

The Priority of Human Development

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I. INTRODUCTION¹

Since 1990, with the publication of the United Nations Development Programme's first *Human Development Report*, the concept of Human Development has been strongly advocated as the central objective of development, in place of economic growth.² Its intellectual antecedents may be traced to Sen's concept of capabilities and the earlier basic needs approach.³ Although mainstream thinkers sometimes acknowledge the concept of human development, economic growth generally remains their prime policy objective. This is one important reason for exploring the relationship between the concepts of Human Development (HD) and economic growth (EG), drawing policy implications from the analysis.

The first *Human Development Report* stated that, "The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives" (UNDP, 1990, p. 9), and defined human development as "a process of enlarging people's choices" (p. 10). This definition is, of course, very broad. For the pur-

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pose of empirically exploring the links between HD and EG, we need, for now, to narrow it down. We shall consider the HD of a country as consisting of the health and education of its people, recognizing that this is very much a reductionist interpretation.

Clearly, there exists a strong connection between EG and HD. On the one hand, EG provides the resources to permit sustained improvements in HD. On the other, improvements in the quality of the labor force are an important contributor to EG. Although many observers accept that economic growth affects human development, and that human development (interpreted as “human capital”) affects economic growth, the important implications of the interrelations between the two are rarely taken into account. Yet, it is important to understand the full implications of this two-way linkage because this affects both analysis and policy.

In this paper, we first identify the major links between EG and HD (Section II). Then we present some empirical cross-country evidence on these links (III). Section IV presents a typology of country cases, some representing the mutual enhancement of HD and EG and some demonstrating asymmetric performance, followed by an investigation of the movement of countries from one category to another over time. Finally, Section V briefly reflects on the implications for policy.

II. THE TWO CHAINS

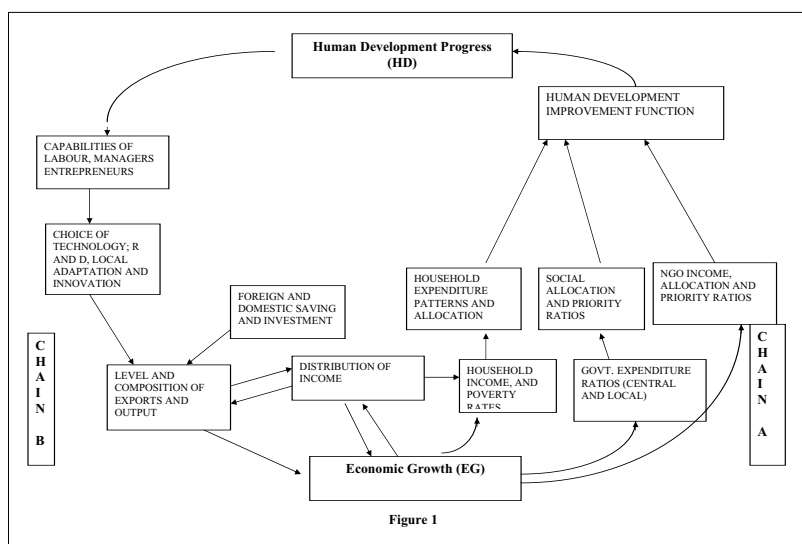
We concentrate on two causal chains, one leading from EG to HD (Chain A), the other from HD to EG (Chain B). The two chains are pictured in Figure 1.

1. Chain A: From EG to HD

GNP contributes to HD through household and government activity, community organizations and NGOs. The same level of GNP can lead to very different performance on HD according to the allocation of GNP among and within these actors.

