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Poverty, Human Development and Growth: An Emerging Consensus?

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Poverty, Human Development and Growth: An Emerging Consensus?

by
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Abstract

This paper considers several issues relevant to the debate on the extent to which poverty, or development progress in general, should be measured by income or by a broader set of objectives. (See Robert Sugden's review (1993) of Amartya Sen's Inequality Revisited (1992) for a comparison of the two approaches.) Issues covered here are: practical implications of the two approaches for poverty reduction efforts; the impact of growth on basic social indicators; and how national achievement on social indicators is best measured. Sri Lanka and Pakistan, countries often cited in this debate, are used as examples.

Contents

I. Extent of Consensus in Practice 1

II. The Debate on Living Standards and Economic Growth 2

III. Another Look at Cross-Country Data 3

IV. Sri Lanka and Pakistan 6

V. The Empirical Evaluation of Improvements in Living Standards 9

References 17

I. Extent of Consensus in Practice

The World Bank (WB) is widely considered as an example of the welfarist perspective of mainstream economics, in which well-being depends primarily on income. Sudhir Anand and Martin Ravallion (1993) cite the heavy emphasis that the WB's World Development Reports (WDRs) on poverty give to raising incomes — as an objective rather than as a means. They cite the Human Development Reports (HDRs), to which Amartya Sen has contributed, as an at least partial application of the human development approach. Paul Streeten (1994), another contributor to the HDRs, makes essentially the same comparison in his contrasting of "human resource developers" and "humanitarians."

Turn now to a comparison of recent WDRs and HDRs as they relate to these two approaches. Overall, there is a broad consensus between the WDRs and HDRs that reduction in poverty, in its income and (other) human-development manifestations, is the over-arching objective of development. There is also consensus that achieving this objective requires progress on broad-based growth, basic social services, and social safety nets. Regarding growth, there is agreement that it is best achieved in a market economy (WDR 1991, ch. 2; HDR 1992, overview). Both see an important role for the State to ensure political stability, provide adequate infrastructure, address externalities and informational imperfections, maintain a regulatory framework, promote competition and assist human resource development (WDR 1991, ch. 7; HDR 1993, Ch. 3).

The WDRs and HDRs both promote interventions that directly raise the living standards of the poor. They agree, for example, on the importance of basic social services and safety nets, of rights and interests of disadvantaged groups (such as women, children and tribal groups), and of NGOs and public participation. While they agree that these interventions are important both as ends and means of development, the WDRs emphasize them more as means and the HDRs more as ends.

Consistent with their broader set of objectives, the HDRs cast their nets more widely and cover issues such as human rights. And consistent with the WB's greater stress on incomes, the WDRs emphasize more the tough choices on macro and sectoral policy issues needed to achieve higher incomes and better social indicators. Also, the two differ on whether adjustment programs supported by the WB pay sufficient attention to direct interventions, or to poverty-reduction in general.

Overall, the WDRs emphasize the income aspects of poverty reduction more, as means and ends, while the HDRs emphasize non-income aspects more. Nonetheless, these are differences of emphasis, not of substance. The substantial agreement increases the closer one gets to field operations, where most of the resources of the WB and of UNDP are concentrated. As an indication of converging views, WB annual social sector lending rose from $0.7 billion (5 percent) to $3 billion (15 percent) of total lending over the past decade, much of it in collaboration with UN development agencies.

What does this general agreement suggest for the difference between the two approaches? To the extent that the WB is firmly in the incomes camp, then it seems that the two approaches lead to similar results on the ground, in terms of both questions asked and policy implications. It is easy to overestimate the extent of emphasis the WB puts on income, though. It is true that in the vocabulary of the WB, the words "resource" and "investment" figure frequently in discussion of the social sectors. However, the WB has a strong interest in human development objectives. This is indicated, for example, in the WDR on health (1993), in the title of the first WDR on poverty: Poverty and Human Development (1980), and in the Pakistan example cited below. More broadly, how many economists working on development are not, in Streeten's words, partly "humanitarians" and partly "human resource developers?" This is not to minimize the analytic importance of the distinction, or the differences in emphasis between individuals or institutions. But at a minimum it reduces the risks that questions that go beyond incomes will be neglected, and it greatly increases the opportunities for collaboration and for further narrowing of differences.

II. The Debate on Living Standards and Economic Growth

The differences between the WDR and HDR approaches reflect in part the long-standing debate on the relationship between income and social indicators. Cross-country data have consistently shown strong, but not perfect, correlations between them. One early view of development was that high incomes were necessary and sufficient for poor countries to raise social indicators. Paul Streeten (1979) and others challenged this view. Paul Isenman (1980) and Sen (1981) argued that Sri Lanka, although poor, had an enviable record on social indicators, in part due to high and effective social spending.

Surjit Bhalla and Paul Glewwe (B&G, 1986) disputed these claims, arguing that although Sri Lanka's social indicator levels were high relative to income, we should judge performance in social indicators by changes rather than levels, just as we judge income performance by focusing on growth rates. They claimed that Sri Lanka's social indicator improvements from 1960 to 1978, when social spending was quite high, were unexceptional, questioning the link between social spending and social indicator performance. They argued that Sri Lanka's social spending was "excessive," i.e., at levels which reduce growth to the point of retarding progress on social indicators. B&G's regression results, and conclusions, remain controversial. Isenman and others argued that while changes in Sri Lanka's social indicators have been unexceptional since 1960, it maintained its lead position, itself a good performance. Sen added that Sri Lanka's social spending declined before 1978, weakening B&G's argument. Overall, the debate remained inconclusive. Perhaps B&G's main contribution was focusing attention away from levels to changes in social indicators.

