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RATES OF RETURN ON CAPITAL:
AN INTERNATIONAL COMPARISON

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In a world characterized by full and accurate information and unfettered movement of resources, marginal rates of return on capital should be equal within and among nations. In reality, knowledge is not perfect, adjustment is not instantaneous, and barriers exist against the movement of resources especially across national boundaries. Therefore if one cuts in at a point in time, international differences in the rates of return on capital arising from distortions and/or disequilibria should not be unexpected.

The main purpose of this paper is to construct stocks of nonhuman, reproducible capital and estimate marginal rates of return on this capital from a world cross-section of 113 countries. The sample includes both developed (DCs) and less developed countries (LDCs). The magnitude of differences among national rates of return reveals the degree of disequilibria or distortions in the world capital market. Secondly, a measure of the rates of return on development assistance capital is obtained from a sub-sample of 73 LDCs. Lastly, the sources of differences in rates of return on capital are investigated.

Procedure, Variables, and Data

Rates of return on capital are estimated by a Cobb-Douglas production function fitted to cross-country observations. National output (Q) is

defined as GDP and the inputs are the three primary factors of production: Land (A), labor (L) and capital (K).

The proper unit of observation for estimating production functions is the point where the production decisions are made. For the market economies, at least, this is the individual firm. However, for national observations it is not possible to measure, or even define, the "average firm" in the economy. On the other hand, large differences in the size of countries will introduce heteroscedasticity in production functions fitted to cross section data on national output and inputs. In an effort to mitigate this problem, output and inputs are measured per unit (year) of labor. Labor is measured as the economically active population in 1980.

Output for country i (Q_i) is defined as 1980 GDP in U.S. dollar equivalents. Data are from Summers and Heston. These figures which are corrected for international price differences should be the most accurate measures of real output that currently exist.

National stocks of physical, reproducible capital are approximated by summing annual gross domestic investment in each country from 1960 through 1979. These figures also are from Summers and Heston. This procedure implies a 20-year one-hoss-shay depreciation pattern whereby the implied service flow of capital is constant over its life. This procedure should yield more accurate capital stock figures than using the current market or book values of capital which decline more rapidly than service flow declines. The older the capital item becomes the fewer years of useful life that remains. Hence its market price will decline even if service flow remained constant. The 20-year life is adopted because investment data for the full set of countries are available for 1960 and beyond.

While assets such as buildings and infrastructure may last longer than 20 years, most machines and tools have shorter life spans. Thus the 20-year life as an overall average is neither unreasonably short or long.

The procedure also measures capital by its cost of production. To the extent that higher quality capital costs more to produce, this measure should capture capital quality. However, it does not reflect the lower real price of new forms of higher quality capital. This phenomenon would show up as a higher rate of return on capital. Nor does this measure allow capital to change in value in response to unforseen circumstances which either raise or lower its return. These circumstances will cause capital's actual rate of return to diverge from its expected rate at the time it was put in place.

The total stock of human capital for each country was estimated by summing the total number of students enrolled in the first level of schooling between 1925 and 1975, plus the number enrolled in the second and third levels between 1930 and 1979.[1/] The per worker stock was obtained by dividing the total years of schooling completed during these periods by the population (age 15 and over) in 1980. The stock of human capital per worker is divided into two components: 1. the average years of schooling at the first and second levels (HK1-2), and 2. average years at the third level (HK3). The reason for dividing the human capital measure into these two parts will be explained in the following section.

Since labor is measured as the number of people in the economically active population, unadjusted for differences in acquired skills, the human capital variables are included to capture the effects of these differences, and in so doing avoid a specification bias on the nonhuman

capital coefficient. However, as will be explained in the following section, the contribution of human capital to national output cannot be accurately measured by a static production function.

The land variable was measured as hectares of agricultural land (arable plus pasture land), per labor-year. A land quality index is included to take account of variations in land quality or growing conditions.[2/]

Average output and input figures per labor-year for the 10 highest and 10 lowest income countries in the 113 county sample are presented in Table 1. (Country specific figures are presented in Appendix Table 1). In order to facilitate comparisons with more recent price levels the monetary variables are converted to constant 1985 dollars, using the U.S. CPI. Output per labor-year is about 21 times greater in the 10 richest countries than in the 10 poorest. The difference in nonhuman capital per worker between the two groups is about 50-fold. Human capital at the first and second levels measured as years of schooling per worker is about 4.7 times greater in the rich countries. It is 56 times greater at the third level. Thus the main difference between the richest and poorest countries from the standpoint of human capital is at the third level of schooling.

