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Measuring Development An Index of Human Progress

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Executive Summary

The United Nations Human Development Index contains a major weakness: Gross Domestic Product (GDP) per capita is arbitrarily adjusted to limit its impact in the index. In addition, too little attention is paid to historical trends in human development. The Fraser Institute's Index of Human Progress, since it is based upon unadjusted GDP per capita and measurements from 1975 through 1999, provides a more complete view of the recent history and current state of development throughout the world. The Index of Human Progress uses 10 development indicators, six more than the Human Development Index. Using more indicators allows us to draw clearer

distinctions among countries though it reduces the number of countries that can be included in the Index of Human Progress.

The Index of Human Progress, using *actual* GDP per capita (US\$1995) and the expanded set of indicators, ranks the United States first, and Canada sixteenth in 1999 out of 128 countries. Only 4 of the 128 countries did not see an improvement in their score on the Index of Human Progress. Canada's score on the Index of Human Progress improved from 73.2 in 1975 to 94.0 in 1999 (a 28.5% increase); the score of the United States improved from 81.4 in 1975 to 105.8 in 1999 (a 30.1% increase).

Introduction

Since its introduction in 1990, the United Nations' Human Development Index has attracted a great deal of attention as a measure by which to gauge the development of nations. This is particularly true in Canada, as the federal government repeatedly touts our standing—at or near the top of the Human Development Index since the inaugural *Human Development Report 1990*—as indicative that Canada is “the best country in the world” (Prime Minister of Canada 1999). Upon closer inspection it is clear that there is room for improvement in the Human Development Index. The main weakness is that the arbitrary adjustment of GDP in the Human Development Index distorts differences among countries. This distortion is especially pronounced for countries with high income. In addition, the emphasis of the Human Development Index is on the year for which the most recent data are available. Measuring development requires that we know how a country has progressed over time, not just how it compares to other countries in a single year.

Further, the Human Development Index uses only four indicators even though there are several others available that have data complete enough to be useful in drawing distinctions among countries. Presumably, part of the reason for using only four indicators is that this allows more countries to be included in the Human Development Index.

This study introduces the Index of Human Progress (IHP), which uses six more indicators than the Human Development Index and employs data from 1975 through 1999 to describe the recent progress and current state of development for 128 countries. The study is organized into two parts. The first describes the Human Development Index and explains its weaknesses. The second introduces the Index of Human Progress and presents the results from 1975 through 1999.

Measuring Development

What is the United Nations' Human Development Index?

The United Nations' Human Development Index is an annual compilation that endeavours to "capture as many aspects of human development as possible in one simple, composite index" (UNDP 1997). The Human Development Index is composed of four indicators in three sub-indices, Life Expectancy, Education, and Gross Domestic Product (GDP), which are averaged to arrive at the Human Development Index score. Each indicator value is computed according to the general formula:

$$\text{Indicator value} = \frac{(\text{country value} - \text{min. value})}{(\text{max. value} - \text{min. value})}$$

where "country value" is the value observed for the country of interest, and the minimum and maximum values are the result of assumptions made by the United Nations about each of the indicators in each sub-index.

Life expectancy

In the area of life expectancy, the minimum and maximum values are set at 25 and 85 respectively. Applying the general formula using Canada's 1999 life expectancy at birth of 78.7 years results in an indicator value of:

$$0.89 = (78.7 - 25)/(85 - 25)$$

Since there is only one indicator in this sub-index, the indicator value is equivalent to the sub-index score.

Education

For education, the sub-index contains two indicators: adult literacy and the combined gross enrolment ratio. Adult literacy is measured as "the percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement on everyday life" (UNDP 1990: 182). The combined gross primary, secondary, and tertiary enrolment ratio is the average of the ratios of the number of students enrolled in a given level of education as a percentage of the population in the appropriate age group. The literacy indicator counts for two-thirds of the sub-index score since the United Nations believes that "literacy is the first step in learning and knowledge-building" and deserves the greater emphasis (UNDP 1990: 12); the combined gross enrolment ratio counts for one-third. The two indicators are combined to arrive at the score for the sub-index. The sub-index score for Canada is:

$$0.98 = (2(99 - 0)/(100 - 0) + 1(97 - 0)/(100 - 0))/3$$

Gross Domestic Product per capita

The calculation of the indicator of GDP per capita is more complicated than that of the other indicators since it is calculated using a logarithmic form of the general formula. This reduces the importance of GDP per capita in the Human Development Index: the size of reduction is especially pronounced for high-income countries.

The method of calculating the adjusted GDP per capita indicator value, $W(y)$ —is given by:

$$W(y) = \frac{\log y - \log y_{\min}}{\log y_{\max} - \log y_{\min}}$$

where y is the per-capita GDP of the country of interest, y_{min} is the assumed minimum value, and y_{max} is the assumed maximum value. (This method of adjustment differs from that employed in reports from 1990 through 1998. For an overview of the old adjustment method, see Emes 1998.)

For Canada, the 2001 Human Development Index reported a value for the GDP-per-capita indicator of:

$$0.93 = \frac{(\log(26,251) - \log(100))}{(\log(40,000) - \log(100))}$$

Since there is only one indicator in this sub-index, the value of the indicator is equivalent to the sub-index score.

The final score of the Human Development Index

To arrive at the final 2000 Human Development Index score, the scores from the three sub-indexes are averaged:

$$0.936 = (0.89 + 0.98 + 0.93)/3$$

Table 1 shows the raw data, sub-index scores, and Human Development Index score and rank for the 20 top-ranked countries from the United Nations' Human Development Report 2001.

The weakness in the Human Development Index: Arbitrary adjustment of GDP per capita

The fundamental weakness of the Human Development Index is the arbitrary adjustment of GDP per capita. The United Nations assumes that GDP per capita should be discounted on the grounds that per-capita income contributes minimally to development when it rises past a certain modest amount. They do not, however, offer

any empirical evidence to support their claim though the *Human Development Report 1999* provides the following rationale:

Income enters into the HDI as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge—in a nutshell, it is a proxy for a decent standard of living. The basic approach in the treatment of income has been driven by the fact that achieving a respectable level of human development does not require unlimited income. To reflect this, income has always been discounted in calculating the HDI (UNDP 1999: 159).

Figure 1 shows five different ways of calculating the score for GDP per capita. One makes no adjustment to GDP per capita (linear) while the others represent four of the countless possible functions that could be used to adjust GDP per capita. The Human Development Index arbitrarily uses the logarithmic (log) function. This adjustment has the effect of giving much higher scores to low-income countries and giving countries whose income increases above the level of \$5,000 to \$7,000 per-capita very little credit for the improvement. For example, the adjustment shows that if Canada's 1999 GDP per capita of \$26,251 (1995 \$US) increased by \$5,621 to match the United States' GDP per capita of \$31,872, Canada's GDP indicator score would increase from 0.93 to 0.96 (see figure 2); the increase in Canada's level of development as measured by the Human Development Index would be only 1.1%. On the other hand, the adjustment shows that if Congo's 1999 GDP per capita of \$727 (1995 \$US) increased by \$5,621 to \$6,348, its GDP indicator score would increase by 109.2% from 0.33 to 0.69 (see figure 2). Congo's level of development as measured by the Human Development Index would increase by 27.8%. If Congo's GDP per capita then grew by a further \$25,524 from \$6,348 to \$31,872, its GDP indicator score would increase by only 38.9%.

Table 1: The United Nations' Human Development Index (HDI)—top 20 scores (1999)

	Life Expectancy at Birth (years)	Adult Literacy Rate (% aged 15 and above)	Combined Enrollment Ratio (%)	Real GDP per Person (PPP US\$)	Life Expectancy Sub-Index	Education Sub-Index	GDP per capita Sub-Index	HDI Score 1999	HDI Rank 1999
Norway	78.4	99.0	97	28,433	0.89	0.98	0.94	0.939	1
Australia	78.8	99.0	116	24,574	0.90	0.99	0.92	0.936	2
Canada	78.7	99.0	97	26,251	0.89	0.98	0.93	0.936	3
Sweden	79.6	99.0	101	22,636	0.91	0.99	0.90	0.936	4
Belgium	78.2	99.0	109	25,443	0.89	0.99	0.92	0.935	5
United States	76.8	99.0	95	31,872	0.86	0.98	0.96	0.934	6
Iceland	79.1	99.0	89	27,835	0.90	0.96	0.94	0.932	7
Netherlands	78.0	99.0	102	24,215	0.88	0.99	0.92	0.931	8
Japan	80.8	99.0	82	24,898	0.93	0.93	0.92	0.928	9
Finland	77.4	99.0	103	23,096	0.87	0.99	0.91	0.925	10
Switzerland	78.8	99.0	84	27,171	0.90	0.94	0.94	0.924	11
Luxembourg	77.2	99.0	73	42,769	0.87	0.90	1.00	0.924	12
France	78.4	99.0	94	22,897	0.89	0.97	0.91	0.924	13
United Kingdom	77.5	99.0	106	22,093	0.87	0.99	0.90	0.923	14
Denmark	76.1	99.0	97	25,869	0.85	0.98	0.93	0.921	15
Austria	77.9	99.0	90	25,089	0.88	0.96	0.92	0.921	16
Germany	77.6	99.0	94	23,742	0.88	0.97	0.91	0.921	17
Ireland	76.4	99.0	91	25,918	0.86	0.96	0.93	0.916	18
New Zealand	77.4	99.0	99	19,104	0.87	0.99	0.88	0.913	19
Italy	78.4	98.4	84	22,172	0.89	0.94	0.90	0.909	20

Source: United Nations, *Human Development Report 2001*, 2001

Figure 1: Alternative adjustment functions for the GDP indicator

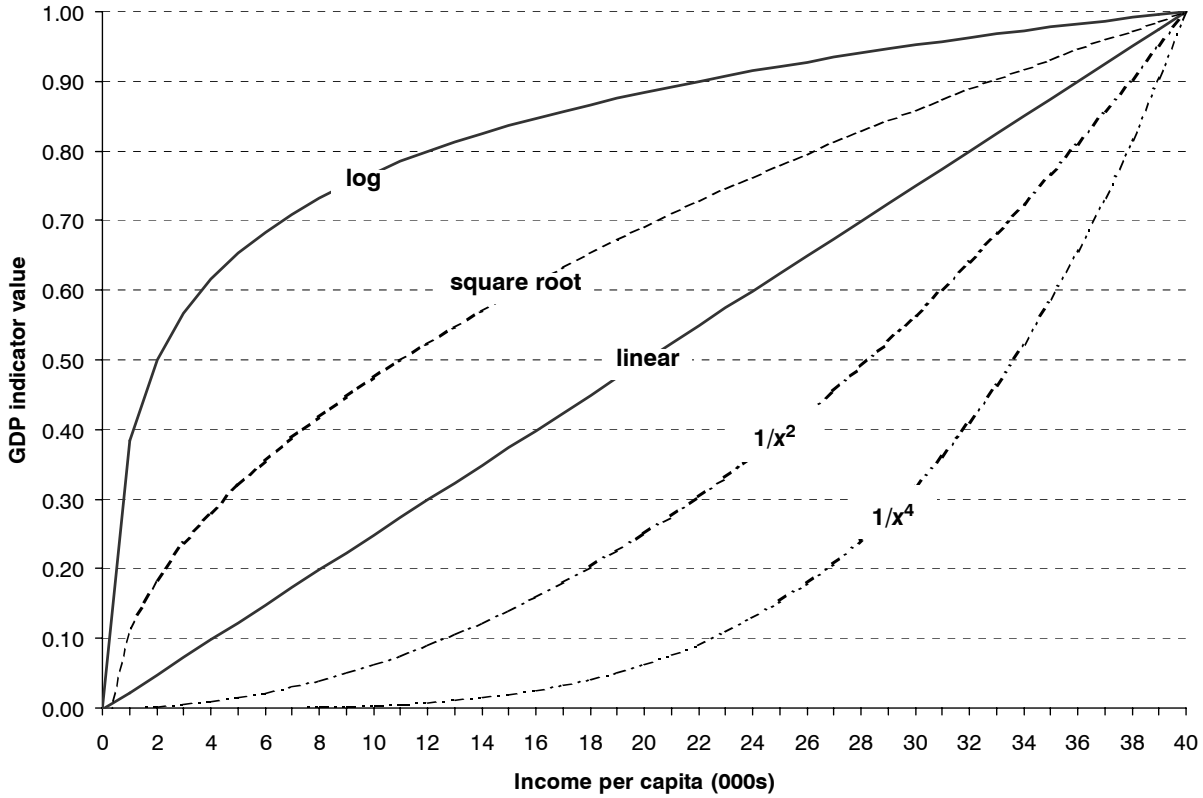
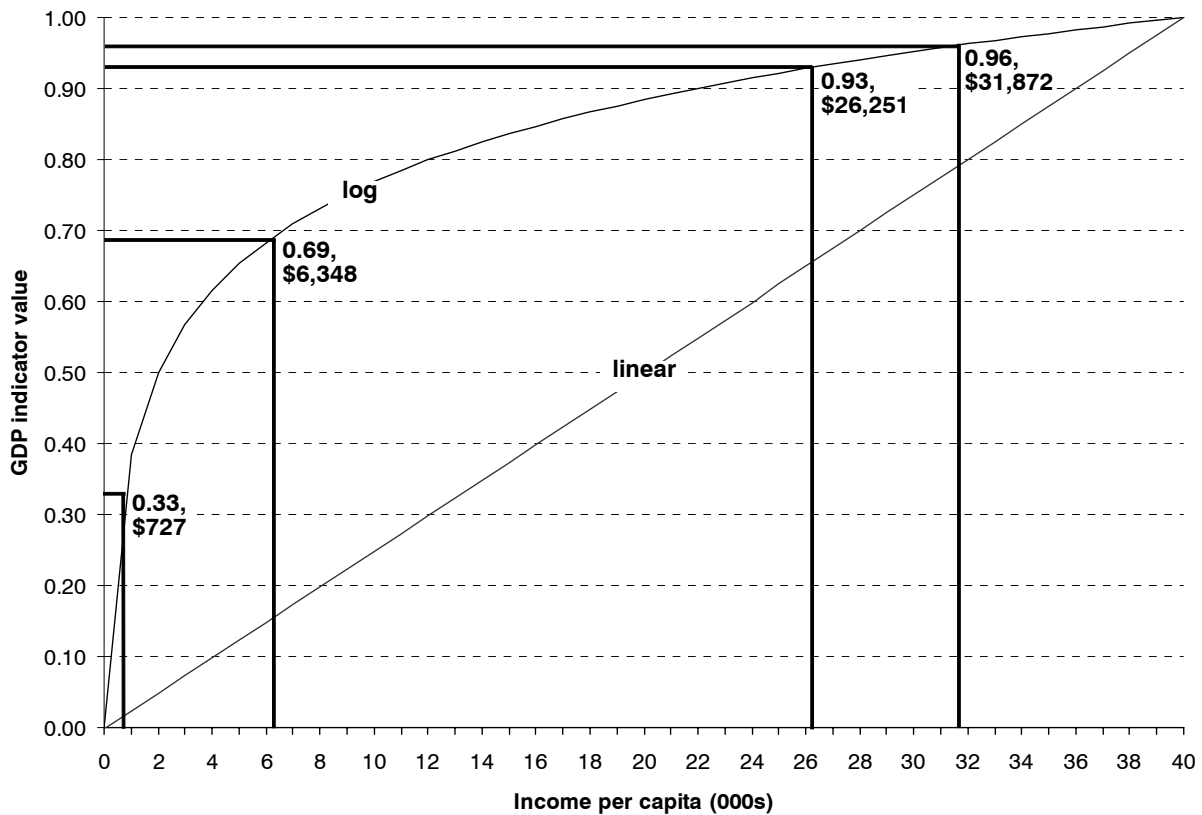


Figure 2: How changes in income affect the GDP indicator value



The adjustment of GDP per capita has a significant impact on the scores in the Human Development Index. Table 2 and figure 3 show, for the 20 countries in table 1, the effect of adjusting GDP per capita. In the absence of the United Nations' adjustment to GDP per capita, Canada would have ranked fifth instead of third on the Human Development Index, Luxembourg would have ranked first as opposed to twelfth, and Sweden would have ranked thirteenth, not fourth. The following examples from table 2 for Canada and the United States highlight the different results

obtained for the Human Development Index when the adjustment to GDP per capita alone is changed.

GDP per capita as calculated with and without adjustment

Canada's GDP indicator value for 1999 as calculated using the United Nations method is 0.93:

$$0.93 = \frac{(\log(26,251) - \log(100))}{(\log(40,000) - \log(100))}$$

Figure 3: The Human Development Index with and without adjustment of GDP per capita

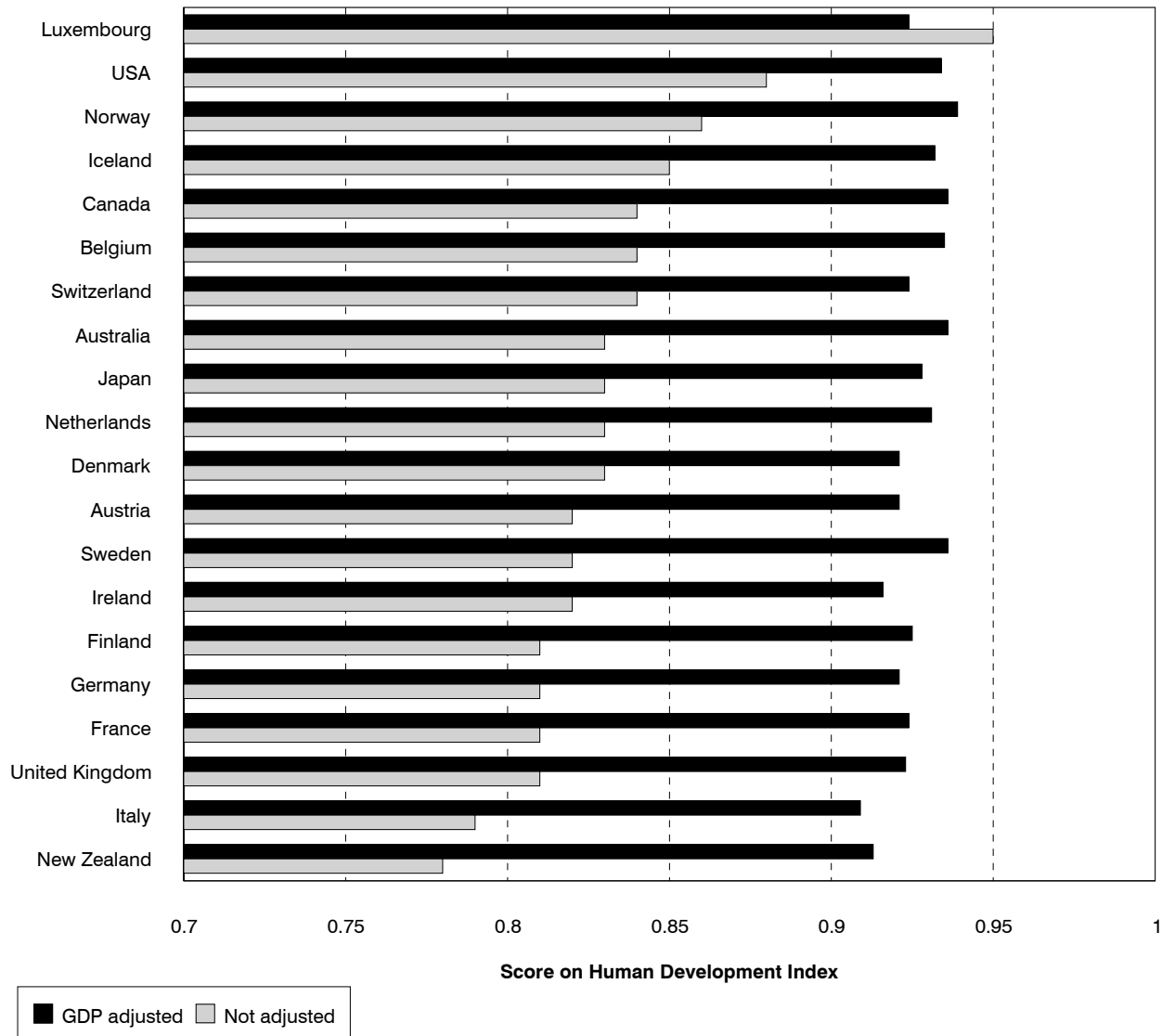


Table 2: The United Nations' Human Development Index (HDI)—with and without adjustment of GDP per capita