More generally, single-equation cross-country models are notoriously poor at detecting causality. Problems include poor data quality (lack of comparability, inaccuracy, non-random

samples) and inadequate econometric specification (regressor endogeneity, omitted variable bias). Household survey data are essential for assessing the effects of income and social programs on social indicators; more data and more analysis based on it are urgently needed.

Now consider three recent studies. Using Sri Lankan time series data, Sudhir Anand and Ravi Kanbur (1991) found that infant mortality rates were negatively correlated with both social spending and income growth, and that social spending had a stronger impact. These findings are plausible. For example, child vaccination campaigns can reduce infant mortality much more quickly than can income growth, and at a low cost. Still, the impact of health spending may be overstated due to omitted variables, including lagged effects of prior health spending and mothers' education.

Anand and Ravallion (1993) present further evidence that both social spending and growth matter for social indicators, with growth mattering because it leads to reducing poverty and financing the provision of basic social services. Still, as they themselves note, the usual caveats on causality (particularly regressor endogeneity) apply; and their sample covers only 22 countries. Finally, Nanak Kakwani (1993) presents axioms that should be satisfied by measures of improvement in social indicators. He also argues that Sri Lanka's 1970-1990 performance was good, despite reduced spending for social programs (more specifically for food subsidies) from 1978 on. Overall, these articles add substantial evidence to the view that growth, while important, is far from the only explanation for improvement in social indicators.

III. Another Look at Cross-Country Data

Whether as "human resource developer," "humanitarian," or both, one should be interested in finding good measures of achievement in social indicators. As implied in the discussion of B&G (1986) above, we think that the best measure of achievement is progress -- change over time. Ideally, such change should be measured over a wide range of detailed social indicators, as is the case now for changes in economic indicators but only for levels of social indicators. At the same time there is an understandable desire to simplify, particularly in order to compare achievements across countries. Thus, the Human Development Indicator (HDI) is composed of four indicators: life expectancy, literacy, years of schooling, and relative income.

We recommend a basic set of, say, three indicators, which cover the same general ground as the HDI (and for the same reasons): change in infant mortality (or alternatively change in under-5 mortality), change in net (or gross) primary enrollment, and change in per capita income. Note that to focus on changes we use measures of flows, available annually in many countries, rather than the measures of stocks used in the HDI. In fact, annual data on life expectancy and literacy are almost always interpolations, with actual data collected only about every ten years.

We hope that the WB and UNDP will agree and will include changes in social indicators for at least one or two time periods in the statistical appendices to the WDRs and HDRs, and to discuss their implications, as appropriate, in the text. For reasons noted by T. N. Srinivasan (1994) and others, we think it is analytically preferable and operationally more useful to keep these three indicators separate. However, for those who prefer a single composite index, the same advice applies. (Srinivasan (1994) and Sugden (1993) note the practical difficulties of inter-personal comparisons of Sen's "capabilities" and "functionings." Yet Sen's participation in work on the HDI indicates that he finds even short-cut answers to what he sees as the right questions worthwhile.) We also agree with Srinivasan that great care is needed on data quality and that it is preferable to drop countries for which the underlying data are unreliable.

Analyzing country progress on a social indicator can be done by estimating regressions that generate (conditional) expected values of that indicator (or its change). These regressions are not meant to measure causal relationships; instead we are interested in residuals, i.e., the difference between expected and actual values (see below). We will now illustrate this approach for changes in the infant mortality rate (IMR) between 1960 and 1990. We will estimate four regressions, which are described in Table 1.

Table 1. Regressions

Equation	*Dependent Variable*	*Regressors*
1	Log (IMR_{90})	Log (IMR_{60})
2	Log (IMR_{90})	Log(IMR_{60}), Log(GDP/capita) - Log (GDP_{60}/capita)
3	Log (IMR_{90})-Log (IMR_{60})	None(except constant term)
4	Log (IMR_{90})-Log (IMR_{60})	Log (GDP_{90}/Capita) - Log (GDP_{60}/Capita)

Equation 3, regressing changes on a constant term, generates residuals that rank country progress unconditionally. Equation 4 is similar but generates expected values, and residuals, conditional on the growth of per capita income. One obtains added flexibility in equations (1) and (2) by not forcing the coefficient on the 1960 value to equal 1; setting the coefficient on Log(IMR_{60}) to one in these equations yields equations (3) and (4). While equation 1 may appear to require autoregression estimation techniques, this is not necessary; we are simply conditioning current values of the infant mortality rates on the initial (1960) values and not implying causality (or extrapolating to the future). As the country rankings in the tables below show, the two methods (equations (1) and (2) vs. equations (3) and (4)) give somewhat different results in practice.

