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Volume Title: Problems in the International Comparison of Economic Accounts

Volume Author/Editor: The Conference on Research in Income and Wealth

Volume Publisher: UMI

Volume ISBN: 0-870-14176-7

Volume URL: <http://www.nber.org/books/unkn57-2>

Publication Date: 1957

Chapter Title: The Government Sector : A Re-examination of Controversial Issues

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Chapter URL: <http://www.nber.org/chapters/c2683>

Chapter pages in book: (p. 113 - 134)

2. The Government Sector

A. A Re-examination of Controversial Issues

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NATIONAL economic accounts are designed to depict in quantitative summary fashion the manner in which the various economic units within a nation are interrelated in the production, distribution, and utilization of goods and services. In the modern economy, production units (enterprises) and consuming units (households) are, for the most part, interrelated through the monetary exchange of the market. Therefore, national economic accounts are basically designed to summarize market transactions. There are, however, in the modern economy, important contributions to total production that are not exchanged through the market. The relationship between the portion of production reflected in money transactions through the market and the portion not so reflected changes from time period to time period within the same country and differs from country to country. Therefore, intertemporal or international comparisons of national economic accounts could be quite misleading if they omitted consideration of the goods and services which are not bought on the market.

Many of the services rendered by the government are not sold on the market. Attempts have been made to construe the government either as a quasi-household "consuming" public services or as a quasi-enterprise "selling" services (with taxes as a quasi-price). Both these constructions fail to recognize the true role of government in the economic system—the performance of such functions as cannot adequately be performed by the market system.

Several problems come up when it is attempted to fit government transactions into a unified system of national economic accounts designed to summarize market transactions. Most of these problems have been debated in the literature of recent years, and I hesitate to go over the ground again. Nevertheless, I believe that some of the solutions found in the national economic accounts for

In revising this paper for the printed volume I had the benefit of helpful suggestions from the National Bureau's Reading Committee and from Samuel M. Cohn of the Bureau of the Budget. In addition, I made some revisions in response to criticism by George Jaszi.

the United States and some of the methods proposed by the international organizations (United Nations and Organization for European Economic Cooperation) deserve re-examination.

In the United States the Department of Commerce's estimates of transactions which are entered in the government sector (federal government) of the national economic accounts differ from the figures presented in the official federal budget documents. This has given rise to considerable confusion. In a companion paper Marilyn Young painstakingly attempted to list and explain the differences between the budget figures and the national economic account figures on federal transactions.¹

In this paper a more general survey of the problems of fitting government transactions into national economic accounts will be given, and some suggestions made for modification of present practices. I shall also use this opportunity to modify some of my previous positions.

The Position of the Government in the Economic System

Before going into statistical problems it may be useful to discuss the way the government fits into the system of basic economic concepts. Experts of the UN have suggested that the government (except government enterprises) be regarded as a final consumer of the services of civil servants and of the goods bought and used by the government.² Richard Stone divided social accounts into those for producers and those for consumers and subdivided the consumer accounts into those for persons and those for government.³ While this approach gives a workable hypothesis for economic accounting, in my opinion it does violence to the nature of government and leads to a confusion in basic concepts.

I think it is more natural to regard government agencies as organizations established to perform services which for one reason or another cannot be performed by enterprises (private or public) or which the community does not wish to have performed by enterprises in response to a market demand. The services to be per-

¹ Marilyn Young has also assisted me in the preparation of this paper.

² "General government activities are treated like the activities of households" (*A System of National Accounts and Supporting Tables*, United Nations, Statistical Office, Studies in Methods Series F, No. 2, 1953, p. 5).

³ Richard Stone, *Definition and Measurement of the National Income and Related Totals*, Appendix to *Measurement of National Income and the Construction of Social Accounts*, United Nations, Studies and Reports on Statistical Methods, No. 7, 1947, pp. 29-30.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

formed by government agencies are not determined by the market but by political decisions made through the political processes which have evolved under particular constitutional and social institutions.

The political decision may determine that government services are to be put at the disposal of individuals, who may or may not be required to pay a fee for the services. Public education and health services are examples. In evaluating the level of living of individuals in a community, these "gratis" services should be taken into consideration even though they are not reflected in consumer expenditures. Some government services are designed to promote the productivity of private enterprise. Finally, government services such as those related to foreign policy and national security are rendered for the sake of the nation as a whole. If one speaks of "government consumption" with respect, for instance, to the military services, one confuses, I believe, *government agencies* (e.g. the army or an administrative agency) which perform certain services, *political processes* which determine what services are to be performed, and the *social group* (nation) for whose existence the services are performed.⁴ These three basic concepts in the public economy are parallel to the basic concepts in the market economy, namely, the *enterprise* which produces goods or services, the *market* mechanism which determines what is to be produced and distributed, and the *household* which consumes the goods or services. In a comparison between the organization of the public and private economies, government agencies (as producers of services) have greater similarity to enterprises than to households.

