assets | 27 | | | Y Y Y | | | | | | | | | | | | | | | | | |
| | | | | Capital loss from unforeseen obsolescence of fixed assets | 28 | | | Y Y Y | | | | | | | | | | | | | | | | | |
| | | | Consumption of fixed assets | At original cost excluding accidental damage of fixed assets | 29 | | | D D D | | D D D D | | | | | | | | | | | | -D | | |
| | | | | Accidental damage of fixed capital | 30 | | | D D D | | D D D D | | | | | | | | | | | | -D | | |
| | | | | *Adjustment for changes in prices* | 31 | | | *D D D* | | *D D D D* | | | | | | | | | | | | -D | | |
| | | | Indirect tax, net | | 32 | T T | | T T T | | T T T T | | | | | | | | | | | | | | |
| | | Income transfers | | | 33 | | | | | | | | | | | | | J | | | | J | | |
| | | Institutional sectors | | | 34 | | | | | | | | W W W W | | Y Y | | T | J | | | | W | | |
| Accumulation | Capital formation | *Increase in inventories* | | 35 | | | | | | | | | | | | | | | | V | | V | | | |
| | | Fixed capital formation | | 36 | | | | | | | | | | | | | | | | V | | V | | | |
| | | Transfer costs on purchases of land and other non-reproducible fixed assets | | 37 | | | | | | | | | | | | | | | | V | | | | | |
| | | *Art objects created during current year* | | 38 | | | | | | | | | | | | | | | | V | | | | | |
| | Capital finance | Industrial capital formation | | 39 | | | | | | | | | | | | | | | | | | V | | | |
| | | Land, art objects, mineral rights | | 40 | | | | | | | | | | | | | | | | | | V | | | |
| | | Financial claims | | 41 | | | | | | | | | | | | | | | | | | F | F | | |
| | | Capital transfers | | 42 | | | | | | | | | | | | | | | | | | | | | |
| | | Institutional sectors | | 43 | $L_o$ | | | | | | | | | | | | | S | | | N K | | R | $L_1$ | |
| Rest of the world | | | | 44 | | I I I | | | | I | I | | W | | | | J | | I | | | | | | |
| Revaluation | | | | 45 | | | | | | | | | | | | | | | | | | R | | | |
| Closing balance sheet | | | | 46 | | | | | | | | | | | | | | | | | | $A_1$ | | | |

## Notes to Table 2

1/ This is an abbreviated illustrative matrix of the system described in Proposals for the Revision of the SNA, August 1967, Statistical Commission Fifteenth session, E/CN.3/356.

2/ The symbols used in this table are given below.

## Symbols used in Table 2

A - Assets

C - Final consumption expenditure

D - Consumption of fixed assets

E - Export at market prices

F - Net acquisition of financial assets

I - Imports

j - Current transfers, net

K - Capital transfers, net

L - Liabilities

N - Net incurrence of liabilities

O - Consumption of other goods and services other than commodities

R - Revaluation

S - Saving

U - Use of supply of commodities

V - Gross domestic capital formation at market prices; net purchases of land; net purchases of other non-reproducible assets

