

# ACCOUNTING FOR THE PUBLIC SECTOR IN DEVELOPMENT PLANNING

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This paper seeks to set out in some detail an accounting structure for the public sector of developing countries which will provide the information essential for development planning. The public sector is of course of special importance in planning because of its sheer size and its pivotal position for altering the contours of the entire economy. Yet the information available for this strategic area often falls far short of what is needed, and also of what could be provided with more effort.

The paper is divided into a number of sections, the first two of which are concerned with demarcating the public sector and with the nature of the accounting framework proposed. These are followed by sections dealing with the distinction between development and other expenditures; the need for separate financial information; public enterprises; the grouping of expenditures according to the purposes served; and income distribution. A final section touches briefly on some of the data problems involved in implementing the system. In addition, a full set of accounts for the public sector and its components is appended.

## I. DEMARCATING THE PUBLIC SECTOR

The macroeconomic aims of governments which can be furthered through the budget process include economic stabilization and growth, a more efficient allocation of resources, and adjustments in income distribution. Pursuit of these interrelated goals via the budget is of course complicated by the fact that measures designed to promote one goal may retard attainment of the others. We are now only too painfully aware that even stabilization alone, if taken to cover both maintenance of full employment and a stable price level, poses a grave dilemma for the policy-makers of certain industrialized countries.

In the less developed countries such conflicts are not likely to be serious in practice because of overriding concern with the goal of economic growth. Rather, the practical problems here stem chiefly from the limited efficacy of conventional fiscal policy. The widespread underutilization of labor and low level of per capita income are unlikely to yield to efforts to raise demand by Keynesian measures since the basic difficulties lie on the supply side. Additional purchasing power will be largely dissipated in higher prices. Since raising output calls for emphasis on raising productivity rather than demand, budgetary strategy must emphasize the promotion of saving and investment at the expense of consumption, a formidable challenge to governments wherever the general level of private consumption is already low.<sup>1</sup>

If households and firms are unable or unwilling to save a larger share of their income, the government itself must face up to the task of generating the additional saving needed to raise the share of capital formation in national output. But

<sup>1</sup>For a succinct summary of the arguments supporting this position, see for example, Richard A. Musgrave, *Fiscal Systems* (Yale University Press, 1969), pp. 207-17.

maintaining a surplus of revenues over recurrent expenditures does not imply that public investment need rise. The alternative to larger government outlays on infrastructure, resource development, etc., is the channeling of the surplus funds into private capital formation through development banks and other suitable intermediaries. The choice usually turns on such factors as the country's political orientation and its views as to the relative efficiency of public versus private enterprise.

Where governments concerned with industrial development lean towards direct ownership of the means of production rather than the promotion of private enterprise through subsidies, tax incentives, tariff protection, credit facilities, and the like, public enterprises may come to form an important part of the national economy. Included may be entire fields of production, such as transport and communications, electric power, petroleum and mineral extraction, and banking and insurance, along with key enterprises in other branches of activity.

In drawing the boundary between public and private enterprise, as we shall want to do, cases of joint government-private ownership can be troublesome. For most purposes, however, majority ownership of the share capital or else the degree of control over policies can serve as the criterion, whatever other differences there may be between one such enterprise and another. Even among the wholly state-owned undertakings there are usually important variations as regards the retention or surrender of earned surpluses, liability to taxation, freedom to borrow or invest, and so on. These differences may be based on law or simply reflect traditional practices.<sup>2</sup>

In dealing with underdeveloped countries there are advantages in focusing on the "public sector" defined to include both public enterprises and general government. Whatever meaning we may ascribe to the term "government sector," it generally connotes a narrower range of activities. Given the importance of public enterprises in the total economy of so many of the less developed countries and the fact that these organizations are potential instruments for the furtherance of public policies, they deserve to be kept more in the forefront of discussion. Coordinated decision making for the public sector is hardly possible where these institutions are largely ignored simply because they are not automatically subject to review when the regular budget is prepared.

Indeed, sometimes even agencies performing ordinary public services indistinguishable from those provided by regular departments are covered by extra-budgetary arrangements. Where these "autonomous" agencies have taken over a significant part of the operating responsibilities of departments or ministries, as they have in certain Latin American countries and elsewhere, the budget will give a misleading impression even of a government's ordinary activities and effective control over government spending may be greatly weakened.<sup>3</sup>

Although the justification for including all these organizations in the public sector is that they are under the jurisdiction of the public authorities, we need to

<sup>2</sup>In passing we may note that drawing the line between general government, i.e., ordinary departments and their offshoots, and government enterprises sometimes also presents problems.

