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Quantitative Characteristics of the Tax Systems of Developing Countries

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Contents

1/ Paper prepared for inclusion in D. Newbery and N. Stern's forthcoming book, Modern Tax Theory for Developing Countries (IBRD). Mrs. Chris Wu's assistance in collecting the statistics is highly appreciated.

Contents

The present paper conveys to the reader a quantitative impression of the existing tax systems of the developing countries. The paper is largely devoid of normative analysis. It is made up of three sections. The first presents data on total tax revenue for 82 countries and discusses briefly the relationship between total tax revenue (T) and gross domestic product (GDP). The following section describes in some detail the empirical importance of various tax sources at different levels of per capita income. This section considers the factors that may lead a country to prefer one type of tax as compared with another. The last section is somewhat different from the two preceding ones as it shifts the emphasis from quantitative to qualitative aspects of the developing countries' tax systems. It briefly discusses some aspects of the tax system that are necessary if taxes are to be used as instruments of economic policy. 1/

In order to describe the quantitative characteristics of the developing countries' tax systems, statistical information on 82 countries has been assembled. The sample is quite comprehensive as it includes most developing countries with per capita incomes ranging from around \$100 to around \$4,000 (in 1979 prices). The information comes from both published and unpublished data collected by the Fund's Bureau of Statistics. As the data have been collected in accordance with consistent definitions and methods, they are likely to be more reliable than other comparable sources. One statistical problem remains, however. For 40 countries the data are comprehensive in the sense that they refer to all levels of government. These are the countries in which noncentral (i.e., state and local) tax revenues are important. For the remaining 42 countries the data refer to central government tax revenue only.

The basic data are shown in two tables. Table 1 gives total tax revenue, as well as tax revenue by type of tax, as a percentage of GDP. Table 2 gives tax revenue by type of tax as a percentage of total taxes. The tables also indicate the years over which the revenue data have been averaged in order to reduce, whenever possible, the effect of transitory events. In most cases the data have been averaged around 1979. Per capita incomes in U.S. dollars are also provided for 1979. Tables 3 and 4 are summaries of the two basic tables. They average the information by four income ranges. 2/

Of the 82 countries considered, 21 had (in 1979) per capita incomes of \$300 or less; 43 had per capita incomes less than or equal to \$650; and 63 had incomes equal to or less than \$1,550. The median income was around \$650. The tables allocate total tax revenue among the following categories: income taxes (individual and corporation), domestic taxes on goods and services (general sales taxes and excises), taxes on foreign

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1/ These qualitative aspects are discussed in detail in a separate paper. See Vito Tanzi, "Tax Systems and Policy Objectives in Developing Countries: General Principles and Diagnostic Tests" (mimeo, 1983).

2/ Appendix Tables A1 and A2 provide the same information but organized by region.

Table 1. Tax Revenue by Type of Tax

(In percent of GDP)

Country	Years		GNP Per Capita (1979)	Total Taxes	Income Taxes: Total	Income Taxes: Individual	Income Taxes: Corporate	Income Taxes: Other	Domestic Taxes on Goods and Services: Total	Domestic Taxes on Goods and Services: General sales, turnover, VAT	Domestic Taxes on Goods and Services: Excises	Domestic Taxes on Goods and Services: Other	Foreign Trade: Total	Foreign Trade: Import duties	Foreign Trade: Export duties	Foreign Trade: Other	Social Security	Wealth and Property	Other
Bangladesh	1976	1978	110	7.54	1.16	1.02	0.14	—	3.13	1.22	1.82	0.09	2.82	2.60	0.13	0.01	—	0.25	0.18
Chad	1974	1976	120	9.33	1.67	0.97	0.70	—	1.47	0.92	0.29	0.27	5.27	4.50	0.77	—	0.19	0.15	0.77
Ethiopia	1976	1978	120	12.20	2.78	1.14	1.38	0.26	2.71	0.93	1.68	0.10	6.24	3.32	2.91	--	--	0.26	0.10
Nepal	1977	1979	130	6.45	0.64	0.43	0.22	—	2.62	1.42	0.89	0.30	2.46	2.22	0.24	--	--	0.71	0.02
Burma	1978	1980	150	9.86	0.58	--	--	--	6.94	6.23	0.02	0.69	2.34	2.34	--	--	—	--	—
Mali	1979	1981	180	12.53	2.67	0.98	1.54	0.16	4.87	3.04	1.60	0.22	2.85	2.23	0.57	--	0.42	0.52	1.20
Upper Volta	1978	1980	180	13.29	2.11	1.38	0.53	0.19	2.65	0.99	0.95	0.71	6.79	5.98	0.43	0.04	1.46	0.19	0.09
Rwanda	1978	1980	190	11.13	2.21	0.82	1.28	0.11	2.12	—	2.11	0.01	6.06	3.18	2.88	--	0.51	0.12	0.11
Burundi	1975	1977	190	11.31	2.16	0.80	1.16	0.21	2.50	0.27	2.17	0.07	5.33	2.60	2.69	--	0.24	0.61	0.46
Zaire	1978	1980	210	16.54	5.90	3.16	2.73	—	2.47	1.48	0.96	0.03	6.63	3.40	3.22	--	0.76	0.04	0.74
India	1978	1980	210	14.05	2.49	1.19	1.26	0.03	8.45	0.12	5.39	2.94	2.60	2.46	0.12	--	--	0.19	—
Gambia, The	1976	1978	220	15.04	2.23	0.84	1.27	0.12	0.52	—	0.13	0.39	11.80	10.28	1.50	—	0.09	0.34	0.05
Malawi	1978	1980	220	15.86	6.56	2.33	4.23	—	5.40	4.36	0.70	0.34	3.58	3.58	—	--	—	0.27	0.06
Sri Lanka	1978	1980	230	22.19	2.77	0.74	2.03	—	6.30	2.49	3.63	0.18	12.47	4.06	8.15	0.03	—	0.13	0.20
Haiti	1979	1981	230	9.28	1.59	0.37	1.21	—	1.63	0.25	1.01	0.37	4.59	2.92	0.96	0.07	0.07	0.16	0.58
Tanzania	1977	1979	250	16.96	4.96	0.47	2.68	1.80	7.38	6.29	0.93	0.16	4.32	2.25	2.07	--	0.06	0.15	0.09
Sierra Leone	1979	1981	250	15.18	3.96	1.20	2.73	0.02	2.98	—	2.77	0.21	7.97	6.27	1.65	—	0.06	—	0.21
Benin	1975	1977	270	15.95	2.41	0.61	1.15	0.64	4.19	1.00	1.48	1.71	8.54	7.47	--	0.11	0.27	0.14	0.40
Pakistan	1978	1980	270	14.53	2.24	0.94	1.07	—	5.65	0.97	4.20	0.47	5.32	4.93	0.18	0.02	--	0.09	--
Niger	1978	1980	300	12.06	3.73	0.73	2.62	0.38	2.68	1.74	0.83	0.10	4.83	4.16	0.57	0.01	0.63	0.36	0.06
Mauritani	1977	1979	300	16.64	5.19	4.26	0.80	0.13	3.21	2.09	0.73	0.39	6.55	6.43	0.11	--	1.44	0.17	0.09
Madagascar	1972	1973	330	15.99	2.55	1.31	1.18	0.07	5.11	2.56	1.66	0.88	5.28	4.28	0.93	0.01	1.26	0.56	0.77
Lesotho	1972	1974	370	20.14	2.50	1.92	0.59	—	0.61	—	--	0.61	15.46	15.21	0.25	—	--	0.09	1.58
Indonesia	1978	1980	370	18.74	14.33	0.42	13.02	0.89	2.17	1.09	0.95	0.12	1.81	1.01	0.80	--	--	0.32	0.06
Kenya	1978	1980	390	20.87	7.08	--	—	--	8.01	5.22	2.24	0.55	5.00	4.72	0.28	--	--	0.19	0.17
Togo	1978	1980	400	26.70	10.56	1.62	8.13	0.80	4.36	3.13	0.84	0.39	9.41	6.83	1.27	0.13	1.96	0.32	0.08
Ghana	1975	1977	400	13.12	3.04	1.29	1.75	--	3.60	0.86	2.64	0.10	6.37	2.35	4.02	--	0.04	0.05	0.02
Yemen Arab Republic	1979	1981	420	18.65	1.73	0.97	0.73	0.02	1.82	—	1.13	0.69	13.33	13.33	--	—	--	0.13	1.63
Sudan	1976	1978	450	13.07	1.73	0.42	1.29	0.02	4.59	—	3.43	1.15	6.65	5.41	0.55	0.07	--	--	0.10
Senegal	1977	1978	450	20.15	3.85	1.16	1.89	0.80	4.79	2.24	2.19	0.35	9.20	8.12	1.07	—	1.41	0.67	0.23
Egypt	1977	1979	500	27.90	4.54	1.58	2.96	--	4.82	—	1.91	2.91	10.78	7.44	0.34	0.30	4.93	0.58	2.24
Honduras	1979	1981	520	13.50	3.81	1.80	1.98	0.03	3.62	1.00	2.35	0.26	5.81	3.38	2.42	--	—	0.12	0.15
Liberia	1979	1981	520	22.63	7.70	4.29	3.20	0.21	5.46	0.21	1.09	4.16	8.73	8.53	0.14	0.01	--	0.25	0.50

Table 1. Tax Revenue by Type of Tax (continued)

(In percent of GDP)