W - Compensation of employees

X - Commodities taxes, net

Y - Operating surplus

d - Dummy accounts

Table 3a. Interconnection between Flows of SNA and MPS

| Flows of the MPS / Flows of the SNA | | | | Material inputs | | | Value added | | | | | | Final demand | | | | | | | | Selected redistributive flows | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Primary incomes of the population | | | Primary incomes of enterprises | | | Final consumption expenditure | | | Net capital formation | | Losses | Exports | - Imports | | |
| | | | | Intermediate consumption | Consumption of productive fixed assets | | Wages and salaries | | Receipts on employees' official mission | Social insurance contributions | Purchases of non-material services | Financing sport, entertainment, etc | Profits and turnover taxes | Consumption of the population | | Material input in non-material services II gr | Fixed assets and circulating material assets | Military goods | | | | | |
| | | | | | Depreciation | Adjusted value of scrapped fixed assets | | Selected uniforms free of charge | | | | | | Household consumption | Material input into non-material services I gr | | | | | | | | |
| Intermediate consumption | | In material sphere | M | $m_1$ | | | | $n_1$ | $l_1$ | | $u_1+v_1$ | | $s_1$ | | | | | | | | | |
| | | In non-material sphere | S | | | | | | | | | | | | $m_2$ | $m_3$ | q | | | | R | |
| Value added | Consumption of fixed assets | At original cost net of accidental damage | | | $d_1$ | | | | | | | | | | $d_2$ | $d_3$ | | | xg | | | $a_2+a_3$ |
| | | Accidental damage | | | | | | | | | | | $a_1$ | | | | | | | | | |
| | | Adjustment for price changes | | | | | | | | | | | | | | | | | | | | |
| | Compensation of employees: Wages and salaries | In material sphere | | | | | $w_1$ | | | | | | | | | | | | | | $w_2+w_3$ | |
| | | In non-material sphere | | | | | | | | | | | | | | | | | | | | |
| | Compensation of employees: Contributions to social security schemes, private pension funds, etc. | In material sphere | | | | | | | | $k_1$ | | | | | | | | | | | $k_2+k_3$ | |
| | | In non-material sphere | | | | | | | | | | | | | | | | | | | | |
| | Compensation of employees: Tips | In material sphere | | | | | | | | | | | | | | | | | | | zz | |
| | | In non-material sphere | | | | | | | | | | | | | | | | | | | | |
| | Operating surplus | Net of unforeseen obsolescence of fixed assets | | | | | | | | | | | $r_1$ | | | | | | | | $r_2+r_3$ | |
| | | Unforeseen obsolescence of fixed objects | | | | $b_1$ | | | | | | | | | $b_2$ | $b_3$ | | | | | | |
| | Indirect taxes, net | | | | | | | | | | | | $t_1$ | | | | | | | | $t_2+t_3$ | |
| | | | | | | | | | | | | | $g_1$ | $m_4+m_5$ | $m_6$ | | $f(d+Rb+g)$ | | | | | |
| Final demand | Final consumption expenditure | Households | | | | | | | | | | | | $C_1$ | | | | | | | $C_2$ | |
| | | General government | | | | | | | | | | | | | | | | | | | $G_1+G_2$ | |
| | | Private non-profit institutions serving households | | | | | | | | | | | | | | | | | | | $O_1+O_2$ | |
| | Gross capital formation | Fixed assets and inventories | | | | | | | | | | | | | | | V | | | | | |
| | | Transfer costs on non-reproducible fixed assets, art objects | | | | | | | | | | | | | | | | | | | T+A | |
| | Exports | | | | | | | | | | | | | $E_1^o$ | | | | | $E_1$ | | $E_2+E_2^o$ | |
| | -Imports | | | | | | | | | | | | | | | | | | | $I_1$ | $I_2+I_2^o$ | $I_1^o$ |

Table 3b. Identification of Elementary Flows Shown in Table 3b

| Elementary flows | | | Production | | | | | | | Final demand | | | | | | | | | | Gross output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Final consumption expenditure | | | Gross capital formation | | | Export | | - Imports | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Households | General government | Private non-profit institutions serving households | Fixed assets and inventories | Transfer costs on land and other non-reproducible capital assets | Objects of art | Commodities | Purchases by non-residents | Commodities | Purchases of residents abroad | |
| Goods and services | Material goods | | 1 | $m_1$ | $m_2$ | $m_3$ | $m_4$ | $m_5$ | $m_6$ | $m_7$ | $C_1$ | | | V | T | A | $E_1$ | $E_1^o$ | $I_1$ | $I_1^o$ | $P_1$ |
| | Non-material services | I gr | 2 | $u_1$ | $u_2$ | $u_3$ | | $u_5$ | $u_6$ | | $C_2$ | $G_1$ | $O_1$ | | | | $E_2$ | $E_2^o$ | $I_2$ | $I_2^o$ | $P_2$ |
| | | II gr | 3 | $v_1$ | $v_2$ | $v_3$ | | | | | | $G_2$ | $O_2$ | | | | | | | | $P_3$ |
| | Selected uniforms free of charge | Dummy accounts | 4 | $n_1$ | $n_2$ | $n_3$ | =R | | | | | | | | | | | | | | |
| | Expenses on employees' official missions | | 5 | $l_1$ | $l_2$ | $l_3$ | | | | | | | | | | | | | | | |
| | Expenses of sport, entertainment etc. provided by enterprises | | 6 | $s_1$ | $s_2$ | $s_3$ | | | | | | | | | | | | | | | |
| | Expenditure on military goods | | 7 | | q | | | | | | | | | | | | | | | | |
| Value added | Depreciation of fixed assets | Consumption of fixed assets | | $d_1$ | $d_2$ | $d_3$ | | | | | | | | | | | | | | | |
| | Accidental damage to fixed assets | | | $g_1$ | $g_2$ | $g_3$ | | | | | | | | | | | | | | | |
| | Adjustment for change in prices | | | $a_1$ | $a_2$ | $a_3$ | | | | | | | | | | | | | | | |
| | Wages and salaries | Compensation of employees | | $w_1$ | $w_2$ | $w_3$ | | | | | | | | | | | | | | | |
| | Contribution to social insurance and private pension funds etc. | | | $k_1$ | $k_2$ | $k_3$ | | | | | | | | | | | | | | | |
| | Tips | | | $z_1$ | $z_2$ | $z_3$ | | | | | | | | | | | | | | | |
| | Net of capital losses from unforeseen obsolescence of fixed assets | Operating surplus | | $r_1$ | $r_2$ | $r_3$ | | | | | | | | | | | | | | | |
| | Capital losses on the unforeseen obsolescence of fixed assets | | | $b_1$ | $b_2$ | $b_3$ | | | | | | | | | | | | | | | |
| | Indirect tax, net | | | $t_1$ | $t_2$ | $t_3$ | | | | | | | | | | | | | | | |
| Gross output | | | | $P_1$ | $P_2$ | $P_3$ | | | | | | | | | | | | | | | |