Thus we recognize that in our economic system goods are produced and services rendered by private and public enterprises, by government agencies, and, in addition, by some philanthropic private institutions and other private organizations (e.g. churches).⁵ What is to be produced is determined through the market, political processes, and decisions by nonprofit organizations. Final con-

⁴ I also find some confusion in this report in a generally very clear and profound treatment of these problems by Ingvar Ohlsson. He speaks of government as a "collection of individuals who consume, collectively, certain goods and services" (*National Accounting*, Stockholm, Konjunkturinstitutet, 1953, p. 23). Government is as little a "collection of individuals" as a business corporation.

⁵ In addition, some production is performed by households for their own use.

sumers are individual households, collective households (e.g. old-age homes), foreign countries, and the nation as a whole. Intermediate consumers are enterprises which buy the products of other producing units (public or private), and government agencies which buy materials from enterprises for use in performing their own services.

I think it is useful to keep some sort of basic system of concepts in mind. This will help in approaching some of the problems with which we deal in the subsequent sections. On the other hand, one can reach similar statistical results in spite of different interpretations of the role of government in the economic system. The same gross national product may be computed by somebody who says that military services are for the benefit of the government as by somebody who regards them as a service for the nation. The reason for the identity of the result is that we cannot measure the value of the services performed by the government by any other yardstick than the amount which the government pays for the human and material resources used in the performance of these services.⁶ In other words, the government provides the nation with these services at "cost" prices. Therefore, GNP is the same whether we regard the service of soldiers as final consumption of a service comparable to the household consumption of domestic service or as an "input" for the production of "national security." However, in a subsequent discussion it will be shown that the two interpretations of government activity do not in all cases lead to the same statistical results.

The Contribution of Government Activities to the National Product and National Income Totals

National accounts portray the economic interrelationships among consumers, producers, savers, investors, governments, and foreign countries. The national product aggregate measures in one figure all the work done by and for a social group, usually a nation. National accounts are usually so set up that the expenditure side of each shows a component part of the national product and that the net totals of the component parts, after adjustment for double counting, add up to the national product.⁷

⁶ This requires one qualification: in case of conscription it may be useful for purposes of international comparison to measure the service of the soldier by an imputed average wage rather than by the actual payment. The difference between the two is a tax in kind which the draftee pays.

⁷ I use frequently in this paper the terms "national product" and "national

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

In this section of the paper I will discuss the government transactions which do or do not form a part of GNP and national income as they are computed by the Department of Commerce and the statistical offices of other countries and of several international organizations.

THE SERVICES OF GOVERNMENT-OWNED CAPITAL ASSETS

Our first concern is with an item which is not included in the usual national product or national income computation. I refer to the contribution which roads, hospitals, canals, dams, buildings, and similar assets make to the social product. Their services are reflected in the totals only to the extent that they are operated by public enterprises. Many of these assets are furnished and managed by general government agencies.⁸ Omission of their services leaves out a very substantial item in the national product. It is

income" in order to avoid going into the question of the appropriate treatment of depreciation in a meaningful aggregate for use in intertemporal and international comparisons. I have stated in other papers my reason for preferring on theoretical grounds the net national product concept. However, on practical statistical grounds the gross national product has advantages, and the distortion involved in the use of this concept is not of great practical significance (see my discussion with Adolph Lowe in *Social Research*, December 1952, pp. 501 ff.).

⁸ I would like to mention a more general problem concerning the accounting for government services for which fees are paid by individuals or businesses. If these services are performed by public enterprises, they are treated like any other services for which prices are paid by consumers. In general, the Department of Commerce treats in this way all services which, to a large extent, are financed by fees. The Post Office Department is an example of this kind. However, if fees are collected more or less incidentally to the performance of government services, as for instance in the case of tuitions at a state college, or entrance fees at a national park, they are treated as "nontax payments" which together with personal taxes are deducted from personal incomes in computing disposable income. This leads to a situation in which some part of educational and recreational expenditures are included in consumer expenditures, another not, depending on whether the educational or recreational facilities are public or private. The only way in which this could be remedied would be to regard such fees as consumer expenditures and not deduct them from personal income in the computation of disposable income. In this case, however, they would have to be deducted from government receipts and expenditures in the same way as the transfer payments are deducted, because they should not appear twice, once in the consumer and once in the government account.