Country	Years		GNP Per Capita (1979)	Total Taxes	Income Taxes				Domestic Taxes on Goods and Services				Foreign Trade				Social Security	Wealth and Property	Other
					Total	Individual	Corporate	Other	Total	General sales, turnover, VAT	Excises	Other	Total	Import duties	Export duties	Other			
Zambia	1978	1980	540	22.25	8.78	4.33	3.97	0.47	10.82	2.70	7.94	0.17	1.79	1.76	--	--	0.74	0.01	0.11
Bolivia	1977	1979	550	8.62	1.64	0.88	0.73	0.04	2.40	0.54	1.67	0.18	3.93	2.67	0.77	0.05	--	0.25	0.40
Cameroon	1978	1980	590	15.57	3.16	1.86	1.26	0.05	2.99	1.11	1.46	0.42	6.95	5.99	0.42	0.05	1.49	0.41	0.55
Thailand	1979	1981	600	13.44	2.66	1.12	1.54	--	6.60	2.74	2.88	0.97	3.44	2.96	0.48	--	--	0.18	0.09
Nicaragua	1978	1980	610	14.75	1.65	--	--	--	6.18	1.52	3.02	1.64	3.75	3.19	0.56	--	1.89	0.91	0.38
Guyana	1977	1979	630	28.77	13.07	4.09	8.98	--	7.99	4.32	2.76	0.90	3.95	2.96	0.51	0.05	3.10	0.45	0.21
El Salvador	1978	1980	640	12.70	2.50	1.12	1.05	0.33	3.64	1.28	1.98	0.38	5.35	1.74	3.61	--	--	0.99	--
Philippines	1978	1980	640	12.30	2.95	1.74	1.19	0.02	5.34	1.88	2.67	0.79	3.09	2.84	0.25	--	--	0.67	0.15
Grenada	1975	1977	650	19.68	4.18	2.96	1.22	--	4.20	1.53	0.22	2.45	8.97	5.41	3.29	0.03	--	0.57	1.76
Swaziland	1978	1980	650	28.49	7.86	3.22	3.83	0.81	0.65	--	--	0.65	19.77	17.56	2.21	--	--	0.06	0.15
Congo	1980	1980	670	26.87	17.13	2.95	14.15	0.03	2.69	2.45	0.17	0.07	4.56	4.44	0.07	--	2.07	0.02	0.41
Papua New Guinea	1978	1980	760	16.16	9.75	4.57	5.18	--	2.75	--	2.56	0.18	3.54	3.03	0.50	--	--	--	0.13
Morocco	1978	1980	780	21.16	5.12	1.79	3.01	0.32	8.26	5.18	2.40	0.68	4.84	4.54	0.25	0.01	1.24	0.63	1.08
Botswana	1978	1980	780	21.40	8.81	--	--	8.81	0.31	--	--	0.31	12.22	12.13	0.09	--	--	0.07	--
Peru	1978	1980	850	16.95	3.58	0.42	3.08	0.08	7.50	5.24	2.08	0.18	5.30	2.59	2.67	--	0.58	0.90	0.23
Nigeria	1975	1977	910	20.61	16.80	0.03	16.77	--	0.42	--	0.42	--	3.37	3.36	0.01	--	--	--	0.02
Guatemala	1978	1980	1010	9.38	1.39	0.32	1.06	0.02	3.02	1.46	1.32	0.23	3.80	1.64	2.11	0.01	--	0.13	1.05
Dominican Republic	1978	1980	1030	11.59	2.49	0.90	1.56	0.03	3.22	--	2.66	0.57	4.98	3.96	0.90	0.01	0.54	0.10	0.15
Colombia	1978	1980	1060	13.23	3.13	1.47	1.66	--	3.80	1.91	0.72	1.17	3.18	1.49	1.69	--	2.04	0.30	0.30
Mauritius	1978	1980	1080	21.43	4.75	2.70	2.07	-0.03	4.23	--	2.90	1.33	11.12	8.07	2.99	0.01	--	1.00	0.10
Ecuador	1979	1981	1110	11.81	4.45	--	3.07	1.38	2.10	1.44	0.62	0.04	3.51	2.96	0.40	0.02	--	0.15	0.18
Jamaica	1975	1977	1110	23.09	6.95	4.61	2.34	--	11.47	4.02	6.55	0.90	1.85	1.61	0.23	--	1.43	0.83	0.56
Paraguay	1978	1980	1140	11.09	1.65	0.02	1.39	0.24	2.22	0.65	1.36	0.21	3.08	2.23	0.09	0.08	1.58	0.74	1.41
Tunisia	1978	1980	1160	25.88	4.54	2.32	1.73	0.49	8.03	1.76	2.39	3.88	7.88	7.60	0.27	--	3.79	0.68	0.76
Syrian Arab Republic	1978	1980	1170	11.28	2.47	--	--	2.47	1.76	--	0.16	1.59	3.80	3.43	0.37	--	0.48	0.69	2.09
Jordan	1978	1980	1200	17.61	2.82	0.70	1.10	0.13	1.55	--	1.26	0.29	11.32	11.32	--	--	--	1.12	0.79
Turkey	1978	1980	1380	16.78	9.63	7.82	0.91	0.90	3.95	0.67	1.55	1.73	2.22	2.15	--	0.01	--	0.39	0.59
Malaysia	1977	1979	1450	21.51	8.50	2.24	6.26	0.01	4.83	1.19	2.20	1.43	7.72	3.51	4.21	--	0.10	0.11	0.24
Korea	1978	1980	1510	17.05	4.63	2.37	2.19	--	8.21	3.84	2.80	1.57	3.11	3.11	--	--	0.20	0.49	0.11
Panama	1977	1979	1550	20.89	5.23	--	--	5.23	4.55	1.75	2.19	0.62	2.95	2.48	0.44	--	6.63	0.56	0.56
Seychelles	1975	1977	1580	19.27	6.19	3.80	2.39	--	1.91	--	1.16	0.75	9.43	9.29	0.14	--	--	0.52	1.23
Costa Rica	1978	1980	1630	17.51	2.71	2.70	0.02	--	5.61	1.64	3.62	0.35	3.57	2.11	1.46	--	4.96	0.43	0.23
Fiji	1978	1980	1650	18.78	10.39	7.73	2.41	0.25	2.12	--	1.62	0.50	6.08	5.73	0.35	--	--	0.11	0.28

Table 1. Tax Revenue by Type of Tax (concluded)

(In percent of GDP)

Country	Years		GNP Per Capita (1979)	Total Taxes	Income Taxes				Domestic Taxes on Goods and Services				Foreign Trade				Social Security	Wealth and Property	Other
					Total	Individual	Corporate	Other	Total	General sales, turnover, VAT	Excises	Other	Total	Import duties	Export duties	Other			
Brazil	1978	1980	1770	23.19	2.93	0.18	1.02	1.72	11.18	6.79	4.39	--	0.97	0.63	0.34	--	7.55	0.43	--
Mexico	1978	1980	1880	13.92	5.71	2.53	3.13	0.05	4.90	2.44	1.77	0.69	2.65	0.92	1.73	--	2.42	0.02	0.26
Chile	1979	1981	1890	25.61	5.19	2.55	2.53	0.11	12.15	10.28	1.31	0.56	1.51	1.51	--	--	5.00	0.30	1.60
South Africa	1977	1979	2000	19.95	11.56	4.90	6.35	0.31	5.52	1.80	3.23	0.49	1.37	1.23	0.13	--	0.30	0.94	0.27
Portugal	1978	1980	2060	26.40	5.67	2.26	1.38	2.03	8.56	4.08	4.09	0.39	1.70	1.70	--	--	8.29	0.39	1.77
Argentina	1978	1980	2210	21.31	0.71	0.02	0.01	0.68	5.18	1.62	3.48	0.09	1.95	1.31	0.19	0.04	4.33	0.38	0.53
Suriname	1974	1976	2480	24.93	6.22	1.98	4.16	0.08	9.81	0.48	8.77	0.57	8.55	8.54	0.01	--	--	0.03	0.32
Uruguay	1979	1981	2500	20.67	1.94	0.30	1.57	0.06	9.30	5.30	3.56	0.44	2.90	2.89	0.01	--	5.55	0.83	0.81
Barbados	1978	1980	2680	25.23	10.11	6.07	3.63	0.40	5.71	2.33	1.80	1.58	5.21	5.05	--	0.02	2.72	1.21	0.27
Bahamas	1977	1979	2770	16.36	--	--	--	--	1.70	--	--	1.70	11.53	10.62	0.32	0.06	1.82	0.56	0.75
Cyprus	1979	1981	3170	17.21	4.32	2.49	0.98	0.86	4.94	--	3.98	0.95	4.28	4.28	--	--	2.83	0.59	0.24
Gabon	1974	1976	3420	20.69	10.55	0.59	9.78	0.18	1.64	1.46	0.08	0.09	7.16	6.06	0.99	0.01	0.85	--	0.49
Venezuela	1978	1980	3440	19.99	15.18	0.72	14.46	--	1.25	--	0.92	0.33	1.87	--	--	1.14	0.27	0.07	
Oman	1979	1981	3530	13.66	12.54	--	12.52	0.02	0.26	--	--	0.26	0.65	0.54	--	0.01	0.17	--	0.03
Singapore	1978	1980	3770	16.73	7.45	--	--	--	3.89	--	1.46	2.43	1.84	1.84	--	--	0.45	2.50	0.60
Trinidad and Tobago	1979	1979	3910	30.47	24.96	4.35	20.27	0.34	1.83	0.76	0.34	0.73	2.72	2.72	--	--	0.59	0.13	0.18

Sources: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

Table 2. Tax Revenue by Type of Tax

(In percent of total taxes)