A country's progress is measured by its residual, expressed in standard or forecast errors. Table 2 shows residuals of the highest and lowest ranking countries and of Sri Lanka and

Pakistan, with and without taking account of income growth. A comparable measure for income growth would be the difference from the cross-country mean, expressed in standard deviations. A composite index would combine these standardized differences, with or without income growth, with whatever weighting is desired.

Table 2. Residuals based on Infant Mortality Regressions

	Equation One	*Equation Two*	*Equation Three*	*Equation Four*
Dependent Variable:	Log IMR_{90}	Log IMR_{90}	Change in Log IMR_{90}	Change in Log IMR_{90}
Country Rankings				
Highest Country	Chile	Chile	Hong Kong	Chile
Lowest Country	Paraguay	Paraguay	Congo	Swaziland
Sri Lanka	19	21	8	8
Pakistan	50	63	50	65

Notes: 1. Equations One and Three exclude the change in log per capita income (from 1960 to 1990) as a regressor while equations Two and Four include it.
2. For full regression results see Table A.1 from annex which is available from the authors.

Regression results of equations 2 and 4 (see Table A.1 in an appendix available from the authors upon request) show that growth is correlated with changes in infant mortality. As the HDRs and WDRs emphasize, some countries have done extremely well on both growth and social indicators. These are found in the upper right quadrant of Figure 1 and are mostly in East Asia. Those in the lower left quadrant, unfortunately mostly in Africa, have done poorly on both. The diagonal line representing equation 4 shows how taking account of growth improves the fit (compared to the horizontal line representing equation 3). But the large number of countries well above or below that line illustrates that growth explains only 28 percent of the variance. Thus, our results on growth confirm those cited above: growth helps, but it is far from enough.

Now turn to similar evidence for net primary school enrollment. Table 3 presents the same results shown in Table 2 except the infant mortality rate is replaced by the net primary school non-enrollment rate (i.e., 100 - net primary school enrollment rate, thus reductions in the dependent variable are improvements in the social indicator). Again, regression results of equations 2 and 4 (see Table A.2 in the appendix available from the authors) show that growth is correlated with reduced non-enrollment. Figure 2 presents a visual depiction of these regressions. As before, East Asian "miracle" countries are the best performers (upper right

quadrant). Also, growth explains only 14 percent of the variations in reductions in non-enrollment (equation 4 has an adjusted R^2 of 0.14).

Table 3. Regression Residuals Based on Net Primary School Non-Enrollment Rate Regressions

	Equation One	*Equation Two*	*Equation Three*	*Equation Four*
Dependent Variable:	Log School Non Enrollment$_{90}$	Log School Non Enrollment$_{90}$	Change in Log School Non Enrollment$_{90-60}$	Change in Log School Non Enrollment$_{90-60}$
Country Rankings				
Highest Country	Zimbabwe	Zimbabwe	Zimbabwe	Zimbabwe
Lowest Country	El Salvador	Egypt	Haiti	Egypt
Sri Lanka	8	6	2	3
Pakistan	35	32	32	41

Notes: 1. Equations One and Three exclude the change in log per capita income (from 1960 to 1990) as a regressor while equations Two and Four include it.
2. For full regression results see Table A.2 from annex which is available from the authors.

It may also be useful to visually display the regressions in equations 1 and 3 by plotting the value of the social indicator in 1960 against its value in 1990. This is shown in Figure 3 for infant mortality rates and Figure 4 for net primary school non-enrollment. Mathematically, equation 1 will fit better since it is defined as the line that reduces the sum of squares when the 1990 value is regressed on the 1960 value. Equation 3 is from a different regression, but it can be "fitted" in these diagrams by adding the (log) 1960 value of the social indicator to both sides of the equation. It appears that the fit is not as good as equation 1, which reflects that equation 3 is not specified to fit the data points as they are displayed in these two Figures.

IV. Sri Lanka and Pakistan

Sri Lanka and Pakistan have grown fairly rapidly (2.6 percent and 2.9 percent, per capita, respectively, from 1960 to 1990). Both need to sustain and strengthen their ongoing policy reform programs to make future growth faster and more robust. As shown in Table 4, they are very different on levels and changes in social indicators. Note that using changes rather

than levels would make a bigger difference if we used a shorter time period (this is evident in Tables A.5 and A.6, in the appendix available from the authors).

Table 4. Social Indicators for Sri Lanka and Pakistan

		SRI LANKA				PAKISTAN			
		Level		Res. Rank[a]		Level		Res. Rank[a]	
	Countries	1960	1990	1990	1990-60	1960	1990	1990	1990-60
Inf. Mort. Rate	71	69	19	1	19	161	99	49	50
Net Prim. Enr.%	43	66	99	1	8	22	46	33	35
Pop Growth%	71	2.7	1.4	--	--	2.1	3.1	--	--

[a] Res. rank is the rank of the residual from running a regression of Equation 1, or from its equivalent for primary enrollment.
Sources: Tables A.1 and A.2 (Equation 1) and Tables A.3 and A.4 from the appendix available from the authors.

Clearly, Sri Lanka has an admirable record on changes and an extraordinary record on levels in infant mortality, primary education and population growth. The link between well-designed public programs and social outcomes is well-established for both education and health; the same link would apply for family planning, provided mostly through the health program. (To show the link between education programs and health outcomes, primary enrollment was entered into the level IMR regressions. Its coefficient is significant in the expected direction, and reduces Sri Lanka's and Pakistan's residuals. See Table A.7 in the appendix available from the authors).