The true difference in human capital may be somewhat greater than these figures imply if quality of schooling is lower in the poor nations. However, this bias will be offset to some degree if there are diminishing returns to schooling -- doubling the years of schooling may not double the quantity of human capital.

Table 1: Output and Inputs per Labor-Year, as of 1980. (1985 prices)

	Output ($1000)	Nonhuman Capital ($1000)	Human Capital (1-2) (years)	Human Capital (3) (years)	Rate of Return on Capital (%)
10 richest countries	$31.5	$126.7	9.4	.56	15.6
10 poorest countries	1.5	2.5	2.0	.01	42.3*

*Excludes Burundi.

The Dynamics of Human Capital

Human capital can exhibit a positive coefficient in a production function by increasing labor productivity, given the quantity of nonhuman capital, and/or by increasing the rate of return on nonhuman capital when it is measured by its cost of production. One can identify four effects of human capital on the national economy.

1. The worker effect. Human capital can increase labor productivity, given the quantity of nonhuman capital, by increasing the ability of workers to perform tasks more efficiently. This effect will be captured by both human capital variables in the production function.

2. The inventive effect. Human capital facilities the invention and production of new products, and/or new, more productive forms of nonhuman capital. Both can increase the rate of return on this capital, at least temporarily. The production of new products and new forms of nonhuman capital is the main engine of economic growth. Without it the rate of return on conventional nonhuman capital would be driven down to a low level, long run equilibrium. It is hypothesized that the inventive effect is determined primarily by the third level of schooling.

3. Short-run allocative effect. While the inventive effect creates disequilibria, the short and long run allocative effects promote the movement towards equilibrium. In the short-run the production of new products and the adoption of new forms of capital increases the marginal rate of return on capital as the proportion of this production or investment becomes a larger share of the total. Human capital, at both the first and second and third levels, should facilitate this adjustment and in turn increase the marginal rate of return on capital from what it would otherwise be. This is not to say that no adjustment would be forthcoming without the existence of human capital. But to the extent that human capital speeds up the adjustment, differences in the stock of human capital should be reflected in the production function by differences in the marginal rate of return on nonhuman capital.

4. Long run allocative effect. As resources are reallocated from other uses towards high pay-off products or capital, the marginal rate of return on this capital declines. Essentially this is the same process described above for the short-run allocative effect except that in this case human capital facilitates an equalization of the rates of return on nonhuman capital. This effect will not be picked up by a production function. In a long run equilibrium the coefficients on human capital will reflect only the worker effect which is likely to be the least important of its overall impact on the economy (Welch). Of course, at any point in time, human capital at the third level will reflect more than the worker effect to the extent that disequilibria exists. But how much more will be purely accidental depending on the stage of the adjustment process that happens to be observed. Therefore it is not possible to accurately

measure the full contribution of human capital, which is a dynamic process, with a static model.

Rates of Return

The results of fitting a Cobb-Douglas production function to the data for the 113 country sample are presented in Table 2. Since the land, land quality, and HK1-2 coefficients are not statistically significant, the results with these variables omitted are presented in column 2. In spite of the simplicity of the model and the rough nature of the data, over 93 percent of the variation in output per labor year in the 113 country sample is explained by the two capital stock variables. Of the explained variation about 96 percent is accounted for by nonhuman capital and the remaining 4 percent by HK3 when each is added last in the regression. However as explained in the previous section this does not represent a fair assessment of the contribution of human capital because new forms of nonhuman capital could not be produced without human capital. The overall average marginal rate of return on nonhuman, reproducible capital evaluated at the sample mean is estimated to be 19.8 or roughly 20 percent per year for these countries.

Table 2: *Production Function Results

	(1)	(2)
Constant	3.23 (4.87)	2.83 (8.79)
Land	-.010 (-.50)	--
Land Quality	-.050 (-.63)	--
Nonhuman Capital	.631 (18.1)	.624 (21.1)
Human Capital (1-2)	-.059 (-.86)	--
Human Capital (3)	.111 (4.08)	.094 (4.09)
R^2	.936	.934

*Figures in parentheses are t-ratios.

