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The Role of Public Enterprises:  
An International Statistical Comparison 1/

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1/ The present paper is one of a series of three DMs which the Fiscal Affairs Department has prepared dealing with different aspects of the public enterprise issue. The second DM, by Clive Gray, is appearing simultaneously with the present one, under the title "Towards a Conceptual Framework for Macroeconomic Evaluation of Public Enterprise Performance in Mixed Economies." The third paper, prepared by Robert Floyd under the title, "Some Topical Issues Concerning Nonfinancial Public Enterprises," will appear later in 1983.

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## I. Introduction and Summary

There is a growing awareness that public enterprises can be a major source of macroeconomic problems. One consequence is that Fund programs often contain undertakings relating to the public enterprise sector or to particular units within the sector. <sup>1/</sup> There is, however, a shortage of analytical work on the macroeconomic role and impact of public enterprises. A principal reason for this is the scarcity and inadequacy of data on public enterprises.

As a preliminary to such work, this paper provides statistical information on several important macroeconomic dimensions of public enterprise operations. Data are presented for almost 90 countries, including both industrial and developing countries and countries with a range of political philosophies regarding public ownership. The notable exclusions are many Middle Eastern countries and most centrally planned economies in Europe and Asia.

In Section II, some of the problems that arise in compiling consistent data for public enterprises are discussed. In Section III, data on several important characteristics of public enterprise sectors are presented. Finally, in Section IV, statistics are provided on the main indicators of the macroeconomic impact and performance of public enterprises--the level and composition of their overall financial balances and the financing they obtain from, in particular, the government and the banking system.

In many countries public enterprises account for significant shares of aggregate output and investment; for those countries in which appropriate data are available, the public enterprise sector contributed on average nearly 10 per cent of total output and about 13 per cent of investment in the mid-1970s. In developing countries, the average share of investment attributable to public enterprises was significantly higher than in industrial countries, with the public sector especially prominent in African countries. Time series data indicate that while the relative size of the public enterprise sector has shown little change in industrial countries, it increased markedly during the 1970s in developing countries, where the average shares in output and investment rose by about 4 1/2 and 10 1/2 percentage points, respectively.

Public enterprise overall deficits have become very large in many countries, creating sizable demands on government budgets, bank credit,

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<sup>1/</sup> See Beveridge and Kelly (1980).

and foreign borrowing. In the mid-1970s, overall deficits in all countries averaged 2 per cent of GDP, more than half the average central government deficit; in developing countries, the mean public enterprise deficit was almost 4 per cent of GDP, and actually exceeded the average central government deficit. Moreover, deficits of public enterprises in developing countries have increased significantly, rising by an average of 2 1/2 per cent of GDP between the late 1960s and the end of the 1970s. Frequently, these deficits have imposed significant financial burdens on central government and thereby led to increased budget deficits. In many countries, public enterprise financial imbalances have contributed significantly to inflation and balance of payments difficulties, so that measures to improve enterprise performance may often be an important element of stabilization programs.

## II. Problems of Definition and Availability of Data

Public enterprises have two defining characteristics: they are government owned and controlled, and they are engaged in business activities. Ideally, when making statistical comparisons, these characteristics should be given a precise and consistent meaning, but, in practice, this is difficult to do.

This is partly because it is difficult to draw a clear-cut and economically useful boundary around the public enterprise sector, especially as in most countries, virtually all enterprises are subject to some degree of government control. <sup>1/</sup> However, more important, it is because of data problems. None of the international organizations publishes comprehensive information on public enterprises. The major statistical sources for individual countries generally do not separately identify public enterprise operations. Moreover, there are differences between countries--and sometimes even between different sources for the same country--in the exact definition of the public enterprise sector used for statistical purposes.

In preparing the data for this paper, an attempt was made to adjust the statistics to a common definition that appeared suitable for statistical analysis. This met with only partial success. Because much of the basic data are not readily accessible, it was decided to err on the side of comprehensiveness rather than comparability in choosing which statistics to include.

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<sup>1/</sup> Problems of definition are discussed in, for example, Jónes (1975) pp. 22-42, and Böhm (1981).

The problems in obtaining consistent statistics are discussed in the remainder of this section. Details of the coverage and sources of the data are given in the Appendix.

As far as possible, ownership/control was taken to mean that the government is able to control management decisions by virtue of its ownership stake alone. This will be true if the enterprise is directly operated by a government department or, in the case of a separate enterprise, if the government holds a majority of its shares, either directly or indirectly through another public enterprise. A smaller shareholding may be sufficient to give the government effective control, but this will depend on the distribution of the ownership of the remaining shares.

For many countries, little information is provided on the criteria used in classifying enterprises under the public enterprise sector for statistical purposes. However, where an explicit definition is given, this is most often based on majority ownership as, for example, for Finland and Botswana. For a few countries, for example, Tunisia, some enterprises with minority government shareholdings are also included in public enterprise statistics. It is possible that these holdings are sufficient to enable the government to exercise effective control, but this cannot easily be determined.

More of a problem is that, for a large number of countries, a narrower definition than majority ownership is used for statistical purposes. There are three main reasons for this. First, for several countries, public enterprise statistics cover only enterprises with particular legal forms. <sup>1/</sup> Most countries include public corporations in their statistics. However, some, for example, Malawi, exclude departmental undertakings, and some, for example, Sudan, exclude some or all publicly owned companies. Second, for many countries, for example, Turkey, public enterprise statistics exclude some or all enterprises owned by regional and local governments. Third, for several countries, statistics are only readily

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<sup>1/</sup> There are three main legal forms that may be taken by a public enterprise: (1) it may be a departmental undertaking, that is, it is operated by a government department with finances and accounts at least partly integrated with those of the government; (2) it may be a public corporation, that is, a corporation operating under a special law that may lay down particular conditions, for example, that it should be wholly government owned or that control should be exercised in particular ways; or (3) it may be a publicly owned company, that is, a company operating under private law in which the government has a controlling ownership stake.

available for a number of the most important enterprises. These may be, for example, those subject to budgetary control, as in Mexico, or the largest, as in Mali, or those in receipt of government transfers.

The impact of these omissions varies widely. Excluded departmental undertakings generally do not appear to be significant in quantitative terms, although they include postal services, ports, and/or airports in a few countries and limited industrial or agricultural activities, such as printing or forestry, in several more. Also, in a number of cases, it was possible to obtain the required figures for these enterprises from government accounts. The omission of public enterprises owned by regional or local governments may be significant in some cases, especially in the larger developing countries of South America and Europe. In most countries, however, where such enterprises are excluded from the statistics, their operations appear to be mainly confined to limited public utility, transport, and marketing activities. These are probably small compared with those of enterprises owned by the national government. The most serious omissions appear to be publicly owned companies, especially indirectly held ones, and cases where only major enterprises are included in the statistics. Impressionistic evidence suggests that such exclusions are significant in quantitative terms in several countries. It was possible in a few cases, for example, Mexico, to obtain an estimate of the size of these enterprises using other statistical sources, but overall it was not feasible to adjust the statistics in this way.

Even though these omissions limit the comparability of the data in the tables, the particular definitions used in individual countries often correspond to ways of classifying public enterprises that are useful for analyzing the role of public enterprises.

First, a significant distinction between public enterprises is the extent and nature of the control actually exercised by the government. It is this that mainly determines the economic impact of public ownership. Also, there are substantial differences between public enterprises in this respect, particularly between countries and also often within countries. Actual control is extremely difficult to measure and is not a suitable basis for a statistical definition for use in international comparisons. Nevertheless, it is often an implied factor in classifying enterprises under the public enterprise sector for statistical purposes. This is likely to be true, for example, when the enterprises included in statistics are only those subject to budgetary control. It may also be true when the legal form is a factor in defining the public enterprise sector. For example, publicly owned companies, especially indirectly held ones, are often subject to less control than other forms of public enterprise.

Second, in several developing countries, the number of public enterprises is large, sometimes exceeding a hundred. It is difficult, if not impossible, for the government to exercise effective control over such a large number of enterprises, especially in countries with weak administrative capacities. The controllable public enterprise sector may, therefore, be better represented by a few of the larger enterprises.

Third, the distinction between enterprises owned by different levels of government is also important. Because of the dispersion of control and the large number of enterprises, it will be more difficult to use the public enterprise sector as a macroeconomic policy tool when the local or regional element is substantial.

As far as possible, the business characteristic of public enterprises was taken to mean that the organization's output is sold and is of a type for which, in most countries, revenue is expected to cover a substantial proportion of costs. This condition is intended to restrict coverage to activities for which a market test is a prominent consideration in judging performance and to exclude both public goods and merit goods. Attention was also confined to nonfinancial enterprises because financial enterprises have a special role in macroeconomic policy that is very different from that of other enterprises and requires separate analysis.

Most countries use some kind of business criterion in defining the public enterprise sector, although this is generally implicit and follows from only including organizations with accounts of a commercial nature. A few restrict the coverage of their statistics to only certain types of economic activity; for example, France only includes monopoly enterprises in basic industries. However, most differences in coverage between countries reflect institutional differences in the extent to which certain activities are organized in enterprise form or operated on a commercial basis. In particular, a number of countries include activities with public or merit good characteristics in their public enterprise statistics; for example, public hospitals in Belgium, toll roads in Austria, and broadcasting services in many countries. On the whole, these differences are probably not of major quantitative importance. Also, in a few cases, disaggregated data were available to enable such activities to be excluded from the figures.

Nonfinancial public enterprises are identified separately in the statistics of most countries. However, in a few cases, for example, the United Kingdom, the only figures available include financial as well as nonfinancial enterprises. As the quantitative significance of financial public enterprises for most of the variables used in this paper, such as capital formation, is likely to be small, this is probably not a serious problem. There are also some hybrid cases of enterprises engaged in both business and financial activities. Public agricultural and industrial development corporations which are common in developing countries, are a prime example. Individual country practice was followed in deciding whether to classify these as public enterprises.

The differences in coverage noted above should be borne in mind when considering the figures. <sup>1/</sup> Overall, it seems unlikely that they seriously distort the broad picture given by the tables, although they probably mean that the size and impact of the public enterprise sector is understated, at least on average. These differences are most relevant when comparisons are made between some individual countries. They are probably of less significance when considering broad trends over time, although there are some countries, for example, Malta, where there have been substantial changes in public enterprise operations that are not reflected in the available statistics.

### III. Size and Characteristics of Public Enterprise Sector

#### 1. Size of public enterprise sector

The quantitative importance of public enterprises is clear from Table 1, which shows two measures of the size of the public enterprise sector: the percentage shares of public enterprises in gross domestic product (GDP) and in gross fixed capital formation. In the mid-1970s, public enterprises accounted for an average <sup>2/</sup> of 13 1/2 per cent of capital formation for the countries for which investment figures are available; excluding the United States, whose share is untypically low, the average share exceeded 16 1/2 per cent. They accounted for an average of 9 1/2 per cent of GDP for the smaller group of countries, again excluding the United States, for which output statistics are available.

It is also clear that these high averages are not simply a reflection of large public enterprise sectors in a few countries but illustrate that public enterprises are now of major quantitative significance in most of the countries included in Table 1. There are also broad similarities in their shares, especially in output and to some extent in investment, in countries that are diverse in terms of geographical location and economic development. On average, African countries have noticeably larger public enterprise sectors than other areas. However, average output and investment shares are very similar for developing countries in Asia, South America, and Europe. Although, in the mid-1970s, the average investment share for all developing countries of 27 per cent was much higher than the 11 per cent of industrial countries, the average output share of both groups was close to 9 per cent. The majority in each country group had investment shares of between 10 per cent and 25 per cent and output shares of between 5 per cent and 15 per cent.

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<sup>1/</sup> Cases where the coverage of the figures is significantly different from the common definition are footnoted in the tables.

<sup>2/</sup> All averages in the tables are weighted averages for 1974-77 or the closest period for which data are available. The weights are GDP in U.S. dollars for all quantities except investment for which the weights are gross fixed capital formation in U.S. dollars.

Table 1. Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
"World" (average) <u>3/</u>		9.4 (9.4)	13.4 (17.1)
Industrial countries (average) <u>3/</u>		9.6 (9.6)	11.1 (15.0)
Australia <u>4/</u>	1954-57	9.1	22.7 (...)
	1958-62	10.4	19.9 (...)
	1963-65	10.5	18.4 (5.3)
	1966-69	10.3	19.1 (6.0)
	1970-73	9.8	17.8 (6.1)
	1974-77	9.2	18.7 (6.5)
	1978-79	9.4	19.2 (5.9)
	1980	...	19.2 (5.2)
Austria <u>1/</u>	1970-73	15.8	...
	1974-75	15.6	...
	1976-77	14.5	19.2
	1978-79	14.5	19.2
Belgium	1953	...	16.2
	1954-57	...	14.2
	1958-61	...	12.9
	1962-65	...	10.4
	1966-69	...	11.6
	1970-73	...	12.4
	1974-77	...	12.6
	1978-79	...	13.1
Canada <u>2/4/</u>	1970-73	...	10.9 (...)
	1974-77	...	14.8 (...)
	1978-80	...	15.5 (2.7)
Denmark	1965	6.9	10.0
	1974	6.3	8.3
Finland <u>2/</u>	1970-73	...	10.1
	1974-75	...	13.6
France <u>5/</u>	1959-61	12.7 (7.6)	23.0 (14.5)
	1962-65	12.8 (7.3)	20.6 (11.4)
	1966-69	12.8 (6.9)	19.0 (10.2)
	1970-73	12.2 (6.0)	15.4 (7.5)
	1974	11.9 (5.3)	14.0 (7.3)
	1975-77	... (5.8)	... (9.7)
	1978-81	... (6.1)	... (12.1)

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
Germany, Fed. Rep. of <u>1/</u>	1962-65	...	10.4
	1966-69	...	11.0
	1970-73	...	12.3
	1974-75	...	14.5
	1976-77	10.3	12.3
	1978-79	10.2	10.8
Ireland	1974-77	...	13.1
	1978	...	11.8
Italy <u>1/</u>	1967-70	7.0	14.2
	1970-73	7.1	19.4
	1974-77	7.7	17.2
	1978	7.5	16.4
	1979-80	...	15.2
Japan <u>2/</u>	1965	...	13.6
	1966-69	...	12.7
	1970-73	...	9.9
	1974-77	...	11.6
	1978-80	...	11.4
Luxembourg	1970-73	...	7.7
	1974	...	9.2
Netherlands <u>2/</u>	1968-70	...	14.8
	1971-73	3.6	13.8
	1974-77	...	14.1
	1978	...	12.6
Norway <u>4/</u>	1959-61	...	13.4 (...)
	1962-65	...	14.6 (...)
	1966-69	...	14.1 (...)
	1970-73	...	14.8 (7.8)
	1974-77	...	17.7 (9.9)
	1978-80	...	22.2 (12.2)
Spain <u>1/</u>	1974	...	12.3
	1977-78	...	14.5
	1979	4.1	16.6
	1980	...	15.6
Sweden <u>1/4/</u>	1978-80	... (6.0)	15.3 (11.4)

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
United Kingdom	1938	...	4.7
	1946-49	...	11.0
	1950-53	...	21.5
	1954-57	...	22.4
	1958-61	...	21.3
	1962-65	10.3	19.8
	1966-69	10.4	20.1
	1970-73	10.0	16.3
	1974-77	11.3	18.7
	1978-81	10.9	17.0
United States <u>2/</u>	1960	...	4.0
	1963	...	4.1
	1965	...	4.0
	1967-69	...	4.3
	1970-73	...	4.2
	1974-77	...	4.9
	1978	...	4.4
Developing countries (average) <u>3/</u>		8.6 (8.6)	27.0 (25.2)
Oil exporting countries			
Algeria	1965	...	5.5
	1966-69	...	21.1
	1970-73	...	47.5
	1974-77	...	70.2
	1978-81	...	67.6
Venezuela <u>1/6/</u>	1968	...	15.3
	1972-73	2.9	22.0
	1974-77	15.0 (2.5)	22.3 (20.1)
	1978-80	27.5 (2.0)	36.3 (25.7)
Africa (average) <u>3/</u>		17.5	32.4
Benin <u>1/7/</u>	1976	7.6	...
Botswana <u>1/</u>	1974-77	7.7	16.5
	1978-79	7.3	7.7
Ethiopia	1976-77	...	17.6
	1978-80	...	36.5

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
Gambia, The	1978-80	...	37.9
Guinea <u>1/</u>	1979	25.0	...
Ivory Coast <u>1/</u>	1965-69	...	16.5
	1970-73	...	27.9
	1974-77	...	28.8
	1978	...	38.2
	1979	10.5	39.5
Kenya	1964-65	7.5	9.7
	1966-69	8.1	13.0
	1970-73	8.7	10.6
	1974-77	...	18.1
	1978-79	...	17.3
Liberia	1973	...	24.3
	1974-76	...	14.1
	1977	6.8	...
Malawi	1969	...	20.2
	1970-73	...	29.4
	1974-77	...	28.1
	1978	...	21.2
Mali <u>7/</u>	1975-77	11.2	20.9
	1978	9.4	7.6
Mauritania	1973	...	85.8
	1974-77	...	31.1
	1978-79	...	37.2
Mauritius	1977-79	...	14.4
Senegal <u>1/</u>	1970	8.4	...
	1974	19.9	17.9
Sierra Leone	1979	7.6	19.6
Tanzania	1964-65	...	9.2
	1966-69	9.3	22.7
	1970-73	12.7	48.2
	1974-77	12.3	30.3
	1978-79	...	16.3
Togo	1980	11.8	...