	Real GDP per person (PPP US\$)	GDP Sub-index (UN Method)	HDI Score (UN Method)	HDI Rank (UN Method)	GDP Sub-Index Score (no GDP adjustment)	HDI Score (no GDP adjustment)	HDI Rank (no GDP adjustment)	Change in Rank
Luxembourg	42,769	1.00	0.924	12	1.07	0.95	1	11
United States	31,872	0.96	0.934	6	0.80	0.88	2	4
Norway	28,433	0.94	0.939	1	0.71	0.86	3	(2)
Iceland	27,835	0.94	0.932	7	0.70	0.85	4	3
Canada	26,251	0.93	0.936	3	0.66	0.84	5	(2)
Belgium	25,443	0.92	0.935	5	0.64	0.84	6	(1)
Switzerland	27,171	0.94	0.924	11	0.68	0.84	7	4
Australia	24,574	0.92	0.936	2	0.61	0.83	8	(6)
Japan	24,898	0.92	0.928	9	0.62	0.83	9	0
Netherlands	24,215	0.92	0.931	8	0.60	0.83	10	(2)
Denmark	25,869	0.93	0.921	15	0.65	0.83	11	4
Austria	25,089	0.92	0.921	16	0.63	0.82	12	4
Sweden	22,636	0.90	0.936	4	0.56	0.82	13	(9)
Ireland	25,918	0.93	0.916	18	0.65	0.82	14	4
Finland	23,096	0.91	0.925	10	0.58	0.81	15	(5)
Germany	23,742	0.91	0.921	17	0.59	0.81	16	1
France	22,897	0.91	0.924	13	0.57	0.81	17	(4)
United Kingdom	22,093	0.90	0.923	14	0.55	0.81	18	(4)
Italy	22,172	0.90	0.909	20	0.55	0.79	19	1
New Zealand	19,104	0.88	0.913	19	0.48	0.78	20	(1)

Sources: United Nations, *Human Development Report 2001*, 2001; calculations by the authors.

Calculated without the log adjustment, Canada's GDP indicator value drops to 0.66:

$$0.66 = \frac{(26,251) - (100)}{(40,000) - (100)}$$

Similarly, the United States' GDP indicator value for 1999 as calculated using the United Nations method is 0.96:

$$0.96 = \frac{(\log(31,872) - \log(100))}{(\log(40,000) - \log(100))}$$

Calculated without the log adjustment, the United States' GDP indicator value drops to 0.80:

$$0.80 = \frac{(31,872) - (100)}{(40,000) - (100)}$$

Using the log formula significantly compresses the differences in GDP per capita among middle-income and high-income countries. The difference of 0.03 (3.5%) between the log-adjusted scores for GDP per capita of Canada and the United States jumps to 0.14 (21.5%) when no log adjustment is used. Removing the adjustment to GDP per capita increases the variability among countries in this extremely important measure. Canada's score for the Human Development Index without the log adjustment is 0.84 while the score for the United States is 0.88, giving the United States a higher score than Canada.

$$0.84 = (0.89 + 0.98 + 0.66)/3 \quad \text{Canada}$$

$$0.88 = (0.86 + 0.98 + 0.80)/3 \quad \text{United States}$$

Canada ranks number three on the Human Development Index despite having a GDP per capita that is only 82.4% of that of its neighbour to the south, which ranks sixth.

GDP per capita as a proxy for health and education

As noted above, the United Nations describes income as a proxy for the dimensions of human development not reflected in a long life and adequate knowledge. They sharply discount high GDP per capita on the assumption that increases in income beyond a certain GDP per capita provide limited benefits to citizens of countries that are relatively well off. The adjustment that the United Nations makes to GDP per capita might be reasonable if they were using it as a proxy for health and education. Figure 4 shows that a plot of life expectancy and GDP per capita exhibits the pattern seen in the "log" line of figure 1. However, the United Nations describes GDP per capita as a proxy for the dimensions of human development *not* reflected in health and knowledge indicators.

Figures 5 and 6 show the relationship between GDP per capita and two indicators not in the United Nations Human Development Index, the number of telephones and the number of televisions per 1,000 persons. The number of telephones and televisions per 1,000 persons do not exhibit the strong logarithmic relationship to GDP per capita embodied in the United Nations' adjustment of GDP per capita. Also, if the data on telephones and televisions could be adjusted for quality, the shape of the curve would likely move even further from the logarithmic relationship posited by the United Nations. For example, the number of televisions per 1,000 persons cannot pick up differences in the size of the screen, clarity of the picture, or the unit's reliability. As quality is likely to be higher in countries with higher GDP per capita, one would expect an adjustment for quality to the data in figure 6 to flatten the curve.

Higher GDP per capita is also associated with higher levels of development because there is a positive connection between growth in GDP and

Figure 4: GDP per capita and life expectancy

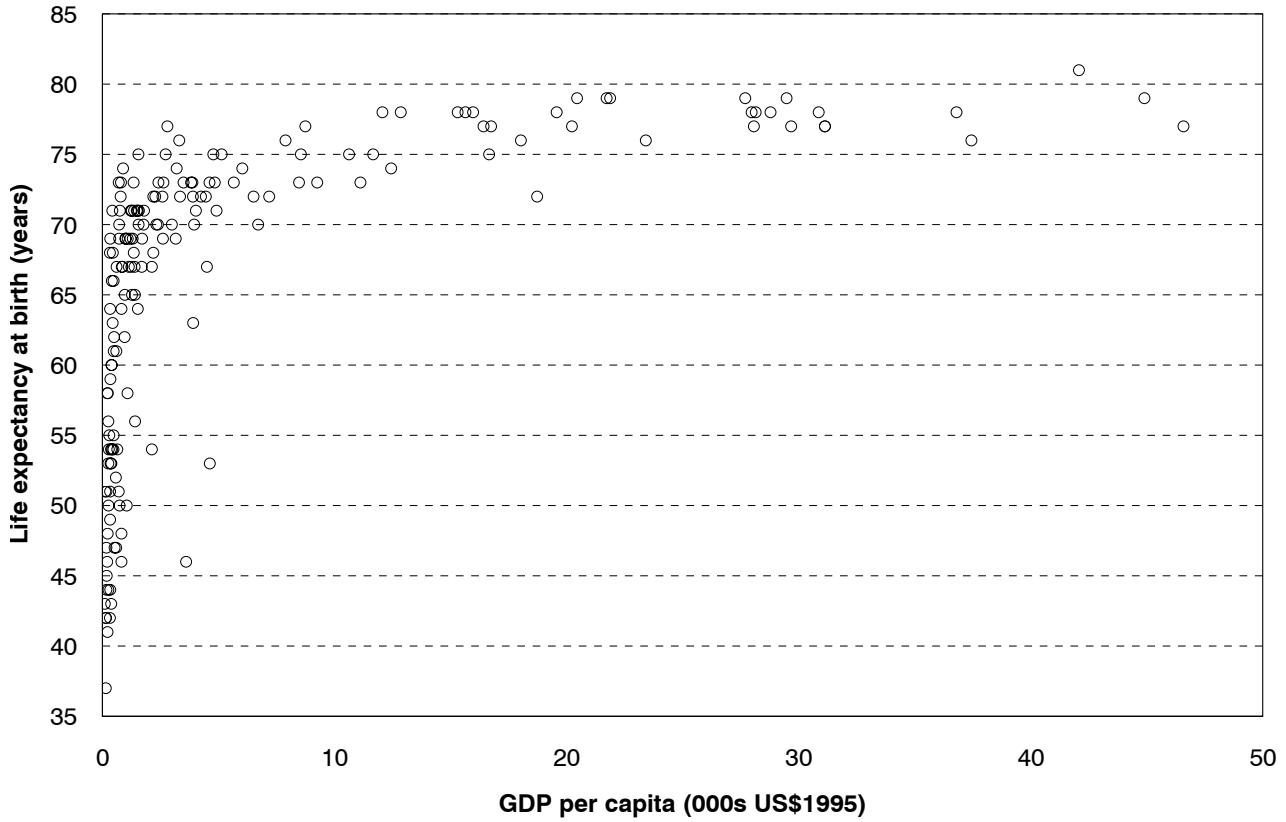


Figure 5: GDP per capita and telephones per 1,000 persons

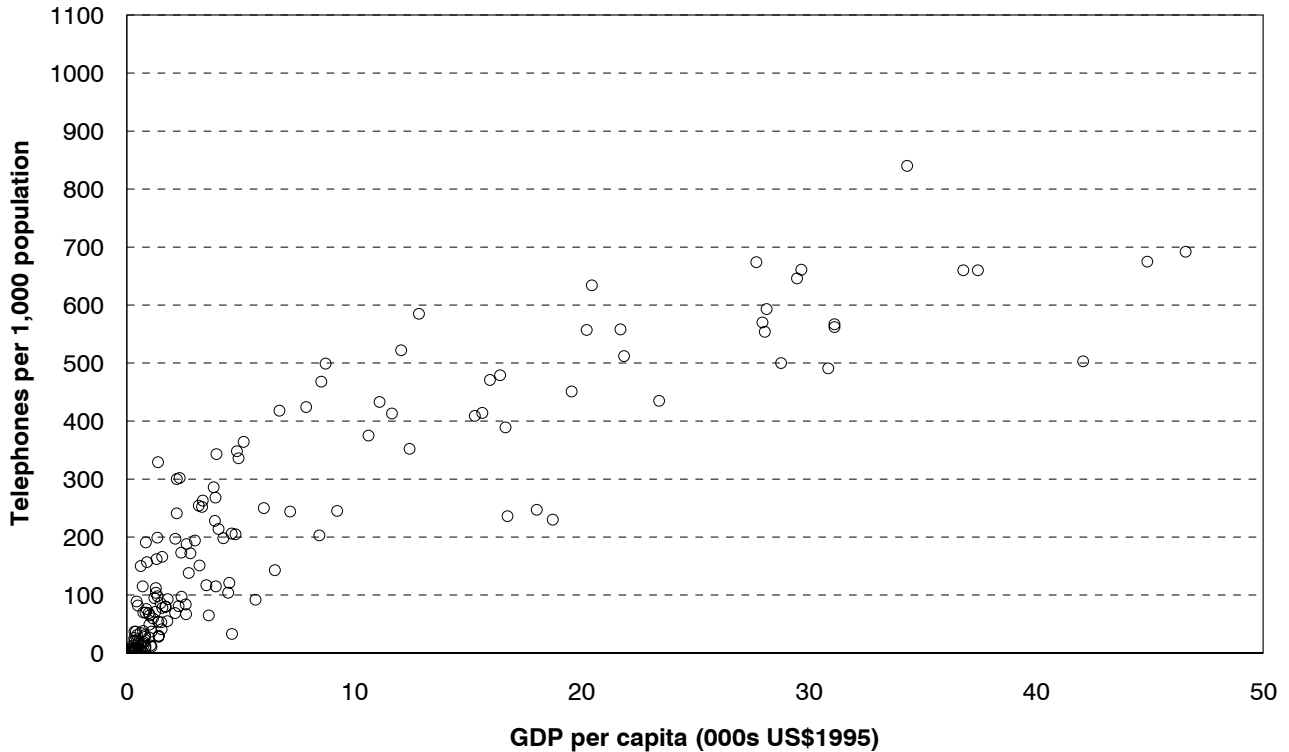
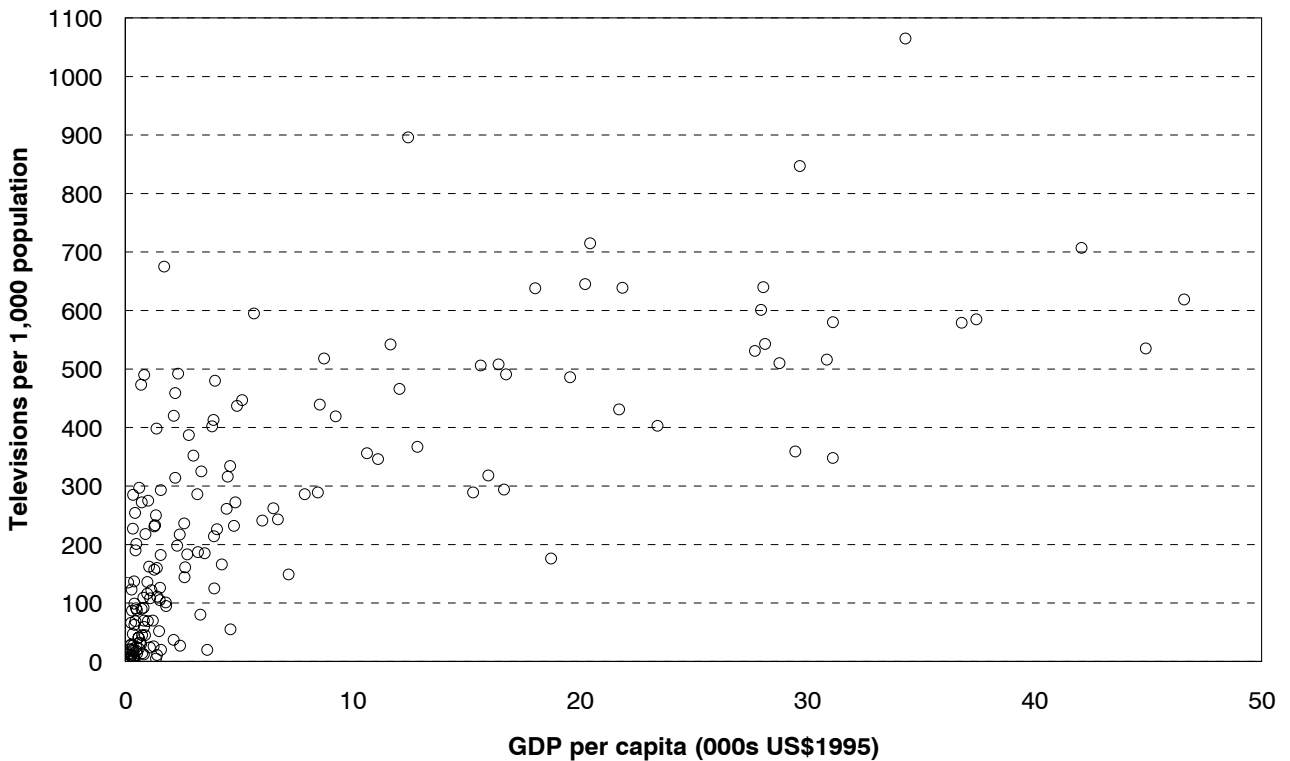


Figure 6: GDP per capita and televisions per 1,000 persons

the environment. Conventional wisdom assumes that as GDP increases, environmental quality decreases. This is not the case. A recent study by Gene M. Grossman and Alan B. Krueger found that economic growth brought about an initial phase of deterioration followed by improvement, reflecting an increased demand and supply of environmental protection as GDP increased (Grossman and Krueger 1995: 370–71). In most cases, environmental quality begins to increase once a country reaches GDP per capita of US\$10,000

(1985 dollars). This level of income is well beyond the point at which the United Nations' assumes that growth in GDP per capita contributes minimally to human development.

When GDP per capita increases, the well-being of the citizens of that country increases. By adjusting GDP per capita as it does, the United Nations does not take adequate account of this important indicator in compiling its development index.

Index of Human Progress

The United Nation's Human Development Index contains only four indicators grouped into the three sub-indices—life expectancy, education (consisting of literacy and school enrolment), and adjusted GDP per capita. The reason cited for this in the inaugural *Human Development Report 1990* was simplicity: too many indicators would obscure the overall comparison that the Index is intended to provide for policy-makers. In the *Human Development Report 1998*, however, the United Nations justifies the restriction of indicators in the Human Development Index by asserting that, if the basic requirements of life expectancy, knowledge, and access to resources are not met, then many other areas of development are impossible to achieve.

At all levels of development the three essential capabilities for human development are for people to live long and healthy lives, to be knowledgeable and to have access to the resources needed for a decent standard of living. If these basic capabilities are not achieved, many choices are simply not available and many opportunities remain inaccessible... Income is certainly one of the main means of expanding choices and well-being. But it is not the sum total of people's lives. (UNDP 1998: 14)

Since the Human Development Index makes use of only four variables, it is limited in the degree to which it can make distinctions among countries. That GDP per capita is arbitrarily adjusted when forming the Human Development Index and that literacy levels do not have much variability for high-income countries exacerbate this problem.

The Index of Human Progress improves on the Human Development Index by using unad-

justed GDP per capita and including several additional indicators that measure desirable outcomes. As long as the data are reliable, a greater number of indicators permits clearer distinctions among countries. In addition, using more indicators makes the index less vulnerable to any unreliability in the data as the impact of a biased indicator on the overall score is reduced when more indicators are used. The cost of increasing the number of indicators is that fewer countries can be included in the Index of Human Progress—128 rather than the HDI's 162—because some do not have complete data.

Indicators used in the Index of Human Progress

The indicators of the Index of Human Progress are grouped into the following sub-indices.

(1) Health	(weight=1)
(1.1) life expectancy	¼
(1.2) infant mortality (per 1,000 live births)	¼
(1.3) mortality of children under five years of age (per 1,000 live births)	¼
(1.4) adult mortality rate (number of adults, per 1,000 adults, not expected to survive to age 60)	¼

The health of a country's citizens is a key indicator of development. Life expectancy at birth is the most comprehensive indicator of the health of a country's citizens. However, it is also important to gauge the health of infants and young children, the most vulnerable in a society. For that reason, the Index of Human Progress includes infant mortality and mortality of children under five years of age (per 1,000 live births). It is also

beneficial to gain some insight into the number of citizens who do not enjoy a long life; this is caught by including the number of the people (per 1,000 population) who die before age 60.

(2) Education (weight=1)

(2.1) literacy rate $\frac{1}{2}$

(2.2) combined enrolment ratio $\frac{1}{2}$

This sub-index consists of the literacy rate of people aged 15 years and older and the combined primary, secondary, and tertiary gross enrolment ratio. These are the same variables that the Human Development Index uses although they are equally weighted in the Index of Human Progress as opposed to the two-thirds weight given to literacy in the Human Development Index.