Some have claimed that Sri Lanka's adjustment program, which has been in effect on and off since 1977, has made the poor worse off in spite of better growth. But estimates for 1960-1978 and 1978-90 show strong progress on infant mortality and primary enrollment in the latter period, as seen in the residuals on Sri Lanka in Tables 5 and 6. For example, Sri Lanka's rank on change in infant mortality was 42 out of 71 for 1960-78 and 7 out of 71 for 1978-90 (see equation one in Tables 5 and 6). This is not surprising, since per-capita growth and per-capita expenditures on education and health increased. Also, the granting of citizenship, and thus the power of the ballot, to the "Indian Tamil" plantation workers helped redress their past lack of access to primary education: this had been identified as a major deficiency in Isenman (1980).

Still, both those interested more in faster and more robust growth and those interested more in human development objectives would probably agree that Sri Lanka has much to be concerned about. The ethnic strife since 1983 has caused thousands of deaths and produced over 600,000 refugees, as well as reducing income growth. There is evidence of stustantial remaining malnutrition. There is also evidence of deteriorating educational quality. Given the good overall

Table 5. Residuals based on Infant Mortality Rate Regressions, 1960-78.

	Equation One	*Equation Two*	*Equation Three*	*Equation Four*
Dependent Variable:	Log IMR_{78}	Log IMR_{78}	Change in Log IMR_{78-60}	Change in Log IMR_{78-60}
Country Rankings				
Highest Country	China	Hong Kong	China	China
Lowest Country	Paraguay	Swaziland	Uruguay	Swaziland
Sri Lanka	42	17	48	16
Pakistan	55	58	55	64

Notes: 1. Equations One and Three exclude the change in log per capita income (from 1960 to 1978) as a regressor while equations Two and Four include it.
2. For full regression results see Table A.5 from annex which is available from the authors.

Table 6. Residuals based on Infant Mortality Rate Regressions, 1978-90.

	Equation One	*Equation Two*	*Equation Three*	*Equation Four*
Dependent Variable:	Log IMR_{90}	Log IMR_{90}	Change in Log IMR_{90-78}	Change in Log IMR_{90-78}
Country Rankings				
Highest Country	Chile	Chile	Korea	Chile
Lowest Country	Paraguay	Paraguay	Congo	Congo
Sri Lanka	7	8	5	7
Pakistan	28	25	39	62

Notes: 1. Equations One and Three exclude the change in log per capita income (from 1978 to 1990) as a regressor while equations Two and Four include it.
2. For full regression results see Table A.6 from annex which is available from the authors.

progress, its poverty programs need to focus more on the poorest of the poor; on this, though, there is conflict between poverty and populist objectives.

What Sri Lanka needs most for poverty reduction, human development and growth, is peace. We see in many other countries around the world the horrendous effect that ethnic strife — a subject still given insufficient attention by development thinkers — has on incomes and on social indicators. The Sri Lanka case illustrates sharply Sen's point that even good growth and good progress in conventional social indicators are not sufficient measures of development progress.

Pakistan's social indicators are by any standard poor, especially taking into account its relatively rapid income growth. Its primary enrollment would be substantially worse if we used WDR/HDR numbers; instead we have used latest sample survey data. This difference in net enrollment figures illustrates the (world-wide) need for better data, particularly from household surveys.

Fortunately, Pakistan's weak record on social indicators is now widely recognized, again both by those concerned primarily about growth -- especially about the need to upgrade human resources to compete internationally in manufacturing and agriculture -- and those concerned primarily about human development objectives. Both the government and leading opposition coalition strongly support the "Social Action Program," an effort to accelerate progress on basic education, health, family planning and rural water supply. This is the WB's top priority in Pakistan. While this program would undoubtedly have positive effects on income, its centrality, for the WB as well as for the government, comes from its effect on broader (human) development objectives. The UNDP's excellent Human Development Report for Pakistan also gave highest priority to basic social services. There is wide agreement that this program, while no panacea for Pakistan's poverty problems, will be vital -- as a means and an end -- to its overall success in development.

In conclusion, the general agreement between WDRs and HDRs indicates in part that differences of emphasis on objectives still lead to similar operational conclusions and in part that the WDRs (and the WB) agree strongly on the importance of non-income objectives -- particularly those measured by basic social indicators. Regression results reported here confirm results of recent articles showing that income growth, while important, is not the primary determinant of improvement in social indicators. We recommend that changes rather than levels of social indicators should be emphasized and have illustrated how these changes should be measured.

V. The Empirical Evaluation of Improvements in Living Standards

In this section we discuss ways in which the progress of a country in improving living standards can be assessed empirically, in relation to the performance of countries world-wide. The objective is to provide a method that can be easily understood by policy makers and

administrative officers who have a general acquaintance with economics, rather than one which is rigorous by the standards of the academic economics profession.

