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Volume Title: The National Economic Accounts of the United States: Review, Appraisal, and Recommendations

Volume Author/Editor: National Accounts Review Committee

Volume Publisher: NBER

Volume ISBN: 0-87014-063-9

Volume URL: http://www.nber.org/books/nati58-1

Publication Date: 1958

Chapter Title: Present Status of National Accounts

Chapter Author: National Accounts Review Committee

Chapter URL: http://www.nber.org/chapters/c6359

Chapter pages in book: (p. 23 - 32)

nitely. A decision clearly must be reached in the not too distant future by the administration and by the Congress regarding the importance of an adequate system of national accounts for Government, for business, agriculture, and labor, and for economic research purposes. If the importance and potentialities of such a system are anywhere near what the committee believes them to be after a fairly exhaustive survey of the uses that are or could be made of the national accounts, a substantial increase in the funds spent on national accounting work by the Federal Government is required and is fully justified even under the strictest requirements of economy compatible with efficiency in Government. As in other fields one gets only what

one pays for.

If the administration and the Congress want to continue the process of slow but continuous reduction in the resources devoted within the Government to national accounting work, that has taken place during the last 5 years or so, they should face the fact that it will be impossible to carry out any of the more important improvements in the national accounts suggested in this report. Even the present scope of the work, which admittedly is not unsatisfactory, has been made possible only by neglect of repair and maintenance in the national income and product accounts, and by reliance on funds provided by semi-independent agencies (like the Federal Reserve Board), by nonrecurring special defense projects or by private research agencies. It is unreasonable to expect that the expansion and development and particularly the integration of our system of national accounts can be financed in the same way for another decade. Unless the allocation of Federal funds to the field of national accounting is considerably stepped up within the next few years there is serious danger that the scope of the work will have to be narrowed considerably or that its quality will deteriorate, and that the United States will lose the leadership in this field which it has held during the 1930's and 1940's and is still holding at the moment. It is the users of the national income and product accounts and related statistics in business, labor, agriculture, and Government who would be the primary sufferers from such a development and who would suffer from it in terms of less reliable and less adequate data on which to base their policy decisions than are available now or could be available to them with relatively modest additional effort and expense.

## CHAPTER IV. PRESENT STATUS OF NATIONAL ACCOUNTS

This very brief review of the present status of national accounting in the United States and abroad is intended only as a means of providing readers not familiar with the field with a minimum of background information that should be useful in understanding the discussion in the chapters that follow. The description is necessarily more detailed for the United States than for foreign countries.

#### 1. UNITED STATES OF AMERICA

The chief characteristic of national accounting work in the United States, particularly in comparison with other countries—apart from the richness of detail—is decentralization.

First, work on each of the four main components of a system of national accounts—national income and product, flow-of-funds statements, input-output tables, and national balance sheet—is done by different organizations. Since their inception as Government projects, the national income and products accounts have been in the hands of the Office of Business Economics of the Department of Commerce; the flow-of-funds statements have been compiled by the Board of Governors of the Federal Reserve System; and input-output tables have been prepared by the Bureau of Labor Statistics and some defense agencies.<sup>5</sup> No systematic work on balance sheets has as yet been done in the Government.

Secondly, the National Income Division of the Office of Business Economics in the Department of Commerce, which is in charge of preparing the national income and product accounts, does not produce or control any of the primary statistics that go into the estimates. The Division is rather in the position of a mosaic worker who puts together the picture which he has conceived with the help of those stones which he can secure from other workmen that most nearly fit his intentions in shape and color. The position of the Board of Governors of the Federal Reserve System and of the Bureau of Labor Statistics in preparing flow-of-funds statements and input-output statements is quite similar. They also assemble materials most of which they do not collect or control.

### (a) National income and product accounts

The history of national income statistics in the United States, so far as it is relevant here, begins with the estimates made by the Department of Commerce, in cooperation with the National Bureau of Economic Research, under the direction of Simon Kuznets, pursuant to a Senate resolution passed, rather significantly, in 1932, at the depth of the great depression. The resulting report, entitled "National Income 1929–32," was published early in 1934 and was continued 2 years later by National Income 1929–35, which was prepared under the supervision of Robert R. Nathan. For more than a decade, these two reports provided the framework for our national income estimates—at that time the only component of the national economic accounts regularly prepared within or outside the Government. In view of the large amount of information now available in this field, it is easy to forget that these reports were limited to annual estimates of national income—i. e., they entirely omitted national product—and that they contained estimates only for 8 forms of income for each of 12 main industrial divisions and generally also for about 3 dozen subdivisions.