Country specific marginal rates of return on nonhuman capital, obtained by multiplying the coefficient on this variable in equation (2), (.624), by its average product for each country, are presented in the Appendix Table 1. These figures vary according to the capital-labor ratio and the quantity of the complementary input--human capital (3). The marginal rate of return on capital for the 10 highest income countries in the sample shown in Table 1 averaged 15.6 percent while the corresponding figure for the 10 poorest is 42.3. As one would expect, the rates of return are higher in the capital poor countries than in those with high capital-labor ratios. There is relatively little variation in the marginal rate of return on NHK among the developed countries - most fall in the 15 to 20 percent range except Switzerland, Denmark, Japan, and New Zealand which came in at the 12 to 14 range. The U.S. figure is 16.8. Countries at the border between the DCs and LDCs such as Iraq, Mexico,

Venezuela, and Chile exhibit rates of return above the DC average. There is, however, substantially more variation in the marginal rate of return on capital among the LDCs, which suggests that the movement of capital among these countries and adjustments to disequilibria are subject to greater constraints than is the case for the developed nations.[3/]

Development Assistance Capital

According to United Nations figures, about 13 percent of the nonhuman capital stock in a sub-sample of 73 LDCs came from development assistance. Of this amount, about 88 percent was contributed by the market economies and multilateral agencies and the remaining 12 percent came from the centrally planned economies. The proportion of nonhuman capital contributed by development assistance varies greatly among LDCs, approaching 100 percent of the nonhuman capital in the smallest and poorest nations.

A number of studies have attempted to assess the impact of development assistance on domestic savings, capital formation, and economic growth of recipient nations. By and large the results of these studies vary and must still be regarded as inconclusive.[4/] In regard to the impact of foreign aid on domestic savings, some of the early efforts reported that foreign aid reduced the domestic savings rate from what it would otherwise have been. (Azeskoug, Griffen and Enos). One explanation given for these results is the government consumption spending in the recipient countries is increased without a corresponding increase in taxes causing a decrease in domestic savings as a percent of GNP. More recent studies have reported little or no relationship between capital inflows

and domestic savings (Gupta, Bhagwati and Srinivasan). Following up on this general theme, other analysts have attempted to assess the importance of the possible negative impact of foreign aid on domestic savings (Bhagwati and Grinols, Dacy). Generally, the results indicated that the outcome depended largely on the pre-aid savings rate of LDCs in question and the propensity of their governments to spend on consumption goods.

A number of other studies have related development assistance to the economic growth of LDCs (Michalopoulos and Jay, Balassa, Papanek, and Mosley). Again the results are mixed. While there is some indication that inflows of development assistance capital are positively related to growth of the recipient countries, the relationship is not strong and the percent explained by this capital is relatively small. The general, albeit tentative, conclusion one draws from the development assistance literature is that at best foreign aid has had a marginal impact on the economic growth of LDCs. Even if the results of the above mentioned studies are valid and the preceding conclusion is correct, they do not necessarily imply that the real marginal rate of return on development assistance capital is lower than the opportunity cost of this capital. Even at an acceptable rate of return, the additional per capita income generated by this capital is dwarfed in many countries by their existing income (Harberger).

Aside from anecdotal evidence on the success or failure of individual development assistance projects there is virtually no quantitative estimates on the overall marginal rate of return on this capital, at least in the published literature. To obtain such an estimate a production function comparable to that shown in the second column of Table 2 is

fitted to a 73 country subsample--countries that received development assistance during the 1960s and 70s. In this function nonhuman capital is split into three parts: 1. that which was produced from domestic savings, 2. capital contributed by the market economies and multilateral agencies, and 3. capital contributed by the centrally planned economies. The two development assistance capital variables were constructed by summing annual transfers of development assistance capital, 1960 through 1979, from the two sources as reported in the United Nations Statistical Yearbook, respective years.[5/] Similar to the total nonhuman capital variable this procedure implies a 20 year "one-hoss-shay" depreciation pattern. Estimated per worker stocks of development assistance capital from the two sources in constant 1985 prices are presented in Appendix Table 2. Capital from domestic saving is obtained as a residual after subtracting both types of development assistance capital from the total estimated capital stock of the country. The coefficients, t-ratios, and estimated rates of return (evaluated at the means) for each of the three capital variables are presented below.

Capital variable	Coefficient and t-ratio	Estimated rate of return (%)
Domestic	.581 (11.9)	27
Market economy	.055 (1.48)	31
Centrally planned economy	-.009 (-.57)	--

The market economy coefficient is marginally significant but taking it at face value yields a 31 percent rate of return on development assistance capital from this source. This figure is about the same order of

magnitude as the marginal rate of return on capital financed form domestic saving (27 percent). Both figures are higher than the rates of return reported previously for the developed countries. The negative but statistically insignificant coefficient on development assistance capital obtained from the centrally planned economies does not necessarily imply that these resources have been wasted. Countries which received this aid may have undertaken changes in their economic systems in the direction of more government control over the economy which in turn could have resulted in a GDPs lower than they otherwise would have been. If so, the results reveal the inefficiency of the system rather than the waste of capital per se.