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Cross Fixed Capital Formation <u>2/</u>
Tunisia	1967-68	...	30.9
	1969	25.9	25.2
	1970-73	...	34.1
	1974-77	...	39.1
	1978-79	25.4	44.6
	1980-81	...	35.8
Zambia	1972	37.8	49.7
	1979-80	...	61.2
Asia (average) <u>3/</u>		8.0	27.7
Bangladesh	1974	5.7	31.0
Burma	1968-69	...	43.4
	1970-73	...	43.3
	1974-77	...	39.6
	1978-80	...	60.6
India	1960-61	5.3	34.7
	1962-65	6.1	36.8
	1966-69	6.5	29.6
	1970-73	7.3	29.0
	1974-77	9.8	33.8
	1978	10.3	33.7
Korea <u>2/</u>	1963-64	5.5	31.2
	1965-69	...	24.2
	1970-73	7.0	21.7
	1974-77	6.4	25.1
	1978-80	...	22.8
Nepal	1971-73	1.1	12.9
	1974-75	1.3	...
Pakistan	1961	4.5	...
	1966	4.1	...
	1970-73	4.4	19.3
	1974-75	6.0	33.3
	1976-77	...	43.5
	1978-81	...	44.6

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
Papua New Guinea	1977	...	18.8
Philippines <u>2/</u>	1960	...	2.0
	1965	...	1.8
	1966-69	...	1.8
	1970-73	...	0.7
	1974-77	1.7	9.5
	1978	...	10.9
Sri Lanka	1961	4.8	16.3
	1962-65	...	21.8
	1966	6.1	29.0
	1967-69	...	22.2
	1970-73	...	19.4
	1974	9.9	15.7
	1975-77	...	18.4
	1978	...	28.4
Taiwan*	1951-53	11.9	31.4
	1954-57	11.7	34.3
	1958-61	13.5	38.1
	1962-65	14.1	27.7
	1966-69	13.6	28.0
	1970-73	13.3	30.5
	1974-77	13.6	35.0
	1978-80	13.5	32.4
Thailand	1969	3.5	9.8
	1970-73	3.6	8.5
	1974-77	...	8.1
	1978-79	...	12.8
Europe (average) <u>3/</u>		6.6	23.4
Greece <u>2/</u>	1975	5.8	10.8
	1976-78	...	9.3
	1979	6.1	8.7
Malta <u>8/</u>	1955-57	...	18.3
	1958-61	...	11.4
	1962-65	3.7	10.8
	1966-69	4.2	12.8
	1970-73	4.2	8.9
	1974-77	3.8	11.6
	1978-80	4.2	6.3

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
Portugal <u>2/9/</u>	1962-65	...	6.2
	1966-69	...	6.7
	1970-73	...	6.9
	1974-75	...	9.0
	1976	14.3 (9.7)	31.0 (29.1)
	1978-80	...	33.2
Turkey <u>1/10/</u>	1952	7.0	...
	1957	7.0	...
	1960-61	...	12.6
	1962-65	7.0	14.5
	1966-69	7.6	17.4
	1970-73	8.1	22.6
	1974-77	5.8	23.5 (29.4)
	1978-80	5.0	27.5
Middle East			
Egypt	1976-79	...	47.8
Western Hemisphere (average) <u>3/</u>		6.6	22.5
Argentina <u>7/</u>	1968-69	...	15.4
	1970-73	...	17.5
	1974-75	...	18.2
	1976-77	4.8	20.7
	1978-80	4.6	19.6
Bahamas	1975-77	...	20.4
	1978-79	...	31.6
Barbados	1975-77	...	9.6
	1978-80	...	11.4
Bolivia <u>1/</u>	1960	...	31.1
	1968	...	39.1
	1970	...	36.0
	1971-73	10.2	39.5
	1974-77	12.1	40.9
Brazil	1968	...	14.0
	1980	...	22.8

Table 1 (continued). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
Chile <u>7/</u>	1961	...	10.5
	1964	...	11.7
	1968	...	15.2
	1974-77	15.2	20.0
	1978-80	13.0	12.9
Colombia <u>4/</u>	1974-77	... (1.9)	10.3 (6.6)
	1978-80	... (2.6)	8.9 (5.6)
Costa Rica	1960	...	5.0
	1968	...	7.3
	1977-79	...	19.6
Dominica	1975-77	...	25.5
	1978-79	...	7.8
Dominican Republic <u>7/</u>	1971-73	...	12.2
	1974-77	...	11.1
	1978-79	...	8.4
Guatemala	1975-77	...	11.2
	1978-80	1.1	13.3
Guyana <u>1/</u>	1973	12.7	26.6
	1974-77	22.8	38.3
	1978-80	37.2	35.1
Haiti <u>2/7/</u>	1976-77	...	16.3
	1978-80	...	12.4
Honduras	1978-79	...	14.6
Jamaica <u>2/7/</u>	1976-77	...	39.5
	1978-80	...	24.8
Mexico <u>11/</u>	1970-74	... (...)	22.0 (...)
	1975-77	... (6.1)	27.0 (21.8)
	1978	... (7.4)	29.4 (23.5)
Panama <u>2/</u>	1960	...	3.7
	1965	...	7.7
	1966-69	...	7.2
	1970-73	...	12.8
	1974-77	...	32.7
	1978-79	...	27.7

Table 1 (concluded). Output and Investment Shares of Public Enterprises

		Percentage Share in GDP at Factor Cost <u>1/</u>	Percentage Share in Gross Fixed Capital Formation <u>2/</u>
Paraguay <u>1/</u>	1970-73	2.9	14.5
	1974-77	2.7	10.4
	1978-80	3.1	6.5
Peru	1960	...	5.1
	1966	...	10.2
	1968-69	...	11.2
	1970-73	...	11.2
	1974-77	...	22.1
	1978-79	...	14.8
St. Lucia	1975-77	...	12.3
	1978-79	...	6.7
Uruguay	1971-73	...	13.2
	1974-77	...	16.6
	1978-80	...	18.3

Source: Appendix.

1/ Share in GDP at market prices where indicated. (For most countries for which both measures are available, the share at market prices is lower than that at factor cost because of the importance of subsidies in the factor incomes received by public enterprises.)

2/ Share in gross domestic capital formation, including change in stocks, where indicated.

3/ Weighted average for 1974-77 or closest available period using GDP at market prices and gross fixed capital formation expressed in U.S. dollars for 1974-77 as weights. Figures in parentheses are averages for countries for which both GDP and capital formation figures are available. Differences between countries in the measures of GDP and capital formation that are available were ignored in calculating averages.

4/ Figures in parentheses exclude public enterprises at the regional or local level.

5/ Figures in parentheses are for eight large enterprises only.

6/ Figures in parentheses exclude iron ore and petroleum enterprises nationalized in 1975.

7/ Major enterprises only.

8/ Excluding industrial enterprises.

9/ Figures include financial enterprises except for those in parentheses which exclude such enterprises. Figures for investment in 1976 relate to gross fixed capital formation; figures for other years relate to total gross capital formation.

10/ Figures relate to state economic enterprises; figure in parentheses includes an estimate of investment by other public enterprises. See Appendix for further discussion.

11/ Figures in parentheses include 22 major public enterprises only.

\*Refers to Taiwan Province of China.

These similarities probably result in part from the differences in the coverage of public enterprise statistics. But, more notable is the fact that they reflect the variety of factors that have contributed to the development of large public enterprise sectors in so many countries. 1/

First, socialist policies have been of some significance in several countries and the dominant factor in a few, for example, Burma and Tanzania. Also of importance is that, in this group of countries, government intervention in public enterprise operations tends to be considerable, particularly when noncommercial objectives are the goal, but it is far from being the only important factor.

Second, historical and other political factors have resulted in substantial extensions in public ownership. Many public enterprises were established as a result of the political upheavals of World War II, for example, those in France and Korea. Others were set up following the financial collapse of large private companies, as, for example, in Argentina and the United Kingdom, or were established to reduce foreign ownership of industry, especially of former colonial powers, as, for example, in Egypt and Indonesia. In principle, these enterprises could eventually have been sold to the private sector; however, in practice, there have been few instances of public enterprises being returned to private ownership, at least not on a large scale. 2/ This partly reflects political factors, notably a reluctance to give up the additional policy instrument provided by public ownership, and partly the large size and persistent financial problems of many public enterprises, making it difficult to find private sector buyers.

Third, the pursuit of economic objectives has been a prominent reason for the establishment of public enterprises. 3/ Probably the most fundamental, and certainly the most widespread, objective in this respect has been the promotion of allocative efficiency. As is shown in Section III.2, certain industries where economies of scale or externalities are substantial, are almost universally operated by public enterprises. Under these conditions, public ownership is viewed as the best solution because of the failure of private markets to satisfy the conditions for an optimum allocation of resources. Another notable factor in developing countries, especially with respect to enterprises in the manufacturing sector, has been the encouragement of economic growth. Public enterprises have been established to boost investment and saving because of the perceived failure of the private sector to achieve socially optimal levels as a result of such factors as excessive risk aversion, inadequate

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1/ These are discussed in more detail in, for example, Gillis (1980).

2/ One exception is the denationalization program in Chile in the mid-1970s. However, the circumstances there were rather special in that the enterprises had only recently been taken over from the private sector.

3/ These are discussed in, for example, Jones and Mason (1980) and Choksi (1979).

capital markets, or high rates of time preference. Improving the distribution of income and stabilization, especially of prices or employment, have also played a role, although generally these have been tied to other objectives and have not been the prime motive for the establishment of public enterprises.

Finally, the similarity in shares can partly be explained by structural factors. First, common to most countries are substantial differences between economic sectors in the extent of penetration by public enterprises (Tables 2 and 3). Second, countries with a relatively large public enterprise presence in all or most sectors often also have relatively large shares of their total output or investment in the sectors where public enterprise penetration is generally low. These two factors operate in opposite directions and may therefore offset one another. This effect is especially pertinent to the explanation of the similarity of shares between industrial and developing countries. In developing countries, public enterprises are generally more prominent in individual sectors, especially manufacturing, than they are in industrial countries. However, developing countries also have relatively large shares of output in agriculture, where penetration by public enterprises is low in all countries, and correspondingly small shares in manufacturing.

A further notable feature is the change over time in the shares of output and investment. In industrial countries there appears to have been no dramatic change in recent years in the relative size of the public enterprise sector, but in developing countries there has been a large increase. For the industrial countries for which data are available, the average shares of public enterprises in output and capital formation actually fell between the early 1960s and the end of the 1970s, although by only half a percentage point in each case. <sup>1/2/</sup> For these countries, the major increases in the size of the sector occurred in earlier periods than are covered by available statistics. For example, there were substantial increases in the 1930s and 1940s in France, Italy, and the United Kingdom.

For developing countries, the average share of public enterprises in GDP rose by 4 1/2 percentage points between the late 1960s and the end of the 1970s and the share in investment increased by 10 1/2 percentage points. While this partly reflected spectacular growth in a few countries, such as Venezuela, shares rose in most of the developing countries for which data are available. Moreover, there also appear to have been very large increases in the size of the public enterprise sector in many developing countries, especially African ones such as Zaire, for which adequate runs of data could not be obtained.

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<sup>1/</sup> All figures for changes in shares are adjusted for changes in country coverage. They were derived from the changes in weighted average shares between successive four-year periods, including in each case only countries for which data were available for both periods.

<sup>2/</sup> These figures do not take account of, in particular, recent nationalizations in France.

Table 2. Per Cent Shares of Public Enterprises in the Output or Investment of Major Sectors

		Agri- culture, Hunting, Forestry, and Fishing	Mining and Quarry- ing	Manu- facturing	Elec- tricity, Gas, and Water	Con- struction	Wholesale and Retail Trade, Restau- rants, and Hotels	Transport, Storage, and Communi- cations
Industrial countries								
Australia (GDPF) 1/	1967-69	0.3	8.9	3.4	95.6	14.8	0.2	50.2
	1970-73	0.3	5.1	3.3	95.0	13.8	0.1	50.0
	1974-77	0.2	3.5	3.9	94.9	15.1	-0.1	48.0
	1978-79	0.1	3.9	4.0	95.3	15.8	0.1	48.8
Austria (GDPM)	1970-75	3.0	23.0		78.0 2/	2.0	1.0	78.0 2/
Belgium (GFCF)	1962-65	--	--	0.2	21.8	--	--	79.2
	1966-69	--	--	0.1	21.8	--	--	84.2
	1970-73	--	--	0.3	19.7	--	--	83.8
	1974-77	--	--	0.4	21.1	--	--	82.3
	1978-79	--	--	0.4	19.8	--	--	77.6
Finland (GFCF)	1971-73	...	32.3			...	...	...
	1974-77	...	31.9			...	...	...
	1978-80	...	27.1			...	...	...
France (GFCF)	1971	--	11.4		96.9	--	...	68.2
Ireland (GFCF)	1974-77	...	63.2 3/		9.4	63.2 3/	--	55.6
Italy (GFCF)	1967-69	...	17.9		67.7	8.2	4.6	63.3
	1970-73	...	31.3		69.7	11.9	3.8	69.5
	1974-77	...	20.4		62.6	16.5	3.2	68.3
	1978	...	18.6		61.2	20.3	2.3	63.7
Netherlands (GFCF)	1970-73	--	37.0			--	--	46.2
United Kingdom (GFCF)	1962-65	--	...	1.2	...	--	--	58.7
	1966-69	--	...	2.5	...	--	--	58.0
	1970-73	--	34.8	8.2	83.5	--	--	55.5
	1974-77	--	16.1	11.8	95.4	--	--	59.7
	1978-81	--	27.2	5.3	97.4	--	--	57.6
Developing countries								
Oil exporting countries								
Iraq (GFCF)	1960	...	...	15.2	...	...	...	...
	1970	...	...	48.3	...	...	...	...
	1975	...	...	96.7	...	...	...	...
Nigeria (GFCF)	1970-74	...	...	17.7			...	...
Africa								
Benin (GFCF)	1975-77	...	57.9			...	...	...
	1978-79	...	57.4			...	...	...
Congo (GO)	1976	3.1 4/	...	15.7	92.6	12.9	...	52.3
Ethiopia (GDPF)	1979-80	...	...	60.9	...	...	...	...
Ghana (GO)	1962	...	...	18.9	...	...	...	...
	1966	...	...	32.2	...	...	...	...
	1970	...	...	32.9	...	...	...	...
Ivory Coast (GDPF)	1979	0.1	25.2		87.6	12.8	...	35.2
Kenya (GDPF)	1970-73	0.4	4.2	13.1	69.0	8.4	2.6	68.7
Morocco (GFCF)	1973	...	...	9.3	...	...	...	...
	1974-76	...	...	26.2	...	...	...	...
Senegal (GDPM)	1974	0.9	99.2	19.0	100.0	5.7	23.7	37.8
Sierra Leone (GDPF)	1979	5.3	26.1	14.2	91.6	--	0.1	8.8

Table 2 (concluded). Per Cent Shares of Public Enterprises in the Output or Investment of Major Sectors

		Agri- culture, Hunting, Forestry, and Fishing	Mining and Quarry- ing	Manu- facturing	Elec- tricity, Gas, and Water	Con- struction	Wholesale and Retail Trade, Restau- rants, and Hotels	Transport, Storage, and Communi- cations
Somalia (GDPF)	1974-77	...	...	59.1	...	...	...	...
Tanzania (GDPF)	1966-69	1.3	84.2	14.9	76.3	5.1	5.7	44.4
	1970-73	2.4	86.5	31.9	80.1	3.1	14.3	45.0
	1974-77	2.2	90.5	37.9	73.6	2.7	20.3	45.7
Tunisia (GFCF)	1978-81	18.3	47.3	58.8	89.4	...	...	60.4
Asia								
Bangladesh (GDPF)	1974	--	62.0	...	78.1	2.8	7.5	18.8
	1975-77	...	69.2	...	...	...	...	...
	1978	...	70.6	...	...	...	...	...
Burma (GDPM) <sup>5/</sup>	1960	0.5	85.8	56.2	100.0	...	...	45.4
India (GDPF)	1970-73	1.5	45.7	13.1	80.7	13.1	2.9	56.2
	1974-77	1.9	80.8	16.2	83.5	16.2	4.7	54.2
	1978	2.3	79.7	15.7	84.0	15.7	5.2	53.6
Korea (GDPF)	1963-64	0.3	30.5	14.8	92.4	2.9	1.8	46.0
	1970-73	0.4	20.3	17.3	78.6	4.2	1.0	24.2
	1974-77	--	14.8	14.9	74.9	5.3	0.6	18.2
Nepal (GDPF)	1971-73	0.1	--	4.0	40.5	20.8	...	10.4
	1974-75	0.1	--	4.4	47.4	36.7	...	13.0
Pakistan (GDPF)	1970-73	--	19.9	4.1	75.0	...	0.5	34.8
	1974-75	--	10.6	7.8	82.7	--	6.8	34.1
Singapore (GDPF)	1972	...	...	14.2	...	...	...	...
Sri Lanka (GDPF)	1966	0.1	--	7.6	90.9	4.2	4.1	39.0
	1974	0.5	0.5	33.5	93.5	6.8	11	45.6
Taiwan* (GFCF)	1980	13.4	85.5	31.9	95.9	25.8	11.0	49.5
Thailand (GDPF)	1970-73	0.2	0.3	5.2	73.1	--	0.3	17.2
Europe								
Greece (GDPF)	1975	--	69.0 <sup>3/</sup>	1.7	69.0 <sup>3/</sup>	...	...	39.8
	1979	--	71.4 <sup>3/</sup>	1.3	71.4 <sup>3/</sup>	...	...	42.7
Portugal (GDPF)	1976	0.9	4.9	12.0	78.2	--	1.0	43.5
Turkey (GFCF)	1974-77	15.4	...	42.1	...	--	--	23.3
Middle East								
Egypt (GFCF)	1975	...	90.6	...	...	...	...	...
	1979	...	80.4	...	...	...	...	...
Syrian Arab Republic (GFCF)	1970	...	...	70.5	...	...	...	...
	1975	...	...	95.9	...	...	...	...
Yemen Arab Republic (GFCF)	1975-76	...	...	59.5	...	...	...	...
Western Hemisphere								
Bolivia (GDPF)	1973-75	0.1	85.4	5.9	9.9	0.6	--	9.0

Source: Appendix.

<sup>1/</sup> GDPF - gross domestic product at factor cost; GFCF - gross domestic fixed capital formation; GDPM - gross domestic product at market prices; G - gross value of output.

<sup>2/</sup> Share in electricity, gas, and water, plus transport, storage, and communications.

<sup>3/</sup> Share in electricity, gas, and water, plus mining and quarrying.

<sup>4/</sup> Share in agriculture only.

<sup>5/</sup> Share in GDPM at 1970 prices.

\*See note to Table 1, page 12.

Table 3. Industry Coverage of Public Enterprises 1/

	Agriculture, Forestry, and Fishery 2/	Mining and Quarrying 3/	Food, Drink, and Tobacco 4/	Textiles and Clothing 5/	Leather and Footwear 6/	Wood Prod- ucts and Furniture 7/	Paper and Printing 8/	Petrol Refin- ing and Dis- tribution 9/
<u>Part A</u>								
<b>Industrial countries</b>								
Australia			D,T					
Austria	FO	C,P,M					PR	P
Belgium			F					
Canada		P						P
Denmark	FO	P		C				
Finland	A		F	T			PA	P
France		C,P	T					P
Germany, Fed.								
Rep. of		C	D					P
Ireland	FI	M	S,F					
Italy		C	F,T	T,C			PR	P
Japan			D,T					P
Luxembourg								
Netherlands		C,P						
Norway	FO,FI	C,P	F,D					
Sweden	FO	P,M	T	T		W	PR	P
United Kingdom		C,P					PR	
United States								
<b>Developing countries</b>								
<b>Oil producing countries</b>								
Indonesia	A,FI	C,P,M	S,T	T			PA	P
Nigeria	A,FI	C,P	S,F,D	T			PA	P
Venezuela		P,M	S					P
<b>Africa</b>								
Benin	FO,AD		F,D	T			PR	
Botswana	AD							
Congo	A,FI	M	F,D,T,	T		W,F	PR	P
Ethiopia	AD		S,D	T,C	L,F	W	PA,PR	
Gambia, The	FI							
Ghana	AD	M	F,D				PA	
Ivory Coast	AD,FI	P,M	S,F	T	F		PR	P
Kenya	A,FI	M	S,F	T,C				P
Liberia	AD		S,F		F			P
Mali		M	F	T				
Mauritania	A,FI	M		C				
Mauritius	AD		F					
Morocco	AD	P,M	S,F,D,T					P
Niger	AD	M						
Senegal	AD	P,M		T			PR	P
Sierra Leone	FI	M	D			W,F		P
Somalia	FI		D,T	T	L			P
Tanzania	AD,FI	M	S,F,D,T	T		W	PA,PR	P
Togo	AD,FI	M	F	T				
Tunisia	FI	P,M	S,D,T				PR	P
Upper Volta	A		S	T	P		PR	P
Zambia	A	M	S,F,T	T		W	PR	P
<b>Asia</b>								
Bangladesh	AD,FI	M	S,F,T	T	L	W	PA	P
Burma	A,FO,FI	M	F,D	T		W	PA	P
India	A,FI	C,M	F	T	L		PA	P
Korea	AD,FI	C,M	F,D,T				PR	P
Nepal	A,FO	M	S,T	T	L			
Pakistan	AD	C,P,M	F				PR	P
Papua New Guinea	A		S					
Philippines	AD		T	T				P
Sri Lanka	AD,FI	M	S,F,D,T	T		W	PR	P
Thailand	FO,FI	M	S,F,T	T		W	PA	P