The first step in the method we propose is to examine the evidence, for the period under examination, graphically, using the values of the social indicators of countries at the starting and end dates. For instance, in our study, the starting date is 1960, and the end date, 1990. The values of the social indicator for the beginning date, 1960, are plotted on the horizontal axis, and the values of the social indicator for 1990 are plotted on the vertical axis, as in Figure 3 and Figure 4. Next, a curve is fitted, using least squares regression, relating the general performance of the set of countries between the two years. This is equation one in Tables 2 and 3 (the full results of which are in Tables A.1 and A.2 in the appendix available from the authors) and the line drawn as equation one in Figure 3 and Figure 4. The double logarithmic functional form was chosen by us as the preferred equation because it provided the best fit. In principle, the researcher should use the functional form that provides the best possible fit, so that an alternative form, such as an inverse model as in Bhalla-Glewwe (1986), or a quadratic model as in Isenman (1987) may provide a closer fit for another set of data. It is important that this equation, which sees the 1990 (end date) values of the social indicator regressed on a constant and the 1960 (initial date) values of the indicator, be viewed not an a proper regression equation, but merely as a fitting device that brings out the correlation between the two sets of years more clearly. The argument underlying this equation can be set out as follows.

The 1960 (initial) values of the social indicator represent a particular economic and social institutional structure, both at the country level and world-wide. Thus, the 1960 infant mortality rate for a country is the outcome of many institutional and economic of features of that country, like the network of hospitals and medical clinics, the incomes of households, and the education levels of the population, especially mothers. The 1960 infant mortality rates for the entire sample of countries represent the outcomes of the institutional and economic features of the whole group. Countries which have better than average infant mortality rates in 1960 are those in which at least some of these institutional and economic features are superior to the average endowments in the sample. The converse holds for countries with worse than average infant mortality rates.

Next, consider the 1990 values of infant mortality rates. These represent the economic and institutional structure of the later year. The curve fitted in equation one relates the mean level of achievement in 1990 to the mean level of achievement in 1960. Countries whose infant mortality rates reveal better than average improvements, in that their absolute values lie above the regression line, are countries which recorded above average improvements in their institutional and economic structures with regard to infant mortality. Once again, the converse applied to countries with less than average improvements. Thus, the countries that lie above equation one in Figure 3 and Figure 4 have performed better than average during 1960-90 in improving infant mortality and schooling enrollments, while countries that lie below equation one have performed worse.

The second step in our method is to control for the change in income during the study period. This is achieved by including the change in income as an additional right hand side variable on the fitting equation, as in equation 2 in Tables 2 and 3 (again, full results are in the appendix available from the authors). This equation can be used to examine whether a given country has a better than average or worse than average correlation between the initial and end values of the social indicator, conditional on the extent to which its income expanded. Such an improved or worsened correlation would indicate whether a country has been registering better than average or worse than average improvements in the non-income dimensions that affect the social indicator. Unfortunately, the introduction of income into the equation adds a third variable into the analysis, so that the relationships cannot be plotted on a graph.

The third step in the method is to take the change in the social indicator between the beginning and end dates, say 1960 and 1990, and regress it, using least squares, upon a constant. This centers the data on its mean value and ranks it. Countries whose absolute values are highest represent the best performers and countries whose absolute values are lowest represent the worst performers for the period. Equations one and three can be algebraically related, by setting the constant term in equation one to the mean of the sample, which equals the constant term in equation three, and setting the slope term in equation one to unity. This equation is plotted as equation three in Figure 3 and Figure 4. Visually, it is evident that it does not track the data as well as the curve of equation 1, so that equation three provides a poorer fit. This is to be expected, since interpreting equation three as a restricted version of equation one implies that it will have an inferior fit. Thus, equation three provides a less sophisticated ranking of country performances over time than equation one. However, it serves as a useful building block to the next stage in our method.

The fourth step is to regress the change in the social indicator on a constant and the change in income during the period. This is equation four in Tables 2 and 3 (full results of which are in the appendix available from the authors), and is the only equation in our method which, strictly speaking, can be interpreted as a regression equation (though not one free of estimation problems, as explained in Section II). The significant coefficients of income in the infant mortality and school enrollment equations show that improvements in social indicators are significantly influenced by income growth. Positive absolute deviations from the regression line represent countries which have recorded improvements in social indicators which are better than their income performances alone would predict, and negative absolute deviations from the regression line represent countries which have recorded worse social indicator performances than can be attributed to their income growth during the period.

In Figure 1 and Figure 2, we plot the rates of improvement of the social indicator against the growth rates of the countries during the period. Into the diagram are drawn the average growth rate of the countries and the average rate of improvement of the social indicator or equation three. These then divide the sample into four categories of performance. Countries in the upper right hand square are those which have performed well on both income and social indicators. Countries in the lower left hand square are those which have done badly on both

income and social indicators. Countries in the lower right hand square have done well on income growth, but badly on social indicators, while the countries on the upper left hand square have done poorly on income growth but performed well on social indicators. Finally, equation four is plotted on the diagram. The direction and extent to which a country deviates from the regression line shows whether it has done well or badly on the relevant social given its income performance.