Sources of Difference

As shown in Appendix Table 1, there is substantial variation among countries in the rate of return on capital, especially among the LDCs. Part of this variation can be explained by differences in capital intensity and in the stock of human capital. In this section three additional potential sources are investigated: 1. the vintage or newness of the capital stock, measured as the percent of capital put in place after 1969, 2. the industry mix, measured as the percent agriculture in GNP, and 3. the extent of government involvement in the economy, measured as the percent government consumption in GDP.[6/]

The results of regressing the rate of return on capital on the two capital stock per unit of labor variables (in logs) and the three variables cited above for the 113 countries are presented below.

Variable	Coefficient and (t-ratio)
Nonhuman Capital	-.419 (-9.52)
Human Capital (3)	.087 (3.87)
Vintage of Capital	.006 (2.41)
Percent agriculture	-.004 (-1.15)
Percent government	-.007 (-1.66)
R^2	.73

Given the stock of nonhuman capital, the most important factor affecting the rate of return on this capital is the stock of human capital obtained from the third level of schooling. As argued previously, the greater the stock of this capital the greater the capacity of a country to modify, produce, and adopt new high pay-off forms of nonhuman capital. The positive and significant coefficient on the vintage of capital variable corroborates this argument -- new forms of capital yield a higher return. Although the coefficient on the percent of agriculture in GNP is negative, it is not statistically significant. While this result does not offer proof, it is consistent with the hypothesis that investment in agriculture yields a marginal rate of return not significantly lower than the overall marginal rate of return in the economy. The percent government consumption coefficient also is negative, and is closer to being statistically significant. This is a rather imprecise measure of government involvement in the economy. Effective marginal rates of taxation and barriers to trade and commerce both internal and external to the country would be preferable measures of this variable. At any rate

the evidence suggests that the greater the government involvement in the economy (above the world average) the lower the rate of return on capital, which in turn implies a lower rate of economic growth, given the marginal propensity to consume.

Concluding remarks

By and large nations are rich or poor depending on capital per worker and the rate of return on this capital. The poor nations are poor primarily because of the small amount of capital per worker (human and nonhuman) rather than because of a low rate of return on capital. Of course, this does not explain why the accumulation of capital differs so greatly among countries. At some point in their history all countries started out with essentially zero capital. Why did the developed countries invest greater amounts per unit of labor then the LDCs during the past 100 to 200 years? One would surmise it had something to do with human capital, which in turn influenced the rate of return on nonhuman capital.

Except for capital obtained from the centrally planned economies, capital transferred from the rich to the poor countries appears to yield a marginal rate of return greater than exists in the rich nations and comparable to the return on capital produced from domestic resources in the recipient countries. Therefore, a transfer of capital from the rich to the poor nations, either through grants or the market, increases world production.

FOOTNOTES

[1]/Enrollment data are available back to 1950 in UNESCO, Statistical Yearbook, 1964-1980. Pre-1950 estimates were obtained by assuming constant 1950 population/enrollment ratios. In a few countries slight adjustments were made to take account of migration and war casualties.

[2]/The land quality index is from Willis Peterson, "International Land Quality Indexes", Department of Agricultural and Applied Economics Staff Paper P87-10, April 1987. Data on hectares of agricultural land and economically active population are from United Nations, Production Yearbook 1984.

[3]/There is also the possibility that the investment and output figures are not as accurate for the LDCs, giving the appearance of more variation in the rate of return.

[4]/Chapter 3 of Krueger and Ruttan, written by Vasant Sukatme, provides a good review of the literature on this subject.

[5]/The figures are reported in U.S. dollars, current year prices. They were converted to constant 1985 prices by the U.S. CPI.

[6]/Percent of agriculture in GNP is from World Bank, World Tables, Third edition. Percent government consumption of GDP is from the Summers and Heston data.