(3) Technology (weight=1)

(3.1) number of televisions (per 1,000 persons) $\frac{1}{3}$

(3.2) number of radios (per 1,000 persons) $\frac{1}{3}$

(3.3) telephone service (per 1,000 persons) $\frac{1}{3}$

Another indicator of the state of development in a country is the diffusion of technology within it. The availability of leisure goods indicates that citizens have choices about how to spend their time and money. As P.T. Bauer wrote in 1957, "I regard the extension of the range of choice, that is, an increase in the range of effective alternatives open to people, as the principal objective and criterion of economic development; and I judge a measure principally by its probable effects on the range of alternatives open to individuals" (Bauer 1957: 113). The number of televisions and radios per 1,000 people are therefore included. Telephone service (per 1,000 population) is included because an effective communications infrastructure is important for a country to get beyond a moderate level of development.

(4) GDP (weight = 1)

The GDP indicator in the Index of Human Progress is unadjusted GDP per capita in 1995 US dollars.

Calculation of the Index of Human Progress

The Index of Human Progress uses the same general formula as the Human Development Index to arrive at the indicator values:

$$\text{Indicator value} = \frac{(\text{country value} - \text{min. value})}{(\text{max. value} - \text{min. value})}$$

where "country value" is the value observed for the country of interest. Instead of assumed minimum and maximum values, the Index of Human Progress uses the observed minimum and maximum values across all countries for each indicator in the base year, 1975. Values are calculated for the indicators for 1975, 1980, 1985, 1990, 1995, and 1999, where data are available.

For sub-indices that contain more than one indicator, the values of the indicators are averaged to arrive at the score for the sub-index. The overall score for the Index of Human Progress is an average of the scores from each of the four sub-indices, Health, Education, Technology, and GDP.

An example

The value of Canada's life expectancy indicator (Health sub-index) for 1999 in the Index of Human Progress is 109:

$$109 = \frac{(79.0) - (35)}{(75) - (35)} \times 100$$

where 79.0 is Canada's life expectancy (in years) at birth in 1999, 35 is the lowest life expectancy at birth recorded for any country in 1975, and 75 is the highest life expectancy at birth recorded for any country in 1975.

From this value of 109 we know that Canadians born in 1999 can expect to live longer, on average, than the longest-lived people in the world born in 1975 could have expected to live, on average. Using the observed minimum and maximum values from the base year gives us a measure of how Canada's average life expectancy compares to the minimum and maximum life expectancy at birth for the world in the base year. A value of 0 would indicate that Canadians born in 1999 could expect to live no longer, on average, than the shortest-lived people in the world did, on average, in 1975 (i.e., 35 years). A value of 100 would indicate that Canadians born in 1999 could expect to live as long, on average, as the longest-lived people in the world did, on average, in 1975 (i.e., 75 years).

Not all countries have full sets of data and cannot, therefore, be given a score in the overall Index of Human Progress (table 8, pages 50–54) for every year indicated. However, where data are available, sub-index scores for these countries are presented in the tables giving results for the sub-indexes (tables 3–7, pages 18–49). For this reason, each of the sub-index tables lists more countries than are included in the Index of Human Progress.

Of the 128 countries that could be included in the Index of Human Progress, 80 had full data for all years, 18 had full data from 1980 through 1999, eight had full data for 1985 through 1999, 15 had full data for 1990 through 1999, and seven had data for 1995 and 1999.

(1) Health

Most countries listed in the Health sub-index (table 3) show an increase in their score (147 out of 161 countries). The top five countries and the increase in their scores between 1975 and 1999 are: Japan (98.3 to 106.4), Switzerland (98.6 to 105.3), Iceland (99.6 to 105.3), Sweden (99.6 to 105.1) and Canada (96.3 to 104.6). The United

States was twenty-sixth, with a score of 101.3 in 1999, up from 93.7 in 1975.

Countries with data from 1975 through 1999 that showed decreases in their score in the Health sub-index are: Botswana (57.3 to 30.3), Zambia (42.2 to 35.5), Zimbabwe (53.4 to 39.7), Uganda (42.7 to 33.0), Kenya (51.4 to 42.3), Lesotho (47.8 to 40.7), Democratic Republic of (North) Korea (77.6 to 70.9), Ivory Coast (38.2 to 36.1), Republic of Congo (47.8 to 45.8), Burundi (33.6 to 31.7), and Tanzania (39.2 to 38.7). There were no decreases among countries that only have data covering 1980 through 1999 or 1985 through 1999. Decreases for countries with data for 1990 through 1999 are: Russian Federation (89.2 to 84.4), Kazakhstan (85.9 to 81.8), Belarus (92.8 to 88.9), and Moldova (88.1 to 85.6). The decrease for the Kyrgyz Republic is too small to report. The Ukraine (88.1 to 86.8) is the single country with only 1995 and 1999 data to post a decrease. All but one of the countries with decreases are either in Africa or are former members of the Soviet Union.

(2) Education

A large majority of countries (137 out of 143) show an increase in their Education sub-index score (table 4). The top five countries and the increase in their scores between 1975 and 1999 are: Australia (93.1 to 124.1), Belgium (94.7 to 119.3), United Kingdom (95.6 to 117.3), Finland (95.5 to 115.2), and The Netherlands (96.0 to 114.5). Canada placed eighth with a change in score from 99.5 in 1975 to 111.1 in 1999. The United States came in eleventh with a score of 109.8 in 1999, up from 97.5 in 1975.

Only six countries saw their scores fall. Lithuania's score fell from 101.0 in 1980 to 98.8 in 1999. The Ukraine's score fell from 98.1 in 1980 to 97.8 in 1999. Belarus' score fell from 98.0 in 1985 to 97.8 in 1999. Croatia's score fell from 92.9 in 1985 to 90.9 in 1999. Tajikistan's score fell from 97.4 in 1990 to 90.7 in 1999. Namibia's score fell from 90.5 in 1990 to 88.8 in 1999.

(3) Technology

All countries show an increase in their score for the Technology sub-index (table 5). The top five countries and the increase in their scores between 1975 and 1999 are: Bermuda (60.0 to 141.5), United States (85.5 to 130.2), Denmark (62.3 to 103.9), Canada (58.4 to 102.4), and Finland (47.6 to 101.2).

(4) GDP

Most countries listed in the GDP sub-index (table 6) show an increase in their score (118 out of 177 countries). The top five countries and the increase in their scores between 1975 and 1999 are: Luxembourg (59.7 to 140.5), Switzerland (96.3 to 121.3), Japan (62.0 to 112.8), Denmark (65.4 to 99.4), and Norway (50.5 to 99.0). Canada placed nineteenth with a score of 57.8 in 1999, up from 38.5 in 1975. The United States came in eighth with a score of 82.1 in 1999, up from 48.8 in 1975.

Countries with decreases on this sub-index are listed alphabetically in table 7. This table also shows, for each of these countries, the percentage change in scores for the Health, Education, and Technology sub-indices. This information is included to show that countries that experienced a drop in real GDP per capita also, in general, perform poorly on these other measures.

On the health sub-index, 10 countries had a drop in their score, 15 had increases below the average, and 19 had increases above the average (15 countries had no data). On the education sub-index, 3 had a drop in their score, 24 had increases below the average, and 10 had increases above the average (22 countries had no data). On the technology sub-index, 32 had increases below the average, and 11 had increases above the average (16 countries had no data). Overall, the coun-

tries that had decreases in their score on the income (GDP) sub-index had decreases or increases below the average in their other sub-index scores 67.7% of the time and increases above the average only 32.3% of the time.

The Index of Human Progress Overall Index

The Index of Human Progress, with countries ranked according to 1999 scores, is presented in table 8. Most countries listed in the table show an increase in their score (124 out of 128 countries). The top five countries and the increase in their scores between 1975 and 1999 are: United States (81.4 to 105.8), Switzerland (86.0 to 105.5), Luxembourg (69.6 to 104.8), Denmark (81.2 to 103.9), and Japan (76.2 to 103.7). Canada came in sixteenth with a score of 94.0 in 1999, up from 73.2 in 1975.

There were no decreases among countries that have data covering 1975 to 1999 or those with data covering 1980 to 1999. Botswana is the one country with data covering 1985 to 1999 that had a lower Index of Human Progress score in 1999 (32.3) than it did in 1985 (34.7). The Russian Federation had a lower score in 1999 (58.4) than in 1990 (59.4). Namibia shows a decrease from 40.5 in 1995 to 38.1 in 1999. The decrease for Djibouti is too small to report.

The ranks that countries achieved in the Index of Human Progress for each year from 1975 through 1999 are shown in table 9 (pp. 55–59, countries are listed in alphabetical order). The United States was ranked second for 1975 through 1990 and first for 1995 and 1999. Canada ranked sixth in 1975, tenth in 1980, eighth in 1985, seventh in 1990, eleventh in 1995, and sixteenth in 1999.

Table 3: Health Sub-Index Scores

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, al}	1999	Rank (out of 161)	Change in Score	%Change in Score
Afghanistan	15.1	19.4	21.3	24.0	29.9	34.9	148	19.8	130.7
Albania	83.9 ^d	86.7 ^d	89.6 ^d	92.1 ^d	91.4 ^d	93.7 ^{aq}	62	9.7	11.6
Algeria	58.3	65.1	75.3	84.1	88.0	90.9	75	32.6	55.9
Angola	17.6	22.1	26.9 ^{ac}	32.0 ^{ac}	36.0 ^{ac}	38.5	145	21.0	119.4
Argentina	85.8	89.1	91.2	93.0	94.7	96.4	47	10.6	12.3
Armenia	n/a	n/a	n/a	92.5	95.0 ^{am}	97.8	37	5.3	5.8
Australia	95.5 ^e	97.8	100.1 ^h	101.8	103.5 ^m	104.5	6	9.0	9.4
Austria	92.9 ^e	95.3	98.0 ^h	100.2	101.7 ^m	103.5	10	10.6	11.4
Bahamas, The	84.5	87.2	90.4	93.2	95.3	95.4	57	10.8	12.8
Bahrain	78.6	84.6	88.6	91.5	94.7	97.0	42	18.4	23.4
Bangladesh	33.9	39.8	48.6	57.6	64.4	69.8	114	36.0	106.1
Barbados	90.5	94.5 ^p	97.1	99.1	99.6	99.5	35	9.0	10.0
Belarus	n/a	n/a	n/a	92.8	89.8 ^{am}	88.9	87	(4.0)	(4.3)
Belgium	94.5	96.8	99.1	100.7	102.1	103.1	15	8.6	9.1
Belize	n/a	n/a	n/a	89.2	91.4	92.6	65	3.4	3.9
Benin	34.4 ^r	38.3	41.4 ^{ad}	45.6 ^{ai}	50.8	54.9	125	20.5	59.6
Bolivia	42.0	50.5	57.7	64.2	70.3 ^{am}	74.0	110	32.0	76.1
Bosnia & Herzegovina	n/a	n/a	n/a	94.0	95.7	96.5	46	2.5	2.7
Botswana	57.3	65.3	64.0 ⁱ	58.9 ⁱ	48.4 ⁿ	30.3	157	(27.0)	(47.1)
Brazil	71.6 ^s	75.7	79.4	83.0	84.7	85.3	98	13.7	19.2
Bulgaria	92.7	93.1	93.6	93.5	93.2 ^{m, am}	93.2	63	0.5	0.6
Burkina Faso	28.1 ^t	32.7 ^z	36.8 ^{ad}	39.0 ^{ai}	35.7 ^{an}	32.4	155	4.1	14.5
Burundi	33.6	37.9	39.9	38.7	34.3	31.7	156	(1.9)	(5.7)

Table 3: Health Sub-Index Scores (Continued)

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, al}	1999	Rank (out of 161)	Change in Score	%Change in Score
Cambodia	12.0	16.1	32.7 ^{ac}	42.2 ^{ac}	49.4 ^{ac}	54.1	128	42.1	350.8
Cameroon	38.0	43.1	49.0	53.6	51.3	48.2	133	10.1	26.6
Canada	96.3	98.5	100.5	102.0	103.3 ^m	104.6	5	8.3	8.6
Cape Verde	63.9	67.6	71.5 ^{ac}	76.4 ^{ac}	81.9 ^{ac}	85.9	96	21.9	34.3
Central African Republic	29.7 ^u	33.3 ^u	38.2 ^{a, ae}	41.0 ^{aj}	38.6 ^{aj}	34.8	150	5.1	17.1
Chad	22.3	28.7	33.3	37.0	41.6 ^{am}	43.5	137	21.2	95.3
Chile	79.7	88.6	93.3	96.4	98.6	100.0	33	20.3	25.5
China	78.6	83.9	86.5	88.5	89.1	90.3	80	11.8	15.0
Colombia	75.9	82.1	85.3	87.8	89.8	91.1	73	15.2	20.1
Comoros	n/a	n/a	n/a	59.2	66.0	71.5	111	12.3	20.9
Congo, Republic	47.8	53.4	54.5 ^{ac}	54.4 ^{ac}	49.8 ^{ac}	45.8	136	(2.0)	(4.3)
Costa Rica	88.4	94.7	97.3	99.6	100.5	101.2	28	12.8	14.4
Côte d'Ivoire	38.2	46.1	50.1	52.6	43.9	36.1	146	(2.2)	(5.7)
Croatia	n/a	91.2	93.0	95.4	96.1 ^{am}	97.4	40	6.1	6.7
Cuba	93.7	96.6	98.0	99.7	100.7	101.5	25	7.8	8.3
Cyprus	94.8	97.9	99.8	101.2	102.2	103.1	16	8.3	8.8
Czech Republic	91.9	92.4	93.5	94.3	97.3 ^{m, am}	99.4	36	7.5	8.2
Denmark	97.5	98.1	98.6	99.0	100.0 ^m	101.1	29	3.6	3.7
Djibouti	27.0	32.4	36.6 ^{ac}	40.3 ^{ac}	39.6 ^{ac}	35.6	147	8.6	31.7
Dominica	n/a	n/a	n/a	95.3	97.8	100.0	34	4.7	4.9
Dominican Republic	70.7	76.8	82.0 ^{ad}	86.6 ^{ai}	88.7 ^{an}	89.9	81	19.2	27.2
Ecuador	68.0	73.5	79.2 ^{ad}	84.8 ^{ai}	87.5 ^{an}	89.6	84	21.7	31.9
Egypt, Arab Republic	51.3	56.6	65.9	74.5	79.3	82.8	102	31.6	61.6

Table 3: Health Sub-Index Scores (Continued)

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, ai}	1999	Rank (out of 161)	Change in Score	%Change in Score
El Salvador	61.1	62.1	71.1	80.4	85.7 ^{am}	89.0	85	27.9	45.7
Equatorial Guinea	22.7	27.2	32.3	37.4	43.8	49.6	132	26.8	117.9
Eritrea	n/a	n/a	n/a	50.7 ^{ai}	52.6 ^{an}	52.8	130	2.2	4.3
Estonia	89.9	89.2	90.5	90.7	89.4 ^{am}	92.4	68	2.5	2.8
Ethiopia	28.9	29.7	34.1	39.1	36.4	32.7	154	3.8	13.3
Fiji	82.6	86.6	89.5	92.2	95.0	95.6	56	13.0	15.7
Finland	94.6	97.2	98.5	99.5	101.4	102.8	20	8.1	8.6
France	95.6	97.5	99.1	100.8	102.6	104.0	8	8.4	8.8
Gabon	35.3	40.2	45.5	50.3	52.7	54.5	127	19.2	54.5
Gambia, The	15.5	23.6	33.2	43.8	52.9 ^{am}	56.8	122	41.4	267.3
Germany	93.8	96.2	98.4	100.2	101.5	102.4	22	8.6	9.2
Ghana	47.3	52.0	57.3	63.8	67.1 ^{am}	66.5	116	19.2	40.7
Greece	94.5	97.4	99.2	101.8	102.6	103.3	14	8.8	9.3
Guatemala	55.4	61.9	67.1 ^{i, ad}	73.4 ^{i, ai}	77.5 ^{n, an}	80.0	107	24.5	44.3
Guinea	12.5	18.4	24.1 ^{ad}	30.9 ^{ai}	37.4 ^{an}	42.8	138	30.3	241.9
Guinea-Bissau	13.2	16.0	20.0	23.5	29.2	33.9	151	20.8	157.4
Guyana	69.8	70.8	72.5	74.3	75.9	76.5	108	6.7	9.6
Haiti	43.3	47.2	51.3 ^{ad}	57.2 ^{ai}	57.5 ^{an}	56.3	124	13.0	30.0
Honduras	59.6	68.0	75.4	82.7	86.4	89.0	86	29.4	49.3
Hungary	88.6	88.7	89.0	89.5	89.8 ^{m, am}	90.7	77	2.1	2.4
Iceland	99.6	101.6	102.7 ^{ac}	103.4 ^{ac}	104.1 ^{ac}	105.3	3	5.7	5.7
India	47.9	54.1	60.9	67.9	71.7	74.0	109	26.1	54.6
Indonesia	48.5	57.3	65.3	73.0	78.9 ^{am}	81.8	103	33.4	68.8

Table 3: Health Sub-Index Scores (Continued)

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, al}	1999	Rank (out of 161)	Change in Score	%Change in Score
Iran, Islamic Republic	60.8	68.1	76.1	83.1	87.7	91.8	72	30.9	50.8
Iraq	66.4	72.6	75.2 ^{af}	70.0 ^{af}	67.9 ^{am}	67.0	115	0.7	1.0
Ireland	94.2	96.2	98.1	99.9	101.2	101.7	24	7.5	8.0
Israel	94.8	96.9	99.4	100.9	102.4	103.4	12	8.7	9.2
Italy	94.9	97.3	99.7	101.9	103.0	103.8	9	9.0	9.4
Jamaica	87.1	89.9	92.2	94.4	96.1	97.5	39	10.4	11.9
Japan	98.3	101.0	103.0	104.5	105.3	106.4	1	8.1	8.3
Jordan	n/a	n/a	n/a	87.9	90.3 ^{am}	92.5	66	4.6	5.3
Kazakhstan	n/a	n/a	n/a	85.9	82.1 ^{am}	81.8	104	(4.0)	(4.7)
Kenya	51.4	57.6	62.2	64.8	52.8 ^{am}	42.3	139	(9.1)	(17.7)
Korea, Dem. Republic	77.6	84.1	87.1	84.8	75.2	70.9	113	(6.7)	(8.7)
Korea, Republic	79.4	86.0	89.3 ^{ac}	92.2 ^{ac}	94.6 ^{ac}	96.6	44	17.2	21.7
Kuwait	86.7	91.5	95.7	99.3	100.6	101.3	27	14.5	16.8
Kyrgyz Republic	n/a	n/a	n/a	85.1	83.7 ^{am}	85.1	99	(0.0)	(0.0)
Lao PDR	27.8	33.5	39.0 ^{ad}	44.1 ^{ai}	48.3 ^{am}	54.7	126	26.9	96.9
Latvia	89.5	89.2	90.1 ^b	90.1	86.7 ^{m, am}	90.6	78	1.1	1.2
Lebanon	n/a	n/a	n/a	86.3	88.9	90.9	76	4.6	5.3
Lesotho	47.8	50.6	51.8 ⁱ	53.0 ⁱ	49.1 ⁿ	40.7	142	(7.1)	(14.9)
Liberia	39.5	45.7	46.9 ^{j, ac}	37.2 ^{j, ac}	37.5 ^{j, ac}	41.7	141	2.2	5.6
Libya	59.0	70.3	79.0	85.3	89.1	91.9	71	32.9	55.8
Lithuania	91.7	91.7	93.1	93.9	90.4 ^{m, am}	94.3	59	2.7	2.9
Luxembourg	93.6	95.8	97.6	99.3	101.0	102.4	23	8.7	9.3
Macedonia, FYR	n/a	n/a	n/a	92.7	94.3 ^{am}	96.0	52	3.3	3.6