Table 3 (continued). Industry Coverage of Public Enterprises 1/

	Agriculture, Forestry, and Fishery <u>2/</u>	Mining and Quarrying <u>3/</u>	Food, Drink, and Tobacco <u>4/</u>	Textiles and Clothing <u>5/</u>	Leather and Footwear <u>6/</u>	Wood Prod- ucts and Furniture <u>7/</u>	Paper and Printing <u>8/</u>	Petrol Refin- ing and Dis- tribution <u>9/</u>
<b>Europe</b>								
Greece			S,T					P
Malta	FI		F	C	F			
Portugal	FI	C,M	S,F,D,T	T		F	PA,PR	P
Turkey	A,FO,FI	C,M	S,F	T			PA	P
<b>Middle East</b>								
Syrian Arab Republic			F,T	T			PR	P
<b>Western Hemisphere</b>								
Argentina	FO	C,P,M	S					P
Bahamas	AD							
Barbados	AD							
Bolivia		P,M						
Brazil	AD,FO	C,M	F				PR	P
Chile		C,M	S					
Colombia	AD	C,M	F		L			P
Costa Rica		M	S,F				PR	P
Dominica	FO							
Dominican Republic		M	S,F	T	L,F		PA	P
Ecuador	A,FI		D					
Guyana	A,FO	M	S,F,D		L,F	F	PA,PR	P
Haiti			F,T	T			PR	
Honduras	FO		S					
Jamaica	AD	M	F	T,C				P
Mexico	A,FO	P,M	S,F	T				P
Panama	A	M	S				PA	
Paraguay								P
Peru		P,M	F					P
St. Lucia								
Uruguay								

Table 3 (continued). Industry Coverage of Public Enterprises 1/

	Chemicals <u>10/</u>	Pottery, Glass, and Cement <u>11/</u>	Basic Metal In- dustries <u>12/</u>	Transport Equip- ment <u>13/</u>	Other Engi- neering	Electricity, Gas, and Water <u>14/</u>	Construc- tion	Wholesale and Retail Trade <u>15/</u>
<u>Part B</u>								
<b>Industrial countries</b>								
Australia					E	E		T
Austria	PH,C	P	I	A	E	E	C	
Belgium						E		
Canada						E		A
Denmark						E	C	T
Finland	C		I	M		E		
France	C			A	E	E	C	
Germany, Fed.								
Rep. of	C	P	I,B	M,S		E		T
Ireland	FE,C		I			E	C	
Italy	PH,C	C	I	M,A,S	E	E	C	A,T
Japan						E	C	A
Luxembourg	C					E		
Netherlands	C		I			E		A
Norway	PH,C		I,B			E		T
Sweden	PH,C		I	M,S		E	C	A
United Kingdom			I	M,A,S		E		
United States						E		
<b>Developing countries</b>								
<b>Oil producing countries</b>								
Indonesia	PH,FE	P,C	I	M,A,S	E	E	C	T
Nigeria	FE	C	I	M,S	E	E		T
Venezuela	FE,C		I,B			E	C	A,T
<b>Africa</b>								
Benin		P				E		A,T
Botswana					E	E	C	A
Congo		P,C		S		E	C	A,T
Ethiopia	PH,C	P				E	C	A,T
Gambia, The				S		E		A,T
Ghana	PH	P	I		E	E	C	A,T
Ivory Coast	FE	P,C,B				E	C	A,T
Kenya	FE,C			M	E	E	C	A
Liberia						E		
Mali	PH	C,B				E		A,T
Mauritania	PH					E		A
Mauritius						E		A,T
Morocco					E	E		A
Niger		P,C				E	C	A
Senegal	FE					E	C	T
Sierra Leone						E	C	A,T
Somalia		B				E		A,T
Tanzania	PH,FE	C	I	M	E	E		A,T
Togo	PH		I			E	C	A,T
Tunisia	PH,FE	P,C	I,B			E	C	T
Upper Volta		B				E		A,T
Zambia	C	P,C		M	E	E		A,T
<b>Asia</b>								
Bangladesh	PH,FE,C	C	I	M	E	E		T
Burma	C				E	E	C	A,T
India	PH,FE,C	P	I	M,S	E	E		A,T
Korea	FE,C	C	I,B	M	E	E	C	A
Nepal		P,C			E	E	C	A,T
Pakistan	FE,C	C	I	M,S	E	E	C	A,T
Papua New Guinea						E		A
Philippines	FE,C					E		A
Sri Lanka	PH,FE	P,C	I	M	E	E	C	A,T
Thailand	PH	P				E	C	A,T

Table 3 (continued). Industry Coverage of Public Enterprises 1/

	Chemicals <u>10/</u>	Pottery, Glass, and Cement <u>11/</u>	Basic Metal In- dustries <u>12/</u>	Transport Equip- ment <u>13/</u>	Other Engi- neering	Electricity, Gas, and Water <u>14/</u>	Construc- tion	Wholesale and Retail Trade <u>15/</u>
<b>Europe</b>								
Greece				A	E	E		A,T
Malta				S	E	E		A
Portugal	PH,C	P,C	I	S	E	E	C	A,T
Turkey	C	C	I		E	E		A
<b>Middle East</b>								
Syrian Arab Republic	PH					E		A
<b>Western Hemisphere</b>								
Argentina	C		I	S		E		
Bahamas						E		
Barbados						E		A,T
Bolivia	C	C	I			E		A,T
Brazil	FE,C		I	A,S	E	E		A
Chile	C		I			E		A
Colombia	FE	C		M,A,S		E		A
Costa Rica		C				E		T
Dominica						E		A,T
Dominican Republic	C	P,C		M		E		A
Ecuador	FE		I			E		A,T
Guyana	PH	P,C				E		A
Haiti						E		T
Honduras						E		A,T
Jamaica						E		A,T
Mexico	C		I			E	C	T
Panama		C				E		A
Paraguay			I			E		
Peru	C		I	S		E		
St Lucia						E		A
Uruguay		C				E		T

Table 3 (continued). Industry Coverage of Public Enterprises 1/

	Hotels (H)	Land Transport 16/	Air and Water Transport 17/	Posts and Telecommu- nications 18/	Housing
<u>Part C</u>					
<b>Industrial countries</b>					
Australia	H	R	A, W	P	
Austria	H	R, B	A, AP, W	P	H
Belgium		R, B	A, P	P	H
Canada		R, B	W, P	P	
Denmark		R, B	A, AP, W, P	P	H
Finland		R, B	A	P	
France		R, B	A, AP, W	P	
Germany, Fed. Rep. of		R	A	P	H
Ireland		R, B	A, AP, W, P	P	
Italy		R, B	A	P	
Japan		R	AP	P	H
Luxembourg		R	AP	P	
Netherlands		R, B	A, AP, W, P	P	
Norway		R	A	P	H
Sweden		R	A	P	H
United Kingdom		R, B	A, AP, W, P	P	
United States		R	AP	P	
<b>Developing countries</b>					
<b>Oil producing countries</b>					
Indonesia	H	R, B	A, W	P	
Nigeria	H	R	A, AP, W, P	P	
Venezuela	H	R, B	A, AP, W, P	P	
<b>Africa</b>					
Benin	H	R	W, P	P	
Botswana	H			P	H
Congo	H	R, B	A, W, P	P	
Ethiopia	H	R, B	A, W	P	H
Gambia, The	H		A, P	P	
Ghana	H	R, B	A, P	P	H
Ivory Coast	H	R, B	A, P	P	H
Kenya	H	R, B	A, W, P	P	
Liberia			A, AP, W, P	P	H
Mali	H	R, B	A, W	P	
Mauritania	H	B	A	P	
Mauritius		B	AP, P	P	H
Morocco	H	R	A, AP, P	P	H
Niger	H	B	A	P	
Senegal	H	R	A, W, P	P	H
Sierra Leone		B	A, AP, W, P	P	
Somalia	H		A, W	P	
Tanzania	R	R	A, W, P	P	
Togo	H	R	A, W, P	P	
Tunisia		R, B	A, AP, W, P	P	H
Upper Volta	H	R	A	P	H
Zambia	H	R, B	A, W	P	H
<b>Asia</b>					
Bangladesh		R, B	W	P	
Burma		R, B	A, W	P	
India	H	R, B	A, AP, W	P	
Korea	H	R	A, W, P	P	H
Nepal		B	A	P	
Pakistan		R, B	A, W	P	
Papua New Guinea			P	P	H
Philippines		R	W, P	P	H
Sri Lanka	H	R	A, W, P	P	
Thailand		R, B	A, AP, W, P	P	H

Table 3 (concluded). Industry Coverage of Public Enterprises 1/

	Hotels (H)	Land Transport <u>16/</u>	Air and Water Transport <u>17/</u>	Posts and Telecommu- nications <u>18/</u>	Housing
<b>Europe</b>					
Greece		R,B	A,P	P	
Malta	H		A,AP,W,P	P	H
Portugal		R,B	A,W,P	P	
Turkey		R	A,AP,W	P	
<b>Middle East</b>					
Syrian Arab Republic			A,AP,P	P	H
<b>Western Hemisphere</b>					
Argentina	H	R	A,W,P	P	H
Bahamas	H		A,P	P	
Barbados	H	B	AP,P	P	H
Bolivia		R	A,AP	P	
Brazil	H	R,B	A,W,P	P	
Chile		R,B	A,P	P	
Colombia	H	R,B	W,P	P	
Costa Rica		R,B	W,P	P	
Dominica			P	P	H
Dominican Republic			A,AP,P	P	H
Ecuador		R	AP,W,P	P	
Guyana			A,W,P	P	
Haiti		B	A,AP,P	P	
Honduras		R	P	P	
Jamaica	H	R,B	A,AP,P	P	H
Mexico		R,B	AP	P	H
Panama		R,B		P	
Paraguay		R	A,AP,W,P	P	
Peru		R,B	A,AP,W,P	P	H
St. Lucia	H		P	P	
Uruguay		R	A,P	P	

Sources: International Monetary Fund, Government Finance Statistics Yearbook (Washington, 1982); Appendix.

1/ Industries in which at least one public enterprise is operating. Coverage of sectorwide and subsidiary enterprises and of enterprises owned by local governments is incomplete.

2/ A - agricultural production; FO - forestry; FI - fishing; AD - agricultural development (enterprises mainly engaged in the promotion of private sector production, for example, through the provision of inputs, rather than directly in production).

3/ C - coal; P - petroleum and natural gas; M - other and general mining and quarrying.

4/ S - sugar; F - other food and agricultural processing; D - drink; T - tobacco.

5/ T - textiles; C - clothing.

6/ L - leather; F - footwear.

7/ W - wood products; F - furniture.

8/ PA - paper; PR - printing.

9/ P - petroleum refining and/or distribution.

10/ PH - pharmaceuticals; FE - fertilizer; C - other and general chemicals.

11/ B - bricks; C - cement; P - pottery and glass.

12/ I - iron and steel; B - other basic metals.

13/ M - motor vehicles; A - aircraft; S - shipbuilding.

14/ E - electricity, gas, and/or water.

15/ A - agricultural marketing; T - other wholesale or retail trade.

16/ R - railways; B - bus and other land transport.

17/ A - airlines; AP - airports; W - water transport; P - ports.

18/ P - posts and/or telecommunications.

## 2. Sectoral distribution of public enterprises

Although public enterprises have traditionally been viewed as operating in a limited number of natural monopoly industries, they can now be found engaged in various degrees in virtually all types of economic activity. This is evident from Tables 2 and 3. Table 2 shows the per cent shares of public enterprises in output or investment in major sectors; Table 3 provides qualitative information on the industries in which public enterprises are most frequently found.

Public enterprises are still relatively most important in the traditional industries. In most countries, the major part, and often almost the whole, of the public utilities--electricity, gas, and water--and the communications and nonroad transport industries are publicly owned. This mainly reflects the economies of scale in these industries, which would make it difficult to achieve socially optimal levels of output under private ownership.

Many countries, especially developing ones, also have a large proportion of their natural resource industries operated by public enterprises. Public ownership of petroleum and natural gas, coal, and other hard minerals, such as copper and tin, is especially common. This is so partly because of the high risks and large-scale operations that are typically involved. It is also because of the large economic rents obtainable and the desire to ensure that these accrue to the nation or the government.

Even though the significance of public enterprises in manufacturing is generally less in quantitative terms than in the previous two sectors, it is the public manufacturing sector that has grown most rapidly in recent years. There are also notable differences between countries. At one extreme, a few countries, mainly industrial ones, such as the United States, have virtually no public sector involvement in manufacturing. A group of countries, including industrial countries, such as Italy, and developing ones, such as Korea, have 10-25 per cent of manufacturing output or investment accounted for by public enterprises. Then, several developing countries, especially in Africa and Asia, have up to half their manufacturing sectors under public ownership. At the other extreme, a number of developing countries, mainly in Africa and the Middle East, have extensive public enterprise involvement in manufacturing. In many of these countries, public enterprises dominate the modern manufacturing sector, while the private sector largely consists of small cottage industries.

Within manufacturing, public enterprises are most prominent in heavy industry, particularly petroleum refining, chemicals, iron and steel, transport equipment, and textiles. In industrial countries, public manufacturing activities are largely confined to these industries, and most developing countries have public enterprises operating in at least some of them. Such industries generally require large-scale production and are often regarded as of key economic importance because of their forward linkages with other parts of the economy or because of their links with

international trade. Public enterprises can be found in most other manufacturing activities, but are much less widespread. Probably most common are enterprises in agro-based industries, such as sugar refining, and fiscal monopolies for beverages and tobacco.

Public enterprises in the remaining nonagricultural sectors--construction, trade, and services--are generally less significant in quantitative terms, although there are again differences between countries. In these sectors, the economic arguments for public ownership appear less powerful. Public enterprises engaged in the provision of housing and in construction, especially public works, are common in both industrial and developing countries, and government hotels are found in a large number of developing countries. However, the most important enterprises in these sectors are government marketing agencies. Public enterprises engaged in wholesale or retail distribution, especially of basic commodities, are found in many developing countries, but especially common are marketing boards for agricultural products, which are found in most African countries and in many other developing countries. Although these enterprises are usually small in terms of, for example, capital formation, they can have a substantial economic impact through their pricing policies, especially as they are generally statutory monopolies.

Finally, in most countries, public enterprises are of minor importance in quantitative terms in agriculture, forestry, and fishing. Some countries have public enterprises engaged in forestry and fishing, but few have much direct public sector involvement in the production side of agriculture. This mainly reflects the dominance of small-scale operations in agriculture in developing countries; this is not to say that public enterprises do not have a major impact on the agricultural sector. Apart from government marketing boards, a large number of developing countries have publicly owned agricultural development corporations. These are generally partly financial institutions, but they are also often engaged in other activities, such as the provision of agricultural inputs.

### 3. Other important characteristics

Two other characteristics of public enterprises are noteworthy. First, the public enterprise sector is invariably highly capital-intensive. In the mid-1970s, for those countries for which both output and investment figures are available, the average share of public enterprises in capital formation was 17 per cent, almost twice the average share in GDP of 9 1/2 per cent. <sup>1/</sup> In none of the countries in Table 1 has the share in output been consistently higher than that in investment.

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<sup>1/</sup> A complete treatment of capital intensity would also require an analysis of public enterprise shares in employment and employment income. Information on these is limited. However, for those countries for which data are available, the share of public enterprises in employment is

This mainly reflects the industrial distribution of public enterprises, particularly their prominence in industries that are inherently capital-intensive, for example, electricity, telecommunications, and steel. It may also reflect differences in the relative factor prices faced by public and private enterprises, although the influences here are not all in the same direction. In many countries, the cost of capital to public enterprises is lower than that to private enterprises: government finance is often provided in the form of transfers or low-interest loans; especially in developing countries, public enterprises obtain finance at subsidized rates from domestic monetary institutions or aid agencies. As a result, the use of relatively capital-intensive techniques will be encouraged. <sup>1/</sup> On the other hand, public enterprises are often under political pressure to employ labor, which could work in the opposite direction. In some countries, for example, Egypt, public enterprises are expected to act as employers of last resort, while, in most countries, it is difficult politically for public enterprises to shed labor.

Second, although there are countries with a substantial number of small public enterprises, many individual public enterprises are very large in absolute terms. For example, measured by sales value, 18 of the largest 100 companies outside the United States in 1980, and 54 of the largest 500 companies, were public enterprises. <sup>2/</sup> A public enterprise is the largest enterprise in, for example, Argentina, Chile, India, Italy, Turkey, the Philippines, and Zambia. Moreover, the importance of large public enterprises has increased substantially. In 1960, only 6 of the largest 100 companies were public enterprises. The sales and assets of

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<sup>1/</sup> (Cont'd from p. 26). generally less than that in GDP. Some examples are:

	Percentage Share in GDP	Percentage Share in Employment
United Kingdom (1974-77)	11.3	8.1
Sierra Leone (1979)	7.6	1.3
Pakistan (1975)	5.8	2.1
Turkey (1978-80)	5.0	3.9

Source: Appendix.

At least in developing countries, average wages in public enterprises are likely to be higher than those in private enterprises because of the concentration of public enterprises in the more advanced sectors of the economy. As a result, the share of public enterprises in employment income is probably higher than that in employment.

<sup>1/</sup> A low cost of capital need not inevitably work in this way. For example, in the United Kingdom, public enterprises are expected to use a discount rate for decisions on the choice of technique that is higher than the rate they pay on their borrowing--see, for example, Heald (1980).

<sup>2/</sup> See Fortune (1981).

large public enterprises have also generally grown much faster than their private sector counterparts. 1/

This large size again partly reflects the high incidence of public enterprises in industries requiring large-scale production. It also reflects the practice in many countries of combining public enterprises into large conglomerates. It is significant because it can make government control easier, and also because such enterprises can exert considerable economic power in both domestic and international markets. 2/

#### IV. Measures of Macroeconomic Impact of Public Enterprises

##### 1. Overall deficits of public enterprises

The principal summary indicator of the macroeconomic impact of public enterprises is their overall deficit or financing requirement. This provides a measure of the effect of public enterprise operations on the balance between demand and supply in the economy and is thus of particular relevance for analyzing economic stabilization.

Figures for the overall deficits of public enterprise sectors, expressed as percentages of GDP, are given in Table 4. The overall deficit is here defined as the difference between (i) current plus capital expenditure; and (ii) revenue plus receipts of current transfers and nongovernment capital transfers. Government capital transfers are also conventionally included in receipts in defining the overall deficit. 3/ Although the distinction between capital transfers and other forms of financing is significant for the financial position of the enterprise, especially in formal legal terms, it is much less useful for economic analysis as both represent a financial and a resource burden that has to be met by other sectors of the economy.

An additional consideration, especially when making intercountry comparisons, is that there are differences between countries in the extent to which government finance is provided in the form of transfers or equity and loans. As there is often little expectation that dividends will be paid on equity, and loans are frequently on very soft terms, these differences may be of little practical significance, but they will affect the deficit as conventionally defined.

There is a reason to also exclude government current transfers from receipts. These do not correspond to any market flow of commodities but

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1/ See Lamont (1979).

2/ The effects of this are discussed in Lamont (op. cit.)

3/ For example, the definition suggested by the IMF includes such transfers as receipts for the purpose of calculating the overall deficit. See, IMF (1974), pp. 295-311.

Table 4. Overall Balances of Public Enterprises  
(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-) Less Government Current Transfers
		Overall Surplus/ Deficit (-) <u>1/</u>
"World" (average) <u>2/</u>		-2.0 (-3.0) (-4.2)
Industrial countries (average) <u>2/</u>		-1.7 (-2.1) (-3.5)
Australia	1966	-4.0 ...
	1968-69	-3.7 ...
	1970-73	-3.3 ...
	1974-77	-3.5 ...
Belgium	1964-65	-0.4 ...
	1966-69	-0.7 ...
	1970-73	-0.9 ...
	1974-77	-0.9 ...
	1978-79	-0.5 ...
Canada	1970-73	-1.5 ...
	1974-77	-2.8 ...
	1978-80	-2.5 ...
Finland	1970-73	-1.5 ...
	1974-75	-2.6 ...
France <u>3/</u>	1959-61	-2.5 (-1.1) 3.9 (-1.6)
	1962-65	-2.7 (-1.0) 4.5 (-1.8)
	1966-69	-2.8 (-0.9) 4.9 (-1.8)
	1970-73	-2.0 (-0.6) 3.9 (-1.2)
	1974	-1.8 (-1.0) 3.5 (-1.6)
	1975-77	... (-1.3) ... (-2.0)
	1978-81	... (-1.6) ... (-2.3)
Italy	1969	-2.1 ...
	1970-73	-3.6 ...
	1974-77	-3.5 ...
	1978-80	-3.0 ...
Japan	1970-73	-2.5 ...
	1974-77	-3.4 ...
	1978-80	-2.7 ...