Households’ propensity to spend their income on items that contribute most directly to the promotion of HD, e.g., food, potable water, education and health, varies, depending on the level and distribution

of income across households as well as on who controls the allocation of expenditure within households. In general, as the incomes of the poor rise, the proportion of income spent on HD items increases. Hence HD expenditures are likely to rise as incomes of poor households increase. This means that higher and more equally distributed growth is likely to enhance HD expenditures. This is shown by much empirical evidence. For example, one estimate suggests that if the distribution of income in Brazil were as equal as Malaysia's, school enrollments among poor children would be 40 percent higher. There is also substantial evidence that greater female control over household expenditure increases the allocation to HD items. In the Ivory Coast, for instance, an increase in women's share of households' cash income was shown to be associated with significantly higher spending on food and reduced spending on alcohol and tobacco.⁴



Turning to the government, the allocation of resources to improving HD is a function of total public sector expenditure, how much of this flows to the HD sectors and the way in which it is allocated within these sectors. This can be expressed in the form of three ratios:⁵ the public expenditure ratio, defined as the proportion of GNP spent by the various levels of government; the social allocation ratio, defined as

the proportion of total government expenditure going to the HD sectors; and the priority ratio, defined as the proportion of total HD-sector expenditure going to priorities within these sectors. To clarify, within the HD sectors, those expenditures that are clearly much more productive in terms of achieving advances in HD than others are defined as such as priorities; for example, basic education, especially at an early stage of development, is generally recognized to have a larger impact than tertiary education on HD. But the precise definition of what constitutes a priority area will inevitably vary according to a country's stage of development, rendering this third ratio more arbitrary than the other two. There exist very large variations across countries in each of these ratios, which means that the same level of GNP may be associated with very different levels of government spending on HD priorities.⁶

The significance of public-expenditure choices for improving HD is illustrated by a comparison between Kenya and Malawi. In the 1980s, a similar proportion of national income went to public expenditure (27 percent in Kenya, 30 percent in Malawi) but Kenya had a significantly higher social allocation ratio (47 percent compared to 35 percent) and priority ratio (34 percent compared to 14 percent) so that the proportion of GDP going directly to HD-improving priorities in Kenya was over three times that of Malawi (5.1 percent compared to 1.5 percent).⁷

Finally, NGO or other civil society activity is typically heavily oriented towards HD objectives (e.g., projects generating incomes for the poor and spending on schools, nutrition and health projects). Although in most contexts NGOs play a supplemental or even marginal role, in a few countries (e.g., BRAC in Bangladesh, and the "Comedores Populares" in Peru) they appear to represent a major source of HD enhancement.⁸

A further important link in Chain A is the effectiveness of these expenditures in raising HD levels. This is represented by the "Human Development Improvement Function." An example of one important input into this production function is female education, which has been shown by abundant evidence as tending to improve infant sur-

vival and nutrition.⁹ Research conducted in Ghana has shown that while in rural areas the provision of basic health services increases child health and survival significantly, the evidence is less clear on urban services.¹⁰

It is clear from this discussion of the various links in the EG-HD chain that, in general, we expect important causal connections to exist between the economy and HD achievements, but these connections are *not automatic*. The strength of the links in Chain A varies according to a large range of factors, including the structure of the economy, the distribution of income and the policy choices made.

2. Chain B: from HD to EG

Turning to Chain B, from HD to EG, higher levels of HD, in addition to being an end in themselves, affect the economy through enhancing people's capabilities and consequently their creativity and productivity. Ample evidence suggests that as people become healthier, better nourished and educated they contribute more to economic growth through higher labor productivity, improved technology and higher exports.¹¹

Numerous studies indicate that increases in earnings are associated with additional years of education, with the rate of return varying with the level of education.¹² Analysis of the clothing and engineering industries in Sri Lanka showed that the skill and education levels of workers and entrepreneurs were positively related to the rate of technical change of the firm.¹³ Moreover, in agriculture, evidence suggests positive effects of education on productivity among farmers using modern technologies.¹⁴ In Thailand, farmers with four or more years of schooling were three times more likely to adopt fertilizer and other modern inputs than less educated farmers.¹⁵

The "new growth theories" aim to endogenize technical progress by incorporating some of these same effects, emphasizing education as well as learning and research and development (R&D). According to Lucas (1988), for example, the higher the level of education of the workforce the higher the overall productivity of capital because the more educated are more likely to innovate, and thus affect everyone's

productivity. A complementary view is that technical progress depends on the level of R&D in an economy. Again, education plays a key role, both in contributing to R&D and via interactive learning.¹⁶