All the official national income estimates of the United States have been prepared by the Department of Commerce, since 1937 in a separate National Income Division; but Simon Kuznets continued to take a leading role in the development of concepts and methods of analysis even after abandoning estimation of current figures with the publication in 1941 of his fundamental National Income and Its Composition 1919–38. Indeed, even today, the structure of the na-

<sup>&</sup>lt;sup>5</sup> Much of the work done on input-output tables in the Defense Department is classified, including work done for the Department 5 years ago. The committee does not see the reason for the maintenance of classification on experimental work done so long ago. Because of lack of information, the committee has not included the input-output work of the Defense Department within the purview of the committee's activities.

tional income and product accounts, notwithstanding the very important changes made in the original design, still bear the imprint of Simon Kuznets' pioneering work. Their development was considerably assisted by the professional discussion at the annual meetings of the Conference on Research in Income and Wealth, which

started in 1936 and are still being continued.6

The accounts as we know them today developed in the Department of Commerce under the direction of Milton Gilbert, George Jaszi, Edward F. Denison, and Charles F. Schwartz. During World War II, the original national income accounts were expanded and substantial progress was made toward the development of a comprehensive and interlocking system of accounts, until they approach fairly closely the form in which they have been presented since 1947. Even before this major reform, several additions had been made by the National Income Division to the rather summary estimates of national income available in published form since 1934. A monthly series of personal income payments was initiated in 1938, running back to 1929; State income estimates were published beginning in 1939; quarterly estimates were started in 1942, going back to 1939; and gross national product estimates were also added during World War II.

The structure of the national income and product and related accounts introduced by the 1947 reform—all of which was carried back to 1929 on an annual basis and to 1939 on a quarterly basis—is the one still in force and constitutes the basis of much of the discussion in this report. The most important changes and additions made in connection with the 1947 reform included—the recasting of the estimates into an accounting frame, which they did not previously possess; expansion of the estimates to cover both national income and product, with a vast amount of detail on both sides of the accounts; and the publication of data for a considerably larger number of industrial divisions and by legal form of organization. The entire system was first described in detail, along with the sources of data and a summary of the methodology, in National Income, 1951 edition, and a slightly enlarged version was published 3 years later in National Income, 1954 edition. This latter volume is still the most comprehensive statement published in any country on the conceptual and statistical foundation of the official national income and product estimates.

Although the basic structure of the accounts has not changed, several additions to the information regularly published by the National Income Division have been made since 1947. Perhaps the most important of these are: deflated annual gross national product, by major categories of expenditures, first published in 1951; a complete revision, released in 1954, of the State income estimates and a recasting of the estimates in terms of the personal income concept used in the national accounts; and distributions of personal income by income-size

classes, first published in 1953.

Though there can be no doubt about the trend in scope and quality of our national income and product accounts, occasional setbacks have not been missing. Instances of retrogression are fortunately rare, and these are due entirely to the fact that the underlying statistics have deteriorated in some respects. For example, it has been neces-

<sup>&</sup>lt;sup>6</sup> See Studies in Income and Wealth, vols. 1, 1937, to 22, in press, published by the National Bureau of Economic Research.

sary to abandon the classification of expenditures on producer durables by type. On balance, however, there is no question that the coverage and the detail of the national income and product accounts have been greatly enlarged since they were started a quarter of a century ago; and that there has been a considerable improvement in the reliability of the figures published.

## (b) Flow-of-funds statements

Morris Copeland's pioneering work provided annual flow-of-funds statements for the years 1936-42. The Federal Reserve Board's basic document 8 contains detailed annual estimates for 1939-53. figures differ sufficiently from Copeland's estimates to prevent their being used jointly without special adjustments. Somewhat less detailed annual figures for 1950-55, showing however all essential magnitudes for the 10 main sectors, have been published in the April 1957, issue of the Federal Reserve Bulletin. The detailed tables, comparable to those in Flow-of-Funds in the United States 1939-53 will be available in mimeographed form so that analysts will have at their disposal a detailed continuous set of figures covering a period of 17 years.