# ANNEX II. PRELIMINARY ESTIMATES OF NET MATERIAL PRODUCT FOR THE UNITED STATES AND THE FEDERAL REPUBLIC OF GERMANY

1. This annex presents preliminary estimates of the net material product, classified according to end use for the United States and the Federal Republic of Germany. The estimates in the case of the United States are for 1958, and are shown in Tables 2 and 3. The estimates in the case of the Federal Republic of Germany are for 1960, and are shown in Tables 5 and 6. Also given in this annex are Tables 1 and 4 which consist of a reclassification and condensation of the published input-output tables for the United States and the Federal Republic of Germany, respectively. These tables furnished the main basis for the estimates of the net material product for the two countries. The paragraphs below consist of a description of the materials used and the procedures followed in making the estimates. No attempt has been made to compare levels on net product of SNA and MPS countries. Such an enterprise would require the estimate of purchasing power parity exchange rates.

## A. The United States

2. The basic source of the estimates is the input-output table for 1958[1/]. Some supplementary data were obtained from the Office of Business Economics of the U.S. Department of Commerce.

1. Separation of material goods from services.

3. An effort was made to separate non-productive services from material goods as far as possible. In the original input-output table, the U.S. Standard Industrial Classification of 1957 is combined into 86 industries. These industries were further combined and reclassified into 22 groups according to the classification by kind of economic activity of the revised SNA. At a second stage, some of the 22 industry groups were again combined in order to make the input-output table more convenient for presentation.

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1/ Survey of Current Business, No.11, 1964

Table 1. CONDENSED INPUT-OUTPUT TABLE FOR THE USA, 1958

(Millions of dollars at producers' value)