Table 3: Health Sub-Index Scores (Continued)

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, ai}	1999	Rank (out of 161)	Change in Score	%Change in Score
Madagascar	40.3	46.0	46.3	47.6	52.2 ^{am}	56.9	121	16.6	41.2
Malawi	22.5	28.9	31.1	31.7	28.9	24.4	160	1.9	8.6
Malaysia	80.7	85.6	89.4	92.6	94.7	96.2	49	15.5	19.2
Maldives	52.6	59.7	65.4	73.0	81.3	86.9	92	34.3	65.3
Mali	13.6 ^v	21.1 ^{aa}	28.1 ^{ag}	32.7 ^{ak}	34.4 ^{ao}	33.8	152	20.2	148.9
Malta	93.7	96.1	97.9 ^{ac}	99.9 ^{ac}	101.5 ^{ac}	103.0	17	9.2	9.8
Mauritania	32.5	38.5	42.8	47.2	52.3	56.7	123	24.2	74.3
Mauritius	78.8	83.7	87.3	90.6	91.6	92.4	69	13.5	17.2
Mexico	76.5	81.7	85.6	88.9	90.9	92.4	67	16.0	20.9
Moldova	n/a	n/a	n/a	88.1	85.1 ^{am}	85.6	97	(2.5)	(2.8)
Mongolia	56.6 ^w	61.7 ^w	65.4 ^{ah}	71.6	76.7 ^{am}	80.4	106	23.8	42.0
Morocco	55.1	61.9	69.3	75.7	80.0	83.4	101	28.2	51.2
Mozambique	27.3	33.0	34.9 ^{ad}	33.5 ^{ai}	33.8 ^{am}	28.3	158	0.9	3.3
Namibia	47.7	53.6	59.3	64.5	58.9	49.7	131	2.0	4.3
Nepal	33.4	41.7	48.2 ^a	53.0	60.8	65.9	118	32.5	97.3
Netherlands	98.8	100.5	101.4	102.1	103.0	103.4	11	4.6	4.7
New Zealand	94.8	96.5	98.2	99.8	101.5	102.7	21	7.9	8.3
Nicaragua	59.3	64.8	72.0	80.7	85.1 ^{am}	87.4	91	28.0	47.3
Niger	15.5	20.8	22.3	22.2	31.2 ^{am}	34.9	149	19.4	124.8
Nigeria	32.3	37.0	42.7	47.8	48.7	47.3	135	15.0	46.6
Norway	99.1	100.4	101.0	101.8	103.5	104.3	7	5.2	5.3
Oman	54.4	67.0	79.2	88.9	92.8	96.2	50	41.7	76.7
Pakistan	48.1	53.5	57.8	62.5	67.1	71.2	112	23.1	48.0

Table 3: Health Sub-Index Scores (Continued)

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, al}	1999	Rank (out of 161)	Change in Score	%Change in Score
Panama	85.4	90.4	92.4 ^{ac}	94.2 ^{ac}	95.8 ^{ac}	96.6	45	11.2	13.1
Papua New Guinea	46.9	51.4 ^{aa}	54.7 ^{ag}	55.8 ^{ak}	61.8 ^{ao}	66.0	117	19.1	40.7
Paraguay	81.6	83.0	85.3 ⁱ	88.1 ⁱ	90.1 ⁿ	91.1	74	9.6	11.7
Peru	59.0	66.0	72.3	79.3	83.8 ^{am}	86.5	95	27.4	46.5
Philippines	67.5	71.2	75.3	79.7	84.2 ^{am}	87.9	89	20.4	30.3
Poland	90.4 ^{f, x}	89.7 ^x	90.6 ^{k, x}	91.2	93.5 ^{m, am}	96.0	51	5.6	6.2
Portugal	88.6	92.9	95.7	97.6	99.5	100.6	30	12.0	13.5
Qatar	77.8	83.3	88.2	92.4	95.7	97.3	41	19.4	25.0
Romania	89.1 ^f	88.8	89.6 ^{k, ah}	89.0	89.2 ^{m, am}	89.7	83	0.6	0.7
Russian Federation	n/a	n/a	n/a	89.2	79.9 ^{m, am}	84.4	100	(4.8)	(5.4)
Saudi Arabia	61.0	71.1	79.9	87.4	91.8 ^{am}	93.9	61	33.0	54.1
Senegal	24.8	31.6 ^{aa}	37.4 ^{ag}	43.6 ^{ak}	48.7 ^{ao}	53.7	129	28.9	116.2
Seychelles	n/a	n/a	n/a	92.0	93.0	95.2	58	3.2	3.5
Sierra Leone	6.2	7.9	9.3	8.1	12.2	16.6	161	10.4	167.9
Singapore	92.0	94.5	97.1	99.8	101.8	102.9	18	10.9	11.9
Slovak Republic	n/a	91.6	92.4	93.2	94.9 ^{am}	96.4	48	4.8	5.3
Slovenia	90.9	91.9	93.8	96.5	98.1 ^{am}	100.1	32	9.2	10.1
Somalia	23.9	28.2	32.5 ^j	31.5 ^j	36.1 ^j	42.0	140	18.0	75.4
Spain	95.9	99.5	100.4	101.4	102.3	103.3	13	7.4	7.7
Sri Lanka	81.2	86.3	90.1	93.2	95.1	96.7	43	15.5	19.1
St. Vincent & the Grenadines	n/a	n/a	n/a	91.7	94.1	95.7	54	4.0	4.4
Sudan	36.8	42.4	47.0	50.3	55.4	60.2	120	23.5	63.9
Suriname	79.7	81.8	84.8	87.3	89.0	90.4	79	10.7	13.4

Table 3: Health Sub-Index Scores (Continued)

	1975 ^{c, q}	1980	1985 ^{g, ab}	1990	1995 ^{l, ai}	1999	Rank (out of 161)	Change in Score	%Change in Score
Sweden	99.6	100.6	101.8	102.9	104.4	105.1	4	5.5	5.5
Switzerland	98.6	100.3	101.6	102.3	103.9	105.3	2	6.6	6.7
Syrian Arab Republic	n/a	n/a	n/a	82.2 ^{ai}	86.0 ^{an}	89.8	82	7.6	9.2
Tanzania	39.2	44.6	45.2 ^{ad}	43.8 ^{ai}	41.5 ^{an}	38.7	144	(0.5)	(1.2)
Thailand	71.3	77.3	82.3	87.3	87.8	87.4	90	16.1	22.5
Togo	37.2	43.9	49.3	53.5	49.8 ^{am}	47.5	134	10.3	27.6
Tonga	n/a	n/a	n/a	86.4	89.7	92.4	70	5.9	6.9
Trinidad & Tobago	83.0	86.1	89.4	92.3	93.8	94.3	60	11.3	13.6
Tunisia	62.4	72.4	78.7	85.3	89.7	93.1	64	30.7	49.1
Turkey	n/a	n/a	n/a	n/a	85.3 ^{n, am}	87.9	88	2.6	3.1
Uganda	42.7	41.5	40.2	39.3	35.5	33.0	153	(9.7)	(22.8)
Ukraine	n/a	n/a	n/a	n/a	88.1 ^{ap}	86.8	93	(1.3)	(1.5)
United Arab Emirates	78.0 ^y	85.5 ^y	91.4 ^y	95.5 ^y	98.4 ^y	100.2	31	22.2	23.2
United Kingdom	95.5	97.4	99.1	100.7	102.0	102.8	19	7.3	7.6
United States	93.7	96.1	97.4 ^{ad}	98.6 ^{ai}	99.3 ^{o, am}	101.3	26	7.6	8.1
Uruguay	88.0	90.2	92.7	94.6	95.9	97.6	38	9.6	10.9
Vanuatu	n/a	n/a	n/a	73.1	78.1	81.3	105	8.2	11.2
Venezuela	84.0	86.9	89.9	92.6	94.3	95.8	53	11.8	14.0
Vietnam	66.4	73.4	78.6	83.8	85.6	86.8	94	20.4	30.7
Yemen, Republic	31.1	42.0	48.0	52.5	59.5 ^{am}	63.7	119	32.6	104.7
Yugoslavia, FR (Serbia/ Montenegro)	n/a	n/a	n/a	93.6	94.8 ^{am}	95.6	55	2.0	2.1
Zambia	42.2	46.8	44.9	43.3	35.5	25.5	159	(16.7)	(39.5)
Zimbabwe	53.4	58.8	64.7 ^{ad}	68.7 ^{ai}	54.7 ^{an}	39.7	143	(13.7)	(25.6)

Sources

World Bank, United Nations; calculations by the authors.

Notes

- a** data for infant mortality rate is from 1987.
- b** data for infant mortality interpolated from 1980 and 1990 data.
- c** data for adult mortality interpolated from 1970 and 1980 data unless otherwise noted.
- d** data for adult mortality interpolated from 1970 and 1999 data.
- e** data for adult mortality is from 1977.
- f** data for adult mortality is from 1975.
- g** data for adult mortality interpolated from 1980 and 1990 data unless otherwise noted.
- h** data for adult mortality is from 1987.
- i** data for adult mortality interpolated from 1980 and 1997 data.
- j** data for adult mortality interpolated from 1980 and 1999 data.
- k** data for adult mortality is from 1985.
- l** data for adult mortality interpolated from 1990 and 1999 data unless otherwise noted.
- m** data for adult mortality is from 1995.
- n** data for adult mortality is from 1997.
- o** data for adult mortality is from 1994.
- p** data for life expectancy is from 1982.
- q** data for under-5 mortality rate interpolated from 1970 and 1980 data unless otherwise noted.
- r** data for under-5 mortality rate interpolated from 1972 and 1980 data.
- s** data for under-5 mortality rate is from 1977.
- t** data for under-5 mortality rate interpolated from 1970 and 1982 data.
- u** data for under-5 mortality rate interpolated from 1970 and 1987 data.
- v** data for under-5 mortality rate interpolated from 1970 and 1979 data.
- w** data for under-5 mortality rate interpolated from 1970 and 1985 data.
- x** data for under-5 mortality rate interpolated from 1970 and 1990 data.
- y** data for under-5 mortality rate interpolated from 1970 and 1999 data.
- z** data for under-5 mortality rate is from 1982.
- aa** data for under-5 mortality rate is from 1979.
- ab** data for under-5 mortality rate interpolated from 1980 and 1990 data unless otherwise noted.
- ac** data for under-5 mortality rate interpolated from 1980 and 1999 data.
- ad** data for under-5 mortality rate interpolated from 1980 and 1992 data.
- ae** data for under-5 mortality rate is from 1987.
- af** data for under-5 mortality rate interpolated from 1980 and 1995 data.
- ag** data for under-5 mortality rate interpolated from 1979 and 1989 data.
- ah** data for under-5 mortality rate is from 1985.
- ai** data for under-5 mortality rate is from 1992.
- aj** data for under-5 mortality rate interpolated from 1987 and 1999 data.
- ak** data for under-5 mortality rate is from 1989.
- al** data for under-5 mortality rate interpolated from 1990 and 1999 data.
- am** data for under-5 mortality rate is from 1995.
- an** data for under-5 mortality rate interpolated from 1992 and 1999 data.
- ao** data for under-5 mortality rate interpolated from 1989 and 1999 data.
- ap** data for under-5 mortality rate is from 1997.
- aq** data for under-5 mortality rate is from 1996.

Table 4: Education Sub-Index

	1975	1980	1985	1990	1995	1999	Rank (out of 143)	Change in Score	% Change in Score
Afghanistan	10.3	8.0 ^c	12.6 ^g	16.0	24.8 ^q	31.3	138	21.1	205.2
Albania	72.6 ^a	76.5	77.6	80.3	83.3 ^q	85.4	74	12.8	17.7
Algeria	40.5	48.3	56.3	65.2	70.1	76.7	94	36.2	89.3
Argentina	88.7	89.6	96.0	97.5 ^j	97.0 ^f	100.4	28	11.7	13.1
Armenia	n/a	n/a	n/a	n/a	86.8	99.2	32	12.4	14.2
Australia	93.1	94.2	94.6	96.8	117.7	124.1	1	31.1	33.4
Austria	95.5	94.2	95.0	99.0	103.6	106.3	17	10.9	11.4
Bahamas, The	n/a	91.4	91.4	92.2 ^k	93.2 ^k	93.7	47	2.3	2.5
Bahrain	63.5	71.8	88.5	92.1	92.9 ^q	93.2	49	29.7	46.8
Bangladesh	29.8	27.8	30.3	34.2	36.8 ^q	38.9	132	9.1	30.7
Belarus	n/a	98.0	101.9	99.9	99.2	97.8	38	(0.2)	(0.2)
Belgium	94.7	95.7	97.9	100.9	115.8	119.3	2	24.6	26.0
Belize	n/a	n/a	n/a	91.5 ^l	92.0 ^q	91.6	53	0.1	0.1
Benin	15.3	23.5	27.7	27.5	35.8	43.4	127	28.1	183.5
Bolivia	64.4	68.5	75.5	76.9	81.7 ^q	85.2	75	20.8	32.4
Botswana	47.0	56.5	66.1	74.3	78.8	80.6	84	33.6	71.4
Brazil	68.3	73.8	76.5 ^g	81.2	88.7 ^s	92.0	52	23.7	34.8
Brunei	n/a	74.7	80.1	86.7 ^l	90.4	92.5	50	17.9	23.9
Bulgaria	90.6	90.6	96.3	93.8	92.3	93.7	46	3.1	3.4
Burkina Faso	1.1	3.3	7.7	11.8	14.8 ^t	19.8	142	18.7	1740.2
Burundi	11.4	15.2	24.6	33.8	31.6 ^q	29.9	141	18.5	161.7
Cambodia	26.0 ^b	43.2 ^d	48.3	46.4	53.7	54.8	116	28.9	111.0
Cameroon	42.5	49.4	56.3	61.3	61.4 ^q	61.3	109	18.7	44.0
Canada	99.5	100.0	106.5	112.9	112.4	111.1	8	11.6	11.7
Cape Verde	54.8	52.1	55.6	63.6	71.4 ^t	83.9	78	29.0	53.0
Central African Republic	23.0	26.8	32.0	31.0	31.7 ^q	32.5	136	9.5	41.2

Table 4: Education Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 143)	Change in Score	% Change in Score
Chad	8.5	12.4 ^e	16.9	21.9 ^m	27.6	34.9	135	26.4	311.2
Chile	89.4	87.5	89.0	90.7 ^j	92.3	96.4	40	7.0	7.8
China	66.4	66.7	66.0	69.6	78.6	86.5	68	20.0	30.2
Colombia	72.4	74.3	74.6	78.0	83.7	90.8	60	18.4	25.4
Comoros	37.5	47.9	49.4	47.5 ^j	48.1	48.1	124	10.6	28.2
Congo, Dem. Republic	37.8	42.9	44.5	39.1 ⁿ	48.7 ^f	46.0	125	8.2	21.6
Congo, Republic	64.5	78.1	84.9	78.9	78.3 ^q	77.5	91	12.9	20.0
Costa Rica	82.4	82.7	80.6	84.7	87.1 ^f	88.8	64	6.4	7.8
Côte d'Ivoire	22.7	31.0	33.2	35.6 ^j	39.3 ^f	42.2	129	19.5	85.7
Croatia	n/a	n/a	92.9	88.4	90.3	90.9	58	(2.0)	(2.1)
Cuba	89.7	92.7	88.7	88.4	88.6	95.5	42	5.8	6.5
Cyprus	89.2	85.6	84.7	91.9	95.6 ^f	90.9	59	1.7	1.9
Denmark	99.5	99.2	99.0	100.5	106.3	111.1	8	11.6	11.7
Djibouti	20.5	26.8	30.7	33.5	36.9	40.8	131	20.3	98.9
Dominican Republic	69.3	75.2 ^e	81.0	80.8 ^o	80.0 ^s	85.6	72	16.3	23.6
Ecuador	77.2	86.9	89.3 ^h	86.7	90.4 ^q	93.2	48	16.0	20.8
Egypt, Arab Republic	40.9	46.9	55.8	62.9	67.3	73.0	101	32.1	78.6
El Salvador	59.3	62.4	65.7 ^h	69.3	72.9	76.8	93	17.5	29.6
Eritrea	n/a	n/a	n/a	n/a	36.9	37.8	133	0.9	2.3
Ethiopia	7.6	15.2	18.4	19.6	23.2	30.2	140	22.6	297.4
Fiji	80.3	80.8	82.9	89.5	94.8 ^q	98.9	33	18.6	23.1
Finland	95.5	97.7	100.3	105.9	111.3	115.2	4	19.7	20.6
France	94.8	95.8	97.2	101.5	107.2	109.1	13	14.3	15.1
Germany	n/a	n/a	n/a	96.7	104.3	109.1	13	12.4	12.8
Ghana	40.4	47.7	50.1	53.8	56.3 ^q	58.2	111	17.7	43.8
Greece	88.0	89.0	93.2	95.4	96.4	99.2	31	11.2	12.8

Table 4: Education Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 143)	Change in Score	% Change in Score
Guatemala	40.0	46.6	51.1	56.2 ^l	59.1	61.8	108	21.8	54.5
Guyana	86.7	87.7	86.0	88.2 ⁿ	87.8	89.7	62	3.0	3.5
Haiti	25.2	32.5	40.4	37.9 ^p	35.6	53.5	121	28.2	111.7
Honduras	53.8	62.1	68.4	69.1 ^j	71.8 ^t	73.1	100	19.3	35.9
Hong Kong, China	77.0	77.8	80.9 ^h	88.2 ^j	88.1 ^t	84.9	76	7.8	10.2
Hungary	85.5	90.1	93.7	91.2	95.5	100.4	27	14.9	17.4
Iceland	93.3	94.0	94.8	100.0	102.0	105.7	19	12.4	13.3
India	38.3	42.0	49.0	53.5	57.7	60.3	110	22.0	57.5
Indonesia	54.8	66.5	74.7 ^h	76.4	79.4	82.5	82	27.7	50.6
Iran, Islamic Republic	50.4	52.9 ^c	59.8	70.9	78.2	82.3	83	31.9	63.3
Iraq	44.6	58.4	58.4	59.4 ^m	56.8 ^q	54.6	117	10.1	22.5
Ireland	95.5	94.9	97.2	100.0	104.5	107.0	15	11.5	12.0
Israel	86.3	90.4	94.0	94.4	96.5	99.9	29	13.7	15.8
Italy	90.6	89.9	88.2	92.3	97.4	102.0	22	11.4	12.6
Jamaica	75.8	78.3	75.1	79.2	80.0 ^q	80.5	85	4.7	6.2
Japan	96.1	99.3	99.0	97.4	99.6 ^t	100.9	26	4.8	5.0
Jordan	62.4	68.9	67.1	72.6	75.8	77.2	92	14.8	23.7
Kenya	54.7	64.3	67.0	69.4	70.1 ^q	70.3	103	15.6	28.6
Korea, Republic	83.1	89.7	94.9	97.2	100.6	105.7	18	22.6	27.2
Kuwait	67.7	76.5	83.0	78.6	73.2	76.0	95	8.3	12.2
Lao PDR	27.7 ^a	38.6	41.9	44.6 ⁿ	51.1	56.8	114	29.0	104.6
Latvia	n/a	96.9	97.9	95.3	93.0	101.4	24	4.4	4.6
Lebanon	75.2 ^a	78.0	78.6	85.1 ^j	87.4	91.0	57	15.8	21.1
Lesotho	65.3	67.1	73.4	75.0	76.4	77.9	90	12.7	19.4
Libya	69.6	76.7	78.4	83.8	91.4 ^q	97.1	39	27.5	39.5
Lithuania	n/a	101.0	97.5	96.0	93.8	99.8	30	(1.2)	(1.2)