Country	Years		GNP Per Capita (1979)	Total Taxes	Income Taxes Total	Income Taxes Indi-vidual	Income Taxes Corpo-rate	Income Taxes Other	Domestic Taxes on Goods and Services Total	General sales, turnover, VAT	Excises	Other	Foreign Trade Total	Import duties	Export duties	Other	Social Security	Wealth and Property	Other
Bangladesh	1976	1978	110	100.00	15.40	13.47	1.91	0.02	41.55	16.10	24.21	1.25	37.41	34.51	1.72	0.12	—	3.29	2.34
Chad	1974	1976	120	100.00	18.16	10.60	7.57	—	15.72	9.79	3.12	2.81	56.66	48.29	8.37	—	2.08	1.51	8.25
Ethiopia	1976	1978	120	100.00	22.95	9.43	11.39	2.14	22.56	7.74	13.98	0.84	50.58	27.32	23.26	—	—	2.13	0.83
Nepal	1977	1979	130	100.00	10.01	6.62	3.39	—	40.52	22.05	13.75	4.72	38.05	34.36	3.70	—	—	11.05	0.36
Burma	1978	1980	150	100.00	5.83	—	—	—	70.39	63.21	0.23	6.95	23.78	23.78	—	—	—	—	—
Mali	1979	1981	180	100.00	21.36	7.86	12.24	1.26	38.74	24.29	12.70	1.75	22.75	17.78	4.60	0.04	3.40	4.13	9.61
Upper Volta	1978	1980	180	100.00	15.89	10.42	4.02	1.45	19.92	7.45	7.15	5.32	51.07	44.94	3.26	0.29	11.03	1.39	0.70
Rwanda	1978	1980	190	100.00	19.90	7.38	11.54	0.97	19.19	—	19.07	0.12	54.24	28.81	25.42	—	4.61	1.10	0.97
Burundi	1975	1977	190	100.00	19.52	7.27	10.36	1.89	22.16	1.98	19.54	0.63	46.09	23.53	22.16	0.04	2.18	5.51	4.55
Zaire	1978	1980	210	100.00	36.14	19.72	16.42	0.01	15.17	8.96	6.00	0.21	39.03	20.40	18.58	0.01	4.79	0.30	4.57
India	1978	1980	210	100.00	18.39	8.76	9.33	0.30	58.97	0.89	39.60	18.48	19.33	18.33	0.88	0.01	—	1.28	—
Gambia, The	1976	1978	220	100.00	14.66	5.58	8.36	0.73	3.41	—	0.83	2.58	78.83	68.60	10.12	0.01	0.59	2.15	0.35
Malawi	1978	1980	220	100.00	41.37	14.69	26.68	—	34.02	27.46	4.42	2.14	22.54	22.54	—	—	—	1.71	0.36
Sri Lanka	1978	1980	230	100.00	12.72	3.29	9.43	—	28.31	11.31	16.21	0.79	55.98	18.67	36.27	0.10	—	0.59	0.94
Haiti	1979	1981	230	100.00	17.22	4.05	13.13	0.04	17.80	2.60	11.14	4.07	49.22	31.67	10.17	0.74	0.79	1.69	6.15
Tanzania	1977	1979	250	100.00	29.19	2.79	15.82	10.58	43.57	37.18	5.46	0.93	25.44	13.27	12.18	—	0.35	0.91	0.53
Sierra Leone	1979	1981	250	100.00	26.05	7.94	17.97	0.14	19.59	—	18.21	1.37	52.55	41.33	10.93	0.03	0.42	—	1.40
Benin	1975	1977	270	100.00	14.96	3.90	7.14	3.92	26.26	6.27	9.31	10.68	53.71	46.95	—	0.68	1.69	0.90	2.48
Pakistan	1978	1980	270	100.00	15.63	6.50	7.46	—	39.16	6.75	29.14	3.27	36.84	34.12	1.23	0.15	—	0.65	—
Niger	1978	1980	300	100.00	30.97	6.09	21.72	3.16	22.26	14.43	6.96	0.87	40.01	34.38	4.70	0.09	5.26	2.98	0.48
Mauritania	1977	1979	300	100.00	31.06	25.51	4.80	0.75	19.25	12.56	4.43	2.25	39.44	38.73	0.67	—	8.71	1.00	0.54
Madagascar	1972	1973	330	100.00	15.97	8.20	7.37	0.41	31.92	16.03	10.40	5.50	32.94	26.68	5.83	0.04	7.85	3.50	4.87
Lesotho	1972	1974	370	100.00	12.78	9.85	2.93	—	2.95	—	—	2.95	76.20	74.90	1.31	—	—	0.46	8.09
Indonesia	1978	1980	370	100.00	76.00	2.27	68.94	4.78	11.80	5.98	5.14	0.69	9.77	5.46	4.31	—	—	1.74	0.33
Kenya	1978	1980	390	100.00	33.97	—	—	—	38.28	24.92	10.75	2.61	24.01	22.68	1.32	—	—	0.88	0.83
Togo	1978	1980	400	100.00	39.49	6.09	30.44	2.96	16.38	11.76	3.14	1.47	35.25	25.61	4.71	0.49	7.39	1.21	0.29
Ghana	1975	1977	400	100.00	23.18	9.79	13.38	—	27.99	6.55	20.70	0.74	47.96	17.81	30.15	—	0.32	0.37	0.19
Yemen Arab Republic	1979	1981	420	100.00	9.14	5.14	3.90	0.10	9.59	—	5.87	3.72	72.17	72.16	0.01	—	—	0.70	8.40
Sudan	1976	1978	450	100.00	13.31	3.25	9.91	0.15	35.32	—	26.51	8.81	50.60	41.52	4.20	0.49	—	—	0.77
Senegal	1977	1978	450	100.00	19.18	5.77	9.42	3.98	23.70	11.03	10.92	1.76	45.66	40.35	5.28	—	7.00	3.31	1.14
Egypt	1977	1979	500	100.00	16.52	5.78	10.74	—	17.47	—	6.98	10.49	38.12	26.87	1.11	1.01	17.70	2.09	8.09
Honduras	1979	1981	520	100.00	28.08	13.37	14.53	0.19	26.82	7.44	17.42	1.96	43.12	25.13	17.94	—	—	0.87	1.10
Liberia	1979	1981	520	100.00	34.08	18.92	14.20	0.96	24.16	0.88	4.61	18.66	38.48	37.59	0.63	0.03	—	1.11	2.17

Table 2. Tax Revenue by Type of Tax (continued)

(In percent of total taxes)

Country	Years		GNP Per Capita (1979)	Total Taxes	Income Taxes				Domestic Taxes on Goods and Services				Foreign Trade				Social Security	Wealth and Property	Other
					Total	Indi-vidual	Corpo-rate	Other	Total	General sales, turnover, VAT	Excises	Other	Total	Import duties	Export duties	Other			
Zambia	1978	1980	540	100.00	39.36	19.52	17.69	2.14	48.73	12.14	35.81	0.78	8.05	7.90	—	0.01	3.34	0.03	0.49
Bolivia	1977	1979	550	100.00	19.23	10.32	8.48	0.43	27.25	6.38	18.79	2.08	45.96	31.17	9.11	0.57	—	2.81	4.62
Cameroon	1978	1980	590	100.00	20.63	12.14	8.19	0.31	19.36	7.19	9.49	2.68	44.25	38.12	2.63	0.35	9.62	2.68	3.45
Thailand	1979	1981	600	100.00	19.82	8.32	11.51	—	49.15	20.43	21.49	7.23	25.62	22.00	3.59	—	—	1.36	0.67
Nicaragua	1978	1980	610	100.00	11.69	—	—	—	41.68	10.33	21.08	10.27	24.76	21.48	3.29	—	13.30	6.00	2.56
Guyana	1977	1979	630	100.00	45.51	14.23	31.28	—	27.76	15.02	9.61	3.12	13.77	10.32	1.77	0.17	10.67	1.57	0.73
El Salvador	1978	1980	640	100.00	19.94	9.00	8.32	2.62	28.76	9.97	15.78	3.02	41.82	13.46	28.36	—	—	7.79	—
Philippines	1978	1980	640	100.00	24.00	14.17	9.64	0.18	43.37	15.27	21.68	6.42	25.11	23.07	2.00	—	—	5.48	1.19
Grenada	1975	1977	650	100.00	21.40	15.09	6.31	—	21.20	7.78	1.24	12.18	46.03	27.81	17.00	0.12	—	2.92	8.44
Swaziland	1978	1980	650	100.00	27.61	11.34	13.43	2.84	2.29	—	—	2.29	69.35	61.59	7.76	—	—	0.21	0.55
Congo	1980	1980	670	100.00	63.75	10.96	52.67	0.11	9.99	9.12	0.62	0.25	16.96	16.52	0.27	0.02	7.69	0.09	1.53
Papua New Guinea	1978	1980	760	100.00	60.27	28.31	31.96	—	17.03	—	15.88	1.15	21.91	18.74	3.10	0.01	—	—	0.79
Morocco	1978	1980	780	100.00	24.20	8.45	14.23	1.52	39.02	24.46	11.36	3.19	22.87	21.46	1.17	0.02	5.86	2.96	5.08
Botswana	1978	1980	780	100.00	40.81	—	—	40.81	1.47	—	—	1.47	57.37	56.95	0.42	—	—	0.34	0.01
Peru	1978	1980	850	100.00	20.61	2.52	17.61	0.48	44.48	30.97	12.46	1.05	31.31	15.17	15.87	0.03	3.41	5.30	1.44
Nigeria	1975	1977	910	100.00	81.59	0.13	81.47	—	2.00	—	2.00	—	16.31	16.27	0.04	—	—	—	0.09
Guatemala	1978	1980	1010	100.00	14.84	3.45	11.21	0.18	32.24	15.66	14.11	2.48	40.36	17.44	22.35	0.06	—	1.35	11.20
Dominican Republic	1978	1980	1030	100.00	21.56	7.76	13.54	0.26	27.81	—	22.92	4.89	42.87	34.13	7.80	0.09	4.65	0.89	1.28
Colombia	1978	1980	1060	100.00	23.72	11.15	12.57	—	28.77	14.49	5.44	8.84	23.93	11.25	12.69	—	15.40	2.25	2.26
Mauritius	1978	1980	1080	100.00	22.26	12.67	9.73	-0.14	19.74	—	13.53	6.22	51.73	37.60	13.86	0.03	—	4.68	0.47
Ecuador	1979	1981	1110	100.00	37.80	—	25.67	12.13	18.06	12.51	5.23	0.33	20.22	25.50	3.42	0.13	—	1.32	1.52
Jamaica	1975	1977	1110	100.00	30.02	19.93	10.08	—	49.85	17.56	28.32	3.97	7.81	6.86	0.96	—	6.29	3.61	2.42
Paraguay	1978	1980	1140	100.00	14.89	0.21	12.59	2.09	20.00	5.89	12.25	1.86	27.74	20.10	0.78	0.69	14.27	6.63	12.68
Tunisia	1978	1980	1160	100.00	17.57	8.98	6.69	1.90	31.04	6.78	9.29	14.97	30.49	29.43	1.05	—	14.62	2.65	2.90
Syrian Arab Republic	1978	1980	1170	100.00	21.91	—	—	21.91	15.41	—	1.45	13.96	33.97	30.74	3.24	—	4.35	6.09	18.28
Jordan	1978	1980	1200	100.00	16.06	3.87	6,03	0.72	8.82	—	7.18	1.64	64.22	64.22	—	—	—	6.45	4.45
Turkey	1978	1980	1380	100.00	57.56	46.84	5.36	5.36	23.59	3.94	9.27	10.38	12.99	12.56	—	0.04	—	2.34	3.52
Malaysia	1977	1979	1450	100.00	39.52	10.43	29.05	0.03	22.45	5.54	10.24	6.66	35.92	16.33	19.59	—	0.45	0.53	1.14
Korea	1978	1980	1510	100.00	27.17	13.88	12.87	—	48.26	22.56	16.47	9.23	18.25	18.25	—	—	1.19	2.73	0.65
Panama	1977	1979	1550	100.00	25.09	—	—	25.09	21.83	8.39	10.49	2.95	14.14	11.87	2.13	0.01	31.67	2.71	2.66
Seychelles	1975	1977	1580	100.00	32.11	19.76	12.36	—	9.87	—	6.01	3.86	48.89	48.18	0.72	—	—	2.66	6.46
Costa Rica	1978	1980	1630	100.00	15.49	15.39	0.10	—	32.06	9.39	20.69	1.98	20.37	12.05	8.32	—	28.32	2.44	1.31
Fiji	1978	1980	1650	100.00	55.37	41.16	12.87	1.35	11.31	—	8.62	2.68	32.39	30.53	1.86	—	—	0.59	1.49