<sup>3</sup>For a brief review of this and other problems of budget administration, see W. I. Abraham, *Annual Budgeting and Development Planning*, National Planning Association, 1965, especially pp. 13-17.

recognize that policy coordination within the sector may be hard to achieve where important units have a large measure of autonomy. The granting of autonomy may be tied up with efficiency considerations (cutting red tape, for example), with the fact that powerful political leaders have taken the organizations under their wing, etc. In some cases meaningful control may even be avoided by such simple expedients as maintaining low standards of recordkeeping or laxity in meeting disclosure requirements. Being subject to control is not the same thing as being effectively controlled. Nevertheless, it is indisputable that the government is ultimately responsible for the conduct of state enterprises and "autonomous" institutions, just as it is usually responsible for bringing them into existence in the first place. The fact that it may be hard to bring certain state organizations to heel is hardly a reason for regarding them as part of the privately controlled part of the economy. A government's policies can, after all, be frustrated by obdurate ministers as well as by independent managers.

## II. ACCOUNTING FRAMEWORK TO MEET INFORMATION REQUIREMENTS

Our concern here is with the public sector's economic transactions, i.e., taxing and spending, production and selling, borrowing and lending. This is not the only way in which governments influence the economy, for in addition they use their vast powers to regulate and shape the institutional setting. These latter actions cannot be summarized in quantitative economic terms and brought within the scope of an accounting system any more than a company's hiring practices, work rules or views on unionization can be directly recorded in its financial statements. Where such influences are important, they need to be studied separately.

If our object then is to provide a framework of fiscal data to serve as a basis for assessing the impact of the public sector's transactions in the areas of production and income generation, consumption, capital formation, and finance, an accounting structure is needed going beyond the usual consolidated statement of receipts and expenditures as shown in the national income accounts. In particular, information on public enterprises and financial dealings has to be integrated into the data system.

This aim can be met by having separate sets of accounts for general government and for public enterprises (grouped broadly according to kind of activity, or industry), each set covering (1) income and outlay transactions, i.e., current disbursements and receipts, (2) capital formation and its financing, and (3) the purely financial transactions which balance revenues and spending. The accounts for the public sector as a whole would be a consolidation of these separate sets of accounts. In addition, production accounts for general government and the different enterprise groupings showing gross output and inputs could usefully be drawn up. Where provincial and local governments are important in the fiscal picture, general government would have to be split into (1) the central government and (2) lower-level governments.<sup>4</sup> Such a fiscal accounting system

<sup>4</sup>This accounting framework is in line with the new United Nations national accounts system as adapted for developing countries; see Ch. IX of *A System of National Accounts*, United Nations, New York, 1968. The system recommended for general use does not distinguish a "public sector" even though the distinction between public and private transactors is emphasized throughout.

allows us to view the sector's current expenditure and receipts, saving, capital expenditures and transactions in financial claims as interrelated flows.

The accounts of the system and analytically interesting consolidations can be summarized as in the chart on page 375. The detail of the accounts can be seen from the appended tables (the figures there are imaginary).

### III. CURRENT AND CAPITAL EXPENDITURES—AND DEVELOPMENT

The justification for distinguishing between current and capital outlays lies mainly in our special concern with the process of saving and capital formation. Saving and investment are, of course, elastic concepts: investment in infrastructure and plant and equipment differs from investment in human capital and other growth-promoting intangible expenditures chiefly in material composition. In certain countries, including Ethiopia, Indonesia, Malaysia and Pakistan, recognition of this fact has led to the division of the central government's budget, and sometimes even provincial budgets, into "routine" and "development" sections as distinct from the more usual current and capital accounts based, on the expenditure side, exclusively on a durability criterion. At the same time, the inclusion in some instances of a part of fixed investment in routine expenditures and of military costs in the development budget serves to muddy the waters.

Governments which split up their budgets in this fashion usually limit the development budget to officially sanctioned "development projects." These may be projects directly related to particular plan targets, projects for which foreign aid is available or being sought, etc. As a practical matter, government officials are necessarily the final arbiters. In coming to decisions there is some tendency to regard the traditional functions as routine, new programs as development. The very fact that it may be official policy to hold down "ordinary" expenses so as to provide more money for development in itself invites the classification of new programs as developmental.

Once the concept of capital is widened to cover more than durable physical assets, it becomes extremely difficult to know where to stop. The difficulties are compounded because considerations involving the relative "importance" of alternative expenditures become confused with the distinction between current and capital. There is no gainsaying that additional expenditure on law and order or fire prevention can be at least as important as more spending for feeder roads or agricultural research. The choice among different broad aims necessarily rests on political judgements: objective criteria can only be established for choosing the most efficient ways of attaining particular aims.

Even where it is understood that development expenditures must continue to yield benefits into the future, the question of identifying them remains. Myrdal rightly calls attention to the productivity-raising aspect of better feeding of undernourished workers. Yet it would be highly unusual to find welfare programs designed to improve nutritional levels classed as capital formation. Countless other instances of expenditures close to the hazy line separating consumption from investment could of course be cited. The question of classification is not important in itself. What is important here is the possibility that appropriations will reflect the failure to recognize the full effects of such programs.

AN ACCOUNTING STRUCTURE FOR SUMMARIZING  
PUBLIC SECTOR TRANSACTIONS

General Government		Public Enterprises				
Central Govt.	Lower-Level Govts.	Financial		Nonfinancial		
		Central Bank	Other	Ind. 1	Ind. 2	Etc.