FIGURE 1: CHANGES IN IMR AND GROWTH
1960–90

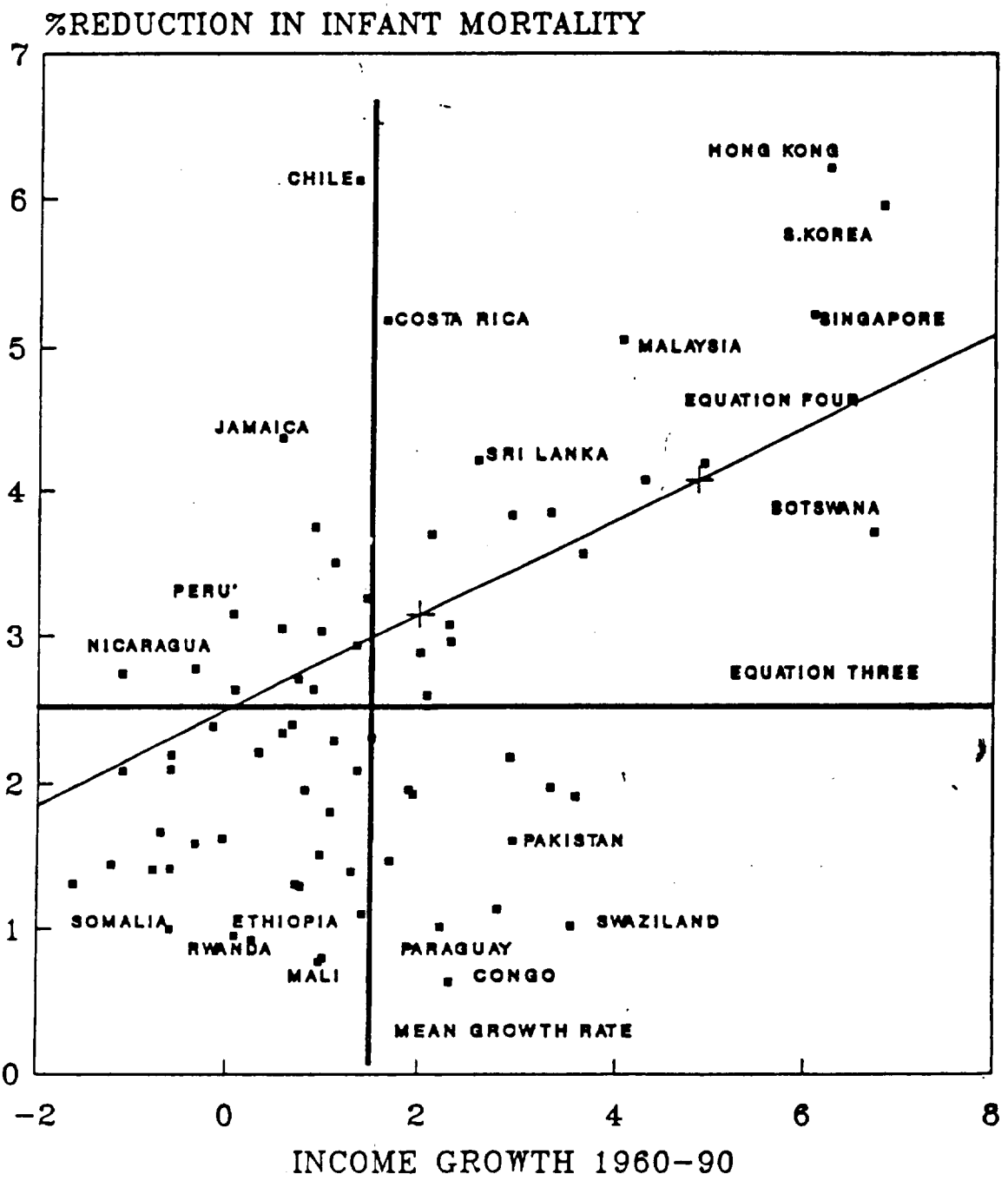


FIGURE 2: SCHOOLING NET NON-ENROLLMENT AND INCOME 1960-90

