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Problems of Poverty and Marginalization

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<u>Problems of Poverty and Marginalization</u>

Strange as it may seem, mainstream neoclassical economics has no concept of poverty. The concept used in neoclassical economics is utility or economic welfare, which following Pigou often is limited to those things which can be subjected to "the measuring rod of money". It is assumed individuals attempt to maximize utility or welfare subject to a constraint, such as income. From an analytical perspective the level of utility, or the level of such things as well-being, income or expenditure is irrelevant; there is no notion in economics of insufficiency and hence of poverty. This is rather odd. None the less, if one overlooks this curiosity of economics and accepts the dictionary definition of poverty as "the state of one who lacks a usual or socially acceptable amount of money or material possessions," then two important implications follow.

First, to be poor is to be lacking in something, to be deficient in some way, to suffer from insufficiency, to fail to meet a "minimum requirement" of something. Second, this "minimum requirement" or "poverty line" as it is usually called, is defined by what is "socially acceptable". That is, it emerges out of the historical circumstances of a particular society and is thus relative to a particular place and time.

This was very much the view of economists and social thinkers in the 18th and 19th centuries. Adam Smith, for example, argued that "necessaries" were determined by "the custom of the country" and consequently that poverty was relative to a particular society. He said, "By necessaries I understand not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without." The absence of poverty, then, requires the avoidance of indecency and the ability to participate in society without shame. Karl Marx, nearly a century later, took a similar view. "Our desires and pleasures," he said, "spring from society; we

measure them, therefore, by society and not by the objects which serve for their satisfaction. Because they are of a social nature, they are of a relative nature."

Marx's argument about the "relative nature" of poverty is aptly illustrated in the following passage:

> "A house may be large or small: as long as the surrounding houses are equally small it satisfies all social demands for a dwelling. But let a palace arise beside the little house, and it shrinks from a little house to a hut….however high it [the little house] may shoot up in the course of civilization, if the neighbouring palace grows to an equal or even greater extent, the occupant of the relatively small house will feel more and more uncomfortable, dissatisfied and cramped within its four walls."

The English essayist, Thomas Carlyle, writing a little before Marx, also took a broad view of poverty. He asked, "What constitutes the well-being of a man?" Well-being, he said, depends in part on a man's wages and the amount of bread his wages will buy, but he goes on to underline the importance of social relations.

> "Can the labourer, by thrift and industry, hope to rise to mastership; or is such hope cut off from him? How is he related to his employer—by bonds of friendliness and mutual help, or by hostility, opposition and chains of mutual necessity alone? … With hunger preying on him, his contentment is likely to be small! But even with abundance, his discontent, his real misery may be great."

The key phrase in the quoted passage is of course the last one: "even with abundance…his real misery may be great." There is more to poverty than a lack of food or income or of the necessities of life; also important are social relations (friendliness or hostility), social mobility (a realistic hope of being able to rise to mastership) and social distance (the little house that becomes a hut alongside a palace). These views were widespread in Europe at the time. In France, for example, a relativist position also was taken at about the same time by Théron de Montaugé who stated forcefully that "poverty is measured by comparisons."

This intellectual tradition has persisted in sociology (for example, in the work of Peter Townsend) and anthropology (for example, in the work of Marshall Sahlins), but in economics the tendency until recently has been to define poverty in absolute terms and to focus on only one dimension, namely, money income. That is, poverty has been conceptualized as an insufficiency of income.

Income poverty

If one wishes to measure the extent of income poverty it is necessary to decide on the unit of observation. Perhaps the most natural unit of observation is the household and many studies do indeed attempt to measure the proportion of a country's households living in poverty. The difficulty with this approach is that the size of household varies and thus two households with the same income but with different numbers of members can have a very different standard of living. Moreover, there is abundant evidence that total income tends to increase with the size of household but at a less than proportionate rate. It is thus likely that the extent of poverty in large households will be underestimated if no attention is paid to the size of household.

The usual way to take this into account is to divide total household income by the number of members of the household and hence to use household income per capita as the unit of

observation. This is in fact the most widely adopted procedure in studies of income poverty. It can be argued, however, that because of economies of scale in consumption large households do not need as large a per capita income as small households to avoid poverty. For example, many consumer durables (a car, a refrigerator, a clothes washer) may be equally satisfactory for a household of four persons as for a household of two persons; even the need for living space may increase less than proportionately as the size of household increases.