1.

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2.

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3.

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4.

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- Key:** 1. *Production Accounts* showing gross outputs and inputs and the income generated in production.  
 2. *Income and Outlay Accounts* showing current income, expenditure and saving.  
 3. *Capital Formation Accounts* showing capital formation and its financing through saving and borrowing.  
 4. *Financial Accounts* giving details of financial transactions.

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Represents separate accounts for sub-sectors.

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Represents in addition a consolidated account.

Whatever the pros and cons of separately identifying a block of expenditures not limited to physical capital accumulation as development expenditure in the budget and/or national accounts, on balance there is probably more to be said in favor of such a procedure than against it. A good example of the danger of limiting capital formation to physical capital is the misuse of saving estimates when they are interpreted as self-help indicators in setting foreign aid allocations. The issue is by no means confined to the public sector. The Ruggleses have proposed classifying certain personal and business outlays of an intangible nature as development expenditure in a broadened concept of capital for the United States. Thus, they would regard personal expenditures on education and certain health expenditures as adding to the stock of capital, while for business enterprises outlays on research and development and the education and training of workers would form part of gross capital formation. The concept of government capital formation would be broadened to include intangible capital in the form of research and development, education and health.<sup>5</sup>

Granted that a more comprehensive concept of capital for households and enterprises is of analytical interest, for the government it takes on operational significance as well. Individuals are unlikely to have more frequent chest X-rays or dental check-ups as a result of a change in the concept of capital, but governments, especially if they are committed to rapid growth, may well come to allocate their resources differently. It is for this reason that the illustrative accounts in the appendix employ the broader concept when dealing with general government (but not the public enterprises). At the same time, however, the sub-category of fixed capital formation is also identified.

#### IV. THE SEPARATION OF FINANCIAL TRANSACTIONS

The clear separation of borrowing and lending from income and spending is a requirement for understanding how the public sector's transactions are related to the generation of demand for goods and services and also to the process of income redistribution (a subject about which we shall have something to say later). An analogy can be drawn here with the balance of international payments which is also divided into two parts, one concerned with goods and services (the current account), the other with financial claims (the capital account). Only the former, which deals with exports, imports and unilateral transfers, enters into the national income system. The latter explains how the deficit or surplus on current account is financed or invested.

In the case of the public sector, the added information on financial transactions not only enables us to analyze the financing of budgetary deficits but, taken in conjunction with data on changes in the assets and liabilities of the banking system (loans and deposits) and the change in foreign reserves, also the monetization of the nonbank private sector. Admittedly, it is sometime difficult to say whether a particular transaction is in fact a loan or purchase (or transfer), as with nonrecourse commodity loans to farmers and some advances to public undertakings, but the principle itself is clear enough.

<sup>5</sup>Nancy and Richard Ruggles, *The Design of Economic Accounts*, National Bureau of Economic Research, 1970.

The separate and systematic accounting for dealings in financial claims, i.e., the itemization of changes in the public sector's financial assets and liabilities, is of course a step towards extending the national income accounts to cover the full flow of funds within the economy. The number of countries that systematize their financial information in this way as distinct from merely preparing *ad hoc* tabulations for analyzing changes in their money supply or the financing of their trade balances is still small. That this should be so is somewhat surprising in view of the widespread availability of financial data for all parts of the economy except the nonfinancial private sector. Since changes in domestic claims balance out for the economy as a whole, data for the nonfinancial private sector can at least be derived as residuals.

The integration of financial transactions with the more familiar national product flows with which they are intimately interrelated provides a more revealing basis for analyzing developments both in the real and financial spheres. In particular, studies of demand inflation originating in the financing of public sector deficits require this broader analytical setting.

## V. THE COVERAGE OF PUBLIC ENTERPRISES

Both the budget and the usual consolidated government account of the national income system include only a part of the net income of the public enterprises, namely such payments as are actually transferred to the government's central funds. Yet as a rule actual payments to the treasury or exchequer represent but a small fraction of the total net earnings even of the wholly-owned state enterprises (let alone the mixed). Losses, too, are not fully reflected, especially if they are absorbed by undertakings entitled to hold their own reserves or if they are covered by loans from the central bank, development banks or other sources. As a result, the figures derived for saving stop short of measuring the saving generated in the whole public sector. The figures for the overall surplus or deficit also fall short of what is wanted because of the limitation just described as well as the failure to account for the capital outlays of public enterprises. Although the capital formation of enterprises that happen to be closely integrated with particular departments or the finance ministry may be included among budgetary expenditures, this will not be the case for the majority of government-held enterprises. In Ethiopia, for example, investment by these excluded enterprises is around 80 percent as large as the total fixed capital formation reported in the budgets of the central government and all municipalities.