| | | 1 | 1a | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | Inter-mediate consump-tion | Final demand | | | | | | Gross output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | Personal consump-tion | Gross fixed capital forma-tion | Inven-tories | Gov't purchases (federal and state) | Net export | Final demand | |
| Agriculture forestry, fishing | 1 | 15872 | | | 26535 | 52 | 237 | 363 | 95 | 241 | | | | 77<br>2150/2 | | | 24 | | | 108 | — | | | 130 | 45884 | 4839 | | 1068 | 948 | 1884 | 8739 | 54623 |
| Agricultural services | 1a | 44 | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | | | 44 |
| Mining and quarrying | 2 | 105 | 3 | 1129 | 13375 | 1751 | 756 | 61 | 16 | 22 | | | | 25<br>144/2 | 16 | | 1 | | | | | | | 29 | 17433 | 279 | | -114 | 274 | 483 | 922 | 18355 |
| Manufacturing | 3 | 6743<br>48/1 | | 1467<br>7/1 | 136044<br>72/1 | 672<br>25/1 | 26926 | 3720<br>44/1 | 988 | 5301<br>110/1 | 509 | 565 | 726 | 8445<br>834/2 | 4 | | 6305 | 157 | | 2318 | 2391 | | | 323 | 204744 | 109484 | 20415 | -2184 | 19336 | 11999 | 159050 | 363794 |
| Electricity, gaz, steam | 4 | 258<br>15/1 | 7 | 250 | 3487<br>2/1 | 4796<br>2/1 | 183 | 557<br>3/1 | 148 | 2195<br>8/1 | 56 | 67 | 79 | 747<br>272/2 | 50 | | 458 | 11 | | | | | | 68 | 13719 | 8278 | | | 905 | 39 | 9222 | 22941 |
| Construction | 5 | 455<br>161/1 | 1 | 5<br>5/1 | 784<br>63/1 | 1158<br>20/1 | 8 | 1301<br>36/1 | 354 | 800<br>90/1 | 8 | 9 | 12 | 6148 | 5 | | 794 | 20 | | | | | | 218 | 12455 | | 36957 | | 19877 | 2 | 56836 | 69291 |
| Transport and communication (material sphere) | 6 | 1024<br>47/1 | | 30<br>3/1 | 11260<br>18/1 | 1132<br>6/1 | 2197 | 2456<br>10/1 | 650 | 2396<br>26/1 | 38 | 46 | 56 | 2640<br>476/2 | 8 | | 437 | 11 | | | 83 | | | 36 | 25086 | 3410 | 854 | 149 | 1277 | 1277 | 6967 | 32053 |
| Transport and communication (non-material sphere) | 7 | | | | | | | | | | | | | | | | | | | 2575 | | | | | 2575 | 10204 | | | 1000 | 1000 | 12204 | 14779 |
| Wholesale and retail trade | 8 | 2086<br>14/1 | | 874<br>5/1 | 13154<br>2/1 | 480<br>2/1 | 6246 | 1020<br>3/1 | 270 | 1788<br>9/1 | 209 | 163 | 200 | 835<br>1201/2 | 4 | | 540 | 14 | | 496 | | | | -477 | 29138 | 61764 | 3763 | 77 | 956 | 1567 | 68127 | 97265 |
| Hotel | 9 | | | | | | | | | | | | | | | | | | | 800 | | | | | 800 | 2103 | | | | | 2103 | 2903 |
| Personal services (non-material sphere) | 10 | 4 | | | 124 | 4 | | | | 90 | | 56 | 30 | 117 | | | 32 | | | | | | | | 457 | 6223 | | | | | 6223 | 6680 |
| Personal services (material sphere) | 11 | | | | 157 | | | | | 114 | | | 54 | 150 | | | 41 | | | | | | | 30 | 546 | 3273 | | | 273 | | 3546 | 4092 |
| Banking, insurance, real estate | 12 | 3365<br>294/1 | | 2176<br>15/1 | 12862<br>51/1 | 734<br>17/1 | 3343 | 2161<br>31/1 | 578 | 11519<br>79/1 | 257 | 277 | 367 | 13533<br>1378/2 | 6 | | 3135 | 78 | | | 3 | | | 175 | 56434 | 53729 | 1209 | | 1603 | 529 | 57070 | 113504 |
| Sanitary and similar services | 13 | 6 | | 3 | 38 | 116 | | 3 | | 20 | | | | 3 | | | 5 | | | | | | | | 194 | | | | | | | 194 |
| Public administration | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 39029 | | 39029 | 39029 |
| Social, recreational and related services | 15 | 113<br>42/1 | | 12<br>3/1 | 472<br>15/1 | 17 | 68 | 45<br>9/1 | 14 | 169<br>24/1 | 2 | 3 | 4 | 1716<br>137/2 | | | 1677 | 64 | | 154 | | | | 8 | 4768 | 23709 | | 22 | 5578 | 275 | 29584 | 34352 |
| Movie production | 16 | | | | | | | | | | | | | | | | 862 | | | | | | | | 862 | | | | | | | 862 |
| Import a) non-competetive<br>b) competetive | 17 | 253<br>878 | | 1717 | 2100<br>6675 | 15<br>36 | | 552<br>609 | 159<br>220 | 56 | | | | 118<br>12 | | | 107 | 3 | | 160 | 277 | 530 | | 6 | 3369<br>11114 | 3855 | 16 | 8 | 2720 | (-21081) | (-14483) | - |
| Business travel expenses | 18 | 43<br>14/1 | 3 | 102 | 2933 | 71 | 263 | 171 | 45 | 1607<br>4/1 | 36 | 40 | 40 | 640 | | | 579 | 15 | | | | | | 5 | 6611 | | | | | | | 6611 |
| Other dummy industries (office supply and scrap) | 19 | 3 | 1 | 125 | 1657 | 33 | 101 | 85 | 21 | 327 | 16 | 15 | 21 | 414 | | | 87 | 7 | | | | | | 9 | 2922 | -14 | -822 | -206 | 665 | 209 | -168 | 2754 |
| Rest of the world | 20 | | | | | | | | | | | | | | | | | | | | | | | | | -1153 | | | -307 | 4020 | 2560 | 2560 |
| Revaluation | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | -311 | | | -311 | -311 |
| Undistributed and discripency | 22 | 9 | 2 | 12 | 88<br>1/1 | 456<br>5/1 | 26 | 66 | 30 | 151<br>4/1 | 6 | 2 | 3 | 31<br>68/2 | 5 | | 2 | | | | | | | -67 | 900 | 86 | | | 24 | 4 | 114 | 1014 |
| Intermediate consumption | | 31261<br>635/1 | 17 | 7902<br>38/1 | 231745<br>224/1 | 11523<br>77/1 | 40354 | 13170<br>136/1 | 3588 | 26796<br>354/1 | 1137 | 1243 | 1592 | 35651<br>6660/2 | 98 | | 15086 | 380 | | 6611 | 2754 | 530 | — | 493 | 440055 | | | | | | | |
| Consumption of fixed capital | | 3872<br>225/1 | | 1180<br>15/1 | 11372<br>88/1 | 2088<br>28/1 | 2040 | 2059<br>50/1 | 556 | 4257<br>125/1 | - | 712 | 906 | 9062 | - | | 293 | 7 | | - | - | - | - | - | 38932 | | | | | | | |
| Value added, net | | 17340<br>1290/1 | 27 | 9129<br>91/1 | 119843<br>522/1 | 9058<br>167/1 | 26897 | 16351<br>290/1 | 10635 | 65011<br>722/1 | 1766 | 4725 | 1594 | 62131 | 96 | 39029 | 18973 | 475 | | - | | 2030 | -311 | 521 | 408402 | | | | | | | |
| Gross output | | 52473<br>2150/1 | 44 | 18211<br>144/1 | 362960<br>834/1 | 22669<br>272/1 | 69291 | 31577<br>476/1 | 14779 | 96064<br>1201/1 | 2903 | 6680 | 4092 | 113504 | 194 | 39029 | 34352 | 862 | - | 6611 | 2754 | 2560 | -311 | 1014 | 887389 | 290069 | 62392 | -1491 | 94158 | 2206 | 44334 | 887389 |