Table 4: Education Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 143)	Change in Score	% Change in Score
Luxembourg	81.7	82.4	82.3	86.2 ^p	90.1	94.7	43	13.0	15.9
Madagascar	43.7	50.3 ^f	56.6 ^h	51.6	51.5	57.1	113	13.4	30.6
Malawi	35.7	39.0	41.1	46.7	74.9	73.4	99	37.7	105.6
Malaysia	n/a	66.9	72.2	75.3	80.5	83.5	79	16.7	24.9
Mali	5.7	8.7	10.7	14.9	23.9	32.2	137	26.5	460.7
Malta	81.8	80.4	85.2	90.7	92.0	95.7	41	13.9	17.0
Mauritania	n/a	n/a	27.7	29.0	38.6	42.1	130	14.4	51.8
Mauritius	66.1	67.3	70.9	74.8	77.4	80.0	86	13.9	21.0
Mexico	76.4	84.7	86.3	83.6	86.1	89.2	63	12.8	16.8
Moldova	n/a	86.8	91.3	93.6	91.8	93.9	45	7.2	8.3
Mongolia	57.1	66.0	67.4	64.9	59.1	64.8	106	7.7	13.4
Morocco	n/a	33.2	37.3	38.2	45.7	53.0	122	19.8	59.8
Mozambique	n/a	26.6	27.2	26.2 ^l	29.3	30.6	139	4.0	15.1
Myanmar	57.5	61.1	63.3	65.9	70.2 ^f	74.6	96	17.1	29.8
Namibia	n/a	n/a	n/a	n/a	90.5	88.8	65	(1.7)	(1.9)
Nepal	15.2	25.8	34.0	45.7	50.0	54.4	118	39.2	258.1
Netherlands	96.0	96.8	101.6	103.8	112.2	114.5	5	18.5	19.3
New Zealand	96.4	97.5	97.4	99.4	108.5	112.5	7	16.1	16.8
Nicaragua	53.1	63.7	63.3	65.0	70.2	71.4	102	18.3	34.6
Niger	1.0	4.2	5.5	7.7	9.4 ^q	10.8	143	9.9	1032.3
Nigeria	22.6	45.0	52.2	49.6 ⁿ	58.5 ^t	56.1	115	33.5	148.6
Norway	95.4	97.0	97.4	100.8	107.4	111.1	8	15.7	16.5
Oman	17.5	28.8	45.2	58.5	66.5	69.1	104	51.6	294.5
Pakistan	18.6	21.0 ^c	24.0	32.2	38.4 ^q	43.2	128	24.6	132.8
Panama	84.6	84.8	85.0	85.5	88.8	91.5	54	6.9	8.2
Papua New Guinea	35.2	38.7	41.9	46.0 ^p	50.1	52.7	123	17.5	49.9

Table 4: Education Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 143)	Change in Score	% Change in Score
Paraguay	70.5	74.5	76.6	78.5	83.9	85.4	73	14.9	21.2
Peru	77.9	82.9	88.1	90.9	92.4	94.5	44	16.6	21.4
Philippines	83.8	89.4	89.5	94.2	96.1	98.8	34	15.0	17.9
Poland	89.2	90.7	94.7	96.8	98.0	102.7	20	13.5	15.2
Portugal	78.4	75.9	83.7	87.5	102.0	106.7	16	28.3	36.0
Qatar	66.9	73.4	83.3	85.4	83.1	86.4	70	19.5	29.1
Romania	88.0	95.9	94.4	89.2	88.5	91.5	55	3.5	4.0
Russian Federation	n/a	97.9	102.2	102.5	98.6 ^t	98.5	35	0.6	0.6
Rwanda	27.2	36.2	40.3	45.5 ⁿ	50.5 ^u	54.4	119	27.2	100.0
Saudi Arabia	37.2	45.4	54.5	61.6	69.1	74.3	98	37.1	99.6
Senegal	15.3	19.0	24.5	27.9	30.7 ^f	35.9	134	20.6	134.3
Singapore	73.5	75.1	78.3	81.4	87.4	92.4	51	18.9	25.8
Slovenia	n/a	n/a	93.3	96.8	96.6	101.9	23	8.6	9.2
South Africa	n/a	n/a	n/a	89.8	99.2	100.9	25	11.1	12.4
Spain	90.1	94.3	98.4	100.7	106.6	109.1	12	19.0	21.1
Sri Lanka	68.1	76.8	80.7	84.7	86.1	88.6	66	20.5	30.1
Sudan	24.4	28.8	33.4	37.8	41.5	45.5	126	21.1	86.2
Swaziland	60.0	66.3	69.8	75.0	81.8	83.3	81	23.3	38.9
Sweden	94.3	95.8	95.7	95.5	111.5	113.9	6	19.6	20.7
Switzerland	93.0	92.7	91.6	93.5	98.6	102.2	21	9.2	9.9
Syrian Arab Republic	57.1	62.9	71.5	73.4	72.1 ^f	74.3	97	17.2	30.1
Tajikistan	n/a	n/a	n/a	97.4	92.3 ^f	90.7	61	(6.7)	(6.9)
Tanzania	33.1	49.7	47.2	49.1	51.8	53.7	120	20.6	62.2
Thailand	69.9	75.0	75.4	74.7 ⁿ	79.8	83.9	77	14.0	20.0
Togo	40.2	52.3	45.1	53.7	60.2	64.3	107	24.1	59.8
Trinidad & Tobago	81.7	81.2	84.3	88.2	87.1	86.4	69	4.7	5.8

Table 4: Education Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 143)	Change in Score	% Change in Score
Tunisia	43.4	49.8	60.1	65.6	73.6	79.8	87	36.4	83.9
Turkey	59.7	61.5	69.2	71.3	76.3	79.5	88	19.9	33.3
Uganda	28.7	33.4	45.0	49.0	51.7	58.0	112	29.3	101.9
Ukraine	n/a	98.1	101.2	97.9	96.3 ^t	97.8	37	(0.2)	(0.2)
United Arab Emirates	n/a	59.8	67.8	77.9	77.6 ^s	78.5	89	18.7	31.3
United Kingdom	95.6	93.6	92.2	95.7	115.8	117.3	3	21.7	22.7
United States	97.5	100.8	103.4	107.1	109.4	109.8	11	12.2	12.6
Uruguay	86.9	87.7	92.0 ⁱ	96.4	96.5 ^s	98.2	36	11.3	13.0
Uzbekistan	n/a	84.3	88.5	88.1	89.9 ^q	91.2	56	6.8	8.1
Venezuela	76.5	79.3	82.8	87.6	86.6 ^q	85.7	71	9.2	12.0
Vietnam	74.2	75.2	74.7	72.7	80.4	87.5	67	13.3	17.9
Zambia	55.7	57.4	65.5	66.8	67.2 ^f	66.7	105	11.0	19.8
Zimbabwe	51.1	58.6	84.5	82.0	84.1	83.4	80	32.3	63.1

Sources

World Bank, United Nations; calculations by the authors.

Notes

- a** enrollment ratio interpolated from 1970 and 1980 data.
b enrollment ratio interpolated from 1970 and 1981 data.
c enrollment ratio is from 1982.
d enrollment ratio is from 1981.
e enrollment ratio interpolated from 1975 and 1985 data.
f enrollment ratio interpolated from 1975 and 1984 data.
g enrollment ratio is from 1986.
h enrollment ratio is from 1984.
i enrollment ratio is from 1983.

j enrollment ratio is from 1991.

k enrollment ratio interpolated from 1985 and 1999 data.

l enrollment ratio is from 1992.

m enrollment ratio is from 1988.

n enrollment ratio is from 1989.

o enrollment ratio interpolated from 1985 and 1996 data.

p enrollment ratio interpolated from 1985 and 1995 data.

q enrollment ratio interpolated from 1990 and 1999 data.

r enrollment ratio is from 1994.

s enrollment ratio is from 1996.

t enrollment ratio is from 1993.

u enrollment ratio interpolated from 1989 and 1999 data.

Table 5: Technology Sub-Index

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Afghanistan	1.0	1.5	2.2	2.4	2.8	3.0	181	2.1	216.8
Albania	2.5	5.3	8.1	8.8	9.7	12.7 ^p	135	10.3	417.8
Algeria	5.6	7.6	9.4	10.4	11.8	13.8	133	8.2	145.7
American Samoa	n/a	n/a	35.6	37.9	42.4	44.1 ^p	69	8.5	23.8
Andorra	18.1	23.8	32.1	38.3	53.2	55.8 ^p	49	37.7	208.3
Angola	n/a	0.9	1.0	1.3	1.3	2.4 ^j	185	1.5	178.2
Antigua & Barbuda	21.2	23.7 ^c	31.0	44.6	56.2	66.2 ^p	35	44.9	211.9
Argentina	19.7	22.5	28.9	32.4	38.3	42.1	72	22.3	113.3
Armenia	n/a	n/a	n/a	24.8	26.4	27.7	97	2.9	11.6
Aruba	n/a	n/a	n/a	n/a	44.1	46.8 ^p	65	2.7	6.2
Australia	53.3	62.4	73.1	82.2	95.1	99.1	8	45.8	85.9
Austria	40.7	50.4	58.1	65.4	70.3	73.8 ^p	26	33.1	81.2
Azerbaijan	n/a	n/a	n/a	17.1	18.0	21.1 ^p	114	4.0	23.7
Bahamas, The	16.2	26.8	33.3	40.2	46.0	51.2 ^p	59	35.0	215.9
Bahrain	15.2	29.0	43.5	46.7	50.8	49.3	63	34.0	223.6
Bangladesh	0.3 ^a	0.3 ^d	0.9	1.1	1.3	1.4	194	1.2	456.4
Barbados	24.7	30.2	40.2	49.1	55.0	60.2 ^p	44	35.5	143.8
Belarus	15.9	21.4	25.3	29.8	34.3	40.5	74	24.5	154.1
Belgium	43.1	51.5	56.6	64.9	70.9	76.9	22	33.8	78.5
Belize	n/a	n/a	20.4 ^l	24.5	29.4	31.2 ^p	90	10.8	53.0
Benin	0.9	1.3	1.7	2.0	2.2	3.0 ^{q, p}	182	2.0	224.3
Bermuda	60.0	78.8	102.6	117.1	131.2	141.5 ^p	1	81.5	135.8
Bhutan	n/a	n/a	n/a	n/a	2.4	3.3	178	0.9	36.3
Bolivia	n/a	14.2	16.8	20.1	20.8	22.9	108	8.7	61.4
Bosnia & Herzegovina	n/a	n/a	n/a	n/a	13.4	17.0 ^k	125	3.6	26.7
Botswana	n/a	n/a	2.9 ^l	4.3	6.0	8.9 ^p	147	6.0	210.3

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Brazil	10.0	15.3	20.6	23.4	27.1	36.7	82	26.7	266.0
Brunei	10.3 ^a	15.2	21.7	27.4	42.9	58.0	46	47.7	463.3
Bulgaria	n/a	27.6	32.5	37.9	48.9	56.1 ^p	48	28.5	103.3
Burkina Faso	0.3	0.5 ^c	0.6	0.8	1.0	1.4 ^p	195	1.1	353.0
Burundi	0.4	0.6 ^c	0.9	1.2	1.4	3.7 ^k	174	3.3	730.9
Cambodia	n/a	n/a	2.2 ^f	2.3	2.4	2.9 ^p	183	0.7	29.4
Cameroon	0.6	1.6	2.3	4.1	4.3	5.2 ^p	165	4.6	797.0
Canada	58.4	64.0	78.4	91.6	98.5	102.4	4	44.0	75.4
Cape Verde	n/a	n/a	n/a	4.8	6.8	10.7 ^p	142	5.9	124.8
Cayman Islands	16.4	34.5	49.9	57.9	69.2	70.5 ^{g, p}	29	54.1	329.9
Central African Republic	n/a	0.9	1.1	1.5	1.7	1.9	188	1.0	106.5
Chad	n/a	n/a	4.1 ^l	4.4	4.5	4.4 ^p	170	0.3	7.9
Chile	8.7	13.7	17.1	22.2	27.3	33.5	87	24.9	287.5
China	1.7	2.1	4.3	15.0	22.1	28.3	95	26.6	1589.2
Colombia	8.2	9.7	11.4	14.7	29.4	31.8	89	23.6	288.6
Comoros	n/a	n/a	2.8 ^l	3.4	3.1	3.3 ^p	179	0.4	14.4
Congo, Dem. Republic	3.1	3.5	3.6	3.8	5.6	6.8 ^{g, p}	159	3.7	120.2
Congo, Republic	1.3	1.4	1.7	2.7	2.9	3.4 ^g	177	2.1	167.3
Costa Rica	9.5	11.9	13.9	24.2	27.2	40.3 ^k	76	30.8	323.5
Côte d'Ivoire	3.0	4.6	5.5	6.4	6.9	7.9 ^p	157	4.9	163.8
Croatia	n/a	n/a	n/a	27.6	38.2	45.7 ^p	66	18.1	65.7
Cuba	8.4 ^b	14.4 ^c	18.5	19.9	19.8	23.0	107	14.5	172.0
Cyprus	13.4	19.3	26.3	44.3	51.1	52.2 ^p	57	38.8	288.2
Czech Republic	n/a	n/a	n/a	n/a	53.0	66.5	34	13.5	25.4
Denmark	62.3	73.4	79.5	85.9	89.1	103.9 ^k	3	41.6	66.8
Djibouti	2.3	2.9	3.7	4.5	4.8	5.0 ^p	166	2.7	115.7

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Dominica	6.9	8.5	13.7	25.3	34.3	41.2 ^p	73	34.3	499.8
Dominican Republic	n/a	8.0	8.8	10.8	12.9	15.0 ^p	131	7.0	86.9
Ecuador	8.8	10.9	11.3	13.7	18.3	25.2 ^p	102	16.4	187.3
Egypt, Arab Republic	3.7	4.8 ^c	10.2	13.8	15.6	21.1	113	17.5	475.3
El Salvador	7.4	10.9	12.6	14.2	19.1	24.4 ^k	105	17.0	229.8
Equatorial Guinea	n/a	n/a	7.9	8.2	13.3	15.1 ^{g, p}	129	7.3	92.1
Eritrea	n/a	n/a	n/a	n/a	2.1	10.0 ^k	144	7.9	366.7
Estonia	n/a	n/a	n/a	40.7	50.5	72.4 ^k	28	31.7	77.7
Ethiopia	0.6	1.6	3.7	3.8	3.7	4.0 ^k	171	3.4	565.7
Faeroe Islands	23.2	33.1	44.9	53.6	62.5	68.9 ^p	31	45.7	197.3
Fiji	n/a	n/a	13.4 ^m	15.0	21.8	25.0 ^k	103	11.6	86.7
Finland	47.6	62.4	73.7	80.9	88.1	101.2 ^k	5	53.6	112.5
France	35.3	53.6	67.6	79.1	86.5	90.4	15	55.1	156.1
French Polynesia	18.5	20.7	26.8	32.3	34.4	35.3 ^p	83	16.8	90.7
Gabon	n/a	n/a	4.9	7.0	7.9	25.4 ^k	101	20.5	414.3
Gambia, The	2.0	2.2	2.7	3.2 ⁿ	4.3	8.7 ^k	152	6.7	329.6
Georgia	n/a	n/a	n/a	26.2	43.6	45.2 ^p	68	19.0	72.7
Germany	52.0	62.8	71.7	76.1	78.3	88.7	16	36.7	70.5
Ghana	2.2	3.3	4.3	5.1	9.7	19.3 ^k	117	17.1	759.3
Greece	24.3	31.2	38.6	43.8	65.1	70.4	30	46.1	189.4
Greenland	13.5	21.7	27.5	38.1	51.3	61.9 ^p	39	48.4	357.9
Grenada	6.4	9.2	12.4	27.7	48.5	52.8 ^p	54	46.4	729.8
Guam	55.0	73.9	79.8	81.6	93.5	94.1 ^g	10	39.1	71.1
Guatemala	2.4	3.1	3.5	5.5	6.6	8.4 ^p	154	6.1	255.2
Guinea	n/a	n/a	0.8	1.2	2.4	3.7 ^k	175	2.9	341.4
Guyana	n/a	n/a	10.6 ^l	12.0	14.7	17.4 ^p	123	6.9	65.2

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Haiti	n/a	0.7 ^c	0.9	1.4	1.7	1.8 ^p	190	1.1	162.7
Honduras	3.0	4.0	11.3	12.2	13.0	15.4	127	12.4	410.5
Hong Kong, China	32.2	38.2	45.1	57.8	67.8	74.5	23	42.3	131.4
Hungary	25.7	30.5	37.9	41.0	49.8	62.1	38	36.5	141.9
Iceland	48.7	53.2	59.3	65.3	70.8	93.1 ^k	11	44.4	91.2
India	0.7	0.9	1.7	3.6	6.4	8.1	155	7.4	1035.2
Indonesia	2.4	3.4	4.8	6.5	10.2	12.8	134	10.4	432.7
Iran, Islamic Republic	6.0	7.3	8.3	10.7	18.4	21.8 ^j	109	15.8	264.0
Iraq	n/a	6.9	8.8	10.3	10.7	10.7 ^p	141	3.8	54.5
Ireland	22.7	29.2	38.0	46.2	56.8	66.9	33	44.2	195.2
Israel	25.5	32.1	40.6	45.4	53.0	58.7	45	33.2	129.8
Italy	37.3	48.2	55.2	63.4	67.9	73.8 ^p	25	36.5	97.6
Jamaica	9.6	12.8	14.6	18.3	24.5	38.0 ^{j, p}	80	28.4	296.7
Japan	48.6	65.3	71.7	79.7	87.6	94.8	9	46.2	95.0
Jordan	9.6 ^a	10.8	14.2	12.4	12.7	15.5	126	6.0	62.3
Kazakhstan	n/a	n/a	n/a	22.0	28.2	27.7	96	5.7	25.9
Kenya	0.9	1.2	2.1	2.9	3.0	3.7 ^p	173	2.9	326.5
Kiribati	n/a	n/a	4.0	5.3	6.6	7.8	158	3.8	92.7
Korea, Dem. Republic	n/a	n/a	4.3	5.6	8.3	8.7	149	4.5	105.4
Korea, Republic	21.2	31.0	39.3	50.3	63.5	67.7	32	46.5	219.0
Kuwait	17.8	27.1	31.7	55.6	48.3	54.5 ^k	50	36.7	205.9
Kyrgyz Republic	n/a	n/a	n/a	7.5	9.0	9.6 ^p	145	2.1	28.3
Lao PDR	1.3	2.0	2.2	2.6	3.2	3.5 ^p	176	2.1	160.1
Latvia	n/a	n/a	n/a	45.9	59.8	74.4 ^k	24	28.5	62.0
Lebanon	n/a	36.9 ^e	33.3	43.6	43.7	49.5 ^p	62	12.6	34.2
Lesotho	0.3	0.5	0.7	1.3	1.9	2.3 ^g	186	2.0	573.1