Table 4 (continued). Overall Balances of Public Enterprises

(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-)	Overall Surplus/ Deficit (-) <u>1/</u>	Less Government Current Transfers
Netherlands	1968-69	-2.5	...	...
	1970-73	-1.9	...	...
	1974-77	-0.5	...	...
	1978	-0.5	...	...
Norway <u>4/</u>	1968-69	-0.9	...	...
	1970-73	-1.2	...	...
	1974-77	-2.7	...	...
	1978	-2.6	...	...
Spain	1979-80	-3.1		-4.4
United Kingdom	1946-49	-0.7		-0.8
	1950-53	-1.7		-1.7
	1954-57	-2.2		-2.2
	1958-61	-2.2		-2.5
	1962-65	-1.7		-2.2
	1966-69	-1.9		-2.3
	1970-73	-1.7		-2.1
	1974-77	-1.9		-3.0
	1978-81	-1.0		-1.8
United States	1960	-0.6		...
	1963	-0.6		...
	1965	-0.6		...
	1967-69	-0.6		...
	1970-73	-0.6		...
	1974-77	-0.7		...
	1978	-0.6		...
Developing countries (average) <u>2/</u>		-3.9 (-4.6)		-5.5
Oil exporting countries				
Venezuela <u>5/</u>	1972-73	-5.4		-5.4
	1974-77	-5.2 (-6.3)		-6.3 (-7.4)
	1978-80	-5.1 (-9.6)		-5.9 (-10.4)

Table 4 (continued). Overall Balances of Public Enterprises  
(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-) Less Government Current Transfers
		Overall Surplus/ Deficit (-) <u>1/</u>
Africa (average) <u>2/</u>		-3.1
Botswana	1974-77	-4.7
	1978-80	-0.6
Gambia, The	1979	-4.9
Guinea	1976-77	-8.0
	1978-79	-23.4
Ivory Coast	1965-69	-0.9
	1970-73	-3.6
	1974-77	-3.5
	1978-79	-8.4
Malawi	1970-73	-2.7
	1974-77	-2.5
	1978	-3.5
Mali <u>6/</u>	1975-77	-5.9
	1978	-2.7
Senegal <u>7/</u>	1974	2.2 (-2.6)
Tanzania <u>8/</u>	1966-69	-1.5
	1970-73	-2.6
	1974-75	-2.8
Zambia	1972	-3.4
Asia (average) <u>2/</u>		-5.6
Burma	1968-69	-1.4
	1970-73	-1.5
	1974-77	-1.2
	1978-80	-10.6
India	1966-69	-4.2
	1970-73	-4.3
	1974-77	-6.3
	1978	-6.2

Table 4 (continued). Overall Balances of Public Enterprises  
(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-) Less Government Current Transfers
	Overall Surplus/ Deficit (-) <u>1/</u>	
Korea	1963-65	-2.8
	1966-69	-3.3
	1970-73	-3.8
	1974-77	-5.4
	1978-80	-5.2
Nepal	1971-73	-0.5
	1974-75	-2.1
Taiwan*	1951-53	-3.7
	1954-57	-2.6
	1958-61	-3.5
	1962-65	-1.3
	1966-69	-2.4
	1970-73	-3.7
	1974-77	-7.3
	1978-80	-5.5
Thailand	1969	-0.8
	1970-73	-0.8
	1974-77	-1.1
	1978-79	-2.0
Europe		
Greece	1975	-1.6
	1979	-1.6
Portugal	1978-80	-8.1
Turkey	1964-65	-1.4
	1966-69	-2.2
	1970-73	-4.0
	1974-77	-7.0
	1978-80	-7.5

Table 4 (continued). Overall Balances of Public Enterprises  
(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-) Less Government Current Transfers
		Overall Surplus/ Deficit (-) <u>1/</u>
Western Hemisphere (average) <u>2/</u>		-2.5
Argentina <u>6/</u>	1968-69	...
	1970-73	...
	1974-75	...
	1976-77	-3.1
	1978-80	...
Bahamas	1975-77	-1.9
	1978-79	-1.7
Barbados	1975-77	-1.8
	1978-80	-2.1
Bolivia	1971-73	-3.4
	1974-77	-4.4
Brazil	1980	-1.7
		...
Chile <u>6/</u>	1974-77	-0.2
	1978-80	-0.4
Colombia <u>9/</u>	1974-77	-0.9 (-0.6)
	1978-80	-0.1 (-0.1)
Costa Rica	1977-79	-4.4
		-4.4
Dominica	1975-77	-4.4
	1978-79	-1.2
Dominican Republic <u>6/</u>	1972-73	-0.1
	1974-77	-0.2
	1978-79	-1.6

Table 4 (continued). Overall Balances of Public Enterprises  
(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-) Less Government Current Transfers
		Overall Surplus/ Deficit (-) <u>1/</u>
Guatemala	1975-77	-1.8
	1978-80	-2.1
Guyana	1973	-3.7
	1974-77	-6.6
	1978-80	-1.4
Haiti <u>6/</u>	1976-77	-2.0
	1978-80	-0.9
Honduras	1978-79	-2.3
Jamaica <u>6/</u>	1976-77	-4.3
	1978-80	-2.3
Mexico <u>6/</u>	1975-77	-3.9
	1978	-3.7
Panama	1960	-0.2
	1965	-0.9
	1966-69	-1.1
	1970-73	-2.7
	1974-77	-7.1
	1978-79	-7.1
Paraguay	1970-73	-1.2
	1974-77	-1.6
	1978-80	-0.9
Peru	1968-69	-1.3
	1970-73	-1.3
	1974-77	-4.8
	1978-79	-1.7

Table 4 (concluded). Overall Balances of Public Enterprises  
(As percentages of GDP at market prices)

		Overall Surplus/ Deficit (-) <u>1/</u>	Overall Surplus/ Deficit (-) <u>1/</u> Less Government Current Transfers
St. Lucia	1975-77	-4.6	-5.0
	1978	-2.8	-3.2
Uruguay	1976-77	--	-0.3
	1978-80	-0.8	-1.1

Source: Appendix.

1/ Excluding government capital transfers. The definition of the overall balance is discussed on page 29.

2/ Weighted average for 1974-77 or closest available period using GDP at market prices in U.S. dollars as weights. Figures in parentheses are averages for countries for which figures for the overall balance less government current transfers are available.

3/ Figures in parentheses are for 8 large enterprises only.

4/ Central government enterprises only.

5/ Figures in parentheses exclude iron ore and petroleum enterprises nationalized in 1975.

6/ Major enterprises only.

7/ Figures in parentheses exclude phosphate company.

8/ Figures include parastatal enterprises only; East African Community enterprises are excluded.

9/ Figures in parentheses exclude public enterprises at the regional or local level.

\*See note to Table 1, page 15.

rather represent a burden to be met by other sectors. <sup>1/</sup> Accordingly, and again where possible, the overall deficit, before crediting receipts of government current transfers, is also shown in Table 4.

The size of the overall deficits of public enterprise sectors is striking. In the mid-1970s, these averaged 2 per cent of GDP. By way of comparison, central government overall deficits averaged 3 1/4 per cent of GDP for the same group of countries. The exclusion of government current transfers increased public enterprise overall deficits by an average of 1 1/4 per cent of GDP for the more limited group of countries for which this information is available.

Overall deficits are also generally much larger relative to GDP in developing than in industrial countries. In the mid-1970s, they averaged 1 3/4 per cent of GDP in industrial countries, but almost 4 per cent of GDP in developing countries. They were particularly large in Asia, where they averaged over 5 1/2 per cent of GDP, and in developing countries in Europe. Over this period, public enterprise deficits in developing countries were, in fact, slightly higher, on average, than central government deficits. Large deficits are of particular significance in developing countries in that, with low incomes and underdeveloped capital markets, such countries are likely to experience considerable difficulty in generating offsetting surpluses in other domestic sectors of the economy.

A further key feature is that public enterprise overall deficits have increased in recent years, especially in developing countries. In the industrial countries for which data are available, overall deficits increased by an average of 1/4 of 1 per cent of GDP between the late 1960s and the mid-1970s, but this has largely been reversed in the period since then. <sup>2/</sup> In developing countries, overall deficits rose by an average of 2 1/2 per cent of GDP between the late 1960s and the mid-1970s, with much of the increase taking place in the later part of this period, and the resulting high levels of deficits were maintained to the end of the 1970s. Particularly notable are large increases in overall deficits in a number of countries, such as Korea, where, at least according to the measures shown in Table 1, the size of the public enterprise sector has not increased significantly.

While the overall deficit is a valuable indicator, it cannot by itself be used to assess the performance or impact of public enterprises.

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<sup>1/</sup> Some of the issues in defining the overall deficit are discussed in Eltis (1979).

<sup>2/</sup> Some of the changes in overall deficits and in other quantities shown in the tables may reflect cyclical, as well as trend factors. While the periods used for averaging took some account of cycles in world economic activity, and hence should have partly removed cyclical effects, they were mainly determined by the periods for which data could be obtained.

In particular, overall deficits for public enterprises are not undesirable per se and even a low deficit is not necessarily an appropriate aim. Public enterprises produce marketable outputs and, just like private enterprises, it may well be desirable for them to run deficits to finance the investment needed to expand output. It is therefore necessary to examine the factors contributing to these deficits and the ways in which they are financed. Information on these is provided in the next two subsections.

## 2. Components of overall deficits of public enterprises

Table 5 provides a breakdown of overall deficits of public enterprises into the contributions of the current and capital accounts. More disaggregated information on the components of the current account is also given where possible.

The capital account balance broadly equates to gross capital formation by public enterprises--the only difference is that nongovernment capital receipts, which are generally small, are also included as an offsetting factor. The current account includes first the operating balance, which is defined as the difference between sales revenue and expenditure on goods and services, other than capital assets, and thus shows the gross (commercial) return on investment. The current balance is then obtained by adding on (net) receipts of current transfers and deducting (net) expenditure on interest, dividends, and direct taxes. The current balance is also shown after deducting depreciation.

Care needs to be taken in using the current balance figures, especially in interpreting them as absolute or comparative measures of performance. First, the current balance is affected by the type and terms of finance and by the tax system applied to public enterprises. <sup>1/</sup> These vary substantially between countries and are frequently determined more by administrative and institutional factors than by economic considerations. <sup>2/</sup> Of particular importance is that public enterprises often obtain finance on soft terms and hence may not pay the full economic cost

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<sup>1/</sup> These effects will be reflected in the figures for the overall deficit which, therefore, also need to be treated with caution.

<sup>2/</sup> For example, even though public enterprises are generally not expected to pay a substantial dividend on their profits, in some countries, such as Guinea, they are required to transfer all or most of their profits, including depreciation allowances, to the government. In many countries, for example, the United Kingdom, public enterprises obtain a high proportion of finance in the form of loans at fixed nominal interest rates. Under inflationary conditions, interest payments on such loans will implicitly contain an element of capital repayment compensating for the effects of inflation. In such cases, the current balance shown net of replacement cost depreciation will involve some double counting of capital costs.

Table 3. Components of Overall Balances of Public Enterprises 1/  
(As percentages of GDP at market prices)

		Operating Surplus/ Deficit (-) Before Depreciation and Subsidies	Subsidies	Current Account Surplus/Deficit (-)		Capital Account Surplus/ Deficit (-)	Overall Surplus/ Deficit (-)
				Before depreciation	After depreciation <u>2/</u>		
"World" (average) <u>3/</u>		1.0	1.2	0.8 (0.8)	-0.4	-2.8 (-2.8)	-2.0 (-2.0)
Industrial countries (average) <u>3/</u>		0.5	1.4	0.7 (0.7)	-0.4	-2.4 (-2.4)	-1.7 (-1.7)
Australia <u>4/</u>	1966	3.4	...	1.4	—	-5.4	-4.0
	1968-69	3.6	...	1.4	—	-5.1	-3.7
	1970-73	3.3	...	1.3	—	-4.6	-3.3
	1974-77	2.2	...	1.0	—	-4.5	-3.5
Belgium	1964-65	...	...	...	...	...	-0.4
	1966-69	...	...	...	...	...	-0.7
	1970-73	...	...	...	...	...	-0.9
	1974-77	...	...	...	...	...	-0.9
	1978-79	...	...	...	...	...	-0.5
Canada	1960	...	...	1.0	0.2	...	...
	1963	...	...	1.1	0.2	...	...
	1965	...	...	1.1	0.3	...	...
	1966-69	...	...	1.0	0.3	...	...
	1970-73	...	...	0.9	0.2	-2.4	-1.5
	1974-77	...	...	0.8	0.1	-3.6	-2.8
	1978-80	...	...	1.1	0.4	-3.6	-2.5
Finland	1970-73	...	...	1.4	...	-2.9	-1.5
	1974-75	...	...	2.0	...	-4.6	-2.6
France <u>5/</u>	1959-61	... (2.0)	1.4 (0.5)	3.0 (1.9)	... (...)	-5.5 (-3.0)	-2.5 (-1.1)
	1962-65	... (1.4)	1.8 (0.8)	2.8 (1.7)	... (...)	-5.5 (-2.7)	-2.7 (-1.0)
	1966-69	... (1.0)	2.1 (0.9)	2.9 (1.5)	... (...)	-5.7 (-2.4)	-2.8 (-0.9)
	1970-73	... (1.1)	1.9 (0.6)	2.7 (1.3)	... (...)	-4.7 (-1.9)	-2.0 (-0.6)
	1974	... (0.6)	1.7 (0.6)	2.9 (0.9)	... (...)	-4.7 (-1.9)	-1.8 (-1.0)
	1975-77	... (0.8)	... (0.7)	... (1.0)	... (...)	... (-2.3)	... (-1.3)
	1978-81	... (1.1)	... (0.7)	... (1.2)	... (...)	... (-2.8)	... (-1.6)
Italy	1969	...	...	0.6	-0.9	-2.7	-2.1
	1970-73	...	...	-0.1	-1.5	-3.5	-3.6
	1974-77	...	...	-0.4	-2.2	-3.1	-3.5
	1978-80	...	...	-0.3	-2.0	-2.7	-3.0
Japan	1970-73	...	...	1.1	0.1	-3.6	-2.5
	1974-77	...	...	0.4	-0.6	-3.8	-3.4
	1978-80	...	...	1.0	-0.1	-3.7	-2.7
Netherlands	1968-69	...	...	1.7	0.3	-4.2	-2.5
	1970-73	...	...	1.7	0.1	-3.6	-1.9
	1974-77	...	...	2.6	0.9	-3.1	-0.5
	1978	...	...	2.3	0.6	-2.8	-0.5
Norway <u>6/</u>	1968-69	2.7	0.7	1.2	...	-2.1	-0.9
	1970-73	2.0	0.6	1.0	...	-2.2	-1.2
	1974-76	1.9	0.7	0.9	...	-3.6	-2.7
	1977-80	...	...	0.8	...	-3.4	-2.6
Spain	1979-80	...	1.3	...	...	...	-3.1
United Kingdom	1946-49	0.9	0.1	0.6	...	-1.3	-0.7
	1950-53	1.8	—	1.2	...	-2.9	-1.7
	1954-57	2.0	—	1.2	...	-3.4	-2.2
	1958-61	2.1	0.3	1.3	...	-3.5	-2.2
	1962-65	2.4	0.5	1.7	-0.2	-3.4	-1.7
	1966-69	2.6	0.4	1.8	-0.3	-3.7	-1.9
	1970-73	2.2	0.4	1.3	-1.1	-3.0	-1.7
	1974-77	2.1	1.1	1.7	-1.1	-3.6	-1.9
	1978-81	2.2	0.8	1.8	-1.0	-2.8	-1.0
United States	1960	0.1	...	0.1	-0.2	-0.7	-0.6
	1963	0.2	...	0.2	-0.2	-0.8	-0.6
	1965	0.2	...	0.2	-0.2	-0.8	-0.6
	1967-69	0.3	...	0.2	-0.1	-0.8	-0.6
	1970-73	0.2	...	0.2	-0.2	-0.8	-0.6
	1974-77	0.2	...	0.2	-0.2	-0.9	-0.7
	1979	0.2	...	0.2	-0.2	-0.8	-0.6

Table 5 (continued). Components of Overall Balances of Public Enterprises 1/  
(As percentages of GDP at market prices)

		Operating Surplus/ Deficit (-) Before Depreciation and Subsidies		Subsidies	Current Account Surplus/Deficit (-) Before depreciation    After depreciation		Capital Account Surplus/ Deficit (-)	Overall Surplus/ Deficit (-)	
							2/		
Developing countries (average) 3/		3.8		0.9	1.6	(1.5)	0.4	-6.0 (-6.0)	-3.9 (-4.5)
Oil exporting countries									
Venezuela 7/	1972-73	0.8		—	0.5		...	-5.9	-5.4
	1974-77	12.4 (0.6)		1.1 (1.1)	2.4 (0.5)		...	-7.6 (-6.8)	-5.2 (-6.3)
	1978-80	23.1 (0.1)		0.8 (0.8)	6.9 (-0.8)		...	-12.0 (-8.8)	-5.1 (-9.6)
Africa (average) 3/		2.8		...	4.6		...	-7.7	-3.1
Benin 8/	1977	4.1		...	1.5		0.5	...	...
Botswana 4/	1974-77	5.4		...	2.0		1.2	-6.7	-4.7
	1978-79	4.9		...	1.7		0.9	-2.3	-0.6
Congo	1976	-1.5		...	...		...	...	...
Gambia, The	1979	...		...	7.1		...	-12.0	-4.9
Guinea	1976-77	...		...	...		...	...	-8.0
	1978-79	...		...	...		...	...	-23.4
Ivory Coast	1965-69	...		...	1.9		...	-2.8	-0.9
	1970-73	...		...	2.2		...	-5.8	-3.6
	1974-77	...		...	3.0		...	-6.5	-3.5
	1978-79	...		...	2.8		...	-11.2	-8.4
Malawi	1970-73	...		0.1	3.1		1.9	-5.8	-2.7
	1974-77	...		—	3.9		2.6	-6.4	-2.5
	1978	...		—	2.9		1.5	-6.4	-3.5
Mali 8/	1975-77	0.8		...	-1.3		-2.5	-4.6	-5.9
	1978	-0.9		...	-2.0		-3.0	-0.7	-2.7
Senegal 9/	1974	...		...	4.9	(--)	3.2 (-1.4)	-2.7 (-2.6)	2.2 (-2.6)
Tanzania 10/	1966-67	3.0		—	1.1		0.5	-2.6	-1.5
	1970-73	4.0		0.1	2.6		1.4	-5.2	-2.6
	1974-75	4.1		1.1	2.8		1.7	-5.6	-2.8
	1976-78	4.1		0.3	...		...	...	...
Tunisia	1976-77	...		...	3.1		0.3	...	...
	1978-80	...		...	3.4		0.6	...	...
Zambia	1972	...		...	12.7		5.7	-16.1	-3.4
Asia (average) 3/		3.5		...	1.7		...	-7.3	-5.6
Burma	1968-69	...		...	3.4		...	-4.8	-1.4
	1970-73	...		...	3.0		...	-4.5	-1.5
	1974-77	...		...	2.5		...	-3.7	-1.2
	1978-80	...		...	1.7		...	-12.3	-10.6
India	1966-69	2.7		—	1.2		0.2	-5.4	-4.2
	1970-73	2.9		0.1	1.3		0.1	-5.6	-4.3
	1974-77	3.0		0.6	1.5		0.3	-7.8	-6.3
	1978	3.6		0.6	1.7		0.4	-7.9	-6.2
Korea	1963-65	...		...	2.3		1.4	-5.1	-2.8
	1966-69	...		...	2.0		1.2	-5.3	-3.3
	1970-73	...		...	1.5		0.8	-5.3	-3.8
	1974-77	...		...	1.6		0.8	-7.0	-5.4
	1978-80	...		...	2.1		...	-7.3	-5.2
Nepal	1971-73	...		...	0.4		...	-0.9	-0.5
	1974-75	...		...	0.3		...	-2.4	-2.1