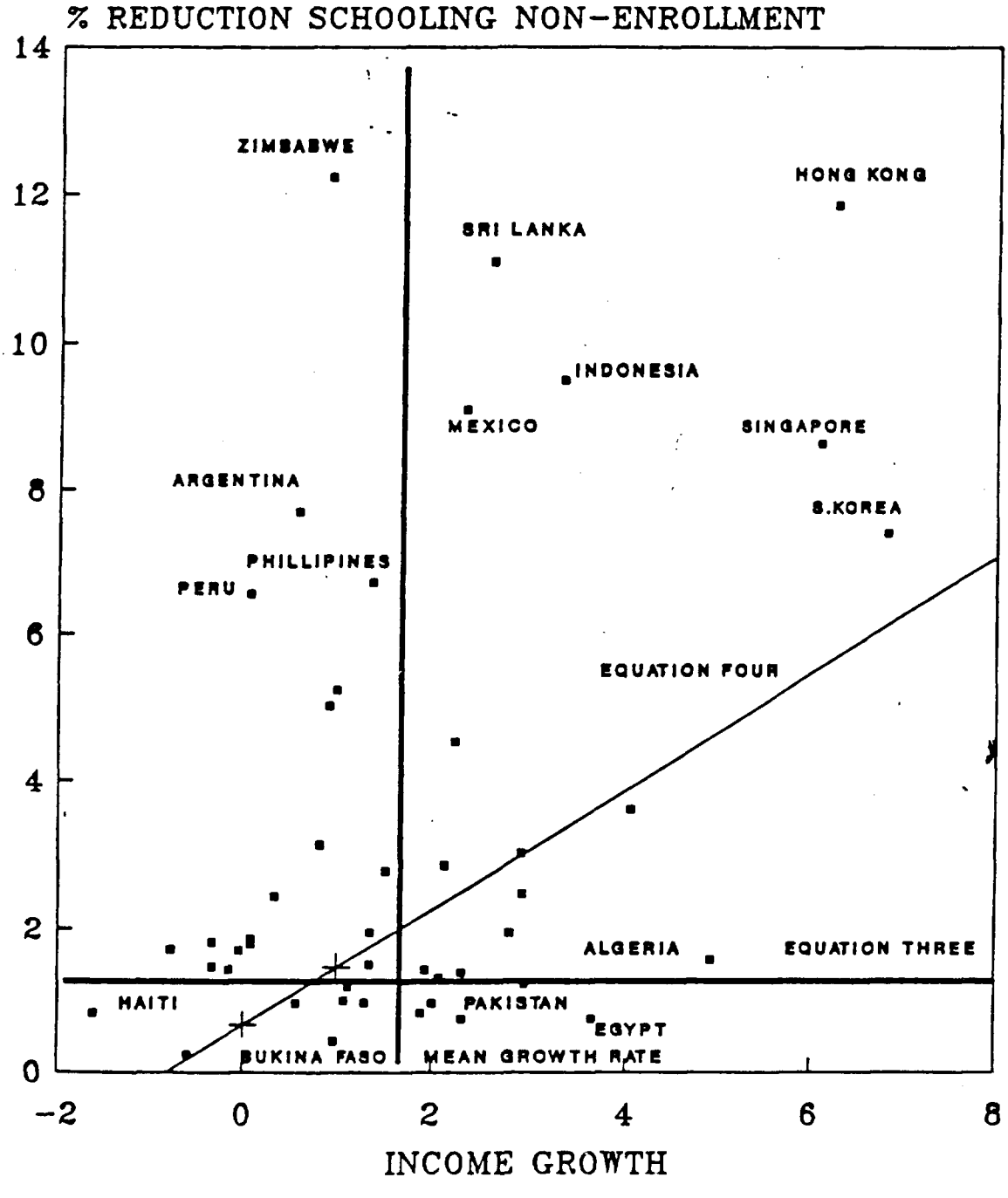


FIGURE 3: INFANT MORTALITY RATES
1960–90

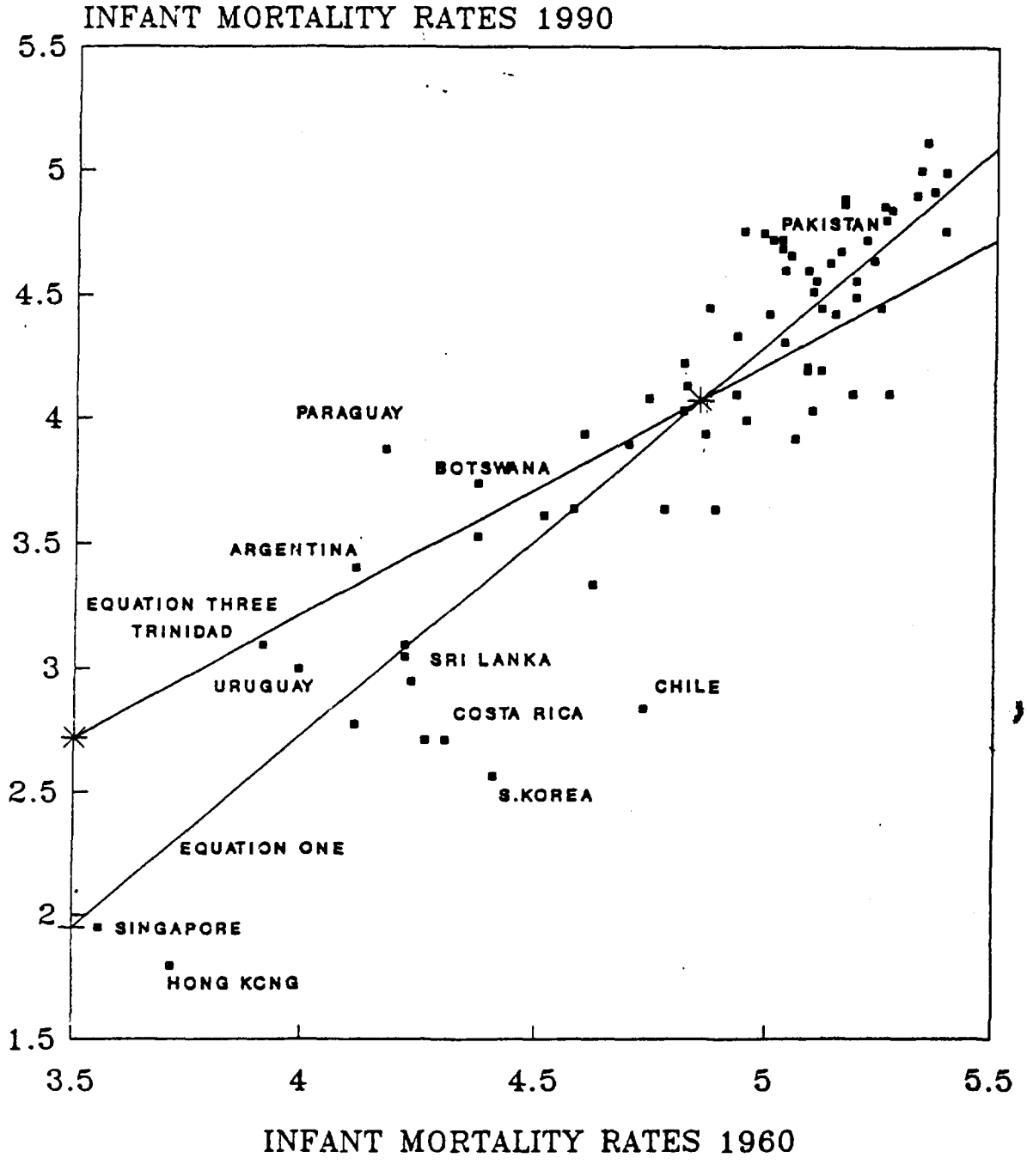