As the amounts involved are not very large, I have no particular criticism of the present Department of Commerce procedure. However, it might be useful to remember that here exists a minor inconsistency in the government account.

difficult to calculate this item because estimates of the capital value of the assets are absent or doubtful. For this reason I recommended in my 1937 paper a short cut which would take account of at least a major part of the services of these assets. I recommended that the interest payments on state and local debt be included in national income because they reflect at least to some extent the use of public capital assets. I did not propose the same treatment for the federal debt service, because it was mainly a result of the war debt and of depression deficits. Therefore, the federal debt had largely the character of a consumer debt and the federal interest payments had largely the character of transfer expenditures which have no *current* counterpart in the social product. This is even truer after World War II than it was after World War I.

My proposal was designed at least to reduce a gap in the estimates by some approximation, because a direct estimate of the services of these assets was not held feasible at that time. In principle, it would be more desirable if a value could be imputed for the services of general government assets. If the capital value of the assets could be computed, the value of services could be estimated by use of some appropriate rate of interest. This should be done for assets held by the federal government as well as for those of state and local governments. If such an *imputed* interest is included in the estimate of the national product and national income, then all *actual* interest payments of public bodies could be omitted from the national product total.

A treatment of this sort has been proposed by Copeland,⁹ Frank,¹⁰ and Ohlsson.¹¹ Today I am inclined to agree with them. The time may have come when enough work on the evaluation of capital assets (partly in connection with national wealth estimates) has been done to justify a direct approach to this problem, and when one should no longer be satisfied with the indirect approximation which I proposed in the earlier paper. The direct approach would require a comprehensive survey of public capital assets, their valuation and depreciation. (For military capital assets, such as bases

⁹ Morris A. Copeland, "Concepts of National Income," *Studies in Income and Wealth, Volume One*, National Bureau of Economic Research, 1937, p. 28.

¹⁰ Max Frank, "Les Problèmes de l'intégration du revenu imputé des biens d'investissement de l'état et de l'intérêt de la dette publique dans la comptabilité nationale," *Public Finance*, Vol. VIII, No. 2, 1953, The Hague, pp. 149 ff.

¹¹ Ohlsson, *National Accounting*, Stockholm, Konjunkturinstitutet, 1953, pp. 83 and 162.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

or battleships, immediate complete write-off is probably warranted.) This may well be a topic to which the Association for Research in Income and Wealth might devote further efforts.

If it should still be too difficult to estimate directly imputed values for the services of capital assets, then the inclusion of some portion of public debt service in national product and national income appears better than ignoring the problem altogether by classifying all public debt as a consumption debt.¹² This I believe misrepresents the role of government in modern economic life and the important contribution to the national product currently made by roads and the other general public assets.

THE TREATMENT OF BUSINESS TAXES

GNP as now computed includes all expenditures of the government for goods and services. It excludes transfer payments (including interest payments) and government outlays for the acquisition of existing properties and of financial assets. The Department of Commerce computation of national income is equal to GNP, except for the deduction of depreciation, indirect business taxes, and some minor items.

Various reasons have been advanced for excluding indirect taxes in the computation of national income. The Commerce Department excludes them on the presumption that they can be shifted. It assumes that corporate profits taxes cannot be shifted but that indirect business taxes generally can be shifted.¹³ Taxes which have been shifted are reflected in the market prices of goods and services. In other words, consumer expenditures for taxable goods include an allowance for such government purchases as are financed by shiftable taxes. If we think only in terms of estimates in current dollars, this reason for excluding sales and excise taxes from national income seems to be convincing. However, the validity of national product and national income estimates must be tested by asking whether meaningful comparisons can be made over time or between different countries. We should obtain the same national income total if we compare two countries which are identical in economic respects except for differences in the method of government financing.

¹² *A System of National Accounts and Supporting Tables*, p. 6; Stone, *op. cit.*, p. 72.

¹³ *National Income Supplement, 1951, Survey of Current Business*, Dept. of Commerce, p. 26.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

Assume we compare national income during periods T_1 and T_2 when nothing has changed except that the government has shifted 10 units of receipts from personal income taxes to excise taxes. Let us further assume that, because of the switch to shiftable taxes, prices have gone up 5 per cent between T_1 and T_2 . Assume that national income in T_1 was 200 units; it would then be 210 in T_2 . If excise taxes are deducted in accord with the Department of Commerce practice, we obtain a national income of 200 current units for both T_1 and T_2 . However, no comparison would be made of national income between two time periods without adjusting for price changes. In constant prices the national income would have fallen from 200 in T_1 to 190 in T_2 , although nothing has changed except the method of government finance. This to my mind demonstrates that the argument that shiftable taxes should be deducted in national income estimates is not valid. If it were said that in "deflating" national income a price index should be used which excludes the effects of indirect taxes, the answer would be that it is impossible to separate the effect of taxes in comparisons of prices over time or from nation to nation. It is much simpler to use the actual price index or actual price comparisons and *not* to deduct indirect taxes.