/1 - Components of cost structure of the provision of real estate services

/2 - Rent which is transferred conventionally from various industries to "real estate" sector

4. Since the kind of economic activity classification of the SNA does not completely separate material goods from services in the MPS sense, some further adjustments in the classification were necessary. The most important of these adjustments are:

i. The separation from agriculture of some services which are treated as non-productive in the MPS (irrigation, veterinary services, etc.)

ii. The separation of passenger transport and communications serving households and units of the non-productive sphere from transport and communications serving the material sphere.

iii. Some personal services, such as laundries, dyeing, shoe repair were separated out since they belong to the material sphere of the MPS. These industries are shown separately in the detailed, but not in the condensed, list of the kind of activity classification of the SNA.

iv. Movie production, which in the SNA is classified under "Recreational and related cultural services" was separated out because it is recorded under "Other branches of the material sphere" in the MPS.

5. It also would have been desirable to separate distribution from production in the case of water and gas to achieve similarity with the MPS. However, this could not be done for lack of information.

6. Since data on gross output only were available in order to make the adjustments listed above, it was assumed that the cost structure of the industries concerned was similar to that of related industries.

2. Secondary products

7. In the original matrix, secondary products, including rent , are treated as output of the industries actually producing them and as sold to the industries for which they are characteristic products before distribution to intermediate and final demand (the so-called "transfer approach"). This complicates the comparison with the MPS, particularly in those cases where services are transferred from industries mainly producing material goods. In particular, it

was necessary to isolate in the column for "Banking, insurance and real estate" the rent transferred from the various industries in which it originates in order to estimate material input in the real estate industry. It was also necessary to separate out the cost structure of rent as a secondary product in order to estimate the material consumption of industries rendering services and the components of value added originating in the material sphere.

8. In Table 1, the footnoted entries in column 12 show rent originating as secondary product in the other industries and transferred to the real estate industry. The footnoted entries in columns 1-4, 6 and 8 show the components of the cost structure connected with the secondary output of rental services in industries engaged in material production.