Table 2. Tax Revenue by Type of Tax (concluded)

(In percent of total taxes)

Country	Years		GNP Per Capita (1979)	Total Taxes	Income Taxes: Total	Income Taxes: Indi- vidual	Income Taxes: Corpo- rate	Income Taxes: Other	Domestic Taxes on Goods and Services: Total	Domestic Taxes on Goods and Services: General sales, turnover, VAT	Domestic Taxes on Goods and Services: Excises	Domestic Taxes on Goods and Services: Other	Foreign Trade: Total	Foreign Trade: Import duties	Foreign Trade: Export duties	Foreign Trade: Other	Social Security	Wealth and Property	Other
Brazil	1978	1980	1770	100.00	12.64	0.79	4.40	7.45	48.22	29.35	18.87	--	4.18	2.72	1.46	--	32.51	1.87	--
Mexico	1978	1980	1880	100.00	41.13	18.31	22.46	0.36	35.40	17.51	12.93	4.95	18.60	6.53	12.07	—	17.49	0.10	1.84
Chile	1979	1981	1890	100.00	20.22	9.97	9.84	0.42	47.41	40.11	5.11	2.20	5.88	5.88	--	--	19.55	1.21	6.25
South Africa	1977	1979	2000	100.00	57.98	24.54	31.86	1.58	27.64	9.01	16.19	2.44	6.85	6.17	0.64	--	1.49	4.70	1.35
Portugal	1978	1980	2060	100.00	21.53	8.60	5.18	7.75	32.31	15.40	15.41	1.51	6.51	6.49	0.02	--	31.44	1.48	6.73
Argentina	1978	1980	2210	100.00	3.36	0.12	0.03	3.21	24.45	7.57	16.48	0.40	9.17	6.15	0.92	0.21	20.28	1.79	2.44
Suriname	1974	1976	2480	100.00	25.82	8.01	17.50	0.31	37.61	1.97	33.31	2.33	5.15	35.09	0.05	--	—	0.12	1.31
Uruguay	1979	1981	2500	100.00	9.40	1.48	7.62	0.31	44.94	25.59	17.21	2.14	14.04	13.99	0.05	—	26.89	4.01	3.92
Barbados	1978	1980	2680	100.00	40.04	24.08	14.36	1.60	22.63	9.19	7.15	6.29	20.67	20.06	--	0.06	10.78	4.79	1.09
Bahamas	1977	1979	2770	100.00	--	—	--	--	10.32	--	—	10.32	70.50	65.00	1.95	0.36	11.20	3.44	4.54
Cyprus	1979	1981	3170	100.00	25.11	14.45	5.71	4.95	28.92	—	23.34	5.58	24.89	24.89	--	—	16.22	3.44	1.42
Gabon	1974	1976	3420	100.00	49.81	2.90	46.03	0.89	8.11	7.19	0.46	0.46	35.55	29.69	5.34	0.05	4.16	0.01	2.35
Venezuela	1978	1980	3440	100.00	75.72	3.66	72.05	--	6.31	—	4.60	1.71	9.41	9.41	--	—	5.74	1.41	0.35
Oman	1979	1981	3530	100.00	92.76	--	92.59	0.17	1.66	--	--	1.66	4.38	3.77	—	0.06	1.05	--	0.15
Singapore	1978	1980	3770	100.00	44.42	—	—	—	23.38	—	8.76	14.52	11.06	11.06	—	—	2.67	15.00	3.57
Trinidad and Tobago	1979	1979	3910	100.00	81.91	14.29	66.51	1.11	6.00	2.49	1.12	2.38	8.94	8.92	--	--	1.95	0.44	0.59

Sources: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

trade (import and export duties), social security taxes, taxes on wealth and property, and other taxes (poll and stamp taxes, for example). 1/

I. The Level of Taxation

The lowest ratio of total tax revenue to GDP is found in Nepal, equal to 6.45 percent. Seven countries have tax ratios of less than 10 percent. Five of these (Nepal, Bangladesh, Chad, Burma, and Haiti) have very low per capita incomes while two of them (Bolivia and Guatemala) have incomes closer to the median. At the other extreme, ten countries have tax ratios exceeding 25 percent. Of these ten, five have relatively high per capita incomes (Trinidad and Tobago, Barbados, Portugal, Chile, and Tunisia) while the other five (Congo, Swaziland, Guyana, Egypt, and Togo) are closer to the median income (their incomes range from $400 to $650). No country with a really low income is in this group.

These results, as well as visual inspection of Table 1, point in the direction of a relationship between per capita income and the tax ratio. Such a relationship would conform with an expectation, supported by various authors, that, as countries develop, tax bases grow more than proportionately to the growth of income. In other words, the capacity to tax grows with the growth of income. [See, especially, Musgrave 1969]. In addition to this supply-side argument, there is also the consideration that, as income grows, countries generally get more urbanized. Urbanization per se brings about a greater demand for public services while at the same time it facilitates tax collection. It is a fact of life that in the majority of countries a large proportion of total domestic taxes originate in the capital city or in the large urban centers.

The correlation of the average tax ratios against per capita incomes supports the above expectation: the correlation coefficient is significant (at the 1 percent level) and equal to 0.35. There are theoretical arguments that lend support to a causal relationship going from per capita income to tax level (for example, Musgrave's tax-base or tax-handle theory), but it would be naive to accept a purely deterministic or mechanical relationship as many historical, political, or social factors play a role.

Tables 3 and 4 provide in a summary fashion the same information as Tables 1 and 2. For all 82 countries combined the (unweighted) average ratio of tax revenue to GDP was 17.5 percent around 1979. However, that ratio was 13.2 percent for the 21 countries with per capita income of

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1/ The major categories also contain a column called "other." This refers to taxes which could not be allocated to the specific subcategories. For example, some income taxes cannot clearly be allocated to individuals or corporations.

Table 3. Tax Revenue by Type of Tax and by Group of Countries

(In percent of GDP)

Per Capita Income: Range (1)	Per Capita Income: Average (2)	Total Taxes (3)	Income Taxes: Total (4)	Income Taxes: Individual (5)	Income Taxes: Corporate (6)	Income Taxes: Other (7)	Domestic Taxes on Goods and Services: Total (8)	Domestic Taxes on Goods and Services: General sales, turnover, VAT (9)	Domestic Taxes on Goods and Services: Excises (10)	Domestic Taxes on Goods and Services: Other (11)	Foreign Trade: Total (12)	Foreign Trade: Import duties (13)	Foreign Trade: Export duties (14)	Foreign Trade: Other (15)	Social Security (16)	Wealth and Property (17)	Other (18)
< 300	206	13.23	2.86	1.22	1.54	0.25	3.80	1.71	1.63	0.46	5.68	4.15	1.62	0.02	0.48	0.26	0.28
$300 < \overline{Y} < 650$	510	18.55	5.08	1.90	3.02	0.32	4.53	1.54	2.05	0.94	7.22	5.80	1.15	0.03	1.87	0.37	0.54
$650 < \overline{Y} < 1550$	1,086	17.79	6.19	2.20	3.97	1.26	4.24	1.58	1.82	0.85	5.22	4.28	1.02	0.01	1.72	0.50	0.54
$1550 <$	2,544	20.63	8.02	2.70	5.09	0.51	5.13	1.69	2.40	1.04	4.00	3.62	0.44	0.01	3.06	0.54	0.55
All countries	1,043.9	17.51	5.54	1.92	3.14	0.61	4.43	1.63	1.98	0.82	5.60	4.51	1.10	0.02	1.85	0.41	0.48

Source: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

Table 4. Tax Revenue by Type of Tax and by Group of Countries

(In percent of total taxes)

Per Capita Income			Income Taxes				Domestic Taxes on Goods and Services				Foreign Trade						
Range (1)	Average (2)	Total Taxes (3)	Total (4)	Individual (5)	Corporate (6)	Other (7)	Total (8)	General sales, turnover, VAT (9)	Excises (10)	Other (11)	Total (12)	Import duties (13)	Export duties (14)	Other (15)	Social Security (16)	Wealth and Property (17)	Other (18)
< 300	206	100.00	20.83	9.09	11.03	1.71	29.45	13.38	12.64	3.43	42.55	32.01	11.01	0.14	3.53	2.33	2.39
300 < $\overline{Y}$ < 650	510	100.00	25.95	10.20	15.03	1.58	26.18	8.60	12.61	4.97	39.05	30.62	7.25	0.17	8.58	2.24	2.81
650 < $\overline{Y}$ < 1550	1,086	100.00	33.06	11.85	20.78	7.03	24.09	8.89	10.43	4.77	30.07	24.07	8.40	0.07	9.15	2.94	3.72
1550 <	2,544	100.00	39.19	12.97	24.79	2.25	24.13	7.65	11.38	5.09	20.39	18.24	2.57	0.06	14.48	2.75	2.62
All countries	1,043.9	100.00	29.75	10.90	17.54	3.28	26.09	9.67	11.86	4.56	33.37	26.51	7.06	0.12	9.29	2.55	2.90

Source: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

$300 or less and 20.6 percent for the 19 countries with per capita income over $1,550. For the 42 countries in between, it was around 18 percent, showing no significant difference between the group of countries with per capita incomes between $300 and $650 and those with per capita incomes between $650 and $1,550. Table A1 shows that if one ignores Europe (represented by only three countries), then Africa, the Middle East, and the Western Hemisphere regions have similar tax ratios (around 18 percent) while Asia has a considerably lower tax ratio (around 15 percent).

Several studies [Chelliah et al., 1975; Tait et al., 1979; Tanzi, 1981] have shown that the total tax ratio may be influenced by other factors in addition to per capita income. Such factors may be the monetization and openness of the economy, the share of mining in GDP, an export ratio which excludes mineral exports, the literacy rate, and others. Rather than duplicating the results of some of these studies in explaining the total tax ratio, I shall consider some of these factors in the analysis of the tax structure.

II. The Structure of Taxation

While many studies have analyzed the level of taxation in developing countries (see bibliography), few have paid particular attention to its structure. Yet, this may be a particularly fruitful line of analysis as there must be specific reasons why, say, one country ends up with a very large share of revenue from taxes on corporate income while another may end up with a tax structure biased toward export duties. Historical factors clearly play a large role, but one feels that there must be more than that. We shall deal separately with income taxes, domestic taxes on goods and services, taxes on foreign trade, and other taxes.