In recent years simplified flow-of-funds statements, mostly limited to the main types of financial transactions, have been prepared by financial analysts interested in current figures and short-term forecasts of fund flows, since no Federal Reserve Board figures extending beyond 1953 were available until recently. These statements often provide semiannual and even quarterly estimates. The statement prepared early each year by the Bankers Trust Co. is probably the best known of these simplified statements of financial fund flows. The most ambitious of the unofficial projects in this field is the quarterly statement of flow of funds through the capital markets for the years 1953-55 which has been prepared by the National Bureau of Economic Research as part of its Postwar Capital Markets Study and which is expected to be published, at least in summary form, some time next year.10

# (c) Balance -of-payments tables 11

Official 12 statements of payments and receipts between the United States and foreign countries, covering trade in commodities as well as all other types of international transactions, have been published on an annual basis since 1922 and have increased in detail and reliability as time went on. Quarterly statements have been publicly available beginning with 1945. Until 1946 only aggregates for transactions between the United States and all foreign countries together were published.<sup>13</sup> In recent years a detailed breakdown has been

A Study of Moneyflows in the United States, 1952.
 Flow-of-Funds in the United States 1939-53, December 1955.
 Consumers, corporations, nonfarm unincorporated business, farm business. Federal Government, State and local government, banking, insurance, other investors, rest of the

Government, State and local government, banking, insurance, other investors, rest of the world.

10 For a description of this project see 36th Annual Report of NBER, pp. 54-57 and 37th Annual Report; pp. 34-39, and article by M. Mendelson in Journal of Finance, 1957, pp. 159-166.

11 Although the committee did not regard a specific study of balance-of-payments statistics as falling within its purview, the brief summary is included here to complete the review of all segments of the national accounts.

12 Of earlier unofficial statements mention should be made at least of The Balance of International Payments of the United States for the Year 1920 With a Statement of the Aggregate Balance July 1, 1914-December 31, 1920, by J. H. Williams in the Review of Economic Statistics, vol. III, 1921, which may be regarded as the pioneering effort in this field.

field.

Bata by reasons back to 1940 were however released in 1947 in International Transactions of the United States During the War.

presented separately for 10 countries or regions. Both the annual and the quarterly balance-of-payments tables are now being published regularly in the Survey of Current Business—for example in the issue of March 1957.14 All official balance-of-payments tables are prepared by the Balance of Payments Division of the Department of Commerce which utilizes, in addition to data specifically collected by the Division, foreign-trade statistics and other data from other Federal agencies. Discussion of the balance-of-payments tables in this report is restricted to the problem of integration with the other segments of the national economic accounts, particularly the foreign trade and payments account in chapters V and VII, section 4.

## (d) Input-output tables

Input-output research is a newcomer in the family of national economic account tabulations. It started only about two decades ago with the theoretical and experimental work of Wassily Leontief; found its first large-scale application in the preparation of the 1947 input-output table by the Bureau of Labor Statistics; and has been recently adopted in a number of foreign countries. This segment of national accounting work is discussed in chapter XIII.

#### (e) National balance sheets

In the early attempts at developing aggregates intended to reflect the economic situation, well-being and potential of a country, about equal attention was devoted to national income and national wealth In recent decades work has been virtually limited, at least in official statistics, to national income and its development into a system of national economic accounts.

Only recently a parallel development has begun with respect to national wealth. Recognition of the limited usefulness of an aggregate national wealth estimate led to emphasis on the breakdown and composition of national wealth rather than on the total. It was particularly the work of Raymond Goldsmith which developed from this starting point the notion of a national balance sheet as an integral part of a system of national economic accounting.15

#### 2. OUTSIDE THE UNITED STATES

The development of national accounting outside the United States received a decisive impetus from three forces: the obvious usefulness of the approach in administering a war economy; its adaptability to aggregative, particularly Keynesian, economics which acquired increasing influence among economists in the 1940's; and the example of the United States. Britain, largely under Lord Keynes' direct guidance, became the first country to publish a set of national income and product accounts in modern form—this happened in the White Paper of 1941—and to allocate to the figures an important role in shaping economic and monetary policy, both during the war and in the transition to the peacetime economy.