Once it is agreed to draw the boundary of the public sector as we have done, it follows that attention needs to be directed equally to all units of government irrespective of whether they are organized to supply services free or at a price. The transactions of both types need to be brought together in a set of accounts for the public sector because all are subject to political decision. Thus, the operating profit and saving of state enterprises depend to a large extent on the price policies imposed by the government, even if these organizations have considerable latitude in their day-to-day operations. Prices may be fixed high enough to ensure a substantial profit, as in the case of the fiscal monopolies often established to produce revenue from the production or distribution of liquor, tobacco, etc., and

from organized gambling; or at competitive levels; or so low as to ensure losses, as with state trading in essential foodstuffs. Because the revenues produced under high prices are no different from an indirect tax, while deliberate losses amount to subsidies, there is much to be said for labelling them as such. Prices paid and charged by marketing boards set up to stabilize the income of certain groups of producers of primary commodities also very clearly reflect political decisions.

Although it may be possible to piece together a picture of the entire public sector's contribution to saving and investment from the national accounts statistics, it is virtually impossible to determine the share of the state enterprises in the net output of the various branches of production. Such information is essential for an overall view of the government's ownership and control (as opposed to regulation) of business organizations, the degree of government monopoly or competition in different fields, and the like. The classification of enterprise data into production accounts by branch of industry as has been suggested would permit us to determine the value added as well as the profitability of the state enterprises in each branch of production. Inasmuch as the usual breakdown of national product by industrial origin frequently covers state as well as private establishments, the essence of the suggestion is the separation of the public and private shares.

## VI. THE CLASSIFICATION OF TRANSACTIONS BY PURPOSE

The expenditures of general government have a number of different dimensions. They are made either by central or lower-level government, have different economic characteristics (and are accordingly grouped under consumption, investment, transfers of various kinds, loans, etc.), serve different purposes (e.g., defense, agriculture, education, health), and in the case of factor remuneration, contribute to the domestic product arising in the various branches of production. The remarks below are directed mainly to the composition of spending according to purpose (or "function").

Since economic planning is concerned with the effective use of resources, coordination of the annual budget with development plans requires that government spending be viewed from the standpoint of the broad purposes served. As a corollary, development plans should be divided into annual components so that the budget can be used to promote the objectives of the planners. Clarity about the purposes served by government spending is the essence of effective planning through the budget.

Now a purpose classification of government activity is very similar to the more familiar industrial classification, but the object of the two classifications is different and they need not be applied to the same kinds of data. The classification by purpose is designed to distinguish the broad objectives served by a government's current purchases of goods and services, transfer payments, subsidies, outlays for capital formation and even loans and other financial operations. An industrial or activity classification, by contrast, rests on technological considerations and groups together data for activities concerned with producing the same goods by similar means. It is thus appropriate for classifying information on outputs, inputs, value added and capital investment. So far as general government itself is concerned, a purpose classification shows how expenditures are divided



among different politically determined ends, while the industrial classification fits value added and other data relating to production functions into industrial-type pigeonholes.

As a practical matter government purposes can be spelled out in terms of the categories of a detailed industrial classification, and therefore the two classification systems can be linked up. If, for instance, the defense ministry operates hospital and specialized educational facilities, these activities serve the single broad purpose of national defense and the expenditures involved should come under this one heading in a classification by purpose. In an industrial classification of value added, on the other hand, the operation of military hospitals would fall under the health industry, military schools and service institutes under education, and so on because of the distinctive nature of the services produced.

Although many countries, including some like the United States which are well supplied with data on government operations, have found it difficult to apply their industrial classification systems to government services, most find it both possible and important to divide up government spending according to purpose. This step may be taken either when the budget is being prepared or at a later stage. It is more likely to be an integral part of the budget process if there is close cooperation between budget and planning officials or if some form of program and performance budgeting has been adopted. Such budgeting is concerned essentially with defining objectives and then delineating programs whose measurable results and costs can be established to throw light on their effectiveness. By being clear about aims, useless or inefficient activities—the two are not the same since functionally pointless operations may be performed efficiently—can be rooted out. The greater the concern with relating programs to clearly defined aims in the budget process, the easier it will be to obtain the information needed to divide up spending by purpose. Since even small administrative divisions for which expenditure data are separately available may serve a number of quite different purposes, further information about their programs is clearly helpful.

The classification of government expenditures by purpose can be related to the attempts discussed above to include intangible growth-promoting expenditures in public capital formation. Since intangible investments are made with particular purposes in mind, it should be possible to organize the purpose classification so that these investments can be identified. If all the costs of providing public health services and education are regarded as investment in human capital, it could suffice to distinguish these broad purposes in the classification. If only certain forms of public health or education or assistance to agriculture are regarded as developmental, then health, education and agriculture have to be broken down in the classification to show the appropriate sub-groups. In some cases rather detailed breakdowns of a given broad objective might be required to permit relating development spending to purposes. For instance, such matching might mean that agriculture in the purpose classification would have to be split up into research, irrigation and drainage, extension services, land reform, price support, and so on.