Attempts have been made to take economies of scale into account by transforming households into the number of adult equivalent members and then dividing total household income by the number of adult equivalents. The unit of observation then becomes household income per adult equivalent. The Organization for Economic Cooperation and Development (OECD), for instance, uses the following scale to estimate adult equivalents:

> 1.0 for the first adult;
>
> 0.7 for additional persons 14 years old or older;
>
> 0.5 for persons under 14 years old.

The problem with such scales is that they are rather arbitrary: there is no scientific basis for determining adult equivalents. Moreover, in low income countries, where most of the world's poor are located, economies of scale in consumption are likely to be less important than in high income countries where expenditure on consumer durables accounts for a relatively high proportion of household income. Perhaps for these reasons most studies of income poverty use household income per capita as the unit of observation.

If one assumes that each individual in a household in fact receives that household's income per capita, then it is possible to use the individual as the unit of observation. All that is required is to weight each household by the number of persons in the household. This procedure

is likely to produce a more accurate estimate of the number of poor people in a country (as opposed to the number of poor households) when, as is often the case, poor households on average are larger than non-poor households.

The next issue to be resolved is the definition of income. Income is of course a flow variable and the flow of income may not be constant over time. In some countries, for example, there may be substantial seasonal fluctuations in income associated with the production cycle in agriculture. An estimate of poverty done just before the harvest may be very different from an estimate done just after the harvest. It is better therefore to use data on annual income to estimate poverty, but sometimes this is not possible and the analyst is forced to use data for a single month or quarter.

In nomadic societies income is an alien concept. A household's well-being depends upon the stock of animals it possesses rather than the annual flow of animal products produced, valued presumably at market prices. That is, in a livestock dependent society poverty may be conceptualized by the persons concerned as an insufficiency of wealth rather than as an insufficiency of income. Wealth, in turn, is expressed in terms of some animal equivalent. In some regions of Mongolia, for example, herders express wealth in terms of horse equivalents (or bods), using the following scale:

$$1 \text{ horse } = \ 2/3 \text{ camel} = 1 \text{ cow} = 7 \text{ sheep} = 10 \text{ goats}.$$

A household is said to be poor if it has less than 21 bods, or a herd of horses, camels, cows, sheep and goats equivalent to less than 21 horses. Income poverty is a meaningless concept among these nomadic people and it is a misleading concept to outsiders. It is the stock of wealth expressed in animal equivalents that matters, not the flow of income expressed in terms of money. There can be no presumption that the exchange rate between horses and other types of

livestock reflects relative market prices or that the minimum stock of animals (21 <u>bods</u>) reflects some notion of a minimum permanent income based on a calculation of the discounted present value of future net income that 21 <u>bods</u> can be expected to produce. Nomadic societies are of course exceptional, but Mongolia illustrates a general point, namely, that poverty is conceptualized in different ways in different societies.

Assuming that income is indeed the appropriate concept, one must still decide precisely what one means by income. One possibility is to narrow the concept to money income, perhaps including remittances received from members working outside the household, gifts and transfer payments from government. This definition, however, excludes income in kind and particularly in the rural areas of developing countries, self-provisioning is common. Many rural households, for instance, grow much of the food they consume. A strong case can be made for including self-provided goods as part of income, but this then raises the question of how income in kind should be valued, particularly when markets are not well developed.

Another possibility is to focus on household expenditure. Income may diverge from expenditure in the short run and some analysts have argued that expenditure is a better indicator of current well-being than income. For example, the effects of a temporary decline in income may be offset in part by reduced saving, or the sale of assets or by going into debt. Expenditure, in other words, is likely to fluctuate less than income and poverty studies based on expenditure may give a more accurate picture of the number of people who fail to meet the "minimum requirement" for consumption.

The final issue to be resolved is the "minimum requirement" itself. The majority of countries, when designating a national poverty line, reduce poverty to a physiological phenomenon, namely, an inadequate diet. This is true whether one is concerned with a

developing country such as India, a transition economy such as Kazakstan or a high income economy such as the United States. The poor, in effect, are reduced to those who are undernourished; and in many cases calorie consumption is used as a proxy for nutritional status. Thus the poverty line becomes that level of income (or expenditure) which permits a household to purchase a nutritionally adequate number of calories, after making allowance for non-food purchases.