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Liberia	n/a	n/a	5.0	5.2	5.6	6.6 ^{g, p}	160	1.7	33.7
Libya	n/a	n/a	9.7	12.6	13.7	18.7 ^p	118	9.0	93.5
Liechtenstein	n/a	51.0	60.6	68.8	78.6	78.5 ^p	20	27.4	53.8
Lithuania	n/a	n/a	n/a	39.9	46.5	53.3 ^k	52	13.5	33.8
Luxembourg	43.5	50.7	57.0	63.1	70.5 ^h	81.6 ^p	18	38.1	87.7
Macao	n/a	n/a	n/a	38.8	47.3	49.9 ^k	60	11.1	28.6
Macedonia, FYR	n/a	n/a	n/a	22.9	25.7	33.2	88	10.3	45.2
Madagascar	3.0 ^b	3.6	3.9	4.6	4.6	5.0 ^p	167	2.0	66.5
Malawi	2.9	3.4	3.8	4.6 ^o	4.8	4.8	168	1.9	64.6
Malaysia	5.8	14.1	18.2	22.0	28.2	30.7	91	24.8	424.9
Maldives	n/a	2.4 ^c	3.6	5.3	8.2	9.5 ^p	146	7.1	295.7
Mali	0.2	0.2	0.9	1.4	1.4	1.7 ^{g, p}	191	1.5	781.6
Malta	47.7	55.2	64.6	51.3	65.2	76.9	21	29.2	61.2
Mauritania	1.0	1.8	2.6	3.6	7.5	8.6	153	7.5	717.8
Mauritius	7.5	11.8	15.7	19.6	27.8	34.3	86	26.8	355.8
Mexico	6.5	8.2	13.3	17.4	22.9	28.4	93	21.9	338.9
Moldova	n/a	n/a	n/a	32.9	38.4	38.6 ^k	78	5.7	17.2
Mongolia	n/a	3.4 ^e	4.8	8.2	8.3	8.7 ^p	151	5.3	153.3
Morocco	3.6	5.9	7.4	10.7	15.9	17.2	124	13.6	382.7
Mozambique	0.4	0.5	0.7	1.0	1.0	1.2 ^p	196	0.7	162.6
Myanmar	0.4	0.4 ^d	1.2	1.7	2.2	1.9 ^k	187	1.6	445.9
Namibia	3.4	4.1	5.5	6.1	7.4	8.8 ^p	148	5.4	156.9
Nepal	0.3	0.3 ^e	0.5	0.9	1.1	1.7	192	1.5	562.3
Netherlands	43.6	56.9	67.5	74.0	79.2	91.5	13	47.8	109.6
Netherlands Antilles	39.4	46.4	53.9	53.2	60.1	61.1 ^{g, p}	43	21.7	55.2
New Caledonia	18.2	24.7	31.9	39.0	48.7	53.3 ^k	53	35.1	192.9

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
New Zealand	54.1	58.2	62.4	70.2	77.1	79.7	19	25.6	47.4
Nicaragua	6.2	8.2	8.6	9.2	10.1	10.8 ^j	140	4.7	75.9
Niger	0.4	0.8	0.9	1.7	2.6	2.8 ^{g, k}	184	2.4	573.4
Nigeria	n/a	2.2 ^c	3.6	5.7	7.4	8.1 ^g	156	5.9	274.4
Norway	44.2	50.9	64.1	71.1	83.6	99.7	7	55.5	125.4
Oman	6.8	11.8	49.1	52.0	50.3	49.6	61	42.8	632.8
Pakistan	1.3	1.9	2.5	3.6	5.7	10.1	143	8.7	649.2
Panama	n/a	13.5	17.5	20.0	21.8	27.0	98	13.5	99.5
Papua New Guinea	1.1	1.5	1.7	1.9	2.3	3.2	180	2.1	202.1
Paraguay	3.0	4.2	5.5	7.8	10.2	18.6	121	15.5	512.3
Peru	5.7	6.9	9.4	11.7	15.7	17.6	122	12.0	210.9
Philippines	2.1	2.5	4.6	6.0	9.9	11.6	138	9.5	452.1
Poland	19.7	23.0	26.3	28.6	41.2	48.7	64	28.9	146.4
Portugal	14.6	19.6	23.6	30.5	54.5	65.1	36	50.5	346.1
Puerto Rico	27.9	32.5	38.1	46.1	52.2	53.5 ^p	51	25.6	91.8
Qatar	16.6	35.8	39.3	42.4	48.6	73.8 ^p	27	57.2	345.3
Romania	14.8	19.8	21.8	22.9	25.6	34.7 ^k	85	20.0	135.0
Russian Federation	n/a	n/a	n/a	36.7	39.9	45.3	67	8.6	23.5
Rwanda	0.2	0.6	1.0	1.4	1.8	1.9 ^p	189	1.7	781.7
Samoa	n/a	n/a	11.1	12.1	14.2 ^h	24.9 ^{g, p}	104	13.8	125.0
Sao Tome & Principe	4.1	4.7 ^c	5.7	11.1 ^o	16.3	20.8 ^{j, p}	115	16.7	408.3
Saudi Arabia	9.9	19.3	23.8	24.5	26.2	29.2	92	19.3	196.2
Senegal	1.2	1.4	3.9	4.4	4.9	6.0 ^p	162	4.8	393.6
Seychelles	6.4	9.5	14.5	20.3	28.8	38.3 ^g	79	31.9	497.3
Sierra Leone	n/a	3.7	4.4	4.7	5.0	5.8 ^{g, j, p}	163	2.2	59.5
Singapore	22.4	39.0	47.0	52.8	54.9	61.2	41	38.8	172.8

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Slovak Republic	n/a	n/a	n/a	n/a	45.5	61.2 ⁱ	40	15.8	34.7
Slovenia	n/a	n/a	n/a	35.7	45.5	52.3	56	16.5	46.2
Solomon Islands	n/a	n/a	n/a	n/a	3.6	4.5 ^P	169	0.9	24.6
Somalia	n/a	n/a	0.4	1.4	1.6	1.7 ^{g, P}	193	1.3	283.9
South Africa	6.5	12.3	14.8	16.6	19.2	21.4	111	14.9	228.6
Spain	23.8	31.8	36.5	48.2	58.8	64.0	37	40.2	168.6
Sri Lanka	n/a	2.1	4.7	6.0	8.8	11.9	136	9.8	465.8
St. Kitts & Nevis	n/a	n/a	20.1	39.8	50.2	61.1 ^P	42	41.1	204.5
St. Lucia	14.6	16.2	18.1	32.3	46.9	51.3 ^{g, P}	58	36.7	250.5
St. Vincent & the Grenadines	11.0	13.0	16.4	28.0	35.0	39.0 ^P	77	28.0	255.0
Sudan	4.0	6.6	7.5	8.9	9.9	15.3	128	11.3	279.0
Suriname	12.6	18.8	22.4	25.7	32.4	37.7 ^P	81	25.1	199.4
Swaziland	2.4	3.2	4.1	4.8	9.9	11.4 ^P	139	9.0	373.3
Sweden	68.9	79.2	83.0	86.6	87.3	90.4 ^P	14	21.6	31.3
Switzerland	56.1	64.0	69.9	74.9	81.1	93.1	12	37.0	66.1
Syrian Arab Republic	6.1	7.8	9.9	10.6	13.2	15.1	130	9.0	145.9
Tajikistan	n/a	n/a	n/a	15.8	20.0	23.6	106	7.8	49.7
Tanzania	1.2	1.5	2.1	3.7	6.1	6.4 ^P	161	5.2	424.6
Thailand	2.7	4.2	9.2	11.1	17.7	26.3	99	23.6	880.1
Togo	2.8 ^b	3.9	4.1	4.2	4.8	5.8 ^j	164	3.0	106.4
Tonga	n/a	n/a	7.7	14.0	16.9	21.3 ^k	112	13.6	177.3
Trinidad & Tobago	12.5	18.7	30.2	37.3 ^o	39.3	43.0	70	30.4	243.1
Tunisia	5.1	6.6	7.8	10.3	12.4	19.5 ^k	116	14.4	282.6
Turkey	4.4	8.1	14.4	23.9	33.1	40.3	75	35.9	820.6
Turkmenistan	n/a	n/a	n/a	18.7	19.6	21.8 ^P	110	3.1	16.3
Uganda	0.7	0.9	1.9	2.7	3.7	4.0 ^P	172	3.2	445.1

Table 5: Technology Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999 ⁱ	Rank (out of 196)	Change in Score	% Change in Score
Ukraine	25.9	29.9	36.6	41.9	47.2	52.5 ^p	55	26.6	102.6
United Arab Emirates	9.6	17.1	20.0	23.4	39.7	42.2	71	32.5	337.3
United Kingdom	48.3	61.0	67.2	78.4	93.3	100.1	6	51.7	107.0
United States	85.5	95.0	106.7	117.8	125.0	130.2	2	44.7	52.3
Uruguay	20.9	22.1	30.0	41.9	54.2	57.6 ^g	47	36.7	175.9
Uzbekistan	n/a	n/a	n/a	21.0	23.5	28.3	94	7.3	35.0
Vanuatu	2.8	4.3 ^e	5.5	6.8	7.5	8.7 ^g	150	5.9	205.6
Venezuela	15.0	16.9	19.4	24.0	25.5	26.1 ^p	100	11.1	73.8
Vietnam	n/a	3.6 ^e	3.7	4.1	11.9	14.2 ^p	132	10.6	295.2
Virgin Islands (US)	n/a	n/a	76.7	82.8	84.2	86.1 ^g	17	9.4	12.2
Yemen, Republic	n/a	11.5	14.7	16.9	17.2	18.6	120	7.1	62.1
Yugoslavia, FR (Serbia/Montenegro)	33.0	39.6	44.1	25.9	28.3	34.9	84	1.8	5.6
Zambia	1.4	1.9	2.4	4.0	6.6	11.7 ^k	137	10.3	730.3
Zimbabwe	1.9	2.0	3.0	3.7	4.2	18.7 ^{g, k}	119	16.7	872.8

Sources

World Bank, United Nations; calculations by the authors.

Notes

- a** number of telephone mainlines is from 1977.
b number of telephone mainlines is from 1976.
c number of telephone mainlines is from 1981.
d number of telephone mainlines is from 1979.
e number of telephone mainlines is from 1982.
f number of telephone mainlines is from 1987.
g number of telephone mainlines is from 1998.

h number of radios is from 1994.

i number of radios is from 1997 unless otherwise noted.

j number of radios is from 1998.

k number of radios is from 1999.

l number of televisions is from 1987.

m number of televisions is from 1986.

n number of televisions is from 1989.

o number of televisions interpolated from 1985 and 1995 data.

p number of televisions is from 1998.

Table 6: GDP-per-capita Sub-Index

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Albania	n/a	2.1	2.1	1.9	1.7	1.9	115	(0.1)	(6.1)
Algeria	3.5	4.2	4.6	4.0	3.6	3.8	92	0.3	8.4
Angola	n/a	1.6	1.4	1.5	0.9	1.0	134	(0.5)	(34.7)
Antigua & Barbuda	n/a	10.5	13.4	18.3	19.9	23.4	40	12.9	122.9
Argentina	19.2	20.5	16.6	15.1	19.5	21.3	41	2.1	10.9
Armenia	n/a	n/a	n/a	3.8	1.7	2.1	114	(1.7)	(44.4)
Australia	38.4	42.3	45.9	49.5	55.4	62.6	17	24.3	63.2
Austria	50.8	59.9	64.3	73.6	78.0	84.0	7	33.2	65.4
Azerbaijan	n/a	n/a	n/a	2.6	0.6	0.9	140	(1.7)	(66.8)
Bahamas, The	20.2	32.3	35.2	35.4	31.9	35.0	32	14.7	72.8
Bahrain	n/a	31.8	23.2	22.5	25.1	24.4 ^e	39	(7.4)	(23.2)
Bangladesh	0.2	0.2	0.3	0.4	0.5	0.6	151	0.4	231.8
Barbados	14.3	17.7	16.7	19.2	18.5	20.9	42	6.6	46.2
Belarus	n/a	n/a	7.1 ^c	7.8	4.9	6.4	75	(0.7)	(9.3)
Belgium	50.3	58.2	60.3	69.3	72.4	79.0	13	28.8	57.2
Belize	4.0	5.1	4.5	6.4	6.9	7.0	71	3.1	77.0
Benin	0.5	0.6	0.7	0.6	0.6	0.7	146	0.2	31.3
Bhutan	n/a	0.3	0.4	0.7	0.8	1.0	136	0.8	299.0
Bolivia	2.3	2.3	1.9	1.9	2.0	2.2	113	(0.1)	(5.8)
Bosnia & Herzegovina	n/a	n/a	n/a	n/a	1.1	3.9	89	2.8	256.2
Botswana	2.7	4.1	5.7	8.0	8.6	9.6	62	6.9	259.3
Brazil	8.9	11.0	10.4	10.5	11.5	11.6	53	2.7	30.5
Brunei	57.8	78.4	56.2	49.7	47.1	47.9 ^e	23	(9.9)	(17.2)
Bulgaria	n/a	3.2	3.8	4.2	3.8	3.4	97	0.2	7.1
Burkina Faso	0.2	0.2	0.2	0.2	0.3	0.3	162	0.2	123.7
Burundi	0.1	0.1	0.2	0.2	0.1	0.0	174	(0.0)	(78.4)
Cambodia	n/a	n/a	0.2 ^c	0.3	0.4	0.4	160	0.2	69.6

Table 6: GDP-per-capita Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Cameroon	1.3	1.6	2.3	1.7	1.2	1.4	129	0.1	8.4
Canada	38.5	43.5	47.3	50.8	52.4	57.8	19	19.4	50.4
Cape Verde	n/a	1.7 ^a	2.4	2.6	3.1	3.5	95	1.8	103.1
Central African Republic	0.8	0.7	0.7	0.6	0.5	0.6	153	(0.3)	(34.0)
Chad	0.3	0.1	0.3	0.2	0.2	0.2	167	(0.1)	(30.1)
Chile	5.0	6.8	6.5	8.4	11.9	13.3	50	8.3	164.2
China	0.0	0.1	0.3	0.6	1.2	1.7	123	1.7	n/a
Colombia	3.9	4.6	4.6	5.3	6.0	5.7	79	1.7	44.0
Comoros	n/a	1.0	1.1	1.0	0.8	0.7	148	(0.3)	(30.6)
Congo, Dem. Republic	0.6	0.4	0.3	0.2	(0.0)	(0.1) ^e	176	(0.6)	(111.9)
Congo, Republic	1.9	2.1	3.1	2.6	2.3	1.9	118	(0.0)	(0.1)
Costa Rica	7.1	7.9	6.9	7.6	8.9	10.3	58	3.3	46.1
Côte d'Ivoire	2.4	2.4	2.0	1.7	1.6	1.7	121	(0.7)	(27.5)
Croatia	n/a	n/a	n/a	11.9	8.7	10.6	56	(1.3)	(10.7)
Cyprus	9.3	16.6	20.5	27.5	31.8	35.1	31	25.8	276.5
Czech Republic	n/a	n/a	n/a	13.7	13.1	13.3	49	(0.4)	(2.8)
Denmark	65.4	72.7	79.9	84.7	91.9	99.4	4	34.0	51.9
Djibouti	n/a	n/a	n/a	n/a	1.8	1.6 ^e	125	(0.2)	(11.1)
Dominica	n/a	4.1	5.4	7.3	7.8	8.6	66	4.5	108.0
Dominican Republic	2.8	3.2	3.2	3.3	3.7	4.8	83	2.0	70.6
Ecuador	3.1	3.8	3.7	3.6	3.8	3.4	96	0.3	10.1
Egypt, Arab Republic	1.0	1.6	2.0	2.2	2.4	2.8	106	1.8	178.3
El Salvador	4.4	3.9	3.2	3.3	4.1	4.3	84	(0.1)	(1.6)
Equatorial Guinea	n/a	n/a	0.6	0.5	0.7	2.7	107	2.1	371.7
Eritrea	n/a	n/a	n/a	n/a	0.1	0.1	172	0.0	56.7
Estonia	n/a	10.4	11.5	11.6	8.3	10.2	59	(0.2)	(1.8)

Table 6: GDP-per-capita Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Ethiopia	n/a	(0.1) ^a	(0.1)	(0.1)	(0.1)	(0.1)	177	(0.0)	24.0
Fiji	5.2	5.8	5.3	5.9	6.4	6.7	74	1.5	28.1
Finland	48.2	54.7	61.7	71.4	67.3	80.8	10	32.6	67.7
France	49.8	56.9	60.5	69.1	71.5	77.1	14	27.3	54.8
French Polynesia	34.1	37.2	46.0	50.0	48.9	51.7	22	17.7	51.9
Gabon	17.0	13.4	12.8	11.5	11.7	11.3	54	(5.6)	(33.3)
Gambia, The	0.6	0.6	0.6	0.6	0.6	0.6	150	0.0	4.4
Georgia	n/a	n/a	n/a	n/a	0.6	0.8	142	0.3	48.3
Germany	n/a	n/a	n/a	n/a	80.2	84.5	6	4.3	5.4
Ghana	0.7	0.7	0.5	0.6	0.6	0.7	145	(0.0)	(0.4)
Greece	21.7	25.3	26.3	28.2	29.7	33.5	33	11.7	53.9
Grenada	n/a	4.2	5.3	7.2	7.5	9.1	64	4.9	117.0
Guatemala	3.3	3.9	3.2	3.3	3.6	3.8	93	0.5	14.2
Guinea	n/a	n/a	n/a	1.1	1.1	1.2	131	0.2	17.2
Guinea-Bissau	0.2	0.1	0.2	0.2	0.3	0.1	171	(0.1)	(48.4)
Guyana	2.0	1.8	1.3	1.1	1.6	1.9	117	(0.1)	(4.4)
Haiti	1.0	1.3	1.0	1.0	0.6	0.6	149	(0.3)	(35.8)
Honduras	1.3	1.6	1.5	1.5	1.5	1.5	128	0.2	15.8
Hong Kong, China	19.4	29.8	36.3	50.0	60.1	59.0	18	39.5	203.4
Hungary	9.2	10.9	12.0	12.6	11.3	13.4	48	4.2	45.6
Iceland	46.5	60.4	64.1	70.8	69.3	81.8	9	35.2	75.7
India	0.2	0.2	0.3	0.5	0.6	0.8	143	0.6	290.8
Indonesia	0.7	1.0	1.2	1.7	2.4	2.2	112	1.5	233.5
Iran, Islamic Republic	4.9	3.3	3.6	3.1	3.6	3.9	90	(1.0)	(20.9)
Ireland	24.6	28.8	31.4	40.0	48.9	66.9	16	42.3	172.1
Israel	28.5	30.6	32.5	36.5	42.2	43.6	28	15.1	53.1

