MINIMIZING DISPARITIES BY CHANGING PUBLIC ATTITUDES AND PERCEPTIONS, AND BY IMPROVING EDUCATION AND PUBLIC AWARENESS

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Summary

Poverty means much more than low income. Indicators such as the Human Development Index and the Human Poverty Index have been developed to measure poverty in several dimensions. To minimize social and economic disparity, much work remains to be done to help the poor not only to increase their income through economic incentives and disincentives, but also to increase and improve human resources through changing public attitudes and perceptions, and improving education and public awareness. Constituting the base of wealth, human resources play an important role for economic development, as shown by empirical studies. The Solow residual is an indirect approach to measuring the

contribution of human resources. In many developing countries, a number of problems (low efficiency, uneven distribution of accessibility, and out-dated teaching content, for example) have hampered the development of education. Setting up the perception of education as a lifelong learning process, some reform strategies are proposed for improving education in developing countries. The gains of improving education are not limited to economic growth. Many aspects of social development can also benefit. Although the developed and the developing nations have different understandings, especially on responsibilities for global environmental deterioration and actions needed to solve global environmental problems, they should promote wide and effective cooperation to create a brighter future for sustainable human society.

1. Changing Perceptions of Poverty

Poverty reduction has been usually regarded as the main outcome for narrowing disparities. What does poverty mean? Poverty is a concept with many dimensions. Before making policies aimed at minimizing increasing social and economic disparities, we need indicators to assess the situation of poverty. Traditional indicators, such as household income, household expenditure, and dietary calories per capita per day, are currently used to measure poverty. The selection of indicators depends on changing perceptions on poverty. To the poor, and particularly to poor rural women, poverty means much more than low income. Complementary indicators, such as access to education and sanitation services and nutritional status, are of more importance to reflect poverty in reality. Furthermore, poverty also implies lack of credit and services, social and economic isolation, and vulnerability.

1.2. Human Development Index

The Human Development Index (HDI), proposed by the United Nations Development Programme (UNDP) in its *Human Development Report 1990* has been accepted worldwide as a comprehensive reflection on the status of human development. HDI is derived from four indicators in three dimensions: adjusted gross domestic product (GDP) in purchasing power parity (ppp), life expectancy, adult literacy rate, and gross enrollment rate.

1.2. Human Poverty Index

In the UNDP's 1999 report, HDI was expanded to measure poverty and was called the Human Poverty Index (HPI). The HPI for developing countries (HPI-1) concentrates on deprivation in three essential dimensions of human life: longevity, knowledge, and a decent standard of living.

The first deprivation in longevity is represented by the percentage of people not expected to survive to age 40 (P_1), and the second deprivation in knowledge by the percentage of

adults who are illiterate (P_2). The deprivation in living standard is represented by a composite (P_3), a simple average of three variables: the percentage of people without access to safe water (P_{31}), the percentage of people without access to health services (P_{32}), and the percentage of moderately and severely underweight children under five (P_{33}). The formula for HPI-1 is:

$$HPI\text{-}1 = [(P_1^3 + P_2^3 + P_3^3)/3]^{1/3} \qquad (1)$$

The HPI for developed countries (HPI-2) adds the fourth dimension as not-participation or social exclusion to the above three and sets different standards for each indicator. The deprivation in longevity is represented by the percentage of people not expected to survive to age 60 (P_1), and the deprivation in knowledge by percentage of people who are functionally illiterate as defined by the Organisation for Economic Co-operation and Development (OECD) (P_2). The deprivation in standard of living is represented by the percentage of people living below the income poverty line, set at 50% of the median disposable personal income (P_3). The fourth deprivation in social exclusion is measured by the rate of long-term (12 months or more) unemployment of the labor force (P_4). The formula for HPI-2 is:

$$HPI\text{-}2 = [(P_1^3 + P_2^3 + P_3^3 + P_4^3)/4]^{1/3} \qquad (2)$$

1.3. The Implications of the Human Poverty Index

UNDP experts on human development believe that poverty and exclusion of the poor from a country's progress are more exactly estimated by HPI. Poverty not only means an inadequate income, but also, and more importantly, indicates the loss of the opportunities of being involved in society and contributing to social advance.