Kuznets suggested at a previous time an entirely different reason for excluding business taxes from national income computations. He proposed that they could be construed as payments by business for the services of the government to business.¹⁴ There are indeed important functions of the government which can be characterized as cost services (or intermediate services) of government, but it would be entirely arbitrary to assume that the amount of expenditures for such cost services should be approximately equal to the amount of business taxes. Kuznets in the meantime has changed his proposal and recommends estimating directly the value of the cost services of government and excluding them from the national product and income estimates as they are reflected in the goods and services produced by business.¹⁵ Thus he has come now to the position which I took in the 1937 paper. However, in the meantime, I have come to the conclusion that such classification of government services would introduce sources of error which may be

¹⁴ See, for example, Simon Kuznets' discussion of my 1937 paper in *Studies in Income and Wealth, Volume One*, National Bureau of Economic Research, 1937, p. 237.

¹⁵ Simon Kuznets, "On the Valuation of Social Income—Reflection on Professor Hicks' Article," *Economica*, February 1948.

larger than the errors resulting from leaving the intermediate services of government in the national product or national income totals. I believe now that it is best to make no deduction on account of the cost services of government, directly or indirectly, but to include all government services in national product and national income. Therefore, on practical grounds, I would not propose to change in this respect the method of GNP computation.

The deduction of indirect taxes from GNP has finally been suggested as necessary if national income is to be computed "at factor cost." By this is meant that the price, excluding taxes, corresponds to the rewards of the factors of production, namely, labor, management, and capital. This concept makes sense only if government is interpreted solely as a "consumer." I agree with R. Frisch, who said: ". . . one cannot claim factor cost to be a relevant national income concept except by considering government as a nuisance, a nonproductive class."¹⁶

The Ratio of Government Activities in the National Product and National Income

In the preceding section we were concerned with the impact of government transactions on the national product and national income totals. In this section we are concerned with the measurement of the ratios of public and private activities in the national product. These ratios are of particular significance for measuring trends in the structure of the economic system or for comparing the structures of different national economies. There are problems in measuring the ratio of public and private activities because several types of activities are public in one respect and private in another. Thus they can be counted either as public or as private activities, depending on the specific question asked concerning the boundary line between the public and private sectors of the economy.

We may ask: (1) Which portion of the production of goods and services is absorbed by private household demand, which portion is absorbed by business investment, and which portion is absorbed by public demand? Or we may ask: (2) Which portion of the whole demand for goods and services is determined by the market and which is determined by the political processes?

The distinction between these two questions may be illustrated by the treatment of transfer payments for social assistance. The income of the social-assistance beneficiary enables him to

¹⁶ Quoted by Ohlsson, *op. cit.*, p. 116.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

buy goods and services, just as does the earned income of a wage earner. Therefore, social-assistance benefits (and other transfer receipts) become personal income and private consumer expenditures. They should be accounted for in the household sector of the national economic accounts. However, these incomes are not earned in the market. It is a political decision which allots the benefits to the beneficiary. If we are concerned with the second question relating to the portion of total demand *determined* by political processes, we may well say these expenditures and their financing should be reflected in the government sector and not the private sector of the national economic accounts. This classification is particularly significant if we wish to measure the portion of total demand which is subject to the fluctuations of the market and the portion which is subject to direct influence by the government. From this important aspect, consumer expenditures financed by government transfer payments belong to the public and not the private sector. The usual subdivision of GNP includes as government demand only the government's purchases of goods and services. This substantially understates the portion of demand which is determined not by the market but by government.

A third question relates to the portion of total production of goods and services which is performed by private enterprise and that which is performed by government agencies. Using this distinction, munitions and all other supplies used by the government are produced by enterprise. The general government sector is measured mainly by the wages and salaries of public servants. Public enterprises (government corporations, etc.) could be included in a broad enterprise sector, which would then be subdivided into private and public enterprises. Or they could be included in the government sector, which then would be subdivided into government enterprises and administrative agencies. For most questions the first alternative appears preferable.

This third question can be regarded as of secondary importance. The usual national income and product accounts are so classified that they show the distinction between production by enterprise (including public) and production by general government.

In determining the boundary line between public and private activities we run into the fact that the government often has the choice between performing a function itself or stimulating private agencies to fulfill the function. In recent decades much use has been made of (or proposed for) government guarantees, insur-

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

ance, and tax incentives in order to induce private business to build and equip defense plants, to build homes, to construct post offices, to extend health insurance, to finance farm surplus inventories for purposes of price support, etc. In all these cases a decision must be made whether the activity is regarded as a genuine public or private function. Perhaps it should be considered that national accounts recognize that in the modern economy a twilight zone exists in which public and private activities are intertwined. At least, auxiliary tables showing the importance of these "mixed" activities would be of interest if a measurement of the relative importance of the public sector in the economy as a whole is intended.