Table 6: GDP-per-capita Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Italy	31.7	38.9	41.9	48.2	50.9	53.6	21	21.9	68.9
Jamaica	4.9	3.9	3.5	4.4	4.5	4.2	87	(0.7)	(15.2)
Japan	62.0	73.7	84.1	103.2	109.2	112.8	3	50.9	82.1
Jordan	2.4	4.5	4.8	3.7	4.0	3.9	88	1.5	60.6
Kazakhstan	n/a	n/a	n/a	5.2	3.0	3.3	99	(1.9)	(37.1)
Kenya	0.4	0.5	0.5	0.6	0.5	0.5	156	0.1	22.1
Kiribati	4.9	1.3	1.2	1.1	1.2	1.2	132	(3.7)	(75.0)
Korea, Republic	7.4	9.7	13.5	20.9	28.7	32.0	35	24.6	333.5
Kuwait	55.8	43.2	27.3	30.3 ^d	44.5	40.1 ^f	29	(15.7)	(28.2)
Kyrgyz Republic	n/a	n/a	n/a	3.6	1.6	1.9	116	(1.7)	(47.3)
Lao PDR	n/a	n/a	0.4	0.5	0.7	0.8	144	0.4	97.0
Latvia	5.8	7.0	8.1	9.5	4.8	5.9	77	0.1	1.4
Lebanon	n/a	n/a	n/a	4.2	7.1	7.7 ^e	69	3.4	80.7
Lesotho	0.3	0.6	0.6	0.8	0.9	1.0	135	0.7	212.3
Lithuania	n/a	n/a	6.2 ^c	7.6	4.3	4.9	82	(1.3)	(20.4)
Luxembourg	59.7	66.1	74.4	97.8	118.9	140.5	1	80.8	135.3
Macao	n/a	n/a	28.9	36.8	45.4	38.6	30	9.7	33.4
Macedonia, FYR	n/a	n/a	n/a	3.7	3.0	3.2	102	(0.5)	(14.2)
Madagascar	0.6	0.6	0.4	0.4	0.3	0.3	164	(0.3)	(54.1)
Malawi	0.0	0.1	0.0	0.0	0.0	0.0	173	0.0	62.5
Malaysia	4.2	5.8	6.6	7.9	11.2	11.7	52	7.5	178.7
Maldives	n/a	n/a	1.4	2.1	2.6	3.0 ^e	104	1.6	116.3
Mali	0.4	0.4	0.4	0.3	0.3	0.4	161	0.0	6.8
Malta	7.6	12.1	14.0	18.4	23.0	25.7 ^e	38	18.1	236.7
Mauritania	0.9	0.9	0.8	0.8	0.9	0.9	138	0.0	1.4
Mauritius	3.7	4.5	5.4	7.5	9.1	10.7	55	6.9	185.8

Table 6: GDP-per-capita Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Mexico	6.8	8.4	8.3	8.2	8.0	9.3	63	2.5	37.7
Micronesia, Fed. Sts.	n/a	n/a	n/a	4.9	4.8	4.2	86	(0.7)	(14.5)
Moldova	n/a	n/a	n/a	4.4	1.5	1.3	130	(3.1)	(70.6)
Mongolia	n/a	0.7 ^a	0.9	1.0	0.8	0.9	141	0.1	14.9
Morocco	2.2	2.6	2.8	3.1	3.0	3.3	100	1.1	49.3
Mozambique	n/a	0.1	(0.1)	0.0	0.0	0.2	169	0.1	113.1
Namibia	n/a	5.6	4.8	4.7	5.2	5.2	81	(0.3)	(5.6)
Nepal	0.0	0.0	0.1	0.1	0.2	0.2	166	0.2	631.3
Netherlands	51.4	56.6	58.8	66.5	71.4	80.2	11	28.9	56.1
New Caledonia	39.6	36.3	33.6	49.8	49.9	46.1	24	6.5	16.4
New Zealand	37.1	37.0	40.9	39.8	43.6	45.7	25	8.6	23.0
Nicaragua	2.3	1.5	1.3	0.9	0.8	0.9	139	(1.4)	(61.2)
Niger	0.4	0.5	0.3	0.3	0.2	0.2	168	(0.2)	(55.5)
Nigeria	0.4	0.5	0.2	0.3	0.3	0.3	163	(0.1)	(31.4)
Norway	50.5	62.7	72.2	76.8	89.6	99.0	5	48.5	96.0
Oman	9.0	9.0	14.6	14.6	14.8	14.8 ^g	47	5.8	63.7
Pakistan	0.4	0.5	0.7	0.8	1.0	1.0	137	0.6	171.7
Panama	6.5	6.9	7.4	6.4	7.7	8.3	67	1.8	27.7
Papua New Guinea	2.1	2.0	1.9	1.8	2.5	2.3	110	0.2	8.6
Paraguay	3.1	4.7	4.3	4.5	4.6	4.2	85	1.1	36.5
Peru	6.6	6.5	5.8	4.7	5.7	5.9	78	(0.7)	(11.0)
Philippines	2.2	2.8	2.2	2.6	2.5	2.7	108	0.4	19.6
Poland	n/a	n/a	n/a	6.6	7.3	9.1	65	2.5	37.8
Portugal	16.2	19.4	19.8	26.2	28.6	32.6	34	16.4	101.4
Puerto Rico	17.5	21.2	21.7	27.4	30.0	31.2 ^h	36	13.7	77.8
Romania	2.8	3.9	4.5	3.7	3.4	3.0	103	0.3	10.0

Table 6: GDP-per-capita Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Russian Federation	6.7	8.1	9.1	9.4	5.7	5.5	80	(1.2)	(17.4)
Rwanda	0.3	0.5	0.5	0.4	0.2	0.3	165	0.0	1.5
Samoa	n/a	2.2	2.1	2.1	2.1	2.3	109	0.1	4.4
Sao Tome & Principe	n/a	n/a	n/a	0.6	0.6	0.5	155	(0.1)	(12.1)
Saudi Arabia	25.5	30.5	19.5	18.6	18.4	17.6	44	(7.9)	(30.9)
Senegal	1.2	1.1	1.1	1.1	1.1	1.2	133	(0.0)	(2.8)
Seychelles	9.3	12.7	12.9	16.5	17.7	18.8	43	9.6	103.3
Sierra Leone	0.4	0.4	0.3	0.4	0.1	0.0	175	(0.4)	(99.9)
Singapore	20.6	29.2	34.9	47.5	64.2	70.4	15	49.8	241.5
Slovak Republic	n/a	n/a	9.9	10.5	8.9	10.5	57	0.6	6.3
Slovenia	n/a	n/a	n/a	25.5	24.8	29.4	37	3.9	15.4
Solomon Islands	0.8	1.2	1.4	1.7	1.9	1.7	122	1.0	130.1
South Africa	11.9	12.0	10.9	10.6	10.0	10.1	61	(1.8)	(15.1)
Spain	27.7	29.0	30.2	37.3	39.5	45.1	26	17.4	62.9
Sri Lanka	0.6	0.8	1.0	1.2	1.5	1.8	120	1.2	185.5
St. Kitts & Nevis	n/a	6.5	7.8	11.8	14.7	17.5	45	11.0	170.5
St. Lucia	n/a	5.2	5.4	9.1	9.9	10.2	60	5.0	96.0
St. Vincent & the Grenadines	n/a	3.2	4.0	5.4	6.0	6.9	72	3.8	119.1
Suriname	1.3	1.3	1.1	1.1	1.1	1.5	127	0.2	19.4
Swaziland	2.5	2.4	2.4	3.5	3.4	3.4	98	0.9	34.4
Sweden	58.1	61.2	66.4	72.6	72.4	79.5	12	21.4	36.9
Switzerland	96.3	106.2	111.2	122.6	116.4	121.3	2	25.0	25.9
Syrian Arab Republic	2.1	2.5	2.4	2.2	2.8	2.9	105	0.9	43.0
Tajikistan	n/a	n/a	n/a	n/a	0.5	0.5	158	(0.0)	(1.2)
Tanzania	n/a	n/a	n/a	0.1	0.1	0.1	170	(0.0)	(1.1)
Thailand	1.9	2.6	3.2	5.0	7.3	6.9	73	5.0	256.5

Table 6: GDP-per-capita Sub-Index (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 177)	Change in Score	% Change in Score
Togo	0.7	0.8	0.7	0.6	0.5	0.5	157	(0.2)	(29.6)
Tonga	n/a	n/a	3.5	3.5	4.2	3.9	91	0.4	11.1
Trinidad & Tobago	8.5	12.0	12.3	10.6	10.9	12.8	51	4.4	51.7
Tunisia	3.3	4.0	4.4	4.5	5.0	6.0	76	2.7	82.3
Turkey	4.7	4.9	5.5	6.6	7.2	7.6	70	2.9	60.6
Turkmenistan	n/a	n/a	n/a	4.9	2.3	2.2	111	(2.7)	(54.7)
Uganda	n/a	0.3 ^b	0.2	0.3	0.4	0.6	152	0.3	113.7
Ukraine	n/a	n/a	5.0 ^c	4.9	2.2	1.9	119	(3.1)	(62.6)
United Arab Emirates	100.0	100.9	66.4	55.8	48.5	44.2 ^e	27	(55.8)	(55.8)
United Kingdom	34.3	37.5	41.4	48.0	51.1	56.0	20	21.6	63.0
United States	48.8	55.8	62.2	69.6	73.8	82.1	8	33.3	68.2
Uruguay	11.1	13.6	10.8	12.7	14.9	16.2	46	5.1	46.1
Uzbekistan	n/a	n/a	n/a	2.3	1.6	1.7	124	(0.6)	(26.6)
Vanuatu	n/a	3.4	4.1	3.9	3.4	3.2	101	(0.2)	(6.1)
Venezuela	10.8	10.3	8.6	8.6	9.1	8.2	68	(2.6)	(24.1)
Vietnam	n/a	n/a	0.1	0.2	0.4	0.5	154	0.4	350.5
West Bank & Gaza	n/a	n/a	n/a	n/a	3.5	3.6	94	0.1	4.1
Yemen, Republic	n/a	n/a	n/a	0.5	0.3	0.4	159	(0.1)	(16.3)
Zambia	1.4	1.2	1.0	0.9	0.7	0.7	147	(0.8)	(53.7)
Zimbabwe	1.4	1.3	1.4	1.5	1.4	1.5	126	0.1	6.9

Sources

World Bank, United Nations; calculations by the authors.

Notes

The Democratic Republic of the Congo, Ethiopia, and Mozambique have a negative value on this indicator for at least one year; a negative value means that a country's GDP per capita for the relevant year is lower than the lowest value across all countries in 1975.

a 1981

c 1987

e 1998

g 1995

b 1982

d 1989

f 1996

h 1997

Table 7: Countries with Decreases on the GDP-per-capita Sub-Index

	GDP per capita, 1999 (1995 US\$)	Change in GDP Score	% Change in GDP Score	% Change in Health Score	% Change in Education Score	% Change in Technology Score
Albania ^a	863	(0.1)	(6.1)	8.1	11.6	138.1
Angola ^a	520	(0.5)	(34.7)	74.0	n/a	178.2
Armenia ^b	917	(1.7)	(44.4)	5.8	n/a	11.6
Azerbaijan	459	(1.7)	(66.8)	n/a	n/a	23.7
Bahrain	9,260	(7.4)	(23.2)	23.4	46.8	223.6
Belarus ^c	2,543	(0.7)	(9.3)	n/a	(4.0)	59.6
Bolivia	956	(0.1)	(5.8)	76.1	32.4	n/a
Brunei	18,033	(9.9)	(17.2)	n/a	n/a	463.3
Burundi	143	(0.0)	(78.4)	(5.7)	161.7	730.9
Central African Republic	347	(0.3)	(34.0)	17.1	41.2	n/a
Chad	218	(0.1)	(30.1)	95.3	311.2	n/a
Comoros ^a	388	(0.3)	(30.6)	n/a	0.3	n/a
Congo, Dem. Republic	113	(0.6)	(111.9)	n/a	21.6	120.2
Congo, Republic	840	(0.0)	(0.1)	(4.3)	20.0	167.3
Côte d'Ivoire	787	(0.7)	(27.5)	(5.7)	85.7	163.8
Croatia ^b	4,102	(1.3)	(10.7)	2.1	2.9	65.7
Czech Republic ^b	5,124	(0.4)	(2.8)	5.4	n/a	n/a
Djibouti ^d	742	(0.2)	(11.1)	(10.1)	10.7	3.7
El Salvador	1,752	(0.1)	(1.6)	45.7	29.6	229.8
Estonia ^a	3,953	(0.2)	(1.8)	3.6	n/a	n/a
Ethiopia ^a	112	(0.0)	24.0	10.2	98.9	156.1
Gabon	4,369	(5.6)	(33.3)	54.5	n/a	n/a
Ghana	410	(0.0)	(0.4)	40.7	43.8	759.3

Table 7: Countries with Decreases on the GDP-per-capita Sub-Index (Continued)

	GDP per capita, 1999 (1995 US\$)	Change in GDP Score	% Change in GDP Score	% Change in Health Score	% Change in Education Score	% Change in Technology Score
Guinea-Bissau	183	(0.1)	(48.4)	157.4	n/a	n/a
Guyana	843	(0.1)	(4.4)	9.6	3.5	n/a
Haiti	371	(0.3)	(35.8)	30.0	111.7	n/a
Iran, Islamic Republic	1,587	(1.0)	(20.9)	50.8	63.3	264.0
Jamaica	1,691	(0.7)	(15.2)	11.9	6.2	296.7
Kazakhstan	1,361	(1.9)	(37.1)	(4.7)	n/a	25.9
Kiribati	600	(3.7)	(75.0)	n/a	n/a	n/a
Kuwait	15,132	(15.7)	(28.2)	16.8	12.2	205.9
Kyrgyz Republic ^b	852	(1.7)	(47.3)	(0.0)	n/a	28.3
Lithuania ^c	1,970	(1.3)	(20.4)	1.4	2.4	n/a
Macedonia, FYR ^b	1,339	(0.5)	(14.2)	3.6	n/a	45.2
Madagascar	242	(0.3)	(54.1)	41.2	30.6	66.5
Micronesia, Fed. Sts.	1,707	(0.7)	(14.5)	n/a	n/a	n/a
Moldova ^b	617	(3.1)	(70.6)	(2.8)	0.3	17.2
Namibia ^a	2,097	(0.3)	(5.6)	(7.3)	n/a	114.8
Nicaragua	472	(1.4)	(61.2)	47.3	34.6	75.9
Niger	209	(0.2)	(55.5)	124.8	1,032.3	573.4
Nigeria	250	(0.1)	(31.4)	46.6	148.6	n/a
Peru	2,346	(0.7)	(11.0)	46.5	21.4	210.9
Russian Federation	2,211	(1.2)	(17.4)	n/a	n/a	n/a
Sao Tome & Principe ^b	337	(0.1)	(12.1)	n/a	n/a	86.3
Saudi Arabia	6,718	(7.9)	(30.9)	54.1	99.6	196.2
Senegal	591	(0.0)	(2.8)	116.2	134.3	393.6

Table 7: Countries with Decreases on the GDP-per-capita Sub-Index (Continued)

	GDP per capita, 1999 (1995 US\$)	Change in GDP Score	% Change in GDP Score	% Change in Health Score	% Change in Education Score	% Change in Technology Score
Sierra Leone	138	(0.4)	(99.9)	167.9	n/a	n/a
South Africa	3,904	(1.8)	(15.1)	n/a	n/a	228.6
Tajikistan ^d	311	(0.0)	(1.2)	n/a	(1.7)	18.0
Tanzania ^b	188	(0.0)	(1.1)	(11.7)	9.4	73.9
Togo	327	(0.2)	(29.6)	27.6	59.8	106.4
Turkmenistan	968	(2.7)	(54.7)	n/a	n/a	16.3
Ukraine ^c	837	(3.1)	(62.6)	n/a	(3.4)	43.5
United Arab Emirates	16,666	(55.8)	(55.8)	28.5	n/a	337.3
Uzbekistan ^b	759	(0.6)	(26.6)	n/a	3.5	35.0
Vanuatu ^a	1,347	(0.2)	(6.1)	n/a	n/a	103.1
Venezuela	3,213	(2.6)	(24.1)	14.0	12.0	73.8
Yemen, Republic ^b	286	(0.1)	(16.3)	21.3	n/a	10.1
Zambia	389	(0.8)	(53.7)	(39.5)	19.8	730.3

Sources

World Bank, United Nations; calculations by the authors.

Notes

Numbers in bold-face represent above-average scores.

- a** all changes from 1980 to 1999.
- b** all changes from 1990 to 1999.
- c** all changes from 1985 to 1999.
- d** all changes from 1995 to 1999.