Calculated for 92 developing countries, the HPI-1 reveals that human poverty ranges from a low of 2.6% to a high of 65.5%. HPI-1 exceeds 33% in 37 of the 92 countries, implying that human poverty affects at least one-third of the people in these countries. A comparison of HDI and HPI-1 values shows distribution of achievement in human progress. Countries can have similar HDI values but different HPI values. For example, Mexico and Costa Rica have a similar HDI of around 0.8, but different HPI-1—10.6% and 4.1% respectively. Human poverty is not confined to developing countries. HPI-2 shows that poverty exists even in industrial countries. For example, the USA, the richest country in the world, has one of the highest poverty figures (16.5%) in the group of industrial countries according to HPI-2: 21% of its population are functionally illiterate as defined by the OECD, while 13% cannot survive to 60 years old. These indicators are apparently higher than those of Sweden, whose HPI-2 ranks thirteenth in 17 OECD countries.

The minimization of disparity demands effort on many fronts. Taxation and other

economic incentives and disincentives are the direct ways to stimulate wealth transfer and income redistribution **(see *Narrowing Disparities Using Taxation and Other Economic Incentives and Disincentives*).** On the other hand, indirect ways to minimize disparities by changing public attitudes and perceptions and by improving education and public awareness need more attention and may be more fundamental ways to effect long-term change.

2. Exploration of Human Resources and Economic Development

Many economists, such as Schultz and Harbison, have pointed out that human resources are the critical factor for growth of national economy. Human resources constitute the base of wealth of nations. Both capital and natural resources are passive factors, but human resources have the most active role in production in human society. It is human beings who accumulate capital, exploit natural resources, construct political and economic infrastructure, and eventually advance the development of nations. If a country fails to improve the knowledge and skill of its people and make use of them efficiently to facilitate economic development, it cannot be expected to progress in other aspects. Thus, in this sense, accumulating human resources by improving education and skill training is an important way for minimizing disparity, particularly in developing countries.

2.1. Human Resources in the Wealth of Nations

In 1995, the World Bank published a report entitled *Monitoring Environmental Progress—A Report on Work in Progress*, in which the concept of the wealth of nations was expanded to include produced assets, natural capital, and human resources. Another report on this subject, *Expanding the Measure of Wealth—Indicators of Environmentally Sustainable Development* published in 1997, improved the data and methods of calculation and estimated the wealth of almost 100 countries. The results for 12 regions are listed in Table.1.

Region	Human resources	Produced assets	Natural capital
North America	76	19	5
OECD countries in the Pacific region	68	30	2
West Europe	74	23	2
Middle East	43	18	39
South America	74	17	9
North Africa	69	26	5
Central America	79	15	6
Caribbean	69	21	11
East Asia	77	15	8
East Africa and South Africa	66	25	10

West Africa	60	18	21
South Asia	65	19	16

Source: World Bank, *Expanding the Measure of Wealth: Indicators of Environmentally Sustainable Development*, Environmentally Sustainable Development Studies and Monographs Series, No. 17 (Washington, D.C.: World Bank, 1997)

Table 1. Wealth composition in different regions (%) in 1994

As shown in Table 1, the overall predominance of human resources in national wealth is striking. Human resources account for 60% or more of total wealth in all regions except the Middle East, which has abundant oil reserves, and more than 70% in five of the 12 regions presented.

Following the expanded conception of wealth, current education expenditures, traditionally treated as consumption in the national accounts, has been treated as investment in human resources in the calculation of genuine saving, which is an indicator developed by the World Bank to assess sustainability. Thus, genuine saving is defined as the true rate of saving of a nation after accounting for the depreciation of produced assets, the depletion of natural resources, investments in human capital, and the value of global damage from carbon emissions.

The report highlighted that investment in human resources by improving education is the only way to provide a solid foundation for sustainable development. This is indeed true today, as society moves towards an information- and knowledge-based economy.

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Biographical Sketch

Dr. Ying Chen was born in April 1969 and is now an associate researcher with the Institute of World Economics and Politics, Chinese Academy of Social Sciences. Dr. Chen graduated from the Chemical Engineering Department of Tsinghua University, Beijing, in July 1997 and she is now engaged in research of environmental and natural economics. Her areas of interest include global environmental problems, climate change economics, and sustainable development indicators.