The Portrayal of Government Receipts and Expenditures in National Economic Accounts

THE TREATMENT OF TRANSFER PAYMENTS

In the section above, the really moot question was whether, in the treatment of transfer payments, the first or the second question should be guiding. Should transfers be regarded as *personal* income which makes possible additional consumer purchases or saving, or should they be regarded as government expenditures financed by government receipts? It is generally agreed that they cannot be counted twice, once in the private and once in the public sector.

As these transfer receipts are used by private households or enterprises subject to their own decisions,¹⁷ we would have an incomplete measurement of private demand if these transactions were recorded only in the government sector and not in the household sector. Their inclusion in the government sector would overstate the relative size of the government sector if we wanted to know what portion of the nation's resources is devoted to specifically "collective" purposes as distinguished from individual household demand (question 1).

On the other hand, the exclusion of transfers from the government sector leads to a substantial reduction in the size of the government sector. If we want to know what portion of total income the government takes out of the income stream, we want to measure total government receipts even though some of this money

¹⁷ In the case of assistance or relief benefit payments, the purposes for which the income may be spent by the beneficiary are sometimes limited by law or administrative regulation.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

is put back into the hands of individuals or enterprises for their own spending. This aspect is particularly important if we wish to measure the portions of total demand which are and are not subject to cyclical fluctuations of the market. Transfer expenditures are determined by government and therefore are not subject to the same forces of the market as personal or corporate earnings (question 2).

Thus a compelling case can be made for showing in the government sector expenditures for transfers as well as for goods and services, and also for including these transfer payments and their use in the household account. They should not, however, be counted twice in the total. The "nation's economic budget" presentation, which was first used in the President's budget message of January 1945, solved this dilemma by including transfers both in the private and the public accounts but making an "adjustment" for government expenditures other than for goods and services in a line above the GNP line, which is the summary of all sectors.¹⁸ Later, when the nation's economic budget, or the nation's economic account, as it was alternatively called, was used in the President's Economic Reports, other presentations were used to solve the dilemma. Usually, transfer payments were shown as part of both government expenditures and consumer receipts, but these entries were printed in italics, which meant that they were not to be included in summing up the various sector accounts.

Details of the presentation of the government sector in the national economic account varied in the various economic reviews of the Council of Economic Advisers. Also, the staff reports of the Joint Committee on the Economic Report used a method of presentation which differs from that used in the Economic Reports. The problem which caused so much difficulty was to show disposable income (which includes receipts from transfer payments) and total government receipts and expenditures (which include receipts for financing transfer payments and the equivalent transfer payments themselves, respectively) without double counting. In some of the Economic Reports, and consistently in the staff reports of the Joint Committee, payments other than for goods and services (which include transfer payments) were deducted from both the receipts and expenditures sides of the government account. This deduction makes sense on the expenditures side. It is mean-

¹⁸ *Budget of the United States Government for the Fiscal Year 1946*, Dept. of Commerce, pp. xxv and 830 ff.

ingful to identify expenditures for goods and services as opposed to other expenditures. As long as total expenditures are shown, it is not particularly difficult to understand that some expenditures do not represent part of GNP. The same deduction on the receipts side makes much less sense. For instance, in the Economic Report of January 1954 (Table G-4, page 171) transfer payments are deducted from government receipts and the residual is called "net receipts." I do not believe that this concept of net receipts has any meaning except that it permits adding up the column without double counting. I think that on the receipts side of the accounts it makes more sense to make the adjustment in the consumer sector. Income (less personal taxes) arising from current production and income from government transfers can be shown separately. The two together equal disposable personal income. The total and the component parts are meaningful magnitudes. Then we can add up the portion of disposable income arising from current production plus gross retained earnings of the business system plus total government receipts and obtain a figure equivalent to GNP.

This method of presentation is illustrated in Table 1 which follows. It uses the form of presentation of the January 1954 Economic Report with the one difference that transfer payments are deducted from disposable incomes rather than from government receipts.

There remains, as a minor problem, the fact that the individual receipts from government transfers are not entirely identical with the concept of transfers included in federal expenditures. The former refer to actual transfer payments plus net interest paid by the government. The latter includes the additional item, "subsidies minus current surplus of government enterprises." Without going into the nature of this item here, it may be mentioned that it is a component of national income but not of GNP. It is included in national income implicitly rather than explicitly. It represents unidentified portions of wages, profits, etc. It must be deducted somewhere on the receipts side of the accounts in order to arrive at a figure equivalent to GNP, but there is no basis for deducting it all from disposable personal income. Therefore, we deduct it by means of a separate adjustment at the bottom of the table.