Table 5 (continued). Components of Overall Balances of Public Enterprises 1/

(As percentages of GDP at market prices)

		Operating Surplus/ Deficit (-) Before Depreciation and Subsidies	Subsidies	Current Account Surplus/Deficit (-)		Capital Account Surplus/ Deficit (-)	Overall Surplus/ Deficit (-)
				Before depreciation	After depreciation 2/		
Taiwan* 4/	1951-53	4.9	...	2.1	0.5	-5.8	-3.7
	1954-57	5.1	...	2.6	0.9	-5.2	-2.6
	1958-61	7.3	...	3.6	1.5	-7.1	-3.5
	1962-65	8.0	...	3.7	1.5	-5.0	-1.3
	1966-69	7.3	...	4.2	2.3	-6.6	-2.4
	1970-73	7.2	...	4.0	2.0	-7.7	-3.7
	1974-77	6.3	...	4.1	2.1	-11.4	-7.3
	1978-80	6.3	...	4.7	2.4	-10.2	-5.5
Thailand	1969	...	...	1.6	...	-2.4	-0.8
	1970-73	...	...	1.1	...	-1.9	-0.8
	1974-77	...	...	0.7	...	-1.8	-1.1
	1978-79	...	0.1	1.2	...	-3.2	-2.0
Europe							
Greece	1975	...	...	...	...	...	-1.6
	1979	...	...	...	...	...	-1.6
Portugal	1978-80	...	4.5	...	...	...	-8.1
Turkey	1964-65	...	0.4	1.0	--	-2.4	-1.4
	1966-69	...	0.4	1.1	0.2	-3.3	-2.2
	1970-73	2.9	0.1	1.1	--	-5.1	-4.0
	1974-77	-0.1	1.3	0.2	-0.8	-7.2	-7.0
	1978-80	-1.4	2.7	0.8	-0.1	-8.3	-7.5
Western Hemisphere (average) 2/		3.3	...	1.2	...	-4.4	-2.5
Argentina 8/11/	1968-69	...	...	... (1.2)	...	-3.0	... (-1.8)
	1970-73	...	...	... (0.6)	...	-3.5	... (-2.9)
	1974-75	...	...	... (-0.4)	...	-3.9	... (-4.3)
	1976-77	1.7	1.0	2.1 (1.1)	...	-5.2	-3.1 (-4.1)
	1978-80	...	...	... (0.6)	...	-4.0	... (-3.4)
Bahamas	1975-77	...	0.8	0.4	...	-2.3	-1.9
	1978-79	...	0.4	2.1	...	-3.8	-1.7
Barbados	1975-77	...	1.0	0.3	...	-2.1	-1.8
	1978-80	...	1.3	0.3	...	-2.4	-2.1
Bolivia	1971-73	5.4	0.2	2.6	...	-6.0	-3.4
	1974-77	8.0	0.1	2.4	...	-6.8	-4.4
Brazil	1980	...	...	...	...	...	-1.7
Chile 8/	1974-77	9.3	1.0	2.9	...	-3.1	-0.2
	1978-80	8.2	0.3	1.5	...	-1.9	-0.4
Colombia 12/	1974-77	... (0.8)	0.3 (0.3)	0.8 (0.4)	...	-1.7 (-1.0)	-0.9 (-0.6)
	1978-80	... (1.5)	0.4 (0.3)	1.3 (1.0)	...	-1.4 (-0.9)	-0.1 (-0.1)
Costa Rica	1977-79	...	--	0.6	...	-5.0	-4.4
Dominica	1975-77	...	0.6	1.6	...	-6.0	-4.4
	1978-79	...	2.9	2.4	...	-3.6	-1.2
Dominican Republic 8/	1972-73	...	0.1	1.9	...	-1.8	0.1
	1974-77	...	0.6	2.1	...	-2.3	-0.2
	1978-79	...	0.7	0.3	...	-1.9	-1.6
Guatemala	1975-77	0.4	0.1	0.3	...	-2.1	-1.8
	1978-80	0.5	--	0.3	...	-2.4	-2.1
Guyana	1973	5.6	0.7	2.7	...	-6.4	-3.7
	1974-77	10.7	1.1	3.8	...	-10.4	-6.6
	1978-80	13.5	1.1	6.5	...	-7.9	-1.4
Haiti 8/	1976-77	...	...	0.6	...	-2.6	-2.0
	1978-80	...	...	1.0	...	-1.9	-0.9
Honduras	1978-79	...	--	1.4	...	-3.7	-2.3
Jamaica 8/	1976-77	...	0.2	0.7	...	-5.0	-4.3
	1978-80	...	1.2	1.3	...	-3.6	-2.3
Mexico 8/	1975-77	3.4	1.0	0.8	...	-4.7	-3.9
	1978	4.9	0.9	1.5	...	-5.2	-3.7

Table 5 (concluded). Components of Overall Balances of Public Enterprises <sup>1/</sup>  
(As percentages of GDP at market prices)

		Operating Surplus/ Deficit (-) Before Depreciation and Subsidies	Subsidies	Current Account Surplus/Deficit (-)		Capital Account Surplus/ Deficit (-)	Overall Surplus/ Deficit (-)
				Before depreciation	After depreciation <sup>2/</sup>		
Panama	1960	...	...	0.4	0.3	-0.6	-0.2
	1965	...	...	0.5	0.3	-1.4	-0.9
	1966-69	...	...	0.5	0.3	-1.6	-1.1
	1970-73	...	0.1	1.1	0.7	-3.8	-2.7
	1974-77	...	0.1	1.9	1.1	-9.0	-7.1
	1978-79	...	0.4	0.6	-1.8	-7.7	-7.1
Paraguay	1970-73	1.7	0.1	1.1	...	-2.3	-1.2
	1974-77	1.8	0.1	1.2	...	-2.8	-1.6
	1978-80	2.2	0.1	1.4	...	-2.3	-0.9
Peru	1968-69	...	0.1	0.4	...	-1.7	-1.3
	1970-73	...	0.2	0.5	...	-1.8	-1.3
	1974-77	...	0.4	-0.7	...	-4.1	-4.8
	1978-79	...	0.1	0.6	...	-2.3	-1.7
St. Lucia	1975-77	...	0.4	0.5	...	-5.1	-4.6
	1978	...	0.4	0.8	...	-3.6	-2.8
Uruguay	1976-77	4.9	0.3	3.4	...	-3.4	--
	1978-80	3.8	0.3	2.3	...	-3.1	-0.8

Source: Appendix.

<sup>1/</sup> The definitions of the components of the overall balance are discussed on page 37.

<sup>2/</sup> Depreciation is measured at replacement cost for most countries. It is measured at historic cost for Turkey. The basis of measurement in several African countries is not known.

<sup>3/</sup> Weighted average for 1974-77 or closest available period using GDP at market prices in U.S. dollars as weights. Figures in parentheses are averages for countries for which both current and capital account surplus figures are available.

<sup>4/</sup> Operating surplus after crediting receipts of subsidies.

<sup>5/</sup> Figures in parentheses are for eight large enterprises only.

<sup>6/</sup> Central government enterprises only.

<sup>7/</sup> Figures in parentheses exclude iron ore and petroleum enterprises nationalized in 1975.

<sup>8/</sup> Major enterprises only.

<sup>9/</sup> Figures in parentheses exclude phosphate company.

<sup>10/</sup> Figures include parastatal enterprises only; East African Community enterprises are excluded.

<sup>11/</sup> Figures in parentheses relate to current account surplus before crediting subsidies and to overall surplus before crediting subsidies.

<sup>12/</sup> Figures in parentheses exclude public enterprises at the regional or local level.

\*See note to Table 1, page 15.

for the resources they use. This means that the level of economic subsidy being provided cannot be deduced directly from figures for the components of the current balance.

Second, in order to calculate the return being achieved by public enterprises, the current balance--and its components--needs to be related to a measure of the capital input into the enterprises. However, there is little information on the capital stock of public enterprises that is adequate for this purpose. 1/

Third, public enterprises are generally expected to pursue objectives, principally allocational and distributional ones, which are not reflected in the commercial return to these enterprises as shown in the current balance. Any benefits in terms of these objectives have to be taken into account separately in judging performance.

Looking at the figures, one of the most striking features is the large size of the capital account deficits. These are, of course, a reflection of the high levels of investment by public enterprises. In the mid-1970s, capital account deficits averaged over 2 3/4 per cent of GDP. They were particularly large in developing countries, averaging 6 per cent of GDP, compared with 2 1/2 per cent of GDP in industrial countries. Moreover, these deficits have risen in recent years. In the industrial countries, the increase has been small, less than 1/4 of 1 per cent of GDP, on average, between the late 1960s and the end of the 1970s. However, in the developing countries, it has been substantial, the average capital account deficit rising by 1 3/4 per cent of GDP over this period.

Also notable are the low levels of the surpluses on operating and current accounts. In the mid-1970s, predepreciation current account surpluses averaged only 3/4 of 1 per cent of GDP. For the more limited numbers of countries for which such information could be obtained, operating surpluses averaged 1 per cent of GDP, while postdepreciation current balances were in deficit, on average, by almost 1/2 of 1 per cent of GDP. Surpluses were generally larger in developing than in industrial countries. However, apart from the operating balance, where the surplus averaged over 3 3/4 per cent of GDP in developing countries as against

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1/ In the United Kingdom, figures for the capital stock of the public enterprise sector are published in the national accounts. However, this information does not appear to be readily available for other countries. Although there are methods for estimating the capital stock from investment figures--see, for example, Harberger (1978)--they are difficult to apply to public enterprises because of the lack of information in most countries on asset lives and, in particular, on the value of the assets of enterprises entering (or leaving) the sector through nationalization, etc. Differences in accounting conventions, especially in the treatment of inflation, make it difficult to use asset values in enterprise accounts for this purpose.

1/2 of 1 per cent of GDP in industrial ones, the differences were not substantial. Also, the higher surpluses in developing countries were partly the result of very large surpluses in a few countries, such as Venezuela, where high rent natural resource industries are under public ownership.

Even allowing for the problems of interpretation, it is clear from these figures that the return on investment in public enterprises, at least in commercial terms, has been low, particularly given the substantial investment effort over recent years. The size of these surpluses is also noteworthy because the promotion of saving has been a major motive for establishing public enterprises in many developing countries. 1/

An alternative way of looking at this saving performance is in terms of the self-financing ratios of the enterprises. The current account surpluses imply that, in both industrial and developing countries, only about 25 per cent of investment requirements were self-financed in the mid-1970s. The exclusion of receipts of government current transfers, which arguably provides a better measure of saving performance, reduced the self-financing ratio from 25 per cent to 10 per cent for those developing countries for which this information is available. It is difficult to judge what is an appropriate level for this ratio, but it is relevant to note that the degree of self-financing in the private sector appears generally to be much higher. 2/

Current surpluses have also not changed substantially in recent years, despite the growth in the output and investment of public enterprises. In fact, between the late 1960s and the mid-1970s, predepreciation current account surpluses fell marginally relative to GDP in industrial countries, although they have recovered since then. In developing countries, these surpluses showed negligible growth between the late

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1/ Public enterprises could increase aggregate saving by boosting saving in other sectors of the economy, rather than directly through their own saving. This might happen if savers were more willing to lend money to public than private enterprises because of the government guarantee, implicit or explicit, that is normally attached to such loans. However, while some such effect is possible, the beneficial effect on saving has generally been viewed as arising mainly through public enterprises' own saving efforts.

2/ For the limited number of countries, mainly industrial ones, for which data on self-financing for both sectors could be obtained, the self-financing ratio for private enterprises averaged 76 per cent in the mid-1970s, and that for public enterprises, after crediting current transfers, averaged 48 per cent. Although differences in tax systems and distribution policies between the two sectors mean that such comparisons need to be treated with some caution, they are unlikely to distort the qualitative conclusion that self-financing is much higher for private enterprises.

1960s and the mid-1970s, and, although there was an increase in the late 1970s, this was only about 1/2 of 1 per cent of GDP. As a result, a decreasing proportion of investment has been financed out of saving. Between the late 1960s and the mid-1970s, the self-financing ratio fell by 12 percentage points on average for those countries for which this ratio can be calculated, although almost half of this drop appears to have been recovered since then.

### 3. Financing of public enterprise deficits

#### a. Major sources of finance

Table 6 provides a breakdown of public enterprise overall deficits by source of finance. Comprehensive information is only available for a relatively limited number of countries, mainly developing ones; however, it is clear that the three specific sources of finance distinguished--the central government, the banking system, and foreign borrowing--are all quantitatively significant. In the mid-1970s, for those countries for which a complete breakdown of sources of finance is available, financing from the central government and the banking system both averaged 1 1/4 per cent of GDP, foreign borrowing averaged 1 per cent of GDP, 1/ and other domestic borrowing averaged 3/4 of 1 per cent of GDP. 2/

These three sources are also important because of their effects on, in particular, the money supply and the balance of payments. No attempt will be made here to provide a rigorous analysis of these effects; however, further information on the individual sources is given below.

#### b. Government financing of public enterprises-- "burden" on the budget

Public enterprises affect government finances not only through government financing of their deficits, but they also contribute revenue to the government and make other demands on the budget in the form of current transfers.

In one sense, all these flows constitute the impact of the public enterprise sector on government finances. Even if the activities operated by public enterprises were in the private sector, they would still affect the budget, especially through tax payments. It is only the difference between these effects and those under public ownership that represents the "burden"--or "benefit"--of public enterprises for government finances. Although this burden raises problems of measurement, both conceptual and practical, it is the most appropriate focus for analysis.

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1/ Some foreign borrowing by public enterprises in developing countries is channeled through government accounts and, as a result, is likely to be shown in the statistics as borrowing from the government rather than from abroad.

2/ This figure also includes the residual of unidentified financing.

Table 6. Financing of Public Enterprise Deficits  
(As percentages of GDP at market prices)

		Foreign Borrow- ing	Do- mestic Borrow- ing	Of Which:			Total Financ- ing <u>1/</u>
				Central Govern- ment	Bank- ing system	Other domestic borrow- ing	
"World" (average) <u>2/</u>		1.0(0.7)	2.9(2.9)	...	...	...	3.6(3.6)
Industrial countries							
Finland	1964-65	...	...	0.4	...	...	...
	1966-69	...	...	0.2	...	...	...
	1970-73	...	...	0.3	...	...	...
	1974-77	...	...	0.3	...	...	...
	1978	...	...	0.2	...	...	...
Norway <u>3/</u>	1969	—	0.8	0.5	-0.4	0.7	0.8
	1970-73	0.3	0.9	1.1	0.1	-0.3	1.2
	1974-76	1.8	0.9	1.8	-0.4	-0.5	2.7
	1977-80	...	...	2.0	...	...	2.6
Spain	1979-80	0.5	2.6	1.2	1.2	0.2	3.1
Developing countries							
Oil exporting countries							
Algeria	1970-73	4.2	...	...	...	...	...
	1974-77	10.2	...	...	...	...	...
	1978-80	9.9	...	...	...	...	...
Africa							
Botswana	1978-79	0.4	0.2	...	...	...	0.6
Gambia, The	1979	1.7	3.2	1.7	...	...	4.9
Guinea <u>4/</u>	1976-77	0.9	7.1	5.7	1.4	—	8.0
	1978-79	-0.5	23.9	13.6	10.3	—	23.4
Ivory Coast	1975-77	2.6	...	...	...	...	...
	1978-80	1.7	...	...	...	...	...

Table 6 (continued). Financing of Public Enterprise Deficits

(As percentages of GDP at market prices)

		Foreign Borrow- ing	Do- mestic Borrow- ing	Of Which:			Financ- ing 1/
				Central Govern- ment	Bank- ing system	Other domestic borrow- ing	
Africa (continued)							
Mali 5/	1975-77	...	...	...	4.1	...	5.9
	1978	...	...	...	3.8	...	2.7
Tanzania 6/	1966-69	0.4	1.1	0.3	...	...	1.5
	1970-73	1.4	1.2	0.7	...	...	2.6
	1974-75	0.7	2.1	0.8	...	...	2.8
Tunisia	1976-77	4.5	...	7.0	...	...	...
Asia							
India	1966-69	--	4.2	3.7	...	...	4.2
	1970-73	--	4.3	3.3	...	...	4.3
	1974-77	--	6.3	5.0	...	...	6.3
	1978	--	6.2	5.3	...	...	6.2
Korea	1963-65	0.7	2.1	--	0.9	1.2	2.8
	1966-69	1.5	1.8	--	1.7	0.1	3.3
	1970-73	2.2	1.6	0.1	0.5	1.0	3.8
	1974-77	1.1	4.3	--	2.0	2.3	5.4
	1978-80	1.7	3.5	0.1	1.4	2.0	5.2
Thailand	1969	0.3	0.5	0.5	...	...	0.8
	1970-73	0.4	0.4	0.4	...	...	0.8
	1974-77	0.7	0.4	0.3	...	...	1.1
	1978-79	1.6	0.4	0.4	...	...	2.0
Europe							
Portugal	1978-80	2.9	5.2	3.8	1.4	--	8.1
Turkey	1964-65	-0.1	1.5	0.5	0.6	0.4	1.4
	1966-69	0.2	2.0	0.4	0.9	0.7	2.2
	1970-73	1.0	3.0	1.9	0.5	0.6	4.0
	1974-77	0.4	6.6	1.1	2.2	3.3	7.0
	1978-80	1.4	6.1	0.7	0.2	5.2	7.5

Table 6 (continued). Financing of Public Enterprise Deficits

(As percentages of GDP at market prices)

			Foreign Borrow- ing	Do- mestic Borrow- ing	Of Which:			Financ- ing <u>1/</u>
					Central Govern- ment	Bank- ing system	Other domestic borrow- ing	
Western Hemisphere								
Argentina <u>5/7/</u>	1976-77	0.7	2.4(3.4)	1.7(2.7)	...	...	3.1(4.1)	
	1978-80	1.5	...(1.9)	...(0.8)	...	...	...(3.4)	
Bahamas	1975-77	-0.9	2.8	2.2	...	...	1.9	
	1978-79	0.5	1.2	1.6	...	...	1.7	
Bolivia	1971-73	...	...	0.7	...	...	3.4	
	1974-77	3.2	1.2	0.5	0.9	-0.2	4.4	
Brazil <u>8/</u>	1980	0.8	0.9	...	...	...	1.7	
Chile <u>5/</u>	1974-77	-0.2	0.4	0.8	...	...	0.2	
	1978-80	1.3	-0.9	—	...	...	0.4	
Colombia <u>9/</u>	1974-76	1.1(0.9)	-0.2(-0.3)	...	...	...	0.9(0.6)	
Dominica	1975-77	5.9	-1.5	...	...	...	4.4	
	1978-79	0.8	0.4	...	...	...	1.2	
Dominican Republic <u>5/</u>	1975-77	0.7	-0.4	...	...	...	0.3	
	1978-79	0.8	0.8	...	...	...	1.6	
Guatemala	1975-77	0.1	1.7	1.3	...	...	1.8	
	1978-79	—	2.1	1.9	...	...	0.9	
Haiti <u>5/8/</u>	1976-77	1.2	0.8	...	...	...	2.0	
	1978-80	0.7	0.2	...	...	...	0.9	
Honduras	1978-79	1.3	1.0	1.2	...	...	2.3	
Jamaica <u>5/</u>	1976-77	-0.4	4.7	1.8	0.1	2.8	4.3	
	1978-80	-0.5	2.8	2.2	0.5	0.1	2.3	
Paraguay	1970-71	0.5	0.5	0.3	...	...	1.0	
	1972-73	1.2	0.3	0.3	0.2	-0.2	1.5	
	1974-77	2.0	-0.4	0.3	—	-0.7	1.6	
	1978-80	1.0	-0.1	0.2	—	-0.3	0.9	

Table 6 (concluded). Financing of Public Enterprise Deficits  
(As percentages of GDP at market prices)

		Foreign Borrow- ing	Do- mestic Borrow- ing	Of Which:			Financ- ing <u>1/</u>
				Central Govern- ment	Bank- ing system	Other domestic borrow- ing	
Peru	1968-69	0.6	0.7	0.4	--	0.3	1.3
	1970-73	0.8	0.5	0.8	0.1	-0.4	1.3
	1974-77	2.3	2.5	0.8	1.1	0.6	4.8
	1978-79	3.4	-1.7	0.5	-1.8	-0.4	1.7
St. Lucia	1975-77	1.7	2.9	0.9	1.3	0.7	4.6
	1978-79	0.9	1.9	1.4	-0.7	1.2	2.8
Uruguay	1976-77	0.8	-0.8	0.2	...	...	--
	1978-80	1.0	-0.2	0.3	...	...	0.8

Source: Appendix.