3. Treatment of transport charges

9. Since the entries of Table 1 are valued at producer prices, some problems arose with regard to the separation of transport of goods from transport of of passengers. In the original table, the entry at the intersection of the row for "Transport" and the column for "Personal consumption" included both purchases of transport services by households and transport costs included in the value of consumer goods purchased by households. An estimate of passenger transport services was made by means of data on personal consumption by type of product contained in "National Income and Product Account of the U.S., 1929-1965".

d. Treatment of imports

10. A distinction is made between competitive and non-competitive imports in Table 1. Competitive imports consumed by industries are distributed by industry together with similar domestic commodities. The entries in row 17b and columns 1-22 therefore show "inputs" of imported competitive commodities into the domestic industries which produce similar commodities. Competitive imports consumed by industries could be easily sub-divided into

material goods and services according to the commodity group to which they belong.

11. Inputs of non-competitive commodities are allocated directly to the consuming industries in row 17a and columns 1-22 of the table. Each entry consists of a mixture of commodities and may contain both material goods and services. Since it was found that the bulk of competitive imports consisted of material goods, it was assumed that non-competitive imports consisted exclusively of material goods. Both competitive and non-competitive imports for final demand were allocated directly to the appropriate demand categories.

12. The excess of exports over imports was adjusted by the amount of net factor income from abroad included under "net exports" in the original table.

e. Government enterprises

13. In the original table, all government enterprises were shown in one separate group. Their output was allocated among the appropriate industries by means of sales data obtained from the Office of Business Economy. Since no supplementary data on inputs were available, it was assumed that the cost structure of government enterprises was the same as that of private enterprises in the same industry group.

f. Capital consumption allowances

14. The consumption of fixed assets by industry was estimated by means of information in "The National Income and Product Accounts of the United States 1929-1965" on corporate and non-corporate capital consumption allowances by industry. No adjustment was possible for the difference in coverage between the MPS and SNA concepts of capital consumption allowances.

g. Dummy industries

15. The original input-output table includes entries for a number of dummy industries. These dummy industries are left without change in Table 1,

since some of them are of interest for comparison purposes (like, for instance, the account relating to business travel expenditures).

h. The calculation of net material product

16. Tables 2 and 3 show net material product of the United States in 1958 estimated from the value added and the final demand side, respectively, on the basis of the data shown in Table 1. The main steps in deriving net material product from the original data on gross national product consist in deducting depreciation and the components of value added originating in service industries, and adding the value of services consumed by industries in the material sphere.

17. The results of the estimation of net material product based on final demand data are given in Table 3. In this case, it was necessary to deduct from GNP purchases of services including the value of services provided free of charge, net factor income from abroad, and consumption of fixed assets and to add material input and depreciation in service industries. Corresponding to business travel expenditure in the preceding table, purchases of material goods by the employees concerned, in the material as well as the non-material sphere, may also be included.

B. The Estimates for the Federal Republic of Germany

18. Calculations of net material product for the Federal Republic of Germany, from the production and final demand side, respectively, are shown in Tables 9 and 10. The adjustments made in order to derive net material product from the original country estimates are broadly the same as described in paragraphs 16 and 17 above, referring to similar estimates for the United States.

19. The estimates were based on an input-output table for 1960, published in "Tableaux" Entrées-Sorties"pour les pays de la Communauté Economique Europeenne", Office Statistique des Communautés Européennes, 1964. The original table was aggregated on the basis of the condensed SNA classification of kind of economic activity.

Table 2. Derivation of Net Material Product of the USA, 1958

(Millions of dollars)