It seems to me that this method of presentation comes closest to combining the various objectives. It shows in the same table all income available to households for purchases of goods and services or saving, and government receipts and expenditures—whether for

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

TABLE 1

National Economic Accounts, 1953
(billions of dollars)

	Receipts	Expenditures	Excess of Receipts (+)
Consumers:			
1. Disposable income arising from current production	230.0		
2. <i>Government transfers and net interest payments</i>	<i>17.9</i>		
3. <i>Disposable personal income</i>	<u>247.9</u>		
4. Personal consumption expenditures		229.8	
5. <i>Personal net saving (+)</i>			+18.1
Business:			
6. Gross retained earnings	38.2		
7. Gross private domestic investment		54.4	
8. <i>Excess of investment (-)</i>			-16.2
International:			
9. Net foreign investment		-2.0	
10. <i>Excess of receipts (+) or investment (-)</i>			+2.0
Government (federal, state, and local):			
11. Tax and nontax receipts or accruals	98.4		
12. Purchases of goods and services		84.9	
13. <i>Transfers, interest, and subsidies (net)</i>		<i>17.8</i>	
14. <i>Total government expenditures</i>		<u>102.7</u>	
15. <i>Surplus (+) or deficit (-) on income and product account</i>			-4.3
Adjustments:			
16. Deduct: Subsidies minus current surplus of government enterprises ^a	-0.1		
17. Statistical discrepancy	0.5		+0.5
Gross national product	<u>367.2</u>	<u>367.2</u>	0.0

^a Included in national income but not in GNP.

Note: Items relating to current production of goods and services are shown in roman type. Transfer payments and receipts and other items not included in GNP are shown in italics. Components may not add to totals because of rounding.

goods and services or for transfer payments—and yet avoids double counting. The fact still remains that the government receipts and expenditures totals are not identical with the consolidated cash statement of the budget. On this fact I will comment in the next section.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

THE RELATION BETWEEN THE CASH BUDGET AND FEDERAL RECEIPTS AND EXPENDITURES ON INCOME AND PRODUCT ACCOUNT

It would be desirable if the government transactions on income and product account could be reconciled with official budget figures on receipts and expenditures.

In the first presentation of the nation's economic budget in President Roosevelt's budget message of January 1945, total federal transactions were measured in accord with the consolidated cash concept. At that time the Commerce Department had not yet elaborated its accounting structure to the extent of publishing full receipts and expenditures accounts for the government and other sectors of the economy.

Since 1947 the Department of Commerce has published at least once a year a consolidated government receipts and expenditures account.¹⁹ Since these estimates became available, they have been used regularly in the national economic budgets or national economic accounts as presented in the President's Economic Reports. However, until recently the national accounts table showed cash receipts and expenditures of the government and then through adjustments eliminated those items which were not related to the national income and product account. A variety of methods were used for making these adjustments in the most understandable fashion. The fact that no method of presentation was quite satisfactory has been ascribed by one observer to the impossibility of fitting "a square peg into a round hole," that is, of fitting the cash budget into a system of national income and expenditure accounts. There are certain items in the cash budget, such as transactions in existing real assets and in financial assets, which represent capital transfers and really have no place in a system of current income and expenditure accounts. With respect to these items, I now believe that it is better to omit them from the receipts and expenditures shown in the government sector of the national economic account. Thus I am reconciled to the fact that there must remain a discrepancy between the totals in the government sector in the national economic accounts and the totals in the cash statement of the budget.

Nevertheless, I believe that it is confusing that there are in use now at least three different concepts of the federal budget, namely,

¹⁹ See *Survey of Current Business*, July 1953, p. 9.

the conventional, or administrative, budget; the consolidated cash budget or, as it is called in the federal budget document, the statement of payments to and receipts from the public; and the Department of Commerce's consolidated government receipts and expenditure account. It would be helpful if the national economic accounts could regularly be accompanied by an auxiliary table reconciling the figures in the federal government sector of the national economic account with those of the consolidated cash statement of the budget. As a matter of fact, several of the President's Economic Reports have included an auxiliary reconciliation table supplied by the Commerce Department. (Such a table was not included in the Report of January 1954.) These tables have been difficult to interpret partly because federal transactions on income and product account were taken as the starting point for the reconciliations, whereas, insofar as one set of figures is derived from the other, it is the Department of Commerce figures which are derived from the official figures. A more serious difficulty in interpretation stemmed from the facts that no such compressed tabulation of the many complex differences between the budget concepts could be completely self-explanatory, and that no narrative explanation of these differences and the reasons for them has existed. Marilyn Young's paper is an attempt to supply such an explanation.

It would be particularly useful if a table could be published in an appendix of the Economic Report showing the additions to and subtractions from the official cash budget estimate for the ensuing year which would be necessary to reach the concepts of federal receipts and expenditures used in economic accounting. The latter would be a more useful tool for economic projections than the approximations which become available in the form of the official cash budget estimate.