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APPENDIX TABLE 1

Per worker Output, Capital Stocks, and
Rates of Return on Capital, 1980.
(Constant 1985 dollars)

	Output ($1000)	Nonhuman Capital ($1000)	Human Capital (1-2) (Years)	Human Capital (3) (Years)	Rate of Return on Capital (%)
Norway	37.1	149.4	9.13	.369	15.5
Canada	34.8	129.7	9.65	.746	16.7
U.S.	34.2	126.8	10.40	1.283	16.9
France	32.4	126.2	9.81	.467	16.0
Sweden	30.7	127.9	8.80	.553	15.0
Belguim-Lux.	30.4	122.2	9.72	.526	15.6
Netherlands	29.4	124.5	9.59	.554	14.8
W. Germany	28.9	122.4	9.17	.366	14.7
Iceland	28.7	120.4	8.76	.281	14.9
Australia	28.6	117.1	8.71	.456	15.2
Denmark	26.3	130.0	9.37	.499	12.6
Austria	26.1	89.3	9.54	.365	18.3
Switzerland	25.8	129.0	8.46	.472	12.5
Iraq	25.1	42.0	5.40	.140	37.3
Italy	25.1	96.1	8.21	.385	16.3
Spain	23.9	80.4	7.77	.312	18.5
Trinidad-Tob.	23.8	63.4	7.06	.080	23.4
New Zealand	23.5	107.0	9.00	.538	13.7
Finland	23.3	97.7	9.89	.402	14.9
Israel	23.3	85.3	8.23	.390	17.0
Venezuela	22.8	64.9	5.85	.558	21.9
Japan	22.2	102.0	10.33	.501	13.6

U.K.	22.1	70.8	8.26	.316	19.5
Surinam	21.3	80.9	6.85	.068	16.4
Algeria	18.9	54.6	4.11	.057	21.6
Greece	18.1	60.6	8.19	.229	18.7
Mexico	18.0	45.0	6.24	.194	25.0
Malta	17.4	44.2	8.63	.113	24.5
Ireland	17.2	62.1	8.20	.209	17.3
Uruguay	16.9	23.1	6.67	.516	45.8
Syria	16.9	26.0	4.77	.218	40.6
Hong Kong	16.7	30.5	5.67	.133	34.1
Singapore	16.4	54.1	7.20	.200	18.9
Tunisia	15.9	36.2	5.68	.075	27.4
Argentina	15.9	56.1	6.22	.477	17.6
Portugal	14.5	48.7	6.77	.176	18.5
Chile	14.4	24.9	7.58	.288	36.2
Brazil	14.1	39.2	5.08	.183	22.5
Cyprus	14.1	50.8	6.99	.042	17.3
Iran	13.5	36.5	4.47	.070	23.1
Colombia	13.4	32.7	5.78	.167	25.5
Malaysia	13.3	33.2	5.65	.055	25.1
S. Africa	13.1	42.3	7.97	.126	19.4
Costa Rica	12.9	29.3	7.22	.328	27.4
Peru	12.6	22.5	7.55	.315	35.0
Panama	12.4	38.0	8.05	.309	20.4
Fiji	11.6	27.3	6.36	.086	26.5
Dominican Rep.	11.2	22.2	7.36	.147	31.4
Barbados	11.0	30.9	9.88	.094	22.1

Paraguay	10.6	18.6	7.44	.150	35.4
S. Korea	10.5	26.0	8.33	.212	25.2
Gabon	10.5	43.9	7.06	.019	14.9
Ecuador	10.2	18.6	6.17	.371	34.3
Turkey	10.1	18.2	5.14	.125	34.6
Morocco	9.4	15.5	3.19	.063	37.9
Jordon	9.3	21.6	6.71	.070	27.0
Guatamala	9.3	16.1	3.28	.090	36.0
Nicaragua	9.1	23.1	5.26	.172	24.4
Egypt	8.5	19.8	4.23	.276	26.8
Jamaica	8.2	36.1	7.10	.109	14.2
Nigeria	7.8	11.1	2.63	.011	43.7
Honduras	7.3	13.4	4.50	.136	33.8
Bolivia	7.0	13.3	4.24	.220	32.8
Mauritius	6.6	20.9	8.22	.037	19.8
Guyana	6.5	21.0	9.52	.050	19.3
Botswana	6.5	13.1	3.56	.012	30.9
Philippines	6.2	11.4	7.71	.253	33.8
Congo	6.2	15.4	5.43	.050	25.0
El Salvadore	5.7	15.6	5.51	.133	23.0
Angola	5.7	8.2	1.82	.012	43.6
Zimbabwe	5.7	15.9	5.62	.009	22.3
Ivory Coast	5.7	11.5	8.31	.109	30.7
Sudan	5.5	12.5	1.80	.031	27.4
Thailand	5.4	11.5	6.00	.076	29.1
Swaziland	5.3	15.9	4.98	.028	20.8
Sri Lanka	4.8	10.3	7.78	.034	29.4