Although it is not now the practice to link up formally the purposes for which expenditures are made with the concept of development spending, there would be clear advantages in moving in this direction. To begin with, this would help clarify

the content of "development expenditure." But there is another important reason that has to do with the fact that not all expenditures serving development are part of the broader concept of public capital formation. This broader concept is limited to all outlays on physical assets plus spending for goods and services (that is, supplies and personnel) which are transformed by the government into development services; transfer payments, loans, etc. made to promote development do not raise the government's own investment but rather enable other parties to acquire the real resources that will raise productivity. Aggregating the different economic categories of development expenditures, as is sometimes done, is therefore misleading. What is actually needed here, then, is an economic-functional cross-classification. If development is defined in terms of purposes, this dual classification should allow the full extent of the government's transactions in promoting development to be understood and enable information to be aggregated meaningfully. The spending for agriculture, for example, would be divided up to show not only how much goes for research, irrigation, extension, land reform, etc., but also how much under each of these purposes consists of outlays for non-durable goods and services, for construction and other fixed capital formation (including the costs of opening up new land), subsidies and other transfers, loans to farmers and equity contributions to government farm credit schemes.

In the accounts appended to this paper no attempt is made to link expenditures formally with purposes. The capital formation accounts for general government (account A3) do, however, show total gross capital formation inclusive of non-durable development expenditures on goods and services, and separately, capital transfers given or received for promoting capital formation. It can therefore be seen that the central government makes transfers to state and local governments and to public enterprises to finance capital formation and itself receives such transfers from the rest of the world, *viz.*, foreign aid grants to boost investment, not consumption. The intra-public sector transfers are not shown in the public sector's capital account (account C2) because they cancel out, but the foreign aid given to the country to finance capital formation remains. As regards loans granted and other financial transactions, the accounts contain no clue as to the purposes served. The addition of a table cross-classifying general government outlays by type and purpose would obviously permit a fuller analysis to be made of the public sector's efforts to raise productivity through investment directly or indirectly.

## VII. INCOME REDISTRIBUTION

Nothing has been said so far about the need for information on the redistribution of income brought about through the fiscal system. Although the leveling of incomes among persons, ethnic groups (a goal in Malaysia) or regions (e.g., in Brazil, Italy, Yugoslavia and Thailand) is often stressed in development planning, more often than not this objective is only paid lip service. The reasons are partly political, partly economic. The promise of a more equitable distribution of income is necessary for winning broad support for planning, but at the same time measures to this end are strongly resisted by entrenched interests. Intellec-

tual support for this resistance is provided by the familiar economic argument that a fairer sharing of income is prejudicial to growth through its effect on saving, investment, technology and incentives.

Now there is much truth in this line of reasoning but the whole truth is too complicated to be summarized confidently in this fashion. There would be a sounder basis for expecting such an outcome if income redistribution consisted simply of transfers of purchasing power from rich to poor. But what if redistribution also takes the form of raising the productive resources and productivity of the poor through the government's expenditure and credit policies?

It is also argued (probably with the experience of today's industrialized societies in mind) that all classes stand to benefit eventually from growth even in the absence of active redistribution policies. Unfortunately, steadily accumulating evidence lends little support to this thesis. In the underdeveloped world with its explosive population growth, the mounting urban unemployment coupled with the continued low productivity of peasant agriculture are the obvious signs that the gains from growth are far from equally shared. The real possibility of social and political upheaval is probably the strongest reason for expecting that more serious attention will soon have to be paid to problems of distribution. The World Bank is already stressing internal maldistribution along with the growing gap in income per head between rich and poor nations.<sup>6</sup>

In judging the fiscal system as a redistributive mechanism we have to consider not only the effects of the tax structure but also of government expenditures of all kinds. Nevertheless empirical studies hardly ever look at both sides of the government ledger, perhaps because it is felt that tracing the effects of taxation, and sometimes transfers and subsidies as well, is difficult enough without trying to extend the analytical framework.<sup>7</sup> Not only may this one-sided view seriously bias the conclusions, as when the big changes in relative welfare are chiefly ascribable to changes in government spending patterns, but it can push into the background the significance of expenditure policies for redistribution.

Tracing the impact of budgetary actions on the distribution of income is complicated by tax shifting and the difficulties of identifying the real beneficiaries of government services. The dependence of the poorer countries on indirect forms of taxation would seem to magnify the problem of determining tax incidence according to income or social class. But offsetting this tendency is the fact that often large numbers of the rural poor are virtually untouched by revenue measures because they are to such a large extent outside the money economy.

The benefits of government services, on the other hand, reach both those participating in the cash economy and those outside it. The task of allocating these benefits can be greatly facilitated by the existence of a reasonably detailed breakdown of expenditures according to purpose. Except for those outlays on general administration, defense, etc., which are of benefit to the community as a

<sup>6</sup>This new emphasis was a prominent feature of the address by Robert S. McNamara to the Board of Governors of the World Bank Group in September 1972.

<sup>7</sup>For a penetrating discussion of the conceptual and statistical limitations of empirical tax and expenditure incidence studies, see Luc De Wulf, "Fiscal Incidence Studies in Developing Countries," IMF Staff Papers, Vol. XXII, No. 1, March 1975, pp. 61-131.

whole and therefore have to be distributed arbitrarily on a *pro rata* basis or in proportion to income (if indeed they are regarded as affecting individual welfare at all), knowing the purpose of the various outlays will often suffice to identify the beneficiary groups, at least broadly. Such allocation is a good deal easier in the underdeveloped countries because such a large part of the poorest class is concentrated in the countryside and government services benefiting the rural poor as distinct from the large commercial farmers or the urban population can usually be identified.