Government Transactions and the Formation of Capital Assets

National economic accounts are an outgrowth and present a rearrangement of national income statistics. Their main emphasis has been on depicting the interrelationships among (1) incomes, spending, and saving and the interrelationship between these money transactions, on the one hand, and (2) the production and distribution of goods and services, on the other.

In addition, national economic accounts can be useful in recording the changes in assets which are brought about as a result of current transactions. This purpose makes it particularly desirable

to subdivide current transactions to show separate estimates of private and public investments in assets, and also of private and public capital consumption. Again we need not deal here with the whole question of capital accounts but may confine our comments to the government sector.

There are two different reasons why it may be of interest to show what part of government expenditures is used for the acquisition of assets. From a narrow "sector-interest" point of view, one may wish to know which portion of expenditures is used for the acquisition of assets which in the long run are expected to pay for themselves—that is, are expected directly or indirectly to yield a return to the government. This information may be of value in connection with an appraisal of the government's fiscal position.²⁰ Here we are not interested in whether the outlay creates a new asset like a dam or is used for the purchase of a mortgage. Both may give the government a yield and both may be of interest from a purely fiscal point of view.

It is quite different, however, if we are interested in the government's net additions to national wealth. In this case there is a great difference between outlays for acquisition of financial and existing assets, on the one hand, and for construction of new assets, on the other. Only the latter should be considered in this case. Therefore, any distinction between a current and capital account in the government budget should subdivide the capital account into these three component parts: (1) acquisition of existing assets (e.g. purchase of real estate), (2) acquisition of financial assets (e.g. loans and purchases of bonds and mortgages), and (3) acquisition or construction of new assets (e.g. dams or buildings). With respect to the last and most important category, further subdivisions are essential. Certain types of new assets (e.g. military equipment) can best be written off immediately when acquired. With respect to other investments in new assets (e.g. administrative buildings, hospitals, schools, roads, dams, harbor installations, airports) the question must be raised whether it is easier to distinguish between

²⁰ I do not favor the use of the amount of government investment in revenue producing assets as the sole or main criterion for determining the proper amount of borrowing. However, any appraisal of a government's borrowing policy will take into consideration the fiscal position of the government in addition to general economic factors (see Gerhard Colm, with the assistance of Marilyn J. Young, *The Federal Budget and the National Economy*, National Planning Association, Planning Pamphlet No. 90, March 1955).

maintenance and replacement work which could be charged to current accounts, or to include all work on these assets in the capital account but deduct a depreciation allowance on capital account which then would be charged to the current account.

In this whole field of capital accounting real progress requires the effort not only of workers in national economic accounting but also of budget experts. Some countries, especially Denmark and other Scandinavian countries, are experimenting with rather detailed government capital accounts which, together with other information, show depreciation of government assets.

Besides the distinction between current and capital accounts there are other important subclassifications of government expenditures. Most important are classifications by functions, by object (pay, purchase of material, rent, etc.), and by recipients of payment. These problems of classification are not primarily problems of national economic accounting but problems of budget classification and of classification in finance statistics.²¹

Problems of Measurement

ACCRUAL OR CASH

We discussed above some of the differences between the Department of Commerce consolidated government receipts and expenditures account and the consolidated cash statement which is derived from budget estimates. We recognized that cash transactions include outlays for purchase of and receipts from sale of existing assets and financial assets which do not affect the national income and product account.

Another difference consists in the fact that the Department of Commerce uses accrual figures wherever feasible. For an estimate of production, delivery of a product comes closer to the event which is to be measured than payment.²² Also, for a computation of earnings, the use of tax liabilities is imperative. Therefore, the use of accrual and liability figures in the business account cannot be questioned. But there arises the question of the government account. All Treasury and budget tax records are in terms of collections. The Department of Commerce consolidated government receipts

²¹ *A Manual for the Classification of Government Accounts*, United Nations, Fiscal Division, Internal Working Paper, 1953.

²² See Ohlsson, *op. cit.*, p. 170: "At which time the payment is made is not so important, but that the payment has to be made (has accrued) and in some way relates to the activity during the year is of fundamental importance for judging a sector's economic status."

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

and expenditures account records tax payments, particularly corporate taxes, on an accrual basis. Some adjustments are also made to government expenditures (e.g. for procurement of munitions). In other respects (e.g. social insurance) no attempt is made to put the estimates on an accrual base.