1. Income taxes

For the 82 countries combined the unweighted ratio of income taxes from all sources was 5.7 percent of GDP and 30.7 percent of total tax revenue. Tables 1 and 2 show the very wide range of importance of income taxes in the tax systems of developing countries. For example, income taxes vary from less than 1 percent of GDP in Nepal to almost 25 percent in Trinidad and Tobago (see Table 1); or from 6 percent to 82 percent of total tax revenue (see Table 2). The two tables indicate that the wide range is largely a consequence of taxes on corporations rather than of taxes on the incomes of individuals.

Individual income taxes account for 1.9 percent of GDP and for 10.9 percent of total tax revenue for the whole 82 countries. In only three countries (Turkey, Fiji, and Barbados) do they exceed 5 percent of GDP. Turkey and Fiji have by far the highest ratios at about 7.8 percent of GDP. The revenue from taxes on the incomes of individuals exceeds 4 percent of GDP in only 11 countries. Thus, it can be concluded that these taxes are much less important (in terms of actual collection) in developing than in developed countries. 1/ This is almost surely due to the combination of high tax avoidance and high levels of exemptions as the marginal rates are often as high in developing countries as in developed countries. In only four countries (Mauritania, Papua New Guinea, Turkey, and Fiji) do individual income taxes account for more than one fourth of total tax revenue; and in only six countries do they exceed one fifth of all tax revenue. On the other hand, in more than half of the countries considered, these taxes account for less than one tenth of total taxes.

Economic development, as measured by per capita income, seems to be correlated with a growing importance of these taxes; however, the correlation, while significant (at the 5 percent level), is not strong ($R = 0.25$). Individual income taxes account for only 1.2 percent of GDP in countries with per capita income of $300 or less but for 2.7 percent of GDP in countries with per capita income above $1,550. Their share of total tax revenue rises from 9.1 percent in the poorest group of countries to about 13 percent in the highest income group (see Table 4). From Tables A1 and A2 the relative importance of these taxes 'by regions' can also be seen. Here, again, eliminating Europe, the dispersion among the regions is not very high.

The relative unimportance of taxes on individual incomes is disappointing as these taxes have been traditionally considered the major instrument for pursuing (through fiscal tools) the objective of income redistribution. However, while this result is disappointing, it should not surprise experts who have worked intimately with these countries. The requirements for an effective system of personal income taxation are many and they are satisfied, if at all, only when the level of development is high. When the agricultural sector is large, accounting standards are poor, the level of literacy is low, and most economic activity takes place in small establishments, the effective taxation of personal income is difficult [Goode, 1962] even though the greater concentration of income in developing countries as compared with industrial ones reduces the need to impose a mass-based income tax to raise a significant level of revenue [Tanzi, 1966]. In developing countries, far more than in developed countries, the personal income tax is often a tax on the wages of public sector employees and of the employees of large, and often foreign, corporations. 2/ As the proportion of total personal income derived from work in large establishments and in the public sector rises, so does the possibility of taxing personal income.

1/ In 1979 the share of individual income taxes to GDP in OECD countries was 11.4 percent. The share of these taxes in total tax revenue was 32.4 percent.

2/ The share of wages and salaries in national income is generally much lower in developing than in developed countries. Therefore the need for taxing non-wage incomes is far greater.

For 15 developing countries it was possible to obtain the proportion of revenue from individual income taxes derived from wages and salaries. These data indicate that for the whole group that proportion was 72.5 percent while it surpassed 90 percent in four countries (see Table 5).

Table 5. Share of Total Income Taxes Derived from Wages and Salaries, Selected Countries

(In percent)

Chad	64.25
Ethiopia	78.89
Upper Volta	36.83
Rwanda	99.57
Niger	66.51
Mauritania	50.35
Togo	98.17
Zambia	93.71
Bolivia	74.89
Cameroon	20.53
Morocco	85.28
Korea	66.60
Mexico	77.85
Gabon	92.91
Total	72.47

Source: IMF, Government Finance Statistics Yearbook, Vol. VI (1982).

Corporate income taxes are somewhat more important than the taxes on the incomes of individuals. This is the reverse of the situation in industrial countries. These taxes account for 3.1 percent of GDP and for 17.5 percent of total tax revenue for the 82 countries combined. In six countries (Indonesia, Congo, Nigeria, Venezuela, Oman, and Trinidad and Tobago) the share of these taxes as a proportion of GDP exceeds 10 percent; in 11 countries it exceeds 5 percent. These are all countries heavily dependent on oil or other mineral exports. These exports are carried out by a few large corporations that make sizable profits and thus provide the government with an easy-to-tap revenue source. 1/ The importance of corporate income taxes can also be assessed

1/ Mineral production could be taxed through export taxes. However, as we shall see below, export taxes are generally applied to agricultural exports.

by the fact that, in at least 14 countries, they account for more than one fourth of total tax revenue and in six countries for more than one half.

The impact of economic development on corporate income tax seems far greater than on individual income taxes. The correlation coefficient between the share of corporate income taxes in GDP and per capita income is 0.45 (significant at the 1 percent level). Table 3 shows that the share of these taxes in GDP rises from 1.5 percent for the group of countries with per capita incomes equal to or lower than $300, to 5.1 percent for countries with per capita incomes over $1,550. As a share of total tax revenue, these taxes rise from 11 percent for the lowest income group to almost 25 percent for the highest income group. These results are somewhat surprising as corporate income taxes become relatively unimportant for OECD countries. For these countries, in 1979, they accounted for only 2.5 percent of GDP and 7.4 percent of total tax revenue. 1/ We thus observe a kind of bell-shaped relationship whereby higher per capita income first leads to an increase in corporate income tax revenue and then to a decline. One explanation of this pattern may be that mineral exports raise the per capita incomes of developing countries while at the same time they provide them with an important tax handle. By the time countries move into the OECD group, the importance of mineral exports in determining per capita incomes is somewhat reduced while other tax handles have become available. 2/

Tables 3 and 4 and Appendix Tables A1 and A2 cast additional light on total income taxes. Tables 3 and 4 show their growing importance in the tax systems of the developing countries as per capita income rises. 3/ While the poorest group (with per capita incomes equal to or less than $300) collects only 2.9 percent of GDP from total income taxes, and about 21 percent of total tax revenue, countries with per capita incomes exceeding $1,550 collect about 8 percent of GDP and almost 40 percent of total tax revenue. The relative importance of income taxes on individuals as compared to those on corporations is also shown. The importance of oil (and other mineral exports) and of per capita income is evident from Tables A1 and A2. As oil exports become less important and per capita income rises, individual income taxes gain in importance while the corporate income taxes become far less important. (Compare Europe with Middle East in Tables A1 and A2.)

1/ The importance of corporate income taxes has been falling over the years in developed countries.

2/ The statutory rates at which profits are taxed in the developing countries are grosso modo of the same order of magnitude as in the OECD countries [Lent, 1977]. The use of investment incentives (in the form of tax holidays, allowances, etc.) in the developing countries is at least as widespread as in the OECD countries. Therefore, the greater importance of these taxes in the former group of countries is probably accounted for by a higher share of profits in GDP.

3/ The correlation coefficient for total income taxes (including individual, corporate, as well as "other") with an R of 0.47 is significant at the 1 percent level.

Table 6. Excises on Alcohol, Tobacco, and Petroleum

Country	Percent of Total Tax Revenue				Percent of GDP				Percent of Excises			
	Alco-hol	To-bacco	Petro-leum	Total	Alco-hol	To-bacco	Petro-leum	Total	Alco-hol	To-bacco	Petro-leum	Total
Chad	--	--	2.29	2.29	--	--	0.21	0.21	--	--	71.55	71.55
Ethiopia	4.83	0.81	3.25	8.89	0.58	0.10	0.39	1.07	34.93	5.78	23.26	63.96
Nepal	0.83	5.63	--	6.46	0.05	0.36	--	0.42	6.14	40.84	--	46.99
Mali	0.53	0.96	10.26	11.75	0.07	0.12	1.30	1.49	8.42	11.13	68.42	87.97
Upper Volta	1.90	--	3.47	5.36	0.25	--	0.46	0.71	26.71	--	48.43	75.14
Rwanda	19.07	--	--	19.07	2.11	--	--	2.11	100.00	--	--	100.00
Burundi	17.79	--	1.58	19.37	1.98	--	0.17	2.15	91.14	--	8.03	99.16
Zaire	0.91	3.89	1.03	5.83	0.14	0.63	0.16	0.93	13.90	66.62	16.67	97.19
India	--	4.65	11.60	16.25	--	0.63	1.61	2.25	--	11.75	29.75	41.50
Tanzania	--	0.42	--	0.42	--	0.07	--	0.07	--	8.80	--	8.80
Sierra Leone	3.21	8.20	5.46	16.88	0.49	1.25	0.83	2.56	18.00	44.82	29.93	92.75
Benin	2.07	--	3.29	5.36	0.33	--	0.53	0.86	22.23	--	35.44	57.67
Niger	1.21	0.71	5.00	6.92	0.15	0.09	0.60	0.83	17.45	10.29	71.67	99.42
Mauritania	0.27	0.20	3.58	4.05	0.05	0.03	0.59	0.67	6.33	4.69	81.13	92.14
Madagascar	--	--	0.05	0.05	--	--	0.01	0.01	--	--	0.50	0.50
Indonesia	0.15	4.61	--	4.76	0.03	0.85	--	0.88	2.85	89.71	0.01	92.57
Togo	--	--	3.14	3.14	--	--	0.84	0.84	--	--	100.00	100.00
Sudan	2.10	2.23	4.75	9.08	0.27	0.29	0.62	1.19	7.97	8.64	18.26	34.87
Senegal	1.90	2.21	6.13	10.23	0.38	0.44	1.23	2.06	17.37	20.22	56.14	93.74
Honduras	8.76	3.20	2.29	14.24	1.18	0.43	0.31	1.92	50.28	18.39	13.06	81.73
Liberia	0.34	--	0.87	1.20	0.08	--	0.20	0.28	2.44	--	6.27	8.71
Bolivia	5.28	2.96	9.82	18.05	0.46	0.25	0.90	1.61	31.50	19.78	44.56	95.85
Thailand	5.45	5.46	9.30	20.22	0.73	0.73	1.25	2.71	25.55	25.38	43.17	94.10
Guyana	9.41	--	--	9.41	2.71	--	--	2.71	97.84	--	--	97.84
Philippines	--	--	3.66	3.66	--	--	0.45	0.45	--	--	16.86	16.86
Grenada	0.85	0.39	--	1.24	0.16	0.06	--	0.22	83.78	16.22	--	100.00
Congo	0.52	--	0.10	0.62	0.14	--	0.03	0.17	83.72	--	16.11	99.83
Morocco	0.80	4.94	4.17	9.91	0.17	1.05	0.88	2.10	7.09	43.51	36.64	87.24
Peru	1.71	2.06	8.13	11.89	0.28	0.35	1.36	1.99	13.12	16.76	65.53	95.42
Guatemala	6.68	2.63	3.96	13.27	0.63	0.24	0.37	1.24	47.42	18.59	28.06	94.07
Dominican Rep.	10.08	3.74	7.50	21.21	1.17	0.43	0.83	2.36	44.00	16.31	32.94	93.18
Colombia	0.31	--	4.92	5.23	0.04	--	0.65	0.69	5.61	--	90.46	96.07