| Code of industries in table 1 | Value added, gross (GNP) | Consumption of fixed capital | Value added, net (NNP) (2-3) | Value added, net, originating in services | Value of services consumed in material sphere | Net material product 1/ (4-5+6) |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 21212 | 3872 | 17340 | | 3541 | 20881 |
| 2 | 10309 | 1180 | 9129 | | 2203 | 11332 |
| 3 | 131215 | 11372 | 119843 | | 13584 | 113427 |
| 4 | 11146 | 2088 | 9058 | | 877 | 9929 |
| 5 | 28937 | 2040 | 26897 | | 3437 | 30334 |
| 6 | 18407 | 2056 | 16351 | | 2275 | 18626 |
| 8 | 69268 | 4257 | 65011 | | 11949 | 76960 |
| 11 | 2500 | 906 | 1594 | | 404 | 1998 |
| 16 | 482 | 7 | 475 | | 142 | 617 |
| I Material sphere | 293476 | 27778 | 265698 | | 38406 | 304104 |
| 1a | 27 | - | 27 | 27 | | |
| 7 | 11191 | 556 | 10635 | 10635 | | |
| 9 | 1766 | - | 1766 | 1766 | | |
| 10 | 5437 | 712 | 4725 | 4725 | | |
| 12 | 71193 | 9062 | 62131 | 62131 | | |
| 13 | 96 | - | 96 | 96 | | |
| 14 | 39029 | - | 39029 | 39029 | | |
| 15 | 19266 | 293 | 18973 | 18973 | | |
| 20 | 2030 | | 2030 | 2030 | | |
| 21 | -311 | | -311 | -311 | | |
| 22 | 521 | | 521 | 521 | | |
| Secondary rent in material sphere | 3613 | 531 | 3082 | 3082 | | |
| II Non-material sphere | 153858 | 11154 | 142704 | 142704 | | |
| III Total | 447334 | 38932 | 408402 | 142704 | 38406 | 304104 |

1/ If business travel expenses in the material sphere (5266) are taken into account, the net material product is equivalent to 309370. The difference between this figure and the corresponding figure of table 2 is due rounding.

Table 3. Derivation of Net Material Product of the U.S.A. according to Final Use, 1958

(Million of dollars)

| Gross national product | | Purchases of services | Consumption of capital assets | Net factor income from abroad | Material input in services | Consumption of fixed capital services | Net material product (1-2-3-4+5+6) | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Final consumption expenditure | 384227 | 143482 | | | 33509 | 11154 | 285408 | Final consumption |
| Gross fixed capital formation | 62392 | 1209 | 38932 | | | | 22251 | Net fixed capital formation |
| Inventories | -1491 | | | | | | -1491 | Material circulating assets |
| Net export (including net factor income abroad) | 2206 | | | 2030 | | | 176 | Net export |
| Total (GNP) | 447334 | 144691 | 38932 | 2030 | 33509 | 11154 | 306344 1/ | Total (NMP) |

1/ If material input in business travel is taken into account (2922), the NMP is equivalent to 309266.

20. The aggregated table is shown in Table 4. Efforts were made to separate services from material goods, to the extent possible. Becuase of lack of information, it was not possible to separate out a number of items, notably passenger transport and communication services rendered households, hotels, and the distribution of gas and water. These activit es are therefore left under material production. The results of calculations of net material product of West Germany are represented in the tables 5 and 6.

Table 4. Condensed Input-Output Table for the Federal Republic of Germany, 1960
(In millions of D marks at producers' values)

| | Agriculture Forestry and Fishing | Mining and Quarrying | Manufactures | Public Utilities | Construction | Trade Storage and Hotels | Transport and Communication | Non-material sphere | Intermediate Consumption | Final Demand | Of Which | | | | Total Production (9 + 10) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Final Consumption Expenditure | Gross Fixed Capital Formation | Increase in Stocks | Export | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1 Agriculture, Forestry Fishing | 489 | 329 | 25.262 | 35 | 203 | 394 | 89 | 737 | 27.538 | 13.084 | 11.617 | 67 | 961 | 439 | 40.622 |
| 2. Mining and Quarrying | 136 | 242 | 3.874 | 4.218 | 1.665 | 123 | 639 | 306 | 13.203 | 2.704 | 1.051 | 409 | -291 | 1535 | 15.907 |
| 3. Manufactures | 6.858 | 2.202 | 88.261 | 2.526 | 9.648 | 7.479 | 4.644 | 14.329 | 135.947 | 171.993 | 85.042 | 37.548 | 7.531 | 41.872 | 307,940 |
| 4. Public Utilities | 355 | 1.055 | 8.316 | 1.796 | 194 | 311 | 298 | 1.217 | 13.542 | 4.841 | 3.253 | 458 | -47 | 1.177 | 18.383 |
| 5. Construction | 166 | 226 | 478 | 25 | 23 | 293 | 69 | 4.503 | 5.783 | 29.624 | 475 | 28.729 | - | 420 | 35.407 |
| 6. Trade, Storage Hotels | 704 | 325 | 15.072 | 321 | 1.188 | 13 | 484 | 2.858 | 20.965 | 32.109 | 26.852 | 1.836 | 267 | 3.154 | 53.074 |
| 7 Transport and Communication | 336 | 318 | 7.777 | 444 | 1.196 | 1.625 | 1.248 | 2.556 | 15.500 | 14.373 | 7.209 | 1.143 | 154 | 5.867 | 29.873 |
| 8. Non-material Sphere | 525 | 359 | 6.166 | 344 | 430 | 3.839 | 915 | 13.015 | 25.593 | 76.568 | 75.289 | 430 | 15 | 834 | 102.161 |
| 9. Subtotal | 9.569 | 5.056 | 157.206 | 9.709 | 14.547 | 14.077 | 8.386 | 39.521 | 258.071 | 345.296 | 210.788 | 70.620 | 8.590 | 55.298 | 603.367 |
| 10. Consumption of Fixed Capital | 1.850 | 879 | 9.956 | 1.854 | 1.025 | 2.358 | 2.825 | 5.493 | 26.240 | | | | | | |
| 11. Total Intermediate Consumption | 11.419 | 5.935 | 167.162 | 11.563 | 15.572 | 16.435 | 11.211 | 45.014 | 284.311 | | | | | | |
| 12. Value Added | 15.902 | 6.757 | 107.572 | 6.566 | 19.787 | 35.419 | 17.055 | 55.553 | 264.611 | | | | | | |
| 13 Import | 13.301 | 3.215 | 33.206 | 254 | 48 | 1.220 | 1.607 | 1.594 | 54.445 | | | | | | |
| 14. Total | 40.622 | 15.907 | 307.940 | 18.383 | 35.407 | 53.074 | 29.873 | 102.161 | 603.367 | | | | | | |