Table 8: The Index of Human Progress

	1975	1980	1985	1990	1995	1999	Rank (out of 128)	Change in Score	% Change in Score
United States	81.4	86.9	92.4	98.3	101.9	105.8	1	24.5	30.1
Switzerland	86.0	90.8	93.6	98.3	100.0	105.5	2	19.5	22.6
Luxembourg	69.6	73.7	77.8	86.6	95.2	104.8	3	35.2	50.5
Denmark	81.2	85.9	89.3	92.5	96.8	103.9	4	22.7	28.0
Japan	76.2	84.8	89.4	96.2	100.4	103.7	5	27.5	36.1
Norway	72.3	77.8	83.7	87.6	96.0	103.5	6	31.2	43.2
Finland	71.5	78.0	83.5	89.4	92.0	100.0	7	28.5	39.9
Australia	70.1	74.2	78.4	82.6	92.9	97.6	8	27.5	39.3
Netherlands	72.5	77.7	82.3	86.6	91.4	97.4	9	25.0	34.4
Sweden	80.2	84.2	86.7	89.4	93.9	97.2	10	17.0	21.2
Iceland	72.0	77.3	80.2	84.9	86.6	96.4	11	24.4	33.9
Germany	n/a	n/a	n/a	n/a	91.1	96.2	12	5.1	5.6
France	68.9	76.0	81.1	87.6	92.0	95.1	13	26.3	38.1
Belgium	70.7	75.6	78.5	84.0	90.3	94.6	14	23.9	33.9
United Kingdom	68.4	72.4	75.0	80.7	90.5	94.0	15	25.6	37.4
Canada	73.2	76.5	83.2	89.3	91.6	94.0	16	20.8	28.5
Austria	70.0	74.9	78.9	84.6	88.4	91.9	17	21.9	31.4
Ireland	59.3	62.3	66.2	71.5	77.9	85.6	18	26.4	44.5
New Zealand	70.6	72.3	74.7	77.3	82.6	85.2	19	14.6	20.6
Italy	63.6	68.6	71.2	76.5	79.8	83.3	20	19.7	30.9
Singapore	52.1	59.4	64.3	70.4	77.1	81.7	21	29.6	56.8
Spain	59.4	63.6	66.4	71.9	76.8	80.4	22	21.0	35.3
Greece	57.1	60.7	64.3	67.3	73.4	76.6	23	19.5	34.1
Israel	58.8	62.5	66.6	69.3	73.5	76.4	24	17.7	30.0
Portugal	49.5	51.9	55.7	60.5	71.1	76.2	25	26.8	54.1
Korea, Republic	47.8	54.1	59.2	65.2	71.9	75.5	26	27.7	58.0
Malta	57.7	61.0	65.4	65.1	70.4	75.3	27	17.6	30.5

Table 8: The Index of Human Progress (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 128)	Change in Score	% Change in Score
Slovenia	n/a	n/a	n/a	63.6	66.2	70.9	28	7.3	11.5
Cyprus	51.7	54.8	57.8	66.2	70.2	70.3	29	18.6	36.0
Bahamas, The	n/a	59.4	62.6	65.3	66.6	68.8	30	9.4	15.8
Latvia	n/a	n/a	n/a	60.2	61.1	68.1	31	7.9	13.1
Kuwait	57.0	59.6	59.4	66.0	66.6	68.0	32	10.9	19.2
Uruguay	51.7	53.4	56.4	61.4	65.4	67.4	33	15.7	30.4
Hungary	52.3	55.0	58.2	58.6	61.6	66.7	34	14.4	27.6
United Arab Emirates	n/a	65.8	61.4	63.1	66.0	66.3	35	0.5	0.7
Bahrain	n/a	54.3	60.9	63.2	65.9	65.9	36	11.6	21.4
Argentina	53.4	55.4	58.2	59.5	62.4	65.1	37	11.7	21.9
Poland	n/a	n/a	n/a	55.8	60.0	64.1	38	8.3	14.9
Lithuania	n/a	n/a	n/a	59.3	58.7	63.1	39	3.8	6.4
Bulgaria	n/a	53.6	56.6	57.4	59.5	61.6	40	8.0	14.9
Croatia	n/a	n/a	n/a	55.8	58.3	61.2	41	5.3	9.6
Chile	45.7	49.1	51.5	54.4	57.5	60.8	42	15.1	33.1
Costa Rica	46.9	49.3	49.7	54.0	55.9	60.2	43	13.3	28.4
Ukraine	n/a	n/a	n/a	n/a	58.5	59.8	44	1.3	2.2
Lebanon	n/a	n/a	n/a	54.8	56.8	59.8	45	4.9	9.0
Trinidad & Tobago	46.4	49.5	54.0	57.1	57.8	59.1	46	12.7	27.4
Russian Federation	n/a	n/a	n/a	59.4	56.0	58.4	47	(1.0)	(1.7)
Belarus	n/a	n/a	n/a	57.6	57.0	58.4	48	0.8	1.4
Oman	21.9	29.1	47.0	53.5	56.1	57.4	49	35.5	161.7
Armenia	n/a	n/a	n/a	n/a	52.5	56.7	50	4.2	8.1
Fiji	n/a	n/a	47.8	50.6	54.5	56.5	51	8.8	18.4
Brazil	39.7	44.0	46.7	49.5	53.0	56.4	52	16.7	42.1
Panama	n/a	48.9	50.6	51.5	53.5	55.9	53	7.0	14.3

Table 8: The Index of Human Progress (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 128)	Change in Score	% Change in Score
Belize	n/a	n/a	n/a	52.9	54.9	55.6	54	2.7	5.1
Malaysia	n/a	43.1	46.6	49.5	53.6	55.5	55	12.4	28.8
Jamaica	44.3	46.2	46.3	49.1	51.3	55.0	56	10.7	24.1
Colombia	40.1	42.7	44.0	46.5	52.2	54.9	57	14.7	36.8
Moldova	n/a	n/a	n/a	54.8	54.2	54.8	58	0.1	0.2
Mexico	41.5	45.8	48.4	49.5	52.0	54.8	59	13.3	32.1
Romania	48.7	52.1	52.6	51.2	51.7	54.7	60	6.1	12.5
Mauritius	39.1	41.8	44.8	48.1	51.5	54.3	61	15.3	39.1
Venezuela	46.6	48.4	50.2	53.2	53.9	54.0	62	7.4	15.8
Turkey	n/a	n/a	n/a	n/a	50.4	53.8	63	3.4	6.7
Saudi Arabia	33.4	41.6	44.4	48.0	51.4	53.8	64	20.4	61.0
Ecuador	39.3	43.8	45.8	47.2	50.0	52.9	65	13.6	34.6
China	36.7	38.2	39.3	43.4	47.8	51.7	66	15.0	41.0
Peru	37.3	40.6	43.9	46.6	49.4	51.1	67	13.8	37.1
Thailand	36.5	39.8	42.5	44.5	48.2	51.1	68	14.7	40.2
Philippines	38.9	41.5	42.9	45.6	48.2	50.3	69	11.4	29.2
Iran, Islamic Republic	30.5	32.9	36.9	42.0	47.0	49.9	70	19.4	63.6
Paraguay	39.5	41.6	43.0	44.7	47.2	49.8	71	10.3	26.0
Sri Lanka	n/a	41.5	44.1	46.3	47.9	49.8	72	8.3	20.0
Tunisia	28.6	33.2	37.7	41.4	45.2	49.6	73	21.1	73.7
Dominican Republic	n/a	40.8	43.7	45.4	46.3	48.8	74	8.0	19.6
El Salvador	33.1	34.8	38.2	41.8	45.4	48.7	75	15.6	47.2
Albania	n/a	42.7	44.3	45.8	46.5	48.4	76	5.8	13.5
Jordan	n/a	n/a	n/a	44.1	45.7	47.3	77	3.2	7.2
Vietnam	n/a	n/a	39.3	40.2	44.6	47.3	78	8.0	20.3
Guyana	n/a	n/a	42.6	43.9	45.0	46.4	79	3.8	8.9

Table 8: The Index of Human Progress (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 128)	Change in Score	% Change in Score
Algeria	27.0	31.3	36.4	40.9	43.4	46.3	80	19.3	71.6
Bolivia	n/a	33.9	38.0	40.8	43.7	46.1	81	12.2	35.9
Cape Verde	n/a	n/a	n/a	36.8	40.8	46.0	82	9.2	24.8
Syrian Arab Republic	n/a	n/a	n/a	42.1	43.5	45.5	83	3.4	8.2
Egypt, Arab Republic	24.2	27.5	33.5	38.3	41.2	44.9	84	20.7	85.7
Indonesia	26.6	32.0	36.5	39.4	42.7	44.8	85	18.3	68.7
Honduras	29.4	33.9	39.2	41.3	43.2	44.7	86	15.3	52.1
Nicaragua	30.2	34.6	36.3	38.9	41.5	42.6	87	12.4	41.1
Morocco	n/a	25.9	29.2	31.9	36.2	39.2	88	13.3	51.5
Mongolia	n/a	33.0	34.6	36.4	36.2	38.7	89	5.7	17.4
Guatemala	25.3	28.9	31.2	34.6	36.7	38.5	90	13.2	52.3
Namibia	n/a	n/a	n/a	n/a	40.5	38.1	91	(2.4)	(5.9)
Ghana	22.7	25.9	28.1	30.8	33.4	36.2	92	13.5	59.6
India	21.8	24.3	28.0	31.4	34.1	35.8	93	14.1	64.5
Zimbabwe	27.0	30.1	38.4	39.0	36.1	35.8	94	8.9	32.8
Botswana	n/a	n/a	34.7	36.4	35.4	32.3	95	(2.3)	(6.7)
Congo, Republic	28.9	33.8	36.1	34.7	33.3	32.1	96	3.3	11.3
Pakistan	17.1	19.2	21.3	24.8	28.0	31.4	97	14.3	83.5
Papua New Guinea	21.3	23.4	25.0	26.4	29.2	31.1	98	9.7	45.7
Comoros	n/a	n/a	n/a	27.8	29.5	30.9	99	3.1	11.3
Nepal	12.2	17.0	20.7	24.9	28.0	30.6	100	18.4	150.1
Lesotho	28.4	29.7	31.7	32.5	32.1	30.5	101	2.1	7.2
Madagascar	21.9	25.1	26.8	26.0	27.1	29.8	102	7.9	36.1
Togo	20.3	25.2	24.8	28.0	28.8	29.5	103	9.3	45.8
Kenya	26.9	30.9	32.9	34.4	31.6	29.2	104	2.4	8.8
Cameroon	20.6	23.9	27.4	30.1	29.6	29.0	105	8.4	40.7

Table 8: The Index of Human Progress (Continued)

	1975	1980	1985	1990	1995	1999	Rank (out of 128)	Change in Score	% Change in Score
Lao PDR	n/a	n/a	20.9	23.0	25.8	28.9	106	8.1	38.8
Cambodia	n/a	n/a	20.9	22.8	26.5	28.0	107	7.2	34.3
Haiti	n/a	20.4	23.4	24.4	23.8	28.0	108	7.6	37.3
Nigeria	n/a	21.1	24.7	25.9	28.7	27.9	109	6.8	32.2
Bangladesh	16.0	17.0	20.0	23.3	25.7	27.7	110	11.7	72.9
Mauritania	n/a	n/a	18.5	20.1	24.8	27.1	111	8.6	46.4
Zambia	25.2	26.8	28.4	28.8	27.5	26.1	112	1.0	3.8
Malawi	15.3	17.8	19.0	20.7	27.2	25.7	113	10.4	68.0
Benin	12.8	15.9	17.8	18.9	22.4	25.5	114	12.7	99.3
Eritrea	n/a	n/a	n/a	n/a	22.9	25.2	115	2.3	9.9
Tanzania	n/a	n/a	n/a	24.2	24.9	24.7	116	0.6	2.3
Senegal	10.7	13.3	16.7	19.3	21.4	24.2	117	13.5	127.1
Uganda	n/a	19.0	21.8	22.8	22.8	23.9	118	4.9	25.6
Côte d'Ivoire	16.6	21.0	22.7	24.1	22.9	22.0	119	5.4	32.4
Chad	n/a	n/a	13.6	15.9	18.5	20.8	120	7.1	52.4
Djibouti	n/a	n/a	n/a	n/a	20.8	20.8	121	(0.0)	(0.1)
Central African Republic	n/a	15.5	18.0	18.5	18.1	17.4	122	2.0	12.8
Mali	5.0	7.6	10.0	12.3	15.0	17.0	123	12.1	242.8
Ethiopia	n/a	11.6	14.0	15.6	15.8	16.7	124	5.1	44.1
Burundi	11.4	13.5	16.4	18.4	16.9	16.3	125	4.9	43.4
Mozambique	n/a	15.0	15.7	15.2	16.0	15.1	126	0.0	0.1
Burkina Faso	7.4	9.2	11.3	13.0	12.9	13.5	127	6.1	81.8
Niger	4.3	6.6	7.2	8.0	10.9	12.2	128	7.9	181.2

Sources

World Bank, United Nations; calculations by the authors.

Table 9: Index of Human Progress Ranks for 1975 through 1999

	1975	1980	1985	1990	1995	1999
Number of Countries	80	98	106	121	128	128
Albania	n/a	48	51	64	73	76
Algeria	56	67	69	77	82	80
Argentina	25	28	31	35	35	37
Armenia	n/a	n/a	n/a	n/a	57	50
Australia	13	14	14	15	8	8
Austria	14	13	12	13	16	17
Bahamas, The	n/a	27	25	26	30	30
Bahrain	n/a	31	27	30	33	36
Bangladesh	72	88	94	106	111	110
Belarus	n/a	n/a	n/a	39	45	48
Belgium	11	12	13	14	15	14
Belize	n/a	n/a	n/a	50	50	54
Benin	74	90	98	113	118	114
Bolivia	n/a	61	65	78	80	81
Botswana	n/a	n/a	72	86	93	95
Brazil	40	44	45	54	56	52
Bulgaria	n/a	33	33	40	39	40
Burkina Faso	78	96	104	119	127	127
Burundi	76	93	100	115	123	125
Cambodia	n/a	n/a	91	109	109	107
Cameroon	68	80	82	94	99	105
Canada	6	10	8	7	11	16
Cape Verde	n/a	n/a	n/a	84	87	82
Central African Republic	n/a	91	97	114	122	122
Chad	n/a	n/a	103	116	121	120
Chile	36	39	38	46	44	42

Table 9: Index of Human Progress Ranks for 1975 through 1999 (Continued)

	1975	1980	1985	1990	1995	1999
China	46	57	60	71	70	66
Colombia	39	47	53	62	58	57
Comoros	n/a	n/a	n/a	97	100	99
Congo, Republic	53	62	71	87	96	96
Costa Rica	33	38	41	47	49	43
Côte d'Ivoire	71	83	88	105	116	119
Croatia	n/a	n/a	n/a	42	42	41
Cyprus	29	30	32	24	28	29
Denmark	3	3	4	4	4	4
Djibouti	n/a	n/a	n/a	n/a	120	121
Dominican Republic	n/a	54	55	66	74	74
Ecuador	42	45	48	60	65	65
Egypt, Arab Republic	62	73	74	83	86	84
El Salvador	49	58	64	74	76	75
Eritrea	n/a	n/a	n/a	n/a	115	115
Ethiopia	n/a	95	102	117	125	124
Fiji	n/a	n/a	43	53	51	51
Finland	10	6	7	5	9	7
France	16	11	10	9	10	13
Germany	n/a	n/a	n/a	n/a	13	12
Ghana	63	75	80	93	95	92
Greece	23	24	24	23	24	23
Guatemala	60	72	77	88	89	90
Guyana	n/a	n/a	58	70	78	79
Haiti	n/a	84	87	103	114	108
Honduras	52	60	62	76	83	86
Hungary	26	29	30	38	36	34

Table 9: Index of Human Progress Ranks for 1975 through 1999 (Continued)

	1975	1980	1985	1990	1995	1999
Iceland	9	9	11	12	17	11
India	66	79	81	92	94	93
Indonesia	59	66	68	80	84	85
Iran, Islamic Republic	50	65	67	73	72	70
Ireland	20	22	21	20	20	18
Israel	21	21	19	22	23	24
Italy	18	18	18	18	19	20
Jamaica	37	42	47	57	63	56
Japan	5	4	3	3	2	5
Jordan	n/a	n/a	n/a	69	75	77
Kenya	58	68	75	89	98	104
Korea, Republic	32	32	29	27	25	26
Kuwait	24	25	28	25	29	32
Lao PDR	n/a	n/a	92	107	110	106
Latvia	n/a	n/a	n/a	34	37	31
Lebanon	n/a	n/a	n/a	44	46	45
Lesotho	55	70	76	90	97	101
Lithuania	n/a	n/a	n/a	37	40	39
Luxembourg	15	15	15	11	6	3
Madagascar	65	78	83	99	108	102
Malawi	73	87	95	110	107	113
Malaysia	n/a	46	46	56	54	55
Mali	79	97	105	120	126	123
Malta	22	23	22	28	27	27
Mauritania	n/a	n/a	96	111	113	111
Mauritius	43	49	49	58	61	61
Mexico	38	43	42	55	59	59

Table 9: Index of Human Progress Ranks for 1975 through 1999 (Continued)

	1975	1980	1985	1990	1995	1999
Moldova	n/a	n/a	n/a	45	52	58
Mongolia	n/a	64	73	85	90	89
Morocco	n/a	76	78	91	91	88
Mozambique	n/a	92	101	118	124	126
Namibia	n/a	n/a	n/a	n/a	88	91
Nepal	75	89	93	101	105	100
Netherlands	7	8	9	10	12	9
New Zealand	12	17	17	17	18	19
Nicaragua	51	59	70	82	85	87
Niger	80	98	106	121	128	128
Nigeria	n/a	82	86	100	103	109
Norway	8	7	6	8	5	6
Oman	64	71	44	48	47	49
Pakistan	70	85	90	102	104	97
Panama	n/a	40	39	51	55	53
Papua New Guinea	67	81	84	98	101	98
Paraguay	41	50	56	67	71	71
Peru	45	55	54	61	66	67
Philippines	44	53	57	65	67	69
Poland	n/a	n/a	n/a	43	38	38
Portugal	30	36	35	33	26	25
Romania	31	35	37	52	60	60
Russian Federation	n/a	n/a	n/a	36	48	47
Saudi Arabia	48	51	50	59	62	64
Senegal	77	94	99	112	119	117
Singapore	27	26	23	21	21	21
Slovenia	n/a	n/a	n/a	29	31	28

Table 9: Index of Human Progress Ranks for 1975 through 1999 (Continued)

	1975	1980	1985	1990	1995	1999
Spain	19	20	20	19	22	22
Sri Lanka	n/a	52	52	63	69	72
Sweden	4	5	5	6	7	10
Switzerland	1	1	1	1	3	2
Syrian Arab Republic	n/a	n/a	n/a	72	81	83
Tanzania	n/a	n/a	n/a	104	112	116
Thailand	47	56	59	68	68	68
Togo	69	77	85	96	102	103
Trinidad & Tobago	35	37	36	41	43	46
Tunisia	54	63	66	75	77	73
Turkey	n/a	n/a	n/a	n/a	64	63
Uganda	n/a	86	89	108	117	118
Ukraine	n/a	n/a	n/a	n/a	41	44
United Arab Emirates	n/a	19	26	31	32	35
United Kingdom	17	16	16	16	14	15
United States	2	2	2	2	1	1
Uruguay	28	34	34	32	34	33
Venezuela	34	41	40	49	53	62
Vietnam	n/a	n/a	61	79	79	78
Zambia	61	74	79	95	106	112
Zimbabwe	57	69	63	81	92	94

Sources

World Bank, United Nations; calculations by the authors.

Conclusion

The main weakness of the United Nations' Human Development Index is that GDP per capita is adjusted to reduce its importance in the index; this adjustment is especially pronounced for countries with high GDP per capita. In addition, the main focus of the Human Development Index is a snapshot of development because the index focusses on one year of data. This diminishes the importance of trends in development over time. Further, the Human Development Index uses only four indicators.

The Fraser Institute's Index of Human Progress, in contrast, uses GDP per capita (in US\$1995) with no adjustment, provides information from 1975 through 1999, and uses 10 indicators to distinguish the differences among countries. By doing so, it provides a better overview of the history and current state of development around the world than the United Nation's Human Development Index.

Notes on methodology

(1) Missing indicators

When data are unavailable for an indicator within a sub-index, no score is calculated. For example, Germany has no information on GDP per capita from 1975 through 1990. Neither the income sub-index nor the overall Index of Human Progress have scores for Germany for 1975 through 1990.

(2) Indicators in the Health sub-index

It is not desirable to have high values for three of the indicators in the Health sub-index. Values for high mortality rates for infants, high mortality rates for children under five, and high percentages of people dying before age 60 cannot be calculated by the general formula alone, since this would indicate that countries with high values for these indicators had a better performance

than countries with low values. Instead, a value has been assigned to each of these indicators by, first, calculating the general formula and, then, subtracting this value from 100.

(3) Interpolated data

The notes to the tables identify any interpolated data.

(4) Proximal data

Some data points are from years other than those indicated in the column headings of the results tables. Most replacement data come from within two years of the indicated year. For example, if a value for 1980 is missing, it may have been replaced by a value from 1978, 1979, 1981, or 1982. All data points from a year other than that indicated by the column heading have been noted.

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