1/ Equal to overall deficit.

2/ Weighted average for 1974-77 or closest available period using GDP at market prices as weights. Figures in parentheses are averages for countries for which both domestic and foreign borrowing figures are available.

3/ Figures relate to central government enterprises only.

4/ Figures for central government and total financing include subsidies.

5/ Major enterprises only.

6/ Figures include parastatal enterprises only; East African Community enterprises are excluded.

7/ Figures in parentheses include subsidies.

8/ Figures exclude government capital transfers.

9/ Figures in parentheses exclude public enterprises at the regional or local level.

There are three components of the budgetary burden. First and foremost, public enterprises affect the budget through government transfers, both current and capital, and loan-related flows, that is, net loans and equity injections on the one hand, and dividend and interest payments on the other. 1/ Second, tax revenue may be affected by public ownership. In several countries, there are differences between the tax systems applied to public and private enterprises, most of which involve lower tax rates for public enterprises. 2/3/ Even if the same tax system is applied, public enterprises may generate less revenue if they charge lower prices, for example, for distributional reasons, or are relatively inefficient in their use of factors. Third, there may be indirect effects on the budget because, for example, government purchases from public enterprises are subject to special conditions 4/ or because public enterprises receive subsidized credit from government-owned financial institutions.

Without detailed study of the public enterprises in each country, it is only possible to quantify the first of these components. The net balance of transfers and loan-related flows was therefore adopted as the measure of the budgetary burden for use in this paper. 5/ Because these are likely to constitute the bulk of the burden in most cases, the omission of the other two components is probably not a serious one. Figures for the burden defined in this way as percentages of GDP are given in

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1/ Private enterprises also receive government transfers and loans, and these are substantial in some countries; however, it seems reasonable to treat all transfers and loans to public enterprises as constituting part of the burden.

2/ Differences in income tax systems are discussed in Floyd (1978).

3/ A lower tax rate does not necessarily imply a burden since, for given prices, it will be offset by higher posttax profits. However, in practice, it seems likely that a lower tax rate will be reflected, at least in part, by a lower level of prices. See, for example, Beals (1980) for a discussion of the issues here.

4/ An important example is that, in several countries, such as Liberia and the Congo, the government has at times accumulated large arrears of payments for goods purchased from public enterprises. In such cases, public enterprises are effectively providing a benefit to the budget--assuming that such arrears are not financed by government transfers.

5/ This measure shows the burden that has to be financed by the government in the short term. To the extent that loans are on commercial terms and are fully serviced, they will not represent a burden in the long term.

Table 7. Also shown are figures for direct taxes paid by public enterprises for the limited number of countries for which the information could be obtained. <sup>1/</sup>

The notable feature of the table is the large size of the budgetary burdens in many countries. In the mid-1970s, they averaged 2 1/4 per cent of GDP, with current transfers and investment-related flows each accounting for over 1 per cent of GDP. By comparison, the overall deficits of the central government <sup>2/</sup> averaged 4 1/4 per cent of GDP for the same group of countries. Budgetary burdens were much higher in developing than in industrial countries. In developing countries, they averaged 3 1/4 per cent of GDP, being particularly high in Africa and Asia, whereas, in industrial countries, they averaged 1 1/2 per cent of GDP. This difference was mainly the result of much larger investment-related flows in developing countries; current transfers were close to 1 per cent of GDP, on average, in both groups of countries.

Also of importance is the fact that budgetary burdens have increased in recent years. In industrial countries, they rose by 1/2 of 1 per cent of GDP, on average, between the early 1970s and the end of the 1970s, while in developing countries, they increased by 1 1/2 per cent of GDP over this period. In a number of the developing countries for which long runs of data are available, there have been some extremely large increases. For example, between the mid-1960s and the end of the 1970s, the budgetary burden rose by over 9 per cent of GDP in Zambia, by 7 1/2 per cent of GDP in Sri Lanka, and by over 4 1/2 per cent of GDP in Tanzania.

The budgetary burdens imposed by public enterprises may be met by measures that increase government revenue or reduce other expenditure, or they may be passed forward to higher government deficits and hence be financed by borrowing or money creation. The interactions between all parts of the budget make it impossible to establish which particular elements adjust to accommodate these burdens. However, the relationship between the sizes of budgetary burdens and government deficits shown in Table 7 suggests that these burdens are passed forward to a substantial extent and hence can be viewed as one explanation of high and rising government deficits.

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<sup>1/</sup> The figures for tax payments and, in particular, the average of 2 per cent of GDP for the countries included, give a misleading impression. In most of the countries for which data could not be obtained, tax payments by public enterprises appear to be very small. If figures had been included for these countries, the average would have been much lower.

<sup>2/</sup> For the definition of the overall deficit of the central government see International Monetary Fund (1974).

Table 7. Budgetary Burden of Public Enterprises

(As percentages of GDP at market prices)

		Central Government Overall Surplus/ Deficit (-)	Bud- getary Burden of Public Enter- prises <u>1/</u>	Of Which: Subsidies and Other Current Transfers	Central Government Overall Surplus/ Deficit Excluding Public Enterprise Burden	Direct Taxes Paid By Public Enterprises
"World" (average) <u>2/</u>		-3.8(-4.2)	2.2 (2.2)	1.7	-2.0(-2.0)	2.0
Industrial countries (average) <u>2/</u>		-3.2(-4.1)	1.6 (1.6)	1.4	-2.5(-2.5)	...
Australia	1973	-1.7	0.3	...	-1.4	...
	1974-77	-3.2	0.4	...	-2.8	...
	1978-80	-3.0	-0.5	...	-3.5	...
Belgium	1970-73	-3.1	2.3	2.0	-0.8	...
	1974-77	-4.6	2.9	2.6	-1.7	...
	1978-79	-7.7	3.2	2.8	-4.5	...
Denmark <u>3/</u>	1970-73	3.6	0.6	0.6	4.2	...
	1974-77	-1.1	0.8	0.7	-0.3	...
	1978-80	-4.1	1.1	0.7	-3.0	...
France <u>4/</u>	1959-61	...	...	1.4 (0.5)	...	... (-)
	1962-65	...	...	1.8 (0.8)	...	... (-)
	1966-69	...	...	2.1 (0.9)	...	... (-)
	1970-73	...	...	1.9 (0.6)	...	2.0 (-)
	1974	0.5	...	1.7 (0.6)	...	2.6 (-)
	1975-77	-1.6	...	... (0.7)	...	... (-)
	1978-80	-1.0	...	... (0.7)	...	... (-)
Italy	1966-69	-1.5	2.2	0.9	0.7	...
	1970-73	-5.4	3.3	1.5	-2.1	...
	1974-77	-5.9	3.2	1.4	-2.7	...
	1978-80	-12.3	3.7	1.2	-8.6	...
Netherlands	1974-77	-2.2	—	1.0	-2.2	...
Norway <u>5/</u>	1969	0.2	1.1	0.8	1.3	0.1
	1970-73	-1.7	1.7	0.6	—	0.1
	1974-76	-3.4	2.4	0.7	-1.0	0.1
Spain	1970-73	-0.8	1.1	0.7	0.3	...
	1974-77	-1.5	1.0	0.8	-0.5	...
	1978-79	-2.9	1.7	1.3	-1.2	...
United Kingdom	1946-49	-1.1	0.5	0.1	-0.6	—
	1950-53	—	0.3	—	0.3	0.1
	1954-57	-0.3	1.4	—	1.1	0.2
	1958-61	-0.7	2.0	0.3	1.3	0.1
	1962-65	-0.9	1.3	0.5	0.4	—
	1966-69	-1.3	1.7	0.4	0.4	—
	1970-73	-1.1	0.8	0.4	-0.3	—
	1974-77	-5.3	1.3	1.1	-4.0	—
	1978-81	-4.9	1.2	0.8	-3.7	—
Developing countries (average) <u>2/</u>		-4.9(-4.4)	3.3 (3.3)	1.3	-1.1(-1.1)	...
Oil exporting countries						
Algeria <u>6/</u>	1970-73	-6.7	10.2	0.6	3.5	...
	1974-77	-7.9	22.0	2.5	14.1	23.2
	1978-80	-11.1	22.2	1.1	11.1	20.5
Indonesia	1972-73	-2.1	...	—	...	...
	1974-77	-2.6	...	0.6	...	...
	1978-80	-2.4	...	1.9	...	...
Venezuela <u>7/</u>	1972-73	0.3	1.4	—	1.7	0.3
	1974-77	-1.5	2.3 (4.5)	1.1 (1.1)	0.8 (3.0)	7.8 (0.4)
	1978-80	-1.4	-0.6 (3.0)	0.8 (0.8)	-2.0 (1.6)	12.5 (0.1)

Table 7 (continued). Budgetary Burden of Public Enterprises

(As percentages of GDP at market prices)

		Central Government Overall Surplus/ Deficit (-)	Bud- getary Burden of Public Enter- prises 1/	Of Which: Subsidies and Other Current Transfers	Central Government Overall Surplus/ Deficit Excluding Public Enterprise Burden	Direct Taxes Paid By Public Enterprises
Africa (average) 2/		-5.3	3.8	1.2	-1.6	...
Ethiopia	1978-80	-4.5	...	0.5	...	...
Guinea	1976-77	9.5	-8.2	...	1.3	9.7
	1978-79	-2.4	3.3	...	0.9	11.0
Kenya 8/	1962-65	-1.6	—	—	-1.6	...
	1966-69	-2.7	0.2	—	-2.5	...
	1970-73	-4.0	0.8	—	-3.2	...
	1974	-3.0	0.6	—	-2.4	...
	1975-76	-5.8	2.2 (0.8)	0.2 (—)	-3.6 (-5.0)	...
	1977-79	-5.0	... (2.0)	... (0.2)	... (-3.0)	...
Liberia	1977	-3.0	2.6	...	-0.4	...
	1978-80	-9.4	3.0	...	-6.4	...
Malawi	1967-69	-4.9	0.5	0.1	-4.4	...
	1970-73	-7.1	2.3	0.1	-4.8	...
	1974-77	-6.2	2.2	—	-4.0	...
	1978	-8.0	1.8	—	-6.2	...
Sierra Leone	1979	-7.3	0.7	0.1	-6.6	1.9
Tanzania	1963-65	-1.7	0.3	0.1	-1.4	...
	1966-69	-3.7	0.5	0.1	-3.2	1.4
	1970-73	-6.2	3.1	0.3	-3.1	1.5
	1974-77	-7.9	5.0	0.7	-2.9	...
Togo	1978-80	-3.6	...	...	...	6.7
Tunisia	1968-69	-6.4	1.7	1.0	-4.7	...
	1970-73	-1.8	1.4	1.1	-0.4	...
	1974-77	-4.4	4.6	1.6	0.2	...
	1978-81	-2.8	4.0	2.9	1.2	...
Zambia	1965	3.5	1.0	0.2	4.5	...
	1966-69	-0.8	5.1	0.7	4.3	...
	1970-73	-10.9	10.0	2.3	-0.9	...
	1974-77	-11.3	10.1	3.4	-1.2	...
	1978-80	-14.5	10.1	4.2	-4.4	...
Asia (average) 2/		-5.0	3.6	0.5	-1.3	...
Bangladesh	1979-81	-11.0	5.0	1.1	-5.0	...
India 3/	1966-69	-4.2	3.1	—	-1.0	0.1
	1970-73	-3.3	3.0	0.1	-0.3	0.1
	1974-77	-5.4	3.2	0.6	-0.2	0.2
	1978	-3.5	5.5	0.6	2.0	0.2
Korea 9/	1972-73	-0.8	-0.1	—	-0.9	...
	1974-77	-1.8	0.3	0.3	-1.5	...
	1978-80	-2.3	0.5	0.5	-1.8	...
Pakistan	1972	-6.7	0.7	—	-6.0	...
	1974-77	-8.5	3.2	0.3	-5.3	...
	1978-81	-7.0	3.2	0.3	-3.8	...
Papua New Guinea	1974-77	-3.1	1.5	0.1	-1.6	...
Sri Lanka	1962-65	-5.1	3.8	0.7	-1.3	...
	1966-69	-6.2	4.0	0.7	-2.2	...
	1970-73	-6.4	3.0	0.8	-3.4	...
	1974-77	-5.6	3.8	1.0	-1.8	...
	1978-80	-14.0	11.3	2.8	-2.7	...

Table 7 (continued). Budgetary Burden of Public Enterprises

(As percentages of GDP at market prices)

		Central Government Overall Surplus/ Deficit (-)	Bud- getary Burden of Public Enter- prises <u>1/</u>	Of Which: Subsidies and Other Current Transfers	Central Government Overall Surplus/ Deficit Excluding Public Enterprise Burden	Direct Taxes Paid By Public Enterprises
Thailand	1969	-2.3	0.4	...	-1.9	...
	1970-73	-3.9	0.4	...	-3.5	...
	1974-77	-2.0	—	...	-2.0	...
	1978-79	-3.4	0.2	0.1	-3.2	...
Europe						
Portugal	1978-80	-10.8	...	4.5	...	...
Turkey	1964-65	-1.8	0.9	0.4	-0.9	...
	1966-69	-1.6	0.8	0.4	-0.8	...
	1970-73	-2.3	1.8	0.1	0.5	...
	1974-77	-2.6	2.3	1.3	-0.3	...
	1978-79	-4.4	3.5	2.7	-0.9	...
Middle East						
Egypt	1975-77	-18.2	...	10.5	...	...
	1978-79	-14.2	...	10.4	...	...
Western Hemisphere (average) <u>2/</u>		-4.5	1.7	0.9	-2.8	...
Argentina <u>10/</u>	1970-73	-3.1	1.4	...	-1.7	...
	1974-75	-8.5	2.2	...	-6.3	...
	1976-77	-5.2	2.7	1.0	-2.5	...
	1978-80	-3.1	0.9	...	-2.2	...
Bahamas	1975-77	-1.0	3.0	0.8	2.0	...
	1978-79	-0.6	2.0	0.4	1.4	...
Barbados	1975-77	-5.8	3.8	1.0	-2.0	...
	1978-80	-3.7	3.8	1.3	0.1	...
Bolivia	1972-73	-0.7	0.5	0.2	-0.2	2.2
	1974-77	-0.1	-0.4	0.1	-0.5	3.7
Chile <u>10/</u>	1974-77	-1.3	0.2	1.0	-1.1	4.7
	1978-80	3.4	-2.5	0.3	0.9	3.9
Colombia	1974-77	—	0.1	0.3	0.1	...
	1978-80	—	0.3	0.3	0.3	...
Dominican Republic <u>10/</u>	1972-73	-0.5	0.3	0.1	-0.2	...
	1974-77	—	1.4	0.6	1.4	...
	1978-79	-3.7	2.1	0.7	-1.6	...
Guatemala	1970-73	-1.4	0.3	—	-1.1	...
	1974-77	-1.4	1.5	0.1	0.1	...
	1978-79	-2.6	1.9	—	-0.7	...
Guyana	1971-73	-12.5	1.4	0.6	-11.1	...
	1974-77	-15.0	1.5	1.1	-13.5	4.0
	1978-80	-23.4	3.8	1.1	-19.0	4.1
Jamaica <u>10/</u>	1976-77	-17.5	1.9	0.2	-15.6	...
	1978-79	-12.9	3.4	1.3	-9.5	...
Mexico <u>10/</u>	1975-77	-4.8	2.1	1.0	-2.7	1.1
	1978	-3.0	1.7	0.9	-1.3	1.5

Table 7 (concluded). Budgetary Burden of Public Enterprises  
(As percentages of GDP at market prices)

		Central Government Overall Surplus/ Deficit (-)	Bud- getary Burden of Public Enter- prises <u>1/</u>	Of Which: Subsidies and Other Current Transfers	General Government Overall Surplus/ Deficit Excluding Public Enterprise Burden	Direct Taxes Paid By Public Enterprises
Panama	1970-73	-4.9	0.8	0.1	-4.1	...
	1974-77	-7.5	1.6	0.1	-5.9	...
	1978-79	-9.7	2.5	0.4	-7.2	...
Paraguay	1970-73	-0.7	0.4	0.1	-0.3	...
	1974-77	0.1	0.4	0.1	0.5	—
	1978-80	0.3	0.3	0.1	0.6	—
Peru	1972-73	-2.1	0.9	0.2	-1.2	...
	1974-77	-2.9	1.0	0.4	-1.9	...
	1978-79	0.7	0.4	0.1	1.1	...
St. Lucia	1975-77	-4.2	1.3	0.4	-2.9	...
	1978-79	-1.4	1.7	0.4	0.3	...
Uruguay	1976-77	-1.7	0.5	0.3	-1.2	1.4
	1978-79	-0.4	0.6	0.3	0.2	1.5

Sources: Appendix; and International Monetary Fund, Government Finance Statistics Yearbook (various issues).

1/ Defined as government subsidies, transfers, and net lending to public enterprises less dividends and interest payments to government.

2/ Weighted average for 1974-77 or closest available period using GDP at market prices in U.S. dollars as weights. Figures in parentheses are averages for countries for which both government deficit and budgetary burden figures are available.

3/ General government.

4/ Figures in parentheses are for eight large enterprises only.

5/ Central government enterprises only.

6/ Figures for taxes include taxes on petroleum companies only.

7/ Figures in parentheses exclude iron ore and petroleum enterprises nationalized in 1975.

8/ Figures relate to all public corporations; figures in parentheses relate to all non-financial enterprises.

9/ Figures relate only to five nonfinancial enterprises organized as departmental enterprises.

10/ Major enterprises only.

To begin with, there is a clear tendency for large government deficits to be associated with large budgetary burdens. <sup>1/</sup> For example, the two industrial countries with the largest budgetary burdens in the mid-1970s, Belgium and Canada, also had the largest government deficits. The four developing countries with the largest burdens, Algeria, Bangladesh, Sri Lanka, and Zambia, were among those with the highest government deficits. In addition, there is some tendency for large increases in government deficits to be associated with large increases in the budgetary burden of public enterprises. This is not very strong in industrial countries. Increases in burdens can explain only a small part of the substantial increases in government deficits that have occurred in Belgium, Italy, and the United Kingdom. However, many of the developing countries that have had large increases in government deficits, such as Sri Lanka, Tanzania, Turkey, and Zambia, have also experienced substantial growth in the budgetary burdens of their public enterprises.

### c. Financing from banking system

Finance from the banking system is important because of its implications for money supply growth. Of special significance from this point of view is the fact that in several countries, for example, Ghana, Korea, Peru, and Turkey, public enterprises have direct access to borrowing from the central bank. Such borrowing will have a direct impact on credit and the money supply. Borrowing from commercial banks is different in this respect in that public enterprise liabilities generally cannot be used as reserve assets by banks. Consequently, the effect may merely be to replace credit that would otherwise have been extended to the private sector. Whether this is so will depend on the extent to which additional reserve assets are made available by the authorities to match the demand for credit by public enterprises.