<sup>&</sup>lt;sup>14</sup> A detailed description of concepts, methods, and sources of the balance-of-payments tables, which is still essentially valid, may be found in Balance of Payments of the United States, 1949-51.

<sup>15</sup> See his paper, Measuring National Wealth in a System of Social Accounting in Studies in Income and Wealth, vol. 12, pt. I, National Bureau of Economic Research, 1950, and the actual estimates in his A Study of Savings in the United States, vol. III, 1956, and in 37th Annual Report of the National Bureau of Economic Research, Inc., the latter of which is reproduced in appendix G.

The international spread of regular national income and product estimates in the decade after World War II was phenomenal. It is doubtful whether any equally important statistical innovation ever gained ground as rapidly on an international scale. The movement was accelerated, and to some extent guided, by international organizations, particularly the United Nations and its regional commissions (Economic Commissions for Europe, Latin America, and the Far East (and the Organization for European Economic Cooperation which induced members to adopt a system of national accounts; to some extent standardized the system and thus facilitated its adoption; and helped to introduce it in countries short of indigenous experts. Additional influences, possibly of a more tangible nature, were the facts that national income and product and other figures from the national accounts were used for operating decisions by some international organizations, for instance in determining membership dues for the United Nations; and that they played a role in influencing the direction and size of international aid and loan programs.

As a result by 1956 about 60 countries were regularly preparing estimates of national income and product <sup>16</sup> compared to only about 2 dozen countries who did so 10 years earlier and only a handful who

regularly published similar estimates before 1940.

The characteristic features of the more advanced foreign national accounting systems, primarily of those used within the British Commonwealth and by countries in the Organization for European Economic Cooperation, are visible from the comparative table given in appendix D which was prepared for the committee's use by the Statistical Office of the United Nations. It may therefore suffice to compare these foreign systems, without having any specific one in mind, with the national income and product accounts of the United States with respect to the conceptual structure, the administrative organization, the detail published, and the quality of the estimates.

As far as the conceptual structure of the system goes several foreign countries seem to have drawn ahead of the United States, at least if the development of an integrated system of national income and product and moneyflow accounts with substantial institutional sectoring is regarded as a step forward. Such a system is now in existence, or in active preparation, at least in Norway, Denmark, the Netherlands, France, Germany, and Canada. It is fair to add, however, that in several cases the figures are still very rough, possibly rougher than would be regarded as acceptable in this country. There is no doubt that a number of countries are ahead of the United States in having a capital account for each sector, including the Government.

It is probably in administrative organization that national income work abroad differs most pronouncedly from that in the United States, partly because most foreign countries have a centralized statistical system under which most basic statistics are collected by one Government office. In Canada for example, the central office is the Dominion Bureau of Statistics. As a result of this administrative centralization of statistics, not only are national income and product accounts and balance of payment statements done under the same roof as flow-

<sup>&</sup>lt;sup>16</sup> This is the number of countries for which current estimates of national income in 1954 or 1955 are shown in United Nations, Statistical Papers H-10 (April 1957) and does not include the U. S. S. R. and its satellites.

of-funds statements and input-output tables—wherever such documents are prepared, but the organization which assembles the national income and product estimates also has control over most of the primary data which go into these estimates. In such a situation it is obviously much easier to cast the primary data into a form suited to the national accounts, than when the recasting has to be done by an independent organization even where there exists a coordinating agency, like the Office of Statistical Standards of the Bureau of the Budget.

The national accounts of the United States provide considerably more detail with respect to industrial divisions and to commodities than those of any other country. On this point the United States is still well ahead, reflecting its more developed system of primary

statistics.

It is extremely difficult to compare the quality of the national accounts in different countries. Statistical experts who are familiar at first hand with the national accounts both of the United States and a number of foreign countries, have however no hesitation in rating the quality of the American estimates very high and in asserting that their quality is above that as yet attained in any foreign country. Those members of this committee who have had personal experience with the national accounts of foreign countries are inclined to agree with this evaluation.