There is also a positive feedback from improved education to greater income equality. As education becomes more broadly based, low-income people are better able to seek out economic opportunities, which improves income distribution over time. For example, a study of the relation between schooling, income inequality and poverty in 18 countries of Latin America in the 1980s concluded that “clearly education is the variable with the strongest impact on income equality.”¹⁷ Improved income distribution, in turn, has been found to be positively associated with EG, although the finding is contested.¹⁸

Improved health and nutrition also have been shown to have direct effects on labor productivity, especially among poorer individuals.¹⁹ For example, calorie increases often have been shown to raise productivity, including among farmers in Sierra Leone, sugar cane workers in Guatemala and road construction workers in Kenya.²⁰ A longitudinal study of a sample of children in Chile concluded that providing nutritional supplements to children to prevent malnutrition would generate benefits equal to six to eight times the cost of the intervention in terms of additional productivity.²¹ Health has been shown to be an important input into EG at the aggregate level as well.²²

Education and health alone, of course, cannot transform an economy. The quantity and quality of investment, domestic and foreign, together with the overall policy environment, form other important determinants to economic performance. But the level of human development has a bearing on these factors too.

As in Chain A, the strength of the various links in Chain B varies considerably and there is no *automatic* connection between an improved level of HD and increases in per capita GNP. It is not enough to create a larger pool of educated people; there must also exist opportunities for them to be productively employed, or this might simply increase the number of educated unemployed. Relevant

to the demand side are the savings and investment rates, technology choices and the overall policy setting.

III. EMPIRICAL FINDINGS ON THE LINKS IN THE CHAINS

In previous work, we have empirically explored some of the relationships in the two chains, using data from 69 developing countries applying OLS methods, though for some variables we have a smaller number of observations because of lack of data.²³ Because of the two-way causation, we used lags of the original variables to reduce the simultaneity bias.²⁴

For Chain A, the variable chosen to measure human-development progress was Infant Mortality Shortfall Reduction²⁵ (IMSR), 1960–2001. This was selected because the infant mortality rate is relatively accurately measured and is also highly correlated with other indicators, such as adult literacy and life expectancy. GDP per capita growth showed a significant positive relationship with IMSR, with higher growth of per capita income leading to better HD performance. We also found HD progress was significantly negatively associated with poverty levels and a measure of income inequality (the Gini coefficient), as well as positively with the gross primary female enrollment rate, and with public expenditure on both health and education as a percent of GNP.

For Chain B, the variable chosen to measure EG was GDP per capita growth, 1960–2001. We found that EG was significantly associated with various measures of HD progress, including the level of literacy, literacy shortfall reduction, the level of life expectancy and life expectancy shortfall reduction. We also found that EG was significantly associated with gross domestic investment as a percent of GDP.

In short, these findings confirmed the importance of the two-way connection between HD and EG and of many of the links in the two chains considered above. They also indicated that one can achieve good results in a variety of ways by relying on the strength of particular links in the chains. For example, a country can achieve good HD progress by high growth in the face of only moderately good income distribution so long as social expenditure ratios are high, as was the

case in Malaysia. Other countries have attained good HD progress with poor growth and poor distribution, but with high social expenditure and high female enrollment rates (e.g., Jamaica). In fact every country that was successful in HD seems to have had high female/male enrollment ratios and relatively high social allocation ratios.