The cross-classification of government spending by economic category and purpose, as suggested earlier, will here too be more useful than a simple purpose classification of total outlays. A great deal of expenditure may, for example, be for rural infrastructure—market roads, water control, country schools and clinics, and the like—rather than for current services to the rural population, and it would be inappropriate to lump both types of spending together. As a rule these physical investments will be suggestive of the stream of benefits still to come.

While initial efforts to determine how the different socio-economic groups are affected by tax and spending policies may lead to estimates that are more impressionistic than scientific, even rough orders of magnitude of tax burdens and spending benefits may be of great interest and practical importance. Moreover, many of the conceptual and statistical difficulties may not be all that serious in painting a picture of changes over time.

Reducing regional or rural-urban disparities is probably a goal which many governments pursue more assiduously than reducing class inequalities *per se*. Whatever combination of special tax inducements and public services is offered to depressed areas to attract new industry, improve agricultural productivity, and so on, the fact that the effects are geographically limited makes it easier to assess the fiscal system's regional impact. Problems of tax shifting in particular are much less crucial in this context. Although certain theoretical problems remain, for instance the treatment of expenditures concentrated in one area but benefitting most of the population, in general it should be sufficient to base the analysis on the location of taxpayers and of recipients of public funds.

In some countries it may be of considerable interest to extend the analysis beyond the distribution of government services to include the consequences of public employment policies. This is especially likely to be so where government jobs are deliberately created for the unemployed, ethnic origin is a factor in hiring, side effects of development efforts include the systematic displacement of certain groups from gainful pursuits, etc. The sharing of employment opportunities is quite distinct from the sharing of the services performed. Government contractors and suppliers too are sometimes selected with an eye to income redistribution.

Beyond these recipients of government payments stands of course the huge mass of income receivers benefitting still more indirectly from the subsequent rounds of responding; and we are thus carried full circle to a consideration of general economic growth. Because the roles of the public sector in the generation and redistribution of income are so complex, quantitative analysis of redistribution has as a practical matter to be more or less arbitrarily limited to the main effects for which reasonably illuminating data can be assembled.

### VIII. THE DATA ASPECT

Considering the formidable difficulties of assembling information for the private sector under the conditions prevailing in most of the less developed countries, it is surprising that greater efforts are not made to develop meaningful, comprehensive data for the public sector. This failure is all the more striking in view of the great interest attaching to the role of government in planning and the relative ease of procuring most of the data needed. As matters stand, far too many countries still lack the information about public transactions which they need for such purposes as judging growth-promoting efforts, evaluating revenue performance, determining the contribution to national saving, capital formation, national income and income redistribution, measuring the inflationary consequences of government operations, and assessing the performance and impact of their public enterprises. Budget officials continue to be concerned mainly with financial accountability and this is reflected all too plainly in the administrative and derived statistics issued by treasury and budget sources.

Aside from the fairly widespread failure within the ranks of government officials to appreciate the need for better, and better organized, data for analytical purposes, there are of course problems in obtaining the data needed. Even if governments at all levels and all public enterprises issued comprehensive and up-to-date information, which is very far from being the case, there would still be the task of assembling this information centrally and of reorganizing it to conform to the definitions and other standards adopted. It would also be found in many cases that the data could not be uniformly reclassified because of various shortcomings in account-keeping, the divergent practices of different government units, etc.

The problems of bringing information together in one place are naturally much more serious in countries having a large number of active local and provincial governments than where the central government is by far the dominant level or shares responsibility with just a few large provincial governments. While for the central government, budgetary sources, the financial statements of the treasury or exchequer, reports of the internal revenue service and social security agency, and so on can be used, data for state and especially lower level governments may be hard to come by unless they are routinely collected by the interior ministry or some other branch of the central government. If such collection is not undertaken centrally, or if the results are unsatisfactory because of wide discrepancies in record-keeping practices, the best solution may be collection through questionnaires on a sample basis. This method has the advantage of imposing some degree of uniformity on the statistics.

To some extent the simpler nature of local governments offsets the fact that the information supplied will be much less detailed than for the central government. Thus, in preparing a purpose breakdown of expenditures, purposes can be inferred from the departments responsible for the disbursements. Where the source of finance is predominantly grants-in-aid from the central government, fiscal data for the central government will help in filling gaps, blowing up the sample and checking returns.

For public enterprises the annual reports which are issued in many countries can be used. But even where it is common practice for such enterprises to publish

reports, the absence of standardized accounting practices can make these statements much less informative than those of large private concerns. Difficulties of interpretation, reporting lags, or the failure to provide periodic statements at all may necessitate the collection of profit-and-loss and balance sheet data by questionnaire directly from these enterprises or from their parent governments. Economic census programs covering manufacturing, distribution, and so on often collect data from public as well as private firms and provide still another opportunity for obtaining some of the information needed.