The available information on the growth in credit to public enterprises and on the share of this credit in total credit is shown in Table 8. It should be noted that the country coverage is limited and probably unrepresentative. It is mainly confined to small, developing countries; excluded countries, especially industrial ones, seem likely to have substantially lower shares of public enterprise credit in total credit.

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<sup>1/</sup> A regression of the central government deficit on the budgetary burden gives the following result:

$$D = 3.0 + 0.56 B \quad \bar{R}^2 = 0.23 \\ (0.153)$$

where:

D = central government deficit as a percentage of GDP

B = budgetary burden as a percentage of GDP

The period is 1974-77 or the closest available period and included are the 42 countries shown in Table 7 for which figures for both variables could be obtained. The figure in parentheses is the standard error; the t-ratio is 3.7, significant at the 99 per cent level.

Table 8. Contribution of Public Enterprises to Growth in Domestic Credit

		Total Growth in Domestic Credit (In per cent a year)	Growth in Credit to Public Enterprises (In per cent a year)	Public Enterprise Share in Total Domestic Credit at End-Period (In per cent)
"World" (average) <u>1/</u>		29.1	46.1	24.5
Industrial countries				
Norway	1976	...	...	4.5
	1977	21.4	21.6	4.5
	1978-81	12.4	12.7	4.5
Developing countries				
Oil exporting countries				
Indonesia	1973	...	...	17.4
	1974-77	27.9	77.9	65.3
	1978-80	11.3	24.5	91.5
Africa				
Benin	1973	...	...	15.8
	1974-77	28.4	73.7	52.8
	1978-80	30.4	31.6	54.2
Gambia, The	1973	...	...	40.2
	1974-77	29.0	2.9	16.2
	1978-81	29.3	62.4	40.5
Ghana	1963	...	..	17.6
	1964-65	45.0	24.0	12.8
	1966-69	13.5	13.5	12.8
	1970-72	12.8	31.4	20.2
	1974-77	46.2	16.3	11.0
	1978-80	35.1	66.8	20.7
Guinea	1977	...	...	73.8
	1978-80	6.0	12.0	87.1
Ivory Coast	1973	...	...	18.4
	1974-77	36.9	54.6	29.9
	1978-79	18.2	16.4	29.0

Table 8 (continued). Contribution of Public Enterprises to Growth in Domestic Credit

		Total Growth in Domestic Credit (In per cent a year)	Growth in Credit to Public Enterprises (In per cent a year)	Public Enterprise Share in Total Domestic Credit at End-Period (In per cent)
Malawi	1965	...	...	1.6
	1966-69	36.2	65.3	3.6
	1970-73	12.3	-7.5	1.6
	1974-77	40.8	186.7	28.1
	1978-81	25.4	6.7	14.7
Mali	1968	...	...	18.7
	1969	24.6	33.5	20.0
	1970-73	11.5	23.1	29.8
	1974-77	20.5	22.7	31.9
	1978	11.0	17.6	37.9
Mauritania	1975	...	...	18.3
	1976-77	36.9	-8.8	8.1
	1978-80	7.4	6.5	7.9
Niger	1975	...	...	44.9
	1976-77	-2.4	-23.8	27.4
	1978-80	71.7	81.5	32.4
Senegal	1973	...	...	32.8
	1974-77	25.5	29.9	37.7
	1978	31.1	34.4	38.7
Somalia	1975	...	...	65.5
	1976-77	21.3	31.1	76.6
	1978-81	40.0	17.4	37.9
Sudan	1965	...	...	5.3
	1966-69	17.2	15.8	5.1
	1970-73	17.8	61.1	17.8
	1974-77	36.5	38.6	18.9
	1978-81	25.5	31.1	22.5
Togo	1975	...	...	29.3
	1976-77	33.5	20.4	23.9
	1978-79	22.4	18.5	22.4

Table 8 (continued). Contribution of Public Enterprises to Growth in Domestic Credit

		Total Growth in Domestic Credit (In per cent a year)	Growth in Credit to Public Enterprises (In per cent a year)	Public Enterprise Share in Total Domestic Credit at End-Period (In per cent)
Upper Volta	1973	...	...	59.7
	1974-77	90.4	64.6	33.3
	1978	35.5	13.2	27.8
Asia				
Bangladesh	1976	...	...	39.1
	1977	11.7	4.8	36.7
	1978-81	27.0	29.2	39.3
Burma	1977	...	...	21.7
	1978-80	16.4	77.0	76.4
Nepal	1975	...	...	23.0
	1976-77	14.9	-13.7	13.0
	1978-80	28.8	24.6	11.7
Pakistan	1974	...	...	7.9
	1975-77	22.2	40.1	11.9
	1978-81	17.7	24.6	15.0
Europe				
Greece	1969	...	...	5.8
	1970-73	20.9	27.2	7.1
	1974-77	25.4	22.5	6.5
	1978-79	22.2	25.5	6.8
Portugal	1976	...	...	23.3
	1977-80	18.6	20.0	24.1
Turkey	1961	...	...	1.2
	1962-65	15.0	41.9	2.9
	1966-67	16.7	18.9	4.2
	1969	18.2	7.4	6.7
	1970-73	18.2	25.6	8.6
	1974-77	43.6	67.6	15.9
	1978	26.1	32.5	16.8

Table 8 (concluded). Contribution of Public Enterprises to Growth in Domestic Credit

		Total Growth in Domestic Credit (In per cent a year)	Growth in Credit to Public Enterprises (In per cent a year)	Public Enterprise Share in Total Domestic Credit at End-Period (In per cent)
Middle East				
Egypt	1973	...	...	15.8
	1974-77	26.9	37.6	21.8
	1978-81	33.6	19.4	13.9
Yemen Arab Republic	1971	...	...	10.5
	1972-73	17.3	66.5	21.1
	1974-77	18.6	8.1	14.6
	1978-80	96.0	112.1	18.5
Western Hemisphere				
Bolivia	1973	...	...	11.7
	1974-77	27.6	74.0	40.3
Guyana	1965	...	...	21.8
	1966-69	21.5	-3.6	8.7
	1970-73	24.5	19.1	7.2
	1974-77	28.6	55.5	15.5
	1978-81	23.9	33.4	20.7
Haiti	1961	...	...	0.7
	1962-65	8.0	43.8	2.2
	1966-69	5.8	25.9	4.3
	1970-73	17.1	40.5	9.0
	1974-77	31.5	59.6	19.5
	1978-81	16.6	10.2	15.6
Peru	1961	...	...	1.3
	1962-65	18.4	53.6	3.6
	1966-69	11.9	21.2	5.0
	1970-73	24.7	50.9	10.7
	1974-77	38.6	70.0	24.3
	1978-81	55.5	30.0	11.8

Sources: International Monetary Fund, International Financial Statistics, various issues; and Appendix.

1/ Weighted average for 1974-77 or closest available period using GDP at market prices in U.S. dollars as weights.

It is clear that in the countries included, credit to public enterprises has generally risen markedly in recent years, although there have been substantial variations both between countries and over time. Credit to public enterprises has also increased much faster than that to other sectors of the economy. For example, in the mid-1970s, it increased at an average rate of 46 per cent a year, almost twice the rate of growth of other domestic credit of 27 per cent. As a result, the share of public enterprise credit in total domestic credit has increased substantially. For the countries for which an adequate run of data is available, the average share rose by 20 percentage points between the early 1970s and the end of the 1970s to stand at a level of almost 30 per cent.

Of particular interest is the extent to which additional public enterprise credit leads to overall credit creation rather than just credit diversion. The large shares of public enterprise credit in total credit in many of the countries in Table 8 make it likely that a substantial proportion of any growth in public enterprise credit will be reflected in net credit creation. This is supported by the fact that there is a strong cross-country correlation between the size of public enterprises' direct contributions to credit growth and the overall rate of credit growth. <sup>1/</sup> However, a proper analysis of this issue requires a more complete modeling of the monetary system than can be attempted here.

d. Foreign borrowing and other sources of domestic finance

Foreign borrowing by public enterprises is significant because of its implications for the balance of payments. Such borrowing generally has less of an impact on economic stabilization in the short term than government or bank finance. In developing countries, it is often used

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<sup>1/</sup> A cross-country regression of the growth in total domestic credit on the direct contribution of public enterprises to that growth--that is, the product of public enterprises' share in credit and the growth in credit to public enterprises--yields a coefficient that is very close to 1, suggesting that public enterprise credit growth is almost fully passed through into credit creation. The equation is

$$C = 17.40 + 0.977P \quad \bar{R}^2 = 0.40 \\ (0.218)$$

where

C = growth rate of total domestic credit

P = public enterprises' contribution to growth in credit.

The period is 1974-77 or the closest available period and included are the 29 countries shown in Table 8. The figure in parentheses is the standard error. It should be noted that common factors influencing credit to both public enterprises and other sectors of the economy could disguise the extent of credit diversion in an equation of this form.

to purchase imported capital equipment and may therefore have little immediate effect on the overall balance of payments or domestic liquidity. Much more critical is the resulting debt burden, which can be a major source of problems in the longer term, especially as repayments will have to be made in foreign exchange.

One measure of the quantitative importance of foreign borrowing has already been given in Table 6. A further indication of its large size can be obtained from the fact that, over the period 1976-78, public enterprises accounted for 23 per cent of all borrowing on international capital markets identified by the World Bank, and for 33 per cent of such borrowing by developing countries. <sup>1/</sup>

Very little information is available on the residual category of other domestic borrowing. In many cases, this probably includes a substantial element of unidentified financing from the other three sources. The one type of such borrowing that is worth mentioning is domestic bond issues by public enterprises. These are of some quantitative importance in industrial countries. For example, the share of public enterprises in total gross domestic bond issues was 7 per cent in the Federal Republic of Germany, 1970-75; 6 per cent in Italy, 1976-79; 10 per cent in Japan, 1976-79; and 9 per cent in Spain, 1979. <sup>2/</sup> Many of these are taken up by the government or the banking system. However, outside holdings appear to have reached moderately high levels in some countries, for example, Belgium.

## V. Conclusions

This paper has brought together a large amount of statistical information on public enterprises in many countries. Although this has provided important insights, the comprehensiveness and comparability of some of the data is less than is desirable for cross-country analysis. A basic, albeit mundane, conclusion is therefore that there is a need to improve both the quantity and quality of statistics on public enterprises.

Despite some statistical shortcomings, it is clear from the data presented that public enterprises are of considerable economic significance. In most countries, they now contribute substantial proportions of aggregate output and investment. They are operating in virtually all kinds of economic activity and are prominent in key sectors of the economy. It is therefore essential that governments should examine carefully the role and performance of public enterprises.

It is also clear that the overall deficits of public enterprises are extremely large in many countries. As a result, public enterprises make sizable demands on government budgets, bank credit, and foreign borrowing.

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<sup>1/</sup> See World Bank (1979).

<sup>2/</sup> These figures were obtained from OECD, Financial Statistics.

The precise effects of these demands will vary from country to country depending on economic circumstances. However, their large size strongly suggests that, in many countries, public enterprises have been a major cause of stabilization problems and, as a result, have contributed significantly to inflation and balance of payments difficulties.

Of course, public enterprises may also bring economic benefits. They are widely regarded as important means of furthering allocative, distributional, and growth objectives. These issues have not been examined here. Nevertheless, it appears from the data presented that the commercial return and saving of public enterprises is generally low, which is at least of some relevance to their effect on growth. Also, the work that has been done on these aspects suggests that the benefits of public ownership in terms of the three above-mentioned objectives are often not particularly great. <sup>1/</sup> As a consequence, measures to reduce the overall deficits of public enterprises may often be particularly appropriate for countries facing stabilization problems.

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<sup>1/</sup> See, for example, Gillis (1980).

### Sources of Statistics

This Appendix provides details of the sources for the data shown in Tables 1 to 8 and some comments on the coverage of the figures for individual countries.

Five types of source were used. First, international organizations publish statistics on certain aspects of public enterprise operations. Data on their investment and saving is published by the United Nations in the Yearbook of National Accounts Statistics (UNNA) and by the Organization for Economic Cooperation and Development in National Accounts Statistics (OECDNA) and Financial Statistics (OECDFS); data on credit to public enterprises is given in the IMF's International Financial Statistics (IFS); data on flows from public enterprises to central governments is provided in the IMF's Government Finance Statistics Yearbook. <sup>1/</sup> In principle, each of these organizations uses a common definition for all countries. However, these definitions differ between the organizations. More important, in practice, however, it appears that corrections are often not made for differences between countries in their definitions of the public enterprise sector. Consequently, lack of comparability of many of the public enterprise figures in these international sources is a problem. <sup>2/</sup> Also, the country coverage of the data is generally limited--for example, public enterprise statistics are only given for 13 of the 150 countries included in the Yearbook of National Accounts Statistics.

Second, a number of countries separately identify public enterprises in their published statistics for national accounting, budgetary, and monetary aggregates. A group of countries, including India and the United Kingdom, includes public enterprise sectors in their national accounts and provides information on the income and capital account operations of these enterprises; a group including Denmark and Sri Lanka shows flows to and from public enterprises in published economic classifications of their budgets; and a group including Bangladesh and Greece separately identifies credit to public enterprises in their monetary statistics. These sources are again subject to the problem that there are significant differences between countries--and sometimes even between different sets of statistics for the same country--in the definitions of the public enterprise sector. It is usually difficult to correct for these.

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<sup>1/</sup> These sources were generally used for aggregate national accounting, budgetary, and monetary data.

<sup>2/</sup> Part of the problem is that the common definitions are imprecise and open to different interpretations--see Jones (1975), p. 39, for a discussion of this in the case of the United Nations definition. However, adjustments also appear not always to be made to make the figures conform even to these broad definitions.

Third, several countries publish information on public enterprise operations outside of an aggregate statistics framework. An example is statistics on public enterprise investment included in development plans as in Burma and Algeria. An additional difficulty in such cases is that the definition of, say, "investment" may differ from that used for national accounting purposes.

Fourth, there have been several academic studies of public enterprises in particular countries or regions. Important examples are comparative studies of EEC countries--see Keyser and Windle (1978), Centre Européen de l'Entreprise Publique (CEEP) (1978, 1981); one of South and Southeast Asian countries undertaken by the International Development Research Centre in Ottawa, Canada--see Sakong (1979)--and one of Latin American countries--see Economic Commission for Latin America (ECLA) (1971).

Fifth, information on individual enterprises is available in their published accounts. The problem with this is the computational effort involved in obtaining aggregate statistics. Individual enterprise data were mainly used for countries with small public enterprise sectors and for improving the comparability of the statistics.

Details of the coverage and sources of the figures for individual countries are set out below. Where a source providing aggregate public enterprise data was used, the definition given is generally the heading shown in the publication from which the statistics were taken. Where possible, a more precise description of the coverage is also given. However, in many cases, no information on the exact criteria used to define the public enterprise sector could be obtained. For brevity, enterprise accounts and the other sources on individual enterprises that were used are generally not included.

## 1. Industrial countries

### Australia

Coverage: Public trading enterprises as defined in the national accounts.

Sources: Australian Bureau of Statistics, Australian National Accounts (Canberra) (various issues); Department of the Treasury, Budget Statement (Canberra) (various issues); UNNA (various issues).

Remarks: Because of data limitations, it is assumed in the national accounts that public enterprises distribute the whole of their net operating surplus. To the extent that part of this surplus is retained, the figures shown for the current account surplus will be understated and those for the overall deficit overstated.

Austria

Coverage: Nationalized enterprises, state and municipal undertakings, excluding banks and insurance companies.

Sources: CEEP (1978, 1981).

Belgium

Coverage: Public enterprises as defined in Belgian official statistics.

Sources: Ministry of Finance, Bulletin de Documentation (Brussels) (various issues); National Institute of Statistics, Annuaire Statistique de la Belgique (Brussels) (various issues); OECDFS (various issues). Public enterprises in Belgium are also discussed in Keyser and Windle (1978) and CEEP (1978, 1981).

Remarks: Belgian statistics for public enterprise investment include financial enterprises, public hospitals, and agricultural research institutes. The figures were adjusted to exclude these bodies.

Canada

Coverage: Nonfinancial government enterprises at the federal, provincial, and local government levels as defined in the national accounts.

Sources: Statistics Canada, Financial Flow Accounts (Ottawa) (various issues); OECDFS (various issues); UNNA (various issues).

Denmark

Coverage: GDP and investment figures are for public utilities, transport, and communications enterprises included in Keyser and Windle (1978).

Sources: Keyser and Windle (1978); Danish Statistics, Statistical Yearbook (Copenhagen) (various issues). Public enterprises in Denmark are also discussed in CEEP (1978, 1981).

Finland

Coverage: Nonfinancial joint stock companies in which the majority of the share capital is owned by central government bodies or companies.

Sources: OECDFS (various issues). Advisory Committee on state-owned companies, State-Owned Companies in Finland (Helsinki) (various issues).

France

Coverage: Public enterprises as defined in the national accounts.

Sources: National Institute of Statistics and Economic Studies (INSEE), Rapport sur les Comptes de la Nation (Paris) (various issues); INSFE, Les Entreprises Publiques de 1959 à 1969 (Paris, 1972); INSEE, Les Grandes Entreprises Nationales de 1959 à 1976 (Paris, 1978). Public enterprises in France are also discussed in Keyser and Windle (1978) and CEEP (1978, 1981).

Remarks: Since 1974, the public enterprises statistics in the national accounts have only included eight large public enterprises engaged in energy, transport, and communications. They have excluded important public enterprises, particularly in manufacturing. Before 1974, the national accounts figures covered over 40 enterprises, including public enterprises in manufacturing. They also included public hospitals. It was not possible to exclude these from the figures.

Federal Republic of Germany

Coverage: Enterprises in which at least 50 per cent of the equity or voting rights are publicly owned.

Sources: CEEP (1978, 1981), Keyser and Windle (1978).

Remarks: Housing enterprises were omitted because of lack of data.

Ireland

Coverage: State-sponsored bodies operating in energy, transport, and communications, and industry plus the Post Office.

Source: CEEP (1978, 1981). Public enterprises in Ireland are also discussed in Keyser and Windle (1978).

Italy

Coverage: GDP and investment figures are for the public enterprises included in the annual survey conducted by the Central Statistics Office; figures for components of overall deficits are for railways, posts and telephones, electricity, and 203 large public enterprises included in Mediobanca (1981).

Sources: Keyser and Windle (1978); CEEP (1978, 1981); Mediobanca, Dati Cumulative di 1078 Società Italiane (1968-1980); Ministry of Budget and Treasury, Relazione Generale Sulla Situazione del Paese (Rome) (various issues).

Japan

Coverage: Public enterprises as defined for United Nations national accounting purposes.

Sources: OECDNA (various issues). Public enterprises in Japan are also discussed in Chalmers Johnson, Japan's Public Policy Companies (American Enterprises Institute, Washington, D.C., 1978).

Remarks: The United Nations definition of a public enterprise is an incorporated or large unincorporated enterprise in which public authorities hold a majority of the shares and/or can exercise control over management decisions. See Jones (1975), p. 39, for a discussion of this definition.

Luxembourg

Coverage: Public utilities, transport, and communications enterprises included in Keyser and Windle (1978).

Source: Keyser and Windle (1978).

Netherlands

Coverage: Capital account figures are for public enterprises as defined for United Nations national accounting purposes; GDP figures are for enterprises included in Keyser and Windle (1978).

Sources: UNNA (various issues); OECDFS (various issues); Keyser and Windle (1978). Public enterprises in the Netherlands are also discussed in CEEP (1978, 1981).

Remarks: See under Japan.

Norway

Coverage: Enterprises in which public authorities hold 50 per cent or more of the share capital.

Sources: Bank of Norway, Economic Bulletin (Oslo) (various issues); Central Bureau of Statistics, Public Sector Finances (Oslo) (various issues); OECDFS (various issues); IFS (various issues).

Spain

Coverage: Public enterprises included in CEEP (1981).

Sources: CEEP (1978, 1981).

Sweden

Coverage: Central government and municipal enterprises as defined in the national accounts.