IV. VIRTUOUS AND VICIOUS CYCLES AND LOPSIDED DEVELOPMENT

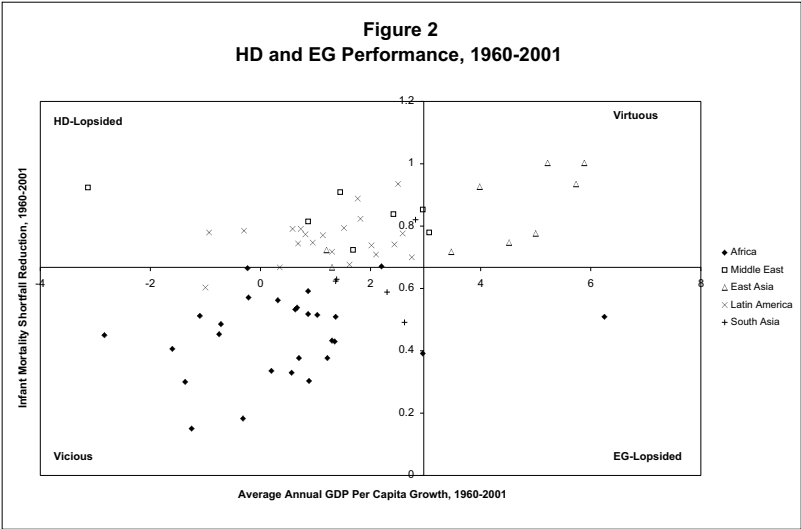
The existence of two chains linking HD and EG is thus strongly supported both by our framework, drawing on micro and macro studies in the literature, and our own empirical results. This means that an economy may be on a mutually reinforcing upward spiral, with high levels of HD leading to high EG and high EG in turn further promoting HD. Conversely, weak HD may result in low EG and consequently poor progress towards HD improvement. The strength of the links in the two chains influences the extent of mutual reinforcement between HD and EG in either direction, i.e., positively or negatively.

Consequently, country performance can be usefully classified into four categories: *virtuous*, *vicious* and two types of *lopsidedness*, i.e., lopsided with relatively strong HD/weak EG (called “HD-lopsided”) and lopsided with relatively weak HD/strong EG (“EG-lopsided”). In the virtuous cycle case, good HD enhances EG, which in turn promotes HD, and so on. In the vicious cycle case, poor performance on HD tends to lead to poor EG performance which in turn depresses HD achievements, and so on. The stronger the linkages in the two chains described above the more pronounced the cycle of EG and HD, either in a positive or dampening direction.

Where linkages are weak, cases of lopsided development may occur. On the one hand, good EG may not bring about good HD if, for example, there are such weak linkages as a low social allocation ratio; on the other hand, good HD performance may not generate good EG if there is a dearth of complementary resources because of low investment rates. Such cases of lopsided development are unlikely to persist. Either the weak partner in the cycle eventually acts as a brake on the

other partner, leading to a vicious cycle case or, if the linkages are strengthened, possibly by policy change, a virtuous cycle may result.

One way of classifying countries into the four categories is to compare their performance on HD and EG (1960-2001) with the average performance of all developing countries (see Figure 2). The vertical and horizontal grid lines represent the average performance for all developing countries for the period, with countries weighted by their populations in 2001. Most developing countries appear as either virtuous (NE quadrant) or vicious (SW quadrant); a significant number show an HD-lopsided pattern and only one an EG-lopsided one. A strong regional pattern emerges, with East Asia heavily represented in the virtuous cycle case. The majority of countries in the vicious cycle quadrant are from sub-Saharan Africa, with a significant number from Latin America as well. Latin America is also strongly represented in the HD-lopsided quadrant, with the one EG-lopsided country from Africa.



The important issue for policy purposes, of course, is how a country may move towards the virtuous cycle. Much can be learned about this by looking at the ways in which countries changed their location over time. Taking the movements of countries over the four decades

between 1960 and 2001, we find that only five countries succeeded in moving from the HD-lopsided to the virtuous category, while three remained in the virtuous category throughout. The others in that quadrant moved in and out of the HD-lopsided category, often in response to particular short-term economic difficulties, such as the 1980s debt crisis, which affected many of the Latin American countries, and the 1997 East Asian financial crisis. There was a strong tendency for countries in the vicious cycle to remain there; only five exited, four into HD-lopsided and one into EG-lopsided. Lop-sidedness, as expected, proved generally unstable. In particular, no country remained in the EG-lopsided category. As noted, some countries succeeded in moving from the HD-lopsided category into the virtuous category, but no country succeeded in moving from EG-lopsided to virtuous. Almost invariably, EG-lopsided countries fell into the vicious category. These findings clearly have some strong implications for policy sequencing. They imply that it is not possible to reach the ideal of a virtuous cycle by first generating improved EG while neglecting HD, since any EG attained in this way will not be sustained.