Even from these few remarks it will be evident that building up a comprehensive picture of the public sector is like assembling a giant jigsaw puzzle out of a large number of ill-fitting pieces. But measures of most macroeconomic constructs have to be pieced together from diverse sources in this way. Statistics made to order for economic analysis are a rarity. The task is considerably easier, however, for government than for the private sector. Governments at whatever level do have budgets and must account for their receipts and expenditures, even if their budgetary and accounting practices fall far short of the ideal; and where their practices are seriously flawed they can be altered if the officials concerned can be made to see that decisions on taxing, spending and financial questions have an important bearing on the whole economy, and that information is needed beyond what is required simply for auditing and control. Again, the information on public enterprises may be deficient, but the very fact that these undertakings are considerably fewer in number and on the whole much larger than the private firms makes it vastly easier to assemble information about them. Efforts to improve the flow of economic intelligence in developing countries need to pay much more attention to the public sector because the returns are so high.

APPENDIX: ACCOUNTS FOR THE PUBLIC SECTOR

A. GENERAL GOVERNMENT ACCOUNTS\*

	Central Govern- ment	Lower- Level Govern- ment	Total Govern- ment
<i>1. Production Accounts:</i>			
1.1 Compensation of employees	300	150	450
1.2 Other current purchases	100	50	150
1.3 (Depreciation)	—	—	—
1.4 Total input	400	200	600
<i>1.5 Public consumption</i>			
1.6 Development expenditure on goods and services	150	25	175
1.7 Minor sales and charges	20	5	25
1.8 Own-account capital formation	30	10	40
1.9 Total output(=1.4)	400	200	600
<i>2. Income and Outlay Accounts:</i>			
2.1 Direct taxes	60	10	70
2.2 Indirect taxes	240	100	340
2.3 Surrendered surplus of public enterprises, total	60	30	90
2.4 Minus: Surplus recorded as indirect taxes	-20	-10	-30
2.5 Social security contributions	30	—	30
2.6 Interest and other property income received	60	50	95
a. From other government level	5	10	—
b. From public enterprises	30	20	50
c. From private sector	20	20	40
d. From abroad	5	—	5
2.7 Current transfers	70	50	70
a. From other government level	—	50	—
b. From abroad	70	—	70
2.8 Total current income	500	230	665
2.9 Public consumption (=1.5)	200	160	360
2.10 Subsidies	30	20	50
a. To public enterprises	25	15	40
b. To private enterprises	5	5	10
2.11 Interest and other property income paid	100	10	95
a. To other government level	10	5	—
b. To public enterprises	20	—	20
c. To private sector	20	—	20
d. To abroad	50	5	55

\*Inclusive of social insurance and other extra-budgetary funds.

(Cont.)

A. GENERAL GOVERNMENT ACCOUNTS (Continued)

	Central Govern- ment	Lower- Level Govern- ment	Total Govern- ment
2.12 Current transfers	75	20	45
a. To other government level	50	—	—
b. To persons	20	20	40
c. To abroad	5	—	5
2.13 Saving	95	20	115
2.14 Total current outlays and saving (= 2.8)	500	210	665
<b>3. Capital Formation Accounts:</b>			
3.1 Saving (=2.13)	95	20	115
3.2 (Depreciation) (= 1.3)	—	—	—
3.3 Capital transfers, net (payment —)	10	40	50
a. Other government level	—50	50	—
b. Public enterprises	—40	—10	—50
c. Private sector	—	—	—
d. Abroad	100	—	100
3.4 Net borrowing (+) or lending (—)	145	5	150
3.5 Finance of gross capital formation	250	65	315
3.6 Fixed capital formation	100	40	140
a. Structures	110	30	140
b. Purchases of land, net	—20	—	—20
c. Other	10	10	20
3.7 Other development expenditure on goods and services (= 1.6)	150	25	175
3.8 Gross capital formation (=3.5)	250	65	315
<b>4. Financial Accounts:</b>			
4.1 Increase in domestic assets			105
a. Currency and deposits			30
b. Corporate securities			—5
c. Loans made less repayments			100
d. Other financial assets			—20
4.2 Increase in foreign assets			—5
a. Gold and foreign exchange			—
b. Other			—5
4.3 Net borrowing (+) or lending (—) (=3.4)			150
4.4 Total increase in financial assets and borrowing			250
4.5 Increase in domestic liabilities			160
a. Treasury currency			30
b. Deposit obligations			20
c. Government securities			90
d. Loans incurred less repayments			10
e. Other liabilities			10
4.6 Increase in foreign liabilities			90
a. Loans incurred			100
b. Other			—10
4.7 Total increase in liabilities (=4.4)			250