# 3. ORGANIZATION OF NATIONAL ACCOUNTING WORK WITHIN THE FEDERAL GOVERNMENT

As the directive guiding the Committee's operation did not include the organizational and administrative aspects of national accounting in the United States, the Committee has only a few suggestions to offer which have come up in connection with other facets of its study. All these suggestions could be implemented immediately or in the very near future, and the first one is in the Committee's opinion of crucial importance for the development of national accounting work in the United States.

# (a) Enlargement of National Income Division

The National Income Division should be considerably enlarged, both at the professional and clerical level. Increases in the staff of the National Income Division are essential and urgent and we shall revert to this point repeatedly throughout the report.

# (b) Research Section within National Income Division

Within the National Income Division a small research section should be set up that can devote itself to the longer range problem of national accounting. The committee is impressed by the fact that Simon Kuznets, who was responsible for the first official national income estimates in the United States and probably has contributed more to the development of this field than anybody else, regards this as the most important recommendation with respect to the organization of national income work. In a memorandum submitted to the committee, he argued that: "The need for a research unit within the National Income Division, as a group of people who would be well versed in the field and yet free from compulsion and responsibility of continuous reporting, seems acute. \* \* \* The research unit must be

set up in such a way that it has access to all the information, and can acquire experience by participating in the labors of estimation, and yet be free to experiment on its own."

## (c) Liaison between National Income Division and Flow-of-Funds Section of Federal Reserve Board

Continuous liaison should be established between the National Income Division and the Flow-of-Funds Section of the Federal Reserve Board. There is already substantial informal contact between the two divisions, but it should be strengthened and formalized. In particular, arrangements should be worked out under which the data on flows of current income and product used in the Federal Reserve Board's flow-of-funds statements are prepared by the National Income Division. It may not always be possible to use in the flow-of-funds system as now set up exactly the same figures which appear in the national income and product accounts. But if two sets of estimates for the same, or closely related items, must coexist because of conceptual differences in the two systems, the figures should be prepared by one set of estimators, preferably the one which has more detailed and continuous experience in the field.

# (d) Administrative coordination

The three recommendations just made are for immediate implementation. There exists, however, in this field a more basic problem—that of administrative coordination and integration of work on the national economic accounts. This problem is one the satisfactory solution of which will take much time and requires much more thorough study than the committee has been able to give it. Nevertheless it is of such importance for the long-term development of the national economic accounts that it cannot be altogether ignored in a report such as this.

The committee has little doubt that as far as collection of basic statistical data is involved, decentralization is here to stay. This means that, as before, the national economic accounts will have to be built up from primary statistical data which are collected by numerous independent agencies, to name only the more important ones without attempt at ranking: the Bureau of the Census; the Internal Revenue Service: the Bureau of Labor Statistics; the Department of Agriculture; the Federal Reserve Board; the Federal Trade Commission; the Securities and Exchange Commission; and the Department of Health, Education, and Welfare. The problem of influencing the collection of these basic statistics so as to make them fit as well as possible into the system of national economic accounts will thus continue to be with Indeed it will become more acute as the scope of national economic accounting expands and as its accuracy requirements are given increasing attention. On this point the committee has no suggestions to offer since it is not called upon nor qualified to deal with the problem of coordination of statistics within the United States Government. The committee believes that the Office of Statistical Standards of the Bureau of the Budget should use to the full its statutory authority in inducing the agencies producing the primary statistics used in national economic accounting to take account in their plans of the needs of the integrated system proposed in this report.

It is essential that at the summary level a single integrated system of economic accounts be published at regular intervals in a single publication. In order to achieve this, it is recommended that the responsibility for preparing and publishing the summary integrated national economic accounts be concentrated in one spot within the Federal Government. Integration of the various segments of the national economic accounts should not be allowed to restrict the activity of those groups working with the detailed information and thus hinder the evolution of these individual segments. It is recognized that changes must take place if there is to be improvement, and these changes may from time to time impair the comparability among the various segments.