Table 6. Excises on Alcohol, Tobacco, and Petroleum (concluded)

Country	Percent of Total Tax Revenue				Percent of GDP				Percent of Excises			
	Alcohol	Tobacco	Petroleum	Total	Alcohol	Tobacco	Petroleum	Total	Alcohol	Tobacco	Petroleum	Total
Mauritius	9.16	2.35	—	11.50	1.96	0.50	—	2.46	67.67	17.32	—	85.00
Ecuador	1.20	0.99	2.39	4.57	0.14	0.11	0.29	0.54	23.03	18.65	45.77	87.45
Jamaica	—	—	20.54	20.54	—	—	4.75	4.75	—	—	72.50	72.50
Paraguay	3.37	1.54	4.11	9.02	0.38	0.17	0.46	1.01	27.45	12.58	33.43	73.46
Tunisia	—	—	7.25	7.25	—	—	1.82	1.82	—	—	68.08	68.08
Syrian Arab Republic	0.46	—	1.30	1.76	0.05	—	0.15	0.21	24.73	—	58.81	83.54
Turkey	—	—	0.34	0.34	—	—	0.06	0.06	—	—	3.85	3.85
Malaysia	1.32	0.63	4.68	6.64	0.28	0.14	1.01	1.43	12.92	6.16	45.74	64.83
Korea	6.10	—	—	6.10	1.04	—	—	1.04	37.11	—	—	37.11
Panama	2.79	1.54	6.03	10.37	0.58	0.32	1.26	2.17	26.60	14.71	57.54	98.85
Costa Rica	2.80	0.56	1.77	5.14	0.49	0.10	0.31	0.90	13.59	2.73	8.54	24.86
Brazil	0.16	—	7.70	7.87	0.04	—	1.79	1.83	0.89	—	40.76	41.65
Mexico	2.65	1.73	4.84	9.22	0.36	0.24	0.66	1.26	20.87	13.53	36.76	71.15
South Africa	4.63	3.01	7.42	15.06	0.92	0.60	1.48	3.01	28.69	18.62	45.41	92.73
Portugal	—	3.42	—	3.42	—	0.90	—	0.90	—	22.33	—	22.33
Argentina	0.09	—	9.74	9.83	0.02	—	2.06	2.08	0.55	—	59.17	59.73
Uruguay	—	—	2.77	2.77	—	—	0.55	0.55	—	—	17.60	17.60
Cyprus	2.05	6.14	7.33	15.52	0.35	1.05	1.25	2.65	8.84	26.52	31.52	66.88
Venezuela	1.77	1.77	1.08	4.62	0.35	0.35	0.21	0.92	38.60	38.60	23.48	100.68
Singapore	1.54	0.51	3.95	6.01	0.26	0.09	0.66	1.00	17.58	5.93	44.94	68.44
Trinidad and Tobago	0.64	—	0.48	1.12	0.20	—	0.15	0.34	57.45	—	42.55	100.00
Average for 53 countries	3.54	2.66	4.71	8.36	0.52	0.41	0.78	1.32	30.39	21.97	39.36	70.36

Source: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

Notes: Same period as Table 1. Dash indicates that data were not available.

2. Domestic taxes on goods and services

Domestic taxes on goods and services account for 4.4 percent of GDP and for 26.1 percent of total tax revenue for the whole group. The importance of these taxes in generating revenue varies considerably among the 82 countries. In six countries (Gambia, Lesotho, Swaziland, Botswana, Nigeria, and Oman) the ratio of domestic taxes on goods and services in GDP is less than 1 percent. It is not obvious what these countries have in common except that none of them has general sales taxes. 1/ Four countries (Zambia, Jamaica, Brazil, and Chile) collect more than 10 percent of GDP from these taxes, while 14 countries collect from them more than 40 percent of total tax revenue. There is no correlation between the share of these taxes into GDP and per capita income. This is true for all domestic taxes on goods and services combined as it is true for general sales taxes and excises separately.

There are relatively few countries without some sort of "general" sales tax. Twenty-two countries have value-added taxes while the rest have other forms of "general" sales taxes. Here the adjective "general" must be put between quotation marks as these taxes are often anything but general. In most countries the value that is added at the retail and often even at the wholesale level is exempt, services are exempt, and so are many categories of goods. Furthermore, in some countries goods produced under particular conditions (e.g., by the cottage industry in Pakistan) are also exempt. Of course, these legal exemptions must be augmented by the illegal ones owing to tax evasion. The result is that for many countries the tax base is made up predominantly by imports subject to these taxes. For several countries for which this information is available the share of total general sales tax revenue collected from imports often exceeds 50 percent. It is unlikely that in many countries more than 20 percent of domestic value added is subject to this form of taxation. 2/ This high rate of base erosion explains why in many countries relatively high legal rates generate low tax revenue. Because of these factors the distinction betwen a general sales tax (often imposed with multiple rates) and excises is at times more a legal than an economic distinction.

In eight countries general sales taxes generate revenue greater than 5 percent of GDP. By far the largest percentage (10.3) is obtained by Chile where it accounts for 40 percent of total tax revenue. For all countries combined general sales taxes account for 1.6 percent of GDP and 9.7 percent of total tax revenue. 3/ Thus, these taxes are a little less important than the taxes on individual income.

1/ Most of these countries make heavy use of import duties. (See below for more details.)

2/ This conclusion is supported by unpublished data for several countries.

3/ Taking into consideration only the countries that have general sales taxes, they account for 2.2 percent of GDP and 13.2 percent of total tax revenue.

The contribution of excises to total revenue is somewhat higher than that of the general sales taxes: 2 percent of GDP and 11.9 percent of total tax revenue. Only four countries generate more than 5 percent of GDP from excises (India, Zambia, Jamaica, and Suriname) with the first place going to Suriname--with an extraordinary 8.8 percent of GDP. In six countries (India, Pakistan, Sudan, Zambia, Jamaica, and Suriname) excise taxes account for more than one fourth of total tax revenue. India shows the highest percentage with a share of almost 40 percent.

Excises are imposed on many products and for many reasons. However, three products--alcohol, tobacco, and petroleum--are known to play a very important role in excise taxation. To determine just how important this role is, information has been gathered and shown in Table 6. The table refers to 53 countries and shows excise tax revenues from those three products as shares of total tax revenue, GDP, and total excises. The total columns underestimate the importance of these taxes as for several countries some of the information needed is unavailable.

By and large petroleum is most important, followed by alcohol and by tobacco. Close to 40 percent of total excise tax revenue comes from petroleum. Alcohol accounts for another 30 percent while tobacco's share is about 22 percent. Overall, these three products account for more than 70 percent of total excises. 1/ In 22 of the countries shown in the table, they account for more than 90 percent of total excise tax revenue. In 15 of the countries shown, excises on these three products account for more than 2 percent of GDP and in 17 countries they account for more than 10 percent of total tax revenue.

Alcohol is a very important tax base in several countries. For example, it accounts for an extraordinary share of total tax revenue in Rwanda and Burundi (19.1 percent and 17.8 percent, respectively). In Honduras, Guyana, and Mauritius, it accounts for close to 10 percent of total tax revenue. Tobacco is most important in the tax systems of Sierra Leone, Cyprus, Nepal, Thailand, India, and a few other countries, but its share is never as important as that of alcohol. Petroleum accounts for more than 20 percent of Jamaica's total tax revenue and for relatively high shares in Mali, India, Bolivia, Thailand, Argentina, and a few other countries. 2/

3. Foreign trade taxes

Foreign trade taxes account for 5.6 percent of GDP and for 33.4 percent of the total tax revenue of developing countries. These taxes are thus of the same order of importance as the taxes on income. The factors that lead a country to rely on export taxes are somewhat different from those that lead it to rely on import taxes. As a consequence, these two taxes will be considered separately.

1/ The actual percentage is much higher because data for some countries and for some of these excises are lacking, thus biasing downward the total.

2/ The importance of petroleum is often somewhat higher than these figures indicate as in many countries it is also taxed with export or import taxes.

Import duties are by far the single most important revenue source: they contribute 4.5 percent of GDP and 26.5 percent of total tax revenue. Import duties generate over one fourth of total tax revenue in almost half of the 82 countries. As is true for other revenue sources, there is considerable variation in their importance among countries. As a percent of GDP, import duties are most important in the group of 21 countries with per capita incomes equal to or below $300. They are least important for the 19 countries with incomes above $1,550 (see Table 3). 1/ By region, they are most important in the Middle East and in Africa where they generate at least twice as much revenue as in other regions.

As total tax ratios rise with per capita income while the ratio of import duties into GDP is negatively related to the level of income, there is a significant fall in the contribution of import duties to total tax revenue (see Table 4). That share is 32 percent for countries with incomes equal to or less than $300 and 18 percent for countries with incomes greater than $1,550. The declining importance of import duties cannot be explained in terms of a tax-handle theory as the ratio of imports to GDP (the presumed tax base) is much higher in the 19 countries with per capita incomes over $1,550 than in the 21 countries with per capita incomes equal to or less than $300. 2/ Thus, explicit policy choices must be involved.

One would expect that revenue from import duties would be higher in countries that are open and that do not rely much on domestic taxes on goods and services. 3/ To get some support for these conjectures Table 7 has isolated the eight countries with the highest ratios of revenue from import duties to GDP and the eight countries with the highest ratios of revenue from domestic transaction taxes to GDP. Table 7 shows also the share of imports to GDP. The striking feature of this table is the degree to which import duties substitute domestic taxes on goods and services and vice versa. All the great users of taxes on imports make little use of taxes on domestic transactions; and, with the exception of Suriname, all the great users of domestic taxes on goods and services make little use of import duties.

A more formal test of the above relationship can be made by regressing the share of import duties in GDP (ID/GDP) against (a) per

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1/ This does not mean that, in these higher-income countries, imports can come in freely. Quotas and other restrictions may take the place of these duties. When this happens, the government de facto transfers the power to tax to importers.