Table 5. Deviation of Net Material Product of the Federal Republic of Germany, 1960

(In millions of D marks)

| | Gross Value Added | Consumption of Fixed Capital | Net Value Added (1-2) | To Add: Value of Non-Material Services Consumed by Material Sphere | To Deduct: Value Added Originated in Non-Material Sphere | Net Material Product (3+4-5) |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Agriculture, Forestry, Fishing | 17752 | 1850 | 15902 | 525 | - | 16427 |
| 2. Mining and Quarrying | 7636 | 879 | 6757 | 359 | - | 7116 |
| 3. Manufactures | 117528 | 9956 | 107572 | 6166 | - | 113738 |
| 4. Public Utilities | 8420 | 1854 | 6566 | 344 | - | 6910 |
| 5. Construction | 20812 | 1025 | 19787 | 430 | - | 20217 |
| 6. Trade, Storage, Hotels | 37777 | 2358 | 35419 | 3839 | - | 39258 |
| 7. Transport and Communication | 19880 | 2825 | 17055 | 915 | - | 17970 |
| 8. Total Material Sphere (1 to 7) | 229805 | 20747 | 209058 | 12578 | - | 221636 |
| 9. Banks, Insurance | 9408 | 310 | 9098 | - | 9098 | - |
| 10. Other Services | 21611 | 903 | 20708 | - | 20708 | - |
| 11. Real Estate | 7987 | 3180 | 4807 | - | 4807 | - |
| 12. Public Administration | 22040 | 1100 | 20940 | - | 20940 | - |
| 13. Non-Material Sphere (9 to 12) | 61046 | 5493 | 55553 | - | 55553 | |
| 14. Total (8 + 13) | 290851 | 26240 | 264611 | 12578 | 55553 | 221636 |

Table 6. Deviation of Net Material Product of the Federal Republic of Germany.

According to Final Uses. 1960

(In millions of D marks)

| Gross Domestic Product | | To Deduct: Purchases of Services | To Deduct Depreciation of Fixed Assets | To Add: Material Input in Non-Material Sphere | To Add: Depreciation of Fixed Assets in Non-Material Sphere | Net Material Product (1-2-3+4+5) | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1. Total Consumption Expenditure | 210788 | 75289 | - | 26506 | 5493 | 167498 | 1. Final Consumption Expenditure |
| 2. Gross Fixed Capital Formation | 70620 | 430 | 26240 | - | - | 43950 | 2. Net Fixed Capital Formation |
| 3. Increase in Stocks | 8590 | 15 | - | - | - | 8575 | 3. Increase in Stocks |
| 4. Net Export | 853 | 760 | - | - | - | 1613 | 4. Net Export |
| 5. Gross Domestic Product | 290851 | 74974 | 26240 | 26506 | 5493 | 221636 | 5. Net Material Product |