The committee is not concerned with the administrative arrangements which such a process of concentration requires. Nor is it interested in the specific location of national accounting work within the Federal Government, or in the question how independent the designated organization ought to be from departmental supervision. The committee believes that it is important that competent staff economists and statisticians specializing in national economic accounting be close to the makers and advisers on economic policy—such as the Council of Economic Advisers, the Joint Economic Committee, the Federal Reserve Board and the Treasury Department. The specialists should serve as a link between the group responsible for the overall national economic accounts and those who will use them in the formulation of

economic and fiscal policies.

The committee, finally, does not regard it as either necessary or feasible to indicate in detail exactly where the responsibility of the coordinating agency ends, e. g., which of the estimates in the detailed accounts should actually be made by the coordinating agency itself and which it should only supervise or advise upon. Again a statement of the general principle that should apply must suffice. On the most general level the coordinating agency should not only set the framework and lay down the rules, but should actually prepare the estimates in the summary tables by itself in close cooperation with other specialized agencies. The tables outlined in appendix A and B give a fairly good idea of the field covered by this recommendation. The detailed elaboration of the segments of the national economic accounts other than the income and product accounts might, however, be left to specialized statistical agencies. This applies primarily to flow-of-funds statements, input-output tables and balances of international payments. There the coordinating agency may limit itself to insuring that the more detailed statistics fit conceptually and quantitatively into the integrated overall framework.

It is usually easier to make the appropriate administrative decisions when the work to be allocated has not yet been appropriated by an existing organization and vested interests are as yet weak. Within the field of national economic accounts this is the case only for national balance sheets. If by the time they become a regular feature of the Federal Government's work on the national accounts, the national income and product accounts and the flow-of-funds statements are in the hands of the same organization no problem will arise. Meanwhile there is, it seems to the committee, a natural division of responsibility, which would make best use of the specialized knowledge and contacts

of the different Federal agencies now involved in national economic accounting: Tangible assets would be handled by the agency in charge of putting together the national income and product accounts (now the National Income Division), while intangible assets and liabilities would be the responsibility of the agency preparing the flow-of-funds statements (now the Federal Reserve Board). The separation of work on one relatively small sector, agriculture, does not have much to recommend itself in principle, but is probably unavoidable as a practical matter and is not likely to lead to serious problems of integration.

# CHAPTER V. OBJECTIVES OF NATIONAL ECONOMIC ACCOUNTS AND THEIR IMPLICATIONS FOR THE GENERAL FORM OF THE ACCOUNTS

#### 1. CURRENT FORMS OF NATIONAL ECONOMIC ACCOUNTS

The term "national economic accounts" is currently used to refer to a number of bodies of systematically arranged statistical data which have as their focus the economic activities taking place within a nation. There are at present five such bodies of data, treating different aspects of the Nation's economic activity. These are the national income and product accounts, the input-output table, the flow-of-funds statements, the balance of payments, and the national balance sheets.<sup>17</sup>

## (a) National income and product accounts

National income and product accounts are concerned, as the name implies, with income and product transactions. They are designed to show in monetary terms the current productive activity of the economy, distinguishing the current income and outlay associated with specific kinds of economic activities: production, consumption, and investment. They thus consolidate by economic activities the sort of information contained in the profit and loss accounts of enterprises and the budgets of consumers and government.

# (b) Input-output tables

Input-output tables are also concerned with the current productive activity of the economy, but they focus on interindustry relationships, rather than on income and product transactions. Input-output tables, which are usually arranged in the form of a square from-whom to-whom tabulation, classify industries according to the nature of the processing activities in which they engaged. Information is provided on the inputs from other industries and sectors that are utilized by each industry, and on the utilization of the output of each industry in other industries and sectors.

# (c) Flow-of-funds statements

Flow-of-funds statements cover all money and credit transactions in the economy; they thus deal with financial as well as income and product transactions. They provide information on the extension of bank credit, the purchase of securities, and other changes in the assets and liabilities of the different sectors of the economy, as well as on the payments and receipts of income. In contrast with input-output

<sup>&</sup>lt;sup>17</sup> A more detailed discussion of flow-of-funds statements, input-output tables, and national balance sheets will be found in chs. XII to XIV. The development of national income and product accounting has already been sketched in ch. IV.