2/ The imports/GDP ratios are, respectively, 23.3 percent for the low-income group and 56.3 percent for the high-income group.

3/ The theory of tax structure change argues that as countries develop, foreign trade taxes are progressively replaced by domestic taxes on goods and services [see Tanzi, 1973 and 1978].

Table 7. Indirect Taxes

(In percent of GDP)

	Import Duties	Domestic Taxes on Goods and Services	Total Indirect Taxes	Import
Countries with Highest Import Duties				
Swaziland	17.6	0.6	18.2	105.9
Lesotho	15.2	0.6	15.8	73.53
Yemen Arab Republic	13.3	1.8	15.1	68.94
Botswana	12.1	0.3	12.4	81.85
Jordan	11.3	1.5	12.8	73.25
Bahamas	10.6	1.7	12.3	322.33
Gambia	10.3	0.5	10.8	55.75
Seychelles	9.3	1.9	11.2	77.01
Countries with Highest Domestic Taxes on Goods and Services				
Chile	1.5	12.5	14.0	19.45
Jamaica	1.8	11.5	13.3	31.51
Brazil	1.0	11.2	12.2	8.16
Zambia	1.8	10.8	12.6	29.67
Suriname	8.5	9.8	18.3	49.70
Uruguay	2.9	9.3	12.2	15.50
Portugal	1.7	8.6	10.3	27.94
India	2.6	8.5	11.1	7.62

Source: Table 1 for revenue data and, for import data, IMF, *International Financial Statistics*.

capita income ($\overline{Y}$), (b) the share of imports in GDP (IM/GDP), and (c) the share of domestic taxes on goods and services in GDP (DOM/GDP). The estimated equation is the following:

$$\underset{}{ID/GDP} = \underset{(7.51)^{**}}{5.2626} - \underset{(3.28)^{**}}{0.0011\overline{Y}} + \underset{(5.42)^{**}}{0.0426\ IM/GDP} - \underset{(2.48)^{*}}{0.2737\ DOM/GDP}$$

$$\overline{R}^2 = 0.350 \qquad DW = 2.053$$

where the numbers in parenthesis are t values. Two stars indicate significance at the 1 percent level while one star indicates significance at the 5 percent level.

The equation provides a strong backing to our hypothesis. Import duties are positively influenced by the openness of the economy and negatively influenced by the level of per capita income and by the country's reliance on domestic taxes on goods and services. 1/

Table 8 summarizes some relevant relationships for these taxes. It shows that in spite of the fact that imports as a share of GDP rise rather sharply as income rises (see column 4), the share of import duties into total tax revenue falls considerably (column 5). That the importance of imports as a tax base is inversely related to the level of income can be seen most clearly from column 6: the effective tax rate on imports averages about 20 percent for the low-income countries and about 10 percent for the high-income countries.

The behavior of the effective tax rate on import values can result either from a systematic reduction of the statutory levels of import duties as per capita income rises; or from progressively more generous exemptions and exonerations from customs duties without any necessary change in the statutory rates. The author is not aware of any study that has assessed whether the level of statutory rates falls as income rises. It would require too much effort to make the assessment here even though the needed information is available. The second possibility would be much harder to check as the required data are not readily available and, in fact, they may not be available at all for most countries.

1/ Incidentally, openness does not play any role in determining a country's total tax ratio. It was not significant in a test which regressed the tax ratio against per capita income and the ratio of imports to GDP.

Table 8. Basic Relationships for Import Taxation

Per Capita Incomes ($\overline{Y}$) $ (1)	Percent of GDP: Total tax revenue (2)	Percent of GDP: Import duties (3)	Percent of GDP: Imports (4)	Import Duties as Percent of Total Tax Revenue (5)	Import Duties as Percent of Imports (6)
$\overline{Y} < 300$	13.2	4.2	24.4	32.0	19.5
$300 < \overline{Y} < 650$	18.6	5.8	38.9	30.6	15.5
$650 < \overline{Y} < 1550$	17.8	4.3	32.5	24.1	13.7
$1550 < \overline{Y}$	20.6	3.6	56.3	18.2	10.3
All countries	17.5	4.5	37.7	26.5	14.8

Source: Table 1 for revenue data and, for import data, IMF, International Financial Statistics.

Table 9 contains whatever information could be found on this issue. The table covers 14 countries and shows that the proportion of exempted imports ranges from a minimum of 12 percent in The Gambia to a maximum of 75 percent in Malaysia. The average for the group is 43 percent. The reasons for this erosion of the import tax base are several. The most important are: (a) duty-free imports by the public sector; (b) duty-free imports by embassies and by other agents with diplomatic status; (c) duty-free imports by private enterprises benefiting from incentive legislation; (d) zero-rating of imports for social reasons. Table 9, while interesting, does not allow us to make any statement about a possible relationship between this form of tax-base erosion and the level of per capita income.

Export taxes continue to play a significant role in many countries but have a much more limited importance than import duties. For the whole group they account for 1.1 percent of GDP and 7 percent of total tax revenue. Their importance falls with the rise of per capita income. They generate 11 percent of total tax revenue (1.62 percent of GDP) for the group of countries with per capita income equal to or less than $300, but less than 3 percent of total tax revenue (0.44 percent of GDP) for the countries with per capita income above $1.550 (see Tables 3 and 4). 1/

1/ The correlation between the ratio of export duties to GDP and per capita income is negative and significant at the 5 percent level (R = 0.28).

The ratio of export duties to exports is 11 percent for the lowest income group and falls respectively to 5.1 percent, 4.4 percent, and 3.3 percent for the other three income groups. The ratio is 6.1 percent for the 82 countries combined. It is highest in Africa (7.3 percent) and in the Western Hemisphere (5.8 percent), lower in Asia (5.2 percent), and much lower in the Middle East (2.4 percent) and in the few European countries (0.1 percent).

Table 9. Exempted Imports as Percent of Total Imports

Country	Year	Exempted Imports
Antigua and Barbuda	1981	50
Cameroon	1979	52
Fiji	1981	29
Haiti	1977	41
Ivory Coast	1979	32
Malaysia	1981	75
Mauritius	1978	25
Morocco	1978	35
Pakistan	1980	34
Sierra Leone	1980	54
Somalia	1978	60
The Gambia	1977	12
Trinidad and Tobago	1981	62
Western Samoa	1979	39
Average		43

Source: Based on unpublished national sources.

Sri Lanka has by far the highest ratio of revenue from export taxes to GDP (8.2 percent). Export taxes are also very important in Malaysia, Ghana, El Salvador, and a few other countries. It will be recalled that in the discussion of corporate income taxes it was argued that those taxes were particularly important in countries that export <u>mineral</u> products as these exports are normally carried out by large enterprises. Following the same line of reasoning one would expect that export taxes would be particularly important in countries that export <u>agricultural</u> products, as agricultural production is far less concentrated and the information required to tax agricultural incomes <u>as incomes</u> is normally not available. Thus, countries have often little alternative but to tax agricultural production through export taxes. If this line of reasoning is correct the countries that make much use of corporate income taxes should make little use of export taxes, and vice versa, unless of course they are important exporters of both mineral and agricultural products. Table 10 casts some light on this hypothesis.

Table 10 shows the eight countries with the highest revenue from export taxes (as percentages of GDP) and the eight countries with the highest revenue from corporate income taxes. The relationship is obvious: the heavy users of corporate income taxes make almost no use of export taxes while the heavy users of export taxes make little use of corporate income taxes. The major exceptions--Malaysia and Zaire--export not just agricultural products but also mineral products so that they can make heavy use of both taxes. It thus appears that the structure of production and exports is a major determinant of the tax structure at least in what concerns the choice between corporate income taxes and export taxes.

Table 10. Export Duties and Corporate Income Taxes

(In percent of GDP)

	Export Duties	Corporate Income Taxes
Countries with Highest Export Duties		
Sri Lanka	8.2	2.0
Malaysia	4.2	6.3
Ghana	4.0	1.7
El Salvador	3.6	1.1
Grenada	3.3	1.2
Zaire	3.2	2.7
Ethiopia	2.9	1.4
Rwanda	2.9	1.3
Countries with Highest Corporate Income Taxes		
Trinidad and Tobago	--	20.3
Nigeria	--	16.8
Venezuela	--	14.5
Congo	0.1	14.2
Indonesia	0.8	13.0
Oman	--	12.5
Gabon	1.0	9.8
Guyana	0.5	9.0

Source: Table 1.

4. Other taxes

We can be very brief with the remaining taxes. Social security taxes generate revenues of the same order of magnitude as the taxes on the incomes of individuals--1.85 percent of GDP and 9.3 percent of total tax revenue. As their base is wages, and as the share of wages in national income rises with per capita income, it is not surprising to find some relationship between these taxes and per capita income. Tables 3 and 4 show the growing importance of these taxes as one moves from the lowest income group to the highest income group. Per capita income, however, is not the sole determinant of these taxes' importance. Sociopolitical factors are perhaps equally important; the six countries with the highest share of GDP coming from this source are all Latin countries (Portugal, Brazil, Panama, Uruguay, Chile, Costa Rica). In these countries social security taxes account for 5 to 8 percent of GDP.

Of the three theoretical tax bases--income, consumption, and wealth--wealth is by far the least important. Wealth taxes account for only 0.4 percent of GDP and 2.6 percent of total tax revenue for the 82 countries taken together. They are very important in Singapore where they account for 2.5 percent of GDP and for about 15 percent of total tax revenue. Singapore is essentially a city state so that a large share of wealth is in the form of buildings. In only three other countries do they account for more than 1 percent of GDP (Mauritius, Jordan, and Barbados). This low yield on the part of these taxes is surprising when one recalls that they used to be a major revenue source in earlier times [Hinrichs, 1966; Adams, 1982]. In recent times administrative constraints have usually made these taxes both unproductive and inequitable in developing countries. Their most sophisticated version--the net wealth tax--has proved a costly mistake in those developing countries that have attempted to implement it. These taxes show some relationship to per capita income (see Tables 3 and 4).

Table 11 has isolated for the last three years for which the information is available the recurrent taxes on immovable property (property taxes on building and land) for 55 countries. 1/ These taxes account for only 1.3 percent of total tax revenue and for 0.20 percent of GDP. Singapore again stands out as it is the only country where these taxes are truly important. Other countries where these taxes contribute significant revenues are Nepal, El Salvador, Bahamas, Jamaica, and a few others. These taxes are also correlated with per capita income. The coefficient of correlation between their share in GDP and per capita income is 0.38, significant at the 1 percent level.

1/ The data in Tables 1 and 2 include all taxes on wealth ownership as well as on wealth transfer.