V. CONCLUSIONS AND POLICY IMPLICATIONS

Our investigation into the determinants of HD progress and EG has clearly demonstrated the importance of the two-way relationship between them. The empirical work confirmed the existence of a number of links in the two chains—including income distribution, the social expenditure ratio and female education in Chain A, and the investment ratio in Chain B, in addition to the important inputs of EG and HD respectively. Moreover, we have found that even in the presence of some weak links in a chain it is possible to achieve good progress by particularly strong performance in other links.

However, our most important conclusion concerns sequencing. Because of the strong two-way relationship between EG and HD, one has to promote *both* to sustain progress in either. Economic growth, which is an important input into HD improvement, is itself not sus-

tainable without improvement in HD. The investigation of country changes over time has strong implications for the phasing of policies. Economic and social policy have tended to focus priority on getting the economic fundamentals “right” as a necessary precondition for economic growth, arguing that HD improvement must await such economic growth—for example, in the classic “Washington Consensus.” In sharp contrast, our findings contradict the view that HD improvement may be postponed until economic resource expansion makes it affordable. If HD improvement is postponed in this way, EG itself will not be sustained.

NOTES

1. This paper draws heavily on previous work by the authors and others: see Ranis, Stewart and Ramirez, 2000; Ranis and Stewart, 2000; Boozer, Ranis, Stewart and Suri, 2003.

2. See the UNDP's *Human Development Reports*.

3. See e.g., ILO, 1977; Sen, 1984; Streeten et al., 1981; Fei, Ranis and Stewart, 1985.

4. Hoddinott and Haddad, 1991.

5. See *Human Development Report 1991*.

6. See *Human Development Report 1991*, Chapter Three, and *Human Development Report 1996*, Chapter Three.

7. *Human Development Report 1996*, p. 71. These calculations adopt a narrow definition of social priority expenditure, including pre-primary and first-level education plus primary health care only.

8. Riddell et al., 1995.

9. See e.g., Rosenzweig and Schultz, 1981; Wolfe and Behrman, 1987; Barrera, 1991.

10. Lavy et al., 1995.

11. This does not detract from the intrinsic value of improving the lives of those who cannot find employment because of disabilities or age, for example.

12. See surveys in Behrman, 1990a, b, 1995; Behrman and Deolalikar, 1988; King and Hill, 1993; Psacharopoulos, 1994; Schultz, 1988, 1993a, b; Strauss and Thomas, 1995.

13. Deraniyagala, 1995.
14. Schultz, 1975; Welch, 1970; Rosenzweig, 1995; Foster and Rosenzweig, 1994; Behrman et al., 1995.
15. Birdsall, 1993.
16. See Roemer, 1990; Grossman and Helpman, 1991.
17. Psacharopoulos et al., 1992, p. 48. De Gregorio and Lee, 1999, find that “higher attainment and more equal distribution of education . . . play a significant role in making income distribution more equal” (Abstract).
18. Alesina and Rodrik, 1994; Alesina and Perotti, 1994; Persson and Tabellini, 1994; Birdsall et al., 1995.
19. See surveys in Behrman, 1993, 1996.
20. See Cornia and Stewart, 1995; Strauss, 1986; Immink and Viteri, 1981; Wolgemuth et al., 1982.
21. Selowsky and Taylor, 1973.
22. Bloom et al., 2004.
23. For the detailed regressions, see Boozer et al., 2004.
24. Lagged values are reasonable candidates as instruments since the correlation between the residuals in the two periods analyzed is not substantial.
25. Shortfall reduction is measured relative to ceiling levels of countries at current maximum achievement, i.e., 3/1000 for infant mortality and 85 years of age for life expectancy.

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