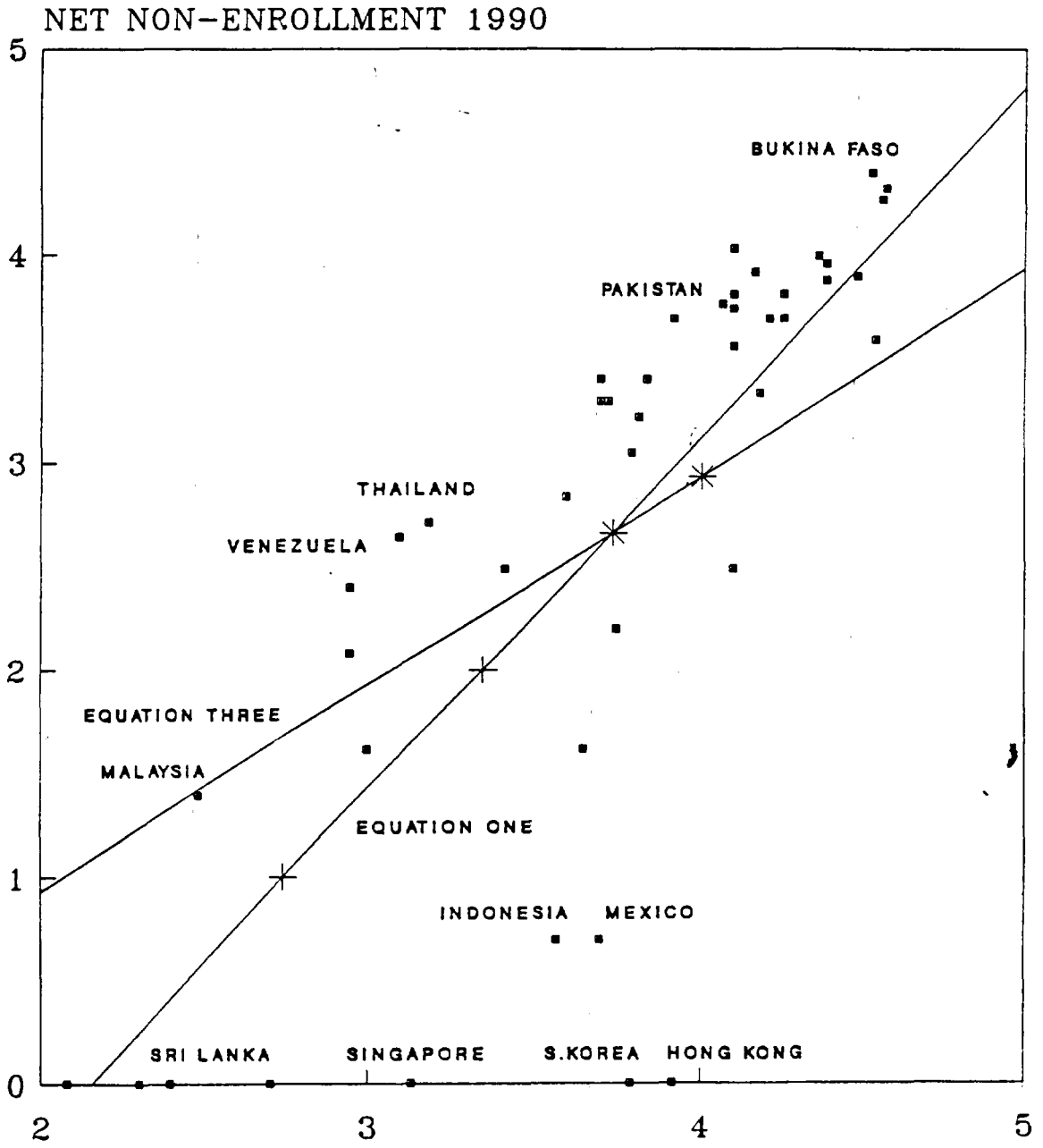


FIGURE 4: NET PRIMARY SCHOOLING
NON-ENROLLMENT 1960-90



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