Sources: Ministry of Economic Affairs, The Swedish Economy (Stockholm) (various issues).

United Kingdom

Coverage: Public corporations.

Sources: Central Statistical Office, National Income and Expenditure (London) (various issues). Public enterprises in the United Kingdom are also discussed in Keyser and Windle (1978), CEEP (1978, 1981) and Richard Pryke, The Nationalised Industries: Policies and Performance since 1968 (Oxford: Martin Robertson, 1981).

Remarks: Public corporations include a number of financial enterprises and other entities, for example, the Bank of England and the National Dock Labour Board, which are not public enterprises according to the definition used in this paper; they exclude subsidiaries of the National Enterprise Board, for example, British Leyland, which should be counted as public enterprises. It was not feasible to correct for these differences in coverage. The figures for the period before 1961 were, however, adjusted to include the Post Office which, prior to that date, was a government department and not a public corporation.

United States

Coverage: Public nonfinancial enterprises as defined for United Nations national accounting purposes.

Sources: UNNA (various issues).

Remarks: See under Japan.

2. Developing countries

a. Oil exporting countries

Algeria

Coverage: Public enterprises as defined in the public sector investment budget.

Source: Public enterprises in Algeria are discussed in Christian Palloix, "Industrialisation et Financement lors des Deux Plans Quadriennaux," Revue Tiers-Monde, Vol. 21 (July-September, 1980), pp. 23-83.

Remarks: Figures for public enterprise investment include some expenditure that is not treated as capital expenditure in the national accounts, for example, spending on training. It was not feasible to correct for this.

Indonesia

Coverage: Public enterprises and official entities as defined in banking statistics.

Source: Public enterprises in the mining sector are discussed in Beals (1980).

Venezuela

Coverage: Iron ore and petroleum industries nationalized in 1975 plus about 40 enterprises, the most important of which are IVP (petrochemicals); VENALUM and INTERALUMINA (aluminum); INOS (water); CADAFE (electricity); CANTV (telecommunications); IADAN (docks); CANV (shipping); INP (port.); LAV (airline); IAAFE (railway); CMA (agricultural marketing); Post Office; VENFERCA (fertilizers); VTV (television); tourism corporation; MINERVEN (minerals); IAAM (airport); subway; bus company; public works company.

b. Africa

Benin

Coverage: Output figures are for 10 enterprises: SOBEPALH (palm oil); SODERA (agriculture); SONAFEL (fruit and vegetables); SONAPECHE (fish marketing); SONIAH (irrigation); SONICOG (oilseed processing); SOBETEX (textiles); La Béninoise (brewery); OCBN (railway); SBEE (electricity). Credit figures are for public and semipublic enterprises as defined in Banque Centrale des Etats de L'Afrique Ouest (BCEAO) statistics.

Sources: BCEAO, Notes d'Information et Statistiques (Dakar) (various issues) for credit figures.

Botswana

Coverage: Nonfinancial parastatal bodies as defined in the national accounts.

Source: Central Statistics Office, National Accounts of Botswana, 1978-79 (Gaborone).

Remarks: Included are statutory bodies, corporations, and companies in which public authorities have an ownership stake of at least 50 per cent.

Congo

Coverage: Fifty-four major public enterprises.

Gambia

Coverage: Investment figures are for 9 enterprises: Utilities Corporation; Public Transport Corporation; Ports Authority; two airlines; National Trading Company; two agricultural marketing boards; a hotel.

Remarks: Credit figures include a relatively small amount of credit to local authorities.

Ghana

Coverage: Output figures are for state and mixed enterprises as defined in industrial statistics.

Sources: Tony Killick, Development Economics in Action: A Study of Economic Policies in Ghana (New York: St. Martin's Press, 1978); IFS (various issues).

Ivory Coast

Coverage: Public and mixed enterprises as defined in official statistics.

Sources: BCEAO, Notes d'Information et Statistiques (Dakar) (various issues); Den Tuinder, Bastiaan A., Ivory Coast: The Challenge of Success (Baltimore: Johns Hopkins, 1978); Ministry of Finance, Centrale de Bilans, 1979 (Abidjan).

Remarks: Included are most enterprises with a majority government shareholding plus some with a minority government shareholding. Exact coverage varies between different statistical series.

Kenya

Coverage: Nonfinancial parastatal bodies plus East African Community enterprises for output and investment.

Sources: Central Bureau of Statistics, Statistical Abstract (Nairobi) (various issues).

Remarks: Figures for budgetary burden up to 1976 include all public corporations, financial as well as nonfinancial; those for the period after 1976 include all nonfinancial enterprises, private as well as public.

Liberia

Coverage: Nonfinancial public corporations.

Remarks: Included are 18 enterprises that are wholly government owned plus two enterprises with mixed ownership in one of which the Government has a minority shareholding.

Malawi

Coverage: The Post Office, which is organized as a government department, plus 11 enterprises: ADMARC (agricultural marketing); airline; railway; two development corporations; tobacco and tea authorities; Housing Corporation; water and electricity enterprises; Book Service.

Sources: Ministry of Finance, Public Sector Financial Statistics (various issues); National Statistical Office, Malawi Statistics Yearbook (various issues).

Remarks: Credit figures also include credit to local authorities. Investment figures include investment in railway infrastructure counted as central government expenditure in the Malawi Government accounts.

Mali

Coverage: Twelve enterprises: Air Mali; COMATEX (textiles); EDM (energy); ITEMA (textiles); PPM (chemicals); SEPAMA (groundnuts); SEPOM (oilseed); SMECMA (agricultural machinery); SOMIFEX (trading); SONATAM (tobacco); SCAER (agricultural inputs); OPAM (agricultural marketing).

Remarks: The enterprises included account for over 85 per cent of the sales of the public enterprise sector.

Mauritania

Coverage: Investment figures are for 11 enterprises: SONADER (rural development); SONIMEX (agricultural marketing); SOMIP (fish processing); SNIM (mining); SAIM (metal industries); airline; SOHELEC (public utilities); SOMACAT (freight); STPN (bus transport); PHARMARIM (pharmaceuticals distribution); SOCOGIM (housing).

Sources: IFS (various issues) for credit figures.

Mauritius

Coverage: Nonfinancial public enterprises, as defined in the national accounts, plus posts and telephones, which are organized as government departments.

Sources: Central Statistical Office, Digest of Statistics (Rose Hill) (various issues).

Niger

Coverage: Public and semipublic enterprises as defined in BCEAO statistics.

Source: BCEAO, Notes d'Information et Statistiques (Dakar) (various issues).

Senegal

Coverage: Public enterprises and mixed companies as defined in official statistics.

Sources: BCEAO, Notes d'Information et Statistiques (Dakar) (various issues) for credit figures; SONED, Les Activités du Secteur Moderne au Sénégal en 1974 (Dakar, 1976).

Remarks: Included are all enterprises in which the Government has a shareholding.

Sierra Leone

Coverage: The Post Office, which is a government department, plus 16 public corporations and companies in which the Government has a shareholding.

Sudan

Coverage: Public entities as defined in monetary statistics.

Sources: Bank of Sudan, Annual Report (various issues).

Tanzania

Coverage: Nonfinancial parastatal enterprises and East African Community enterprises.

Sources: Bureau of Statistics, National Accounts of Tanzania, (Dar es Salaam) (various issues); Bureau of Statistics, Analysis of Accounts of Parastatals (Dar es Salaam) (various issues); Government of Tanzania, Economic Survey (Dar es Salaam) (various issues).

Remarks: Figures for components of overall deficits and financing are for nonfinancial parastatal enterprises only.

Togo

Coverage: Output figures are for 10 enterprises: OPT (phosphates); OPAT (agricultural marketing); SONAPH (palm oil); SNS (steel); STH (oil refinery); SOTEXMA and TOGOROUTE (agricultural machinery supply); SALINTO (salt); a hotel; SOTOMA (quarrying). Credit figures are for public and semipublic enterprises as defined in BCEAO statistics.

Sources: BCEAO, Notes d'Information et Statistiques (Dakar) (various issues).

Tunisia

Coverage: Government agencies, offices, and enterprises in which the Government holds more than 10 per cent of the equity.

Sources: National Institute of Statistics, Statistical Abstract (Tunis) (various issues).

Upper Volta

Coverage: Public and semipublic enterprises as defined in BCEAO statistics.

Sources: BCEAO, Notes d'Information et Statistiques (Dakar) (various issues).

Zambia

Coverage: Public enterprises as defined in the national accounts.

Source: Central Statistical Office, National Accounts 1972 (Lusaka, 1978) for output and capital account figures.

c. Asia

Bangladesh

Coverage: Nonfinancial public enterprises included in Bangladesh Institute of Development Studies (BIDS) (1977), plus Post Office and Telephone and Telegraph Department.

Sources: BIDS, Public Enterprise in an Intermediate Regime: A Study in the Political Economy of Bangladesh (Dacca, 1977); Bureau of Statistics, Statistical Abstract (Dacca) (various issues).

Burma

Coverage: State economic enterprises.

India

Coverage: Departmental enterprises and public nondepartmental nonfinancial enterprises as defined in the national accounts.

Sources: Central Statistical Organization, National Accounts Statistics (New Delhi) (various issues). Public enterprises in India are also discussed in Indian Institute of Management, Performance of Indian Public Enterprise Sector (Bangalore, 1977).

Remarks: Net borrowing by the general government, as given in the national accounts, was used as a measure of the overall deficit of the general government.

Korea

Coverage: Government invested corporations plus government enterprises, as defined in flow-of-funds accounts, for capital operations; nonfinancial enterprises included in the public enterprise sector by Jones (1975) and Sakong (1978) for output.

Sources: Bank of Korea, Flow-of-Funds Accounts in Korea (1978); Bank of Korea, Economic Statistics Yearbook (Seoul) (various issues); Jones (1975); Il Sakong, "Macroeconomic Aspects of the Korean Public Enterprise Sector," Korea Development Institute Working Paper No. 7906 (1978).

Remarks: Flow-of-funds figures include five enterprises organized as government departments and nonfinancial enterprises in which the Government has a direct majority shareholding. Jones (1975) and Sakong (1978) also include indirect shareholdings. The figures for investment and output are therefore not strictly comparable.

Nepal

Coverage: Nonfinancial public enterprises included in Corporation Coordination Council (1977) plus the Post Office.

Source: Corporation Coordination Council and Industrial Service Center, Performance of Public Enterprises in Nepal (1977).

Pakistan

Coverage: One hundred and fifty nonfinancial enterprises included in Investment Advisory Center of Pakistan (1977) for output; government enterprises plus autonomous and semiautonomous organizations engaged in mining and quarrying, manufacturing, electricity and gas, as defined in the national accounts, for investment.

Sources: Investment Advisory Center of Pakistan, Role and Performance of Public Enterprises in the Economic Growth of Pakistan (1977); Statistics Division, Government of Pakistan, Pakistan Statistical Yearbook (Karachi) (various issues).

Remarks: Because of differences in coverage, the figures for investment and output are not strictly comparable.

Papua New Guinea

Coverage: Electricity Commission; Post Office; Harbors Board; airline; shipping company; Food Marketing Corporation; palm oil joint ventures.

Philippines

Coverage: Public enterprises as defined for United Nations national accounting purposes.

Sources: UNNA (various issues).

Remarks: See under Japan.

Singapore

Coverage: Thirty-eight major public enterprises in manufacturing.

Source: Sheng-Yi Lee, Public Finance and Public Investment in Singapore (Institute of Banking and Finance, Singapore, 1978).

Sri Lanka

Coverage: Output figures are for nonfinancial enterprises included in National Institute of Management (1977); other figures are for public enterprises and public corporations as defined in the national accounts.

Sources: National Institute of Management, Public Enterprises in Economic Development of Sri Lanka (1977); Central Bank of Ceylon, Review of the Economy (various issues).

Remarks: National accounts figures include financial enterprises and are not strictly comparable with those for output.

Taiwan\*

Coverage: Public corporations and government enterprises as defined in the national accounts.

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\*See note to Table 1, page 15.

Source: Directorate-General of Budget, Accounting, and Statistics, National Income of the Republic of China\* (1981).

Thailand

Coverage: Nonfinancial public enterprises included in National Institute of Development Administration (NIDA) (1979).

Source: NIDA, Management and Performance of Public Enterprises in Thailand (1979).

Remarks: Included are enterprises in which the Government has a majority shareholding.

d. Europe

Greece

Coverage: Output and investment figures are for non-financial public enterprises included in CEEP (1981); credit figures are for public enterprises as defined in monetary statistics.

Sources: CEEP (1981), National Statistical Service, Statistical Yearbook of Greece (Athens) (various issues).

Malta

Coverage: Government enterprises as defined in the national accounts.

Sources: Central Office of Statistics, National Accounts of the Maltese Islands (Valleta) (various issues).

Remarks: Figures exclude industrial enterprises controlled by the Malta Development Corporation, which is wholly owned by the Government.

Portugal

Coverage: Public enterprises as defined for United Nations accounting purposes for the period up to 1975; public enterprises as defined in the Portuguese national accounts for the period since 1976.

Sources: OECDNA (various issues), Economic Survey of Portugal 1979 (Paris, 1979); Bank of Portugal, Annual Report (Lisbon) (various issues).

Remarks: Figures include financial as well as nonfinancial enterprises. As a result of a change in classification, figures for the period before 1975 are not strictly comparable with those for later years. See also under Japan.

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\*See note to Table 1, page 15.

Turkey

Coverage: Nonfinancial state economic enterprises as defined for legal purposes.

Sources: Organization for Economic Cooperation and Development, Economic Survey of Turkey (Paris) (various issues); World Bank, Turkey: Prospects and Problems of an Expanding Economy (Washington, 1975); World Bank, Turkey: Policies and Prospects for Growth (Washington, 1980); IFS (various issues). Public enterprises in Turkey are also discussed in Bertil Walstedt, State Manufacturing in a Mixed Economy: The Turkish Case (Baltimore: Johns Hopkins, 1980).

Remarks: State economic enterprises exclude some public enterprises at the national level operating mainly in manufacturing as well as enterprises operated by provincial and local governments--see Walstedt (1980). An estimate of total public enterprise investment at the national level was obtained by adding total government fixed investment in industry as given in World Bank (1980) to investment by state economic enterprises in other sectors. Allocation of government transfers to public enterprises between subsidies and capital transfers was estimated. As a result of a change in classification, output figures for the period before 1970 are not strictly comparable with those for later years.

e. Middle East

Egypt

Coverage: Public sector companies and public economic authorities.

Sources: Central Bank of Egypt, Annual Report (various issues) for credit figures.

Remarks: Credit figures are for public sector companies only.

Yemen Arab Republic

Coverage: Public and mixed enterprises as defined in monetary statistics.

Sources: Central Bank of Yemen, Financial Statistical Bulletin (various issues).

f. Western Hemisphere

Argentina

Coverage: Twenty enterprises: YPF, GE, AEE, SEGBA, HIDRONOR, YCF, CIAE (energy); FA, AA, AGP, ELMA (transport); ENTEL, ENCOTEL (communications); Yacireta, Salte Grande, COMIF (binational energy enterprises); PBB, AFNE (defense); YMAD, ATC.

Bahamas

Coverage: Public corporations plus the Post Office and port, airport, and water undertakings which are organized as government departments.

Barbados

Coverage: Ten enterprises: Housing Corporation; Agricultural Development Corporation; Industrial Development Corporation; Post Office; Transport Board; Port Authority; Civil Aviation Department; Waterworks Department; Marketing Corporation; National Gas Corporation.

Bolivia

Coverage: Government corporations.

Sources: Richard A. Musgrave, Fiscal Reform in Bolivia (Cambridge: Harvard University Law School, 1981); ECLA (1971).

Remarks: Post-1970 figures are for nine enterprises operating in mining, industry, transport, and communications. Pre-1970 figures are taken from ECLA (1971) and their precise coverage is not known.

Brazil

Coverage: One hundred forty-five government-owned holding companies and their subsidiaries for 1980 figures.

Source: ECLA (1971).

Remarks: The figure for 1968 taken from ECLA (1971) and its precise coverage is not known.

Chile

Sources: ECLA (1971); World Bank, Chile: An Economy in Transition (Washington, 1980).

Remarks: Pre-1970 figures are taken from ECLA (1971) and their precise coverage is not known.

Colombia

Coverage: National nonfinancial public enterprises plus three major municipal public utilities.

Costa Rica

Coverage: Twelve enterprises mainly operating in public utilities, marketing, transport, and industrial projects.

Source: ECLA (1971).

Remarks: See under Chile.

Dominica

Coverage: The Post Office, which is organized as a government department, plus six enterprises: Water Authority; Port Authority; two agricultural marketing boards; External Trade Bureau; Forest Development Corporation.

Dominican Republic

Coverage: Ten enterprises: port and airport authorities; State Sugar Council (CEA); Electricity Corporation (CDE); Cotton Institute; Price Stabilization Institute (INESPRE); three water authorities; radio and television services.

Guatemala

Coverage: Nine enterprises: two ports; FEGUA (railways); INDE and EEG (electricity); PROLAC (milk); GUATEL (telecommunications); INFOM (municipal development); AVIATECA (airline).

Guyana

Coverage: Income and capital account figures are for GUYSUCO, BIDCO, the Guyana Rice Board, and enterprises in the GUYSTAC group.

Sources: IFS (various issues) for credit figures.

Haiti

Coverage: Capital account figures are for five enterprises: electricity company; Port Authority; Telecommunications Company; Water Authority; flour mill.

Sources: IFS (various issues) for credit figures.

Honduras

Coverage: Ten enterprises: COHBANA, BANASUPRO, IMHA (agricultural marketing); HONDUTEL (telecommunications); COHDEFOR (forestry); ENEE (electricity); SANAA (water); FNH (railway); ENP (harbors); lottery.

Jamaica

Coverage: Nineteen enterprises: Airport Authority; Port Authority; airline; Broadcasting Corporation; shipping company; Public Service Company; two bus companies; two telephone companies; Housing Corporation; hotel company; two water authorities; two sugar companies; food company; Urban Development Corporation; property company.

Remarks: Figures exclude a number of public enterprises, particularly in mining and industry, for which no information was available.

Mexico

Coverage: Nineteen enterprises subject to budgetary control plus the telephone system, the Mexico City subway, and the Altos Hornos steel mill.

Remarks: An estimate of investment for the whole public enterprise sector, including enterprises not subject to budgetary control, was obtained as the difference between total public sector investment, as given in the national accounts, and general government investment.

Panama

Coverage: Public enterprises as defined for United Nations national accounting purposes.

Sources: UNNA (various issues) for capital account figures.

Remarks: Figures for budgetary burden exclude financial enterprises; other figures include financial enterprises. See also under Japan.

Paraguay

Coverage: Public enterprises included in World Bank (1979).

Source: World Bank, Economic Memorandum on Paraguay (Washington, 1979).

Remarks: Included are 13 enterprises: LAP and LATN (airlines); ANAC (airports); ANNP (ports); FME (shipping); FCAL (railway); INC (cement); ANTELCO (telecommunications); ANDE (electricity); CORPOSANA (water); APAL (beverages); COPACAR (meat); SIDEPAR (iron and steel).

Peru

Sources: World Bank, Current Economic Position and Prospects of Peru (Washington, 1972); IFS (various issues); ECLA (1971). Public enterprises in Peru are also discussed in E.V.K. Fitzgerald, The State and Economic Development: Peru Since 1968 (Cambridge University Press, 1976).

St. Lucia

Coverage: Seven enterprises: Port Authority; Water Authority; Urban Development Corporation; National Development Corporation; two marketing boards; electricity company.

Uruguay

Coverage: Public enterprises included in World Bank (1979).

Source: World Bank, Economic Memorandum on Uruguay (Washington, 1979).

Remarks: Included are eight enterprises: AFE (railway); ANCAP (fuel and cement); ANP (ports); OSE (water); ANTEL (telecommunications); UTE (electricity); ILPE (fishing); PLUMA (airline).

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