B. PUBLIC ENTERPRISE ACCOUNTS\*

	Nonfinancial Enterprises: by Industry		Financial Institutions		All Enterprises
	1	2	Central Bank	Other	
<i>1. Production Accounts:</i>					
1.1	120	125	25		270
1.2	50	105	5		160
1.3	15	42	3		60
1.4	5	13	2		20
1.5	-30	-10	—		-40
1.6	25	45	50		120
1.7	185	320	85		590
<i>2. Income and Outlay Accounts:</i>					
2.1	25	45	50		120
2.2	15	15	100		80
a.	—	—	20		20
b.	10	10	30		—
c.	5	5	50		60
2.3	40	60	150		200
2.4	10	10	70		90
2.5	25	40	60		75
a.	5	15	30		50
b.	15	15	20		—
c.	5	10	10		25
2.6	5	5	5		15
2.7	—	5	15		20
2.8	40	60	150		200
<i>3. Capital Formation Accounts:</i>					
3.1	—	5	15		20
3.2	15	42	3		60
3.3	20	30	—		50
a.	20	30	—		50
b.	—	—	—		—
3.4	-20	-27	-13		-60
3.5	15	50	5		70

\*Of government at all levels.

†For purposes of the table it is assumed that there are only two industry groups.

B. PUBLIC ENTERPRISE ACCOUNTS (Continued)

	Nonfinancial Enterprises: by Industry		Financial Institutions		All Enterprises
	1	2	—†	Central Bank Other	
3.5	Fixed capital formation	13	42	5	60
	a. Structures	13	35	2	50
	b. Purchases of land, net	-2	2	—	—
	c. Other	2	5	3	10
3.7	Increase in inventories	2	8	—	10
3.8	Gross capital formation (= 3.5)	15	50	5	70
4.	<i>Financial Accounts:</i>				
4.1	Increase in domestic assets	60	92	500	1,140
	a. Currency and deposits	50	70	—	600
	b. Government securities	—	2	80	-40
	c. Loans made less repayments	5	10	400	500
	d. Other financial assets	5	10	20	80
4.2	Increase in foreign assets	5	—	-47	45
	a. Gold and foreign exchange	—	—	-27	—
	b. Other	5	—	-20	45
4.3	Net borrowing (+) or lending (-) (= 3.4)	-20	-27	-3	-10
4.4	Total increase in financial assets and borrowing	45	65	450	1,175
4.5	Increase in domestic liabilities	40	60	440	1,150
	a. Currency	—	—	300	—
	b. Deposit obligations	—	—	100	900
	c. Corporate securities	10	20	—	100
	d. Loans incurred less repayments	20	25	—	100
	e. Other liabilities	10	15	40	50
4.6	Increase in foreign liabilities	5	5	10	25
	a. Loans incurred	5	4	—	20
	b. Other	—	1	10	5
4.7	Total increase in liabilities (= 4.4)	45	65	450	1,175

C. THE PUBLIC SECTOR: CONSOLIDATED ACCOUNTS

<i>1. Income and Outlay Account:</i>		
1.1	Direct taxes	70
1.2	Minus: Direct taxes paid by public enterprises	-15
1.3	Indirect taxes	340
1.4	Operating surplus of all public enterprises, total	120
1.5	Minus: Surplus recorded as indirect taxes	-30
1.6	Social security contributions	30
1.7	Current transfers from abroad, net	65
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1.8	Total current income	580
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1.9	Public consumption	360
1.10	Subsidies	50
	a. To private enterprises	10
	b. Included in operating surplus of public enterprises	40
1.11	Current transfers to persons	40
1.12	Interest and property income paid, net	-5
1.13	Saving	135
<hr/>		
1.14	Total current outlays and saving (= 1.8)	580
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<i>2. Capital Formation Account:</i>		
2.1	Saving (= 1.13)	135
2.2	Depreciation	60
2.3	Capital transfers, net (receipts +, payments -)	100
	a. Private sector	—
	b. Abroad	100
2.4	Net borrowing (+) or lending (-)	90
<hr/>		
2.5	Finance of gross capital formation	385
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2.6	Fixed capital formation	200
	a. Structures	190
	b. Purchases of land, net	-20
	c. Other	30
2.7	Increase in inventories	10
2.8	Other development expenditure on goods and services	175
<hr/>		
2.9	Gross capital formation (= 2.5)	385
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<i>3. Financial Account:</i>		
3.1	Increase in domestic assets	1,855
	a. Currency and deposits	750
	b. Corporate securities	-5
	c. Loans made less repayments	1,015
	d. Other financial assets	95
3.2	Increase in foreign assets	-2
	a. Gold and foreign exchange	-27
	b. Other	25
3.3	Net borrowing (+) or lending (-) (= 2.4)	90
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3.4	Increase in financial assets and net borrowing	1,943
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C. THE PUBLIC SECTOR: CONSOLIDATED ACCOUNTS (*Continued*)

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3.5	Increase in domestic liabilities	1,808
	a. Currency and deposit obligations	1,350
	b. Government securities	48
	c. Corporate securities	130
	d. Loans incurred less repayments	155
	e. Other liabilities	125
3.6	Increase in foreign liabilities	135
	a. Loans	129
	b. Other	6

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| 3.7 | Increase in liabilities (=3.4) | 1,943 |

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