Again, as in the case of government outlays not pertinent to a national income and product account, it is desirable that in both the detailed enterprise account and government account the differences between the accrual and cash concepts be clearly shown. This would have two advantages. First, it would reduce the confusion which results from having various government agencies publish different sets of figures on government receipts and expenditures. Second, there is some value in showing cash transactions between the sectors of the economy.²³

It should be recognized that national accounts are not only a means of estimating aggregate production but largely a record of transactions between the sectors. It is a fact that money owned but not yet paid by corporations to the Treasury is still available for business and is used as part of the working capital of business. Taxes accrued but not paid are still funds available to business and not yet funds available to the government sector. Therefore, it seems to be most desirable if in the business account two entries appear: (1) tax payments and (2) net additions to or deductions from tax reserves. Profits available for either distribution or retention would be estimated after tax payments and after additions to (or reductions from) the tax reserve. Thereby, the business account and the cash budget could be made more consistent with each other.

GROSS OR NET

Copeland has criticized the existing statements of government finance and of the government sectors in national economic accounts because they record certain transactions on a net rather than a gross basis.²⁴ This is true, for instance, of the Post Office and various government corporations. These quasi-commercial agencies are treated in the official statements and in national economic

²³ Morris A. Copeland, *A Study of Moneyflows in the United States*, National Bureau of Economic Research, 1952, pp. 80-81. For qualification, see p. 102 of the same work.

²⁴ Morris A. Copeland, *Concerning a New Federal Financial Statement*, National Bureau of Economic Research, Technical Paper 5, 1947, particularly pp. 14 ff.

THE GOVERNMENT SECTOR: CONTROVERSIAL ISSUES

accounts on a net basis; that is, an excess of expenditures is treated as a positive component of the expenditures of the government, and an excess of receipts as a deduction from government expenditures. Net outlays cannot be broken down by object classification, that is, by wage and salary payments, purchase of supplies, rents, etc.; such a breakdown could only be based on complete gross expenditure figures. Also, an attempt to trace the moneyflows through each unit in the economic process (including public credit institutions) requires records of gross transactions rather than net results for these agencies.²⁵ There are certainly legitimate questions concerning the total wage and salary bill or the total amount of procurement or the credit extended or used by government, including both general government and government corporations. It is desirable to give gross expenditures of government enterprises broken down by suitable classification.²⁶

For purposes of the basic national accounts, however, I prefer continuation of the present practice of showing government enterprises on a net basis.

For most purposes it is more informative if the truly quasi-commercial transactions of government are treated as enterprise—that is, public enterprise. Then the figures of key interest are the profits or losses of these enterprises and their gross investment in plant, equipment, and inventories. Either their sales are reflected in expenditures by households (for example, postage stamps bought for personal use) or they cancel out if transactions take place among private and public enterprises. If we are interested in wage and salary payments or purchases or financing of enterprises, we can obtain such estimates separately and should break them down by private and public enterprises.

MEASUREMENT IN CONSTANT DOLLARS

Certain specific problems arise for the government sector when an attempt is made to express the accounts in constant prices.

The methods used for measuring estimates in constant prices should vary depending on the purpose. When the purpose is to measure production in total and by major components, one yardstick will be appropriate. Another yardstick will be more useful

²⁵ Copeland, *A Study of Moneyflows in the United States*, as cited, particularly pp. 305 ff.

²⁶ See *Flow of Funds in the United States 1939-1953*, Board of Governors of the Federal Reserve System, December 1955.

if it is the purpose to measure the interrelationships among the various sectors of the economy.

In the first case specific price deflators should be used for each of the major component parts. Let us take as an example an attempt to measure the increase in real production from the pre-World War II period through the years of World War II. An important component part was the production of munitions. It would be of no use to deflate the government purchase of munitions by a general price index: it must be deflated by a specific munitions price index if these estimates are to reflect changes in real work done on this important component part of GNP. In any effort to devise specific deflators for specific component parts of GNP a difficulty is posed by the services of government employees. These services are measured only by wage and salary payments. If they are deflated by the rise in pay scales, it is implicit that the volume of service performed moves exactly in proportion with the number of employees in the various salary and wage brackets. In other words, it is implied that there is no change in productivity or output per man-year.²⁷ There cannot be a serious objection to this approach for comparisons over a relatively short period. Over a longer period of time this method may result in a serious underestimate of the significance of government services in the total of production, and in a lesser error if an arbitrary increase in labor productivity (due to better management, higher skills, better equipment) is assumed. The average increase in the productivity of private employees may be assumed.

If national accounts are used to measure the interrelationships among various sectors of the economy, it is not feasible to use different indexes for the deflation of various component parts. Assume we use different indexes for government purchase of munitions, for public works construction, for interest payments (presumably constant index), and for various types of taxes. In this case the deficit or surplus may change, or a deficit may even be transformed into a surplus or vice versa. In this way what we want to know might be distorted. It follows that for this approach only one general average deflator should be applied to all items in the national economic accounts. In this case the specific problem of the treatment of government services would disappear. The government wage and salary payments would be deflated with the same average price index used for all other component parts.

²⁷ This is implied in the method of deflation used by the Department of Commerce.