Table 11. Recurrent Taxes on Immovable Property

(Average last three years) 1/

	Percent of Total Tax Revenue	Percent of GDP
Bangladesh	2.051	0.154
Chad	0.477	0.049
Ethiopia	1.957	0.239
Nepal	6.664	0.428
Mali	0.789	0.099
Rwanda	0.502	0.056
Burundi	0.293	0.032
Zaire	0.022	0.003
Haiti	0.286	0.026
Tanzania	0.877	0.148
Benin	0.028	0.004
Niger	0.089	0.010
Mauritania	0.161	0.027
Madagascar	0.052	0.008
Lesotho	0.333	0.064
Indonesia	1.157	0.212
Togo	0.415	0.111
Ghana	0.365	0.046
Yemen Arab Republic	0.480	0.092
Sudan	0.164	0.024
Senegal	1.166	0.234
Egypt	1.463	0.409
Liberia	1.111	0.249
Bolivia	0.171	0.015
Nicaragua	2.755	0.385
Guyana	1.132	0.325
El Salvador	5.417	0.687
Philippines	0.417	0.051
Grenada	0.953	0.185
Congo	0.029	0.008
Morocco	0.198	0.042
Peru	1.308	0.187
Guatemala	1.023	0.097
Colombia	0.317	0.042
Ecuador	0.336	0.038
Jamaica	3.449	0.795
Paraguay	2.815	0.313

Source: IMF, Government Finance Statistics Yearbook, Vol VI (1982); World Bank, Atlas (1981).

1/ Same years as Table 1.

III. Other Aspects

The objective of this paper was to convey to the reader a feel for the quantitative aspects of the developing countries' tax systems. It is to be hoped this was accomplished in the previous sections. Therefore, the paper could now be concluded. However, if this were done, the reader who knows little about those tax systems might get the impression that he has learned more from this paper than in fact he had. The fact is that tax systems differ in more than the statistical aspects described above. 1/ Each tax system has its own characteristics and peculiarities and these cannot be captured by purely statistical summaries. To give a more comprehensive picture of the tax systems of developing countries one would need, in addition to the statistical description, the statutory one as well as what, for lack of better words, we shall call the real or effective description. The correlation between these three descriptions can be low indeed.

The statutory tax system could in part be outlined by presenting the relevant information about rates, taxable bases, methods of payments, and so on, as described in the laws. This information is generally available for many countries and for most taxes although absence of codification often makes it difficult to trace. 2/ If the reader were provided with the statutory information, in addition to statistical information, his knowledge would undoubtedly increase but not by as much as he might believe; and certainly not by as much as it would increase if we were dealing with advanced countries. The reason is that in developing countries the gap between the statutory tax system and the effective or real tax system may be wide indeed. This gap also affects the quality or the meaning of the statistical description. Two countries could have similar statistics but totally different statutory systems. They could have similar laws but end up with highly different statistics. How do these divergencies come about? Some reasons are outlined below. 3/

First, there is the wedge introduced by explicit and intentional tax evasion. The individual who earns an income equal to x, or sells an amount equal to y, but declares only half of these amounts has, in an effective sense, reduced the burden of taxation, thus changing the relationship between the statutory system and the statistical description.

1/ At this point, Disraeli's well-known observation--that there are three kinds of lies: lies, damned lies, and statistics--appears highly pertinent.

2/ In some countries getting hold of a given tax law can be a major and frustrating enterprise. Getting hold of the regulations that accompany the law may be even more difficult.

3/ A more extensive discussion can be found in [Tanzi, 1983].

Second, there is the wedge introduced by poor, or more often nonexistent, accounting. Again, the unwary observer may believe that what shows up in the statistics as an "income" tax was actually imposed on a clear-cut concept of income, and what shows up as a sales tax was imposed on an objectively measured concept of sale. The reality is, however, far different. It is not uncommon for the government to get some idea of income from the volume of the turnover and some idea of sales from, say, the size of the establishment. 1/ In these cases, the theoretical distinction between, say, an income tax and a sales tax, has no real-life counterpart. Thus, one would be naive to apply the public finance theories related to specific taxes to these statistical concepts.

Third, the wedge can be introduced by the timing of the payment. Suppose, for example, that a tax on corporate income is paid with a two-year delay so that this year's collection is determined by the corporate income of two years ago. Suppose further that there is a significant and variable rate of inflation. 2/ In such case, this year's revenue from the tax on corporate income might bear no relationship to this year's corporate income. Unfortunately, information on these lags is not readily available and is generally unknown so that in comparing statistics between countries such information cannot be taken into account.

If tax evasion, accounting standards, lags as well as other factors were unchanging, they could, perhaps, be taken into account into an analysis of the tax systems. But, to complicate matters even more, they keep changing, being influenced by factors such as the rate of inflation, the personality of the tax administrators, the political mood, the means available to the tax administration, the rigidity with which the courts are applying the penalties on tax evaders, the degree of corruptibility of the tax inspectors, and the variability in the exchange rate. Thus, an intimate knowledge of a tax system is necessary before theoretical prescriptions for tax reform are made. In taxation, perhaps more than in any other area, perfection may be the enemy of the good. What looks just right in theory may be quite wrong in practice. The basic truth to remember is that control over the statutory system (over the tax laws) may at times be accompanied by very little control over the effective system. If this is the case changing the laws may mean far less than one believes.

1/ For example, several countries collect a minimum tax on corporate income. This tax is assessed as a given percent (often 1 percent) of the turnover. It is generally shown as an income tax but is it? See [Mutén, 1982].

2/ These are all realistic assumptions.

Table A1. Tax Revenue by Region

(In percent of GDP)

			Income Taxes				Domestic Taxes on Goods and Services				Foreign Trade						
	Average Income	Total Taxes	Total	Individual	Corporate	Other	Total	General sales, turnover, VAT	Excises	Other	Total	Import duties	Export duties	Other	Social Security	Wealth and Property	Other
Africa	602	17.95	5.68	1.88	3.38	0.64	3.80	1.58	1.58	0.64	7.16	5.97	1.14	0.02	0.93	0.32	0.38
Asia	846	14.95	5.04	2.04	3.04	0.15	4.93	1.66	2.36	0.91	4.19	3.05	1.40	0.01	0.25	0.48	0.17
Europe	2203	20.13	6.54	4.19	1.09	1.26	5.82	1.58	3.21	1.03	2.73	2.71	--	0.01	5.56	0.46	0.87
Middle East	1364	17.82	4.82	1.09	4.33	0.66	2.04	--	0.89	1.15	7.98	7.21	0.24	0.10	1.86	0.63	1.36
Western Hemisphere	1533	17.87	5.32	1.84	3.48	0.60	5.24	1.99	2.33	0.92	4.17	3.05	1.07	0.02	2.84	0.45	0.54
All countries		17.51	5.54	1.92	3.14	0.61	4.43	1.63	1.98	0.82	5.60	4.51	1.10	0.02	1.85	0.41	0.48

Source: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

Table A2. Tax Revenue by Region

(In percent of total taxes)

	Average Income	Total Taxes	Income Taxes				Domestic Taxes on Goods and Services				Foreign Trade				Social Security	Wealth and Property	Other
			Total	Individual	Corporate	Other	Total	General sales, turnover, VAT	Excises	Other	Total	Import duties	Export duties	Other			
Africa	602	100.00	29.76	10.39	17.44	3.24	21.82	8.98	9.50	3.34	40.96	33.35	7.47	0.09	4.98	1.86	2.31
Asia	846	100.00	30.32	13.10	17.36	0.83	36.11	13.58	16.53	6.00	27.96	22.09	7.11	0.04	1.44	3.69	1.12
Europe	2203	100.00	34.73	23.30	5.42	6.02	28.27	6.44	16.01	5.82	14.80	14.65	0.02	0.04	23.83	2.42	3.89
Middle East	1364	100.00	31.28	4.93	28.32	5.72	10.59	--	4.30	6.29	42.57	39.55	1.45	0.36	7.70	3.83	7.87
Western Hemisphere	1533	100.00	27.09	9.42	17.40	3.24	28.83	10.72	13.22	4.89	26.92	18.81	7.76	0.15	14.48	2.67	3.45
All countries	1043.9	100.00	29.75	10.90	17.54	3.28	26.09	9.67	11.86	4.56	33.37	26.51	7.06	0.12	9.29	2.55	2.90

Source: IMF, Government Finance Statistics Yearbook, Vol. VI (1982); World Bank, Atlas (1981).

References

Adams, C. (1982), Fight, Flight, Fraud, The Story of Taxation (Curacao: Euro-Dutch).
Chelliah, R., H. J. Baas, and M. R. Kelly (1975), "Tax Ratios and Tax Effort in Developing Countries, 1969-71," 22, International Monetary Fund, Staff Papers, 1.
Goode, R. (1962), "Personal Income Tax in Latin America" in Joint Tax Program OAS/IDB/ECLA, Fiscal Policy for Economic Growth in Latin America (Johns Hopkins Press).
Hinrichs, H. H. (1966), A General Theory of Tax Structure Change During Economic Development (Cambridge: Harvard University Press).
International Monetary Fund (1982), Government Finance Statistics Yearbook, Vol. VI.
Lent, G. (1977), "Corporation Income Tax Structure in Developing Countries," 24, *International Monetary Fund*, Staff Papers, November.
Musgrave, R. (1959), The Theory of Public Finance (New York: McGraw-Hill).
Mutén, L. (1982), "A Cascade Tax by Any Other Name" in Public Finance, Vol. XXXVII, No. 2.
Newbery, D. and N. Stern, eds., Modern Tax Theory for Developing Countries (IBRD, forthcoming).
Tait, A. A., W. L. M. Gratz, and B. J. Eichengreen (1979), "International Comparison of Taxation for Selected Developing Countries, 1972-76," 26, International Monetary Fund, Staff Papers, 1.
Tanzi, Vito (1966), "Personal Income Taxation in Latin America: Obstacles and Possibilities," National Tax Journal, Vol. 19, June, pp. 156-62.
_____ (1973), "The Theory of Tax Structure Change During Economic Development: A Critical Survey," Rivista di Diritto Finanziario e Scienza delle Finanze, Vol. 32, pp. 199-208.
_____ (1978), "Import Taxes and Economic Development," Economia Internazionale, Vol. XXXI, Nos. 3-4, pp. 252-69.
_____ (1981), "Taxation in Sub-Saharan Africa: A Statistical Evaluation" in International Monetary Fund, Occasional Paper, No. 8 (October), pp. 43-73.
_____ (1983), "Tax Systems and Policy Objectives in Developing Countries: General Principles and Diagnostic Tests" (mimeo).