Indonesia	4.6	5.2	4.78	.055	55.7
Pakistan	4.6	7.5	3.75	.078	38.5
Mauritania	4.3	15.9	.87	.001	16.9
Liberia	3.9	16.3	2.33	.030	15.0
Cameroon	3.9	7.5	4.04	.017	32.7
Papua N.G.	3.9	11.9	3.36	.040	20.5
Ghana	3.8	8.7	5.16	.023	27.2
Zambia	3.8	21.5	4.85	.030	11.0
Niger	3.7	3.5	.37	.001	65.9
Togo	3.7	7.4	3.74	.017	30.8
Gambia	3.5	7.0	2.83	.003	30.6
Guinea	3.3	6.0	1.52	.033	34.4
Senegal	3.2	7.7	2.32	.036	26.4
Mozambiq	3.2	4.4	2.37	.001	45.8
Sierra Leone	2.8	5.1	2.39	.013	33.9
Afganistan	2.8	3.6	1.31	.018	47.0
India	2.6	5.7	4.36	.157	28.5
Uganda	2.6	3.3	3.28	.012	48.7
Bangladesh	2.6	2.8	3.41	.063	57.6
Kenya	2.3	5.9	3.92	.017	24.5
Tanzania	2.3	3.8	2.22	.004	37.5
Lesotho	2.2	2.9	6.04	.012	48.9
Madagascar	2.2	3.6	4.10	.025	38.9
Benin	1.9	4.0	2.07	.007	29.2
Haiti	1.9	1.9	1.69	.019	61.8
Burma	1.8	2.0	4.01	.048	56.5
Chad	1.8	3.0	1.18	.002	37.1

Burundi	1.8	1.0	1.59	.006	117.5
C.A.R.	1.7	3.4	2.31	.004	32.0
Somolia	1.7	3.6	1.17	.009	29.7
Ethiopia	1.7	1.9	.62	.005	56.5
Nepal	1.7	1.2	1.71	.039	85.1
Malawi	1.6	2.9	2.04	.004	33.3
Rwanda	1.5	1.3	3.63	.005	71.2
Zaire	1.4	5.3	5.04	.020	16.0
Upper Volta	1.2	2.5	.71	.003	29.5
Mali	.9	1.9	1.14	.007	29.3

APPENDIX TABLE 2

Development Assistance Capital per Worker,
By Source, as of 1980
(Constant 1985 dollars)

	Market Economy ($)	Centrally Planned Economy ($)		Market Economy ($)	Centrally Planned Economy ($)
Algeria	2554	921	Bangladesh	294	35
Angola	1128	1717	Burma	153	5
Botswana	2303	--	India	210	21
Burundi	452	--	Malaysia	498	--
Cameroon	573	54	Nepal	118	39
C.A.R.	806	4	Pakistan	978	136
Chad	704	90	Philippines	331	--
Congo	2087	428	Sri Lanka	409	155
Egypt	698	788	Syria	471	2047
Ethiopia	215	26	Thailand	166	--
Gambia	828	87	Turkey	68	8
Ghana	668	36	Barbados	9743	--
Guinea	204	211	Costa Rica	1243	36
Iv. Coast	476	--	Dom. Rep.	1374	--
Kenya	673	35	El Salvadore	596	--
Lesotho	998	--	Guatemala	530	--
Liberia	2260	72	Haiti	300	--
Madagascar	376	46	Honduras	1031	--
Malawi	647	--	Jamaica	1084	251
Mali	439	49	Mexico	151	12

Mauritania	1456	283	Nicaragua	1308	--
Mauritius	1542	495	Panama	1677	--
Morocco	1161	141	Trinidad-Tob.	1052	--
Niger	1178	72	Argentina	200	236
Nigeria	131	23	Bolivia	1298	123
Rwanda	592	--	Brazil	276	103
Senegal	1009	21	Chile	1555	453
Sierra Leone	539	116	Colombia	758	41
Somolia	1055	265	Guyana	1463	--
Sudan	339	189	Paraguay	994	--
Swaziland	5887	10	Peru	537	113
Tanzania	170	388	Surinam	17206	--
Togo	796	114	Uruguay	1434	2
Tunisia	3883	613	Venezuela	735	58
Uganda	277	47	Indonesia	332	8
Upper Volta	160	53	Papua N.G.	4190	--
Zaire	133	79			