The official poverty line in the United States, for example, is the cost of a nutritionally adequate diet multiplied by three. The implicit assumption is that the poor should spend no more than one-third of their income on food, the rest of their income being available to meet the needs for shelter, clothing, health care, transportation, etc. Poverty lines in developing countries are much lower than the U.S. poverty line and less provision is made for non-food items. The poverty line used by the World Bank to compare income poverty among developing countries is $1 per day, measured in 1985 prices adjusted for differences in purchasing power parity. There are conceptual and practical problems that arise in using these hypothetical international prices to estimate poverty, but the practice is now widespread and the results widely quoted. The World Bank's international poverty line is intended to reflect the expenditure necessary to purchase a minimum standard of nutrition and other basic needs plus additional income necessary "to participate in the everyday life of society."

Having determined the unit of observation, the definition of income and the poverty line, one is then in a position to measure income poverty. The most widely used indicator of income poverty is the headcount measure (H), which is simply the number of persons with an income below the poverty line (q) expressed as a percentage of the number of persons in the society (n): $H = q/n$. The headcount measure indicates the incidence of poverty, i.e., it tells us how

widespread is poverty among the population.   The headcount measure sometimes is supplemented by the poverty gap indicator (G), which measures the depth of poverty as the difference between the poverty line income (z) and the average income of those below the poverty line (y_p) expressed as a percentage of the poverty line: $G = (z-y_p)/z$. The poverty gap indicator tells us how much, on average, the income of the poor would have to be raised in order to eliminate poverty. Although several other indicators of income poverty have been proposed, the headcount measure (H) and the gap indicator (G) in combination provide most of the information one needs to understand the incidence and depth of poverty.

International comparisons of income poverty

The World Bank has used its standard of $1 a day to estimate the incidence of income poverty in the developing countries as a whole, and in the various regions and individual countries. In Table 1 below we report the estimates for absolute poverty for the period 1989-94.

It can be seen at a glance that the incidence of poverty is highest in South Asia, where 45 per cent of the population has an income of less than $1 a day. Moreover, because of the large size of the population of India, Pakistan and Bangladesh, the absolute number of poor people is greater in South Asia than any other region of the World. Nearly half of all poor people live in South Asia. The next highest incidence is in sub-Saharan Africa, where 39 per cent of the people suffer from income poverty. These are the two regions where the incidence of poverty is above the average for the developing countries as a whole (32%). The incidence of poverty in all other regions is below the world average. Although per capita income (in PPP$) in Latin America is more than twice as high as in East Asia, the incidence of poverty is only moderately higher in East Asia. This reflects the fact that incomes are much more unevenly distributed in Latin America than in East Asia. Poverty in South-east Asia is rather low and uncommon in the Arab

region. Once again, the reasons differ. The Arab countries enjoy a very high average income which compensates for a very unequal distribution of income whereas the countries of South-east Asia enjoy a relatively more equal distribution of income which compensates for a somewhat lower average level of income.

Accurate measures of changes in the number of poor people over time are hard to obtain. It is clear however that progress often has been uneven and disappointingly slow. East and South-east Asia have been the most successful regions and in fact the incidence of income poverty has declined substantially since, say, 1965. Progress in South Asia has been slower and more erratic, but the downward trend in poverty is clear. There has been little change since 1965 in the Middle East and North Africa, and periodic wars and the aftermath of war have caused sharp conjunctural increases in poverty, as in Iraq and Iran.

Table 1

The Percentage of the Population Living in Absolute Poverty
($1 per day in PPP$)

	1989-1994
Arab States	4
Sub-Saharan Africa	39
Latin America and the Caribbean	24
South Asia	45
South-east Asia and the Pacific	14
East Asia	29
All Developing Countries	32

Sources: UNDP, Overcoming Human Poverty, UNDP Poverty Report 1998, New York, 1998, p. 17.

Much of sub-Saharan Africa has experienced a fall in per capita income since 1965 and a very substantial increase in the number of people living in poverty. Latin America, in contrast, has been subjected to violent fluctuations in output and average incomes and in the "lost decade" of the 1980s experienced a dramatic increase in the incidence of poverty. The transition economies of the former Soviet bloc have fared very poorly since 1989: average incomes have declined, the distribution of income has become more unequal and the extent of poverty has increased, often very substantially.

If one considers the low income countries as a whole, there undoubtedly has been progress in reducing income poverty in the last three or four decades. Not all regions, however, have participated in the progress and in some regions the gains are precarious. Moreover, in some countries the potential gains from growth in average incomes have been neutralized in part by increased inequality in the distribution of income, and as a result, the incidence of poverty has remained high.

Some of the relationships between income poverty, the average level of income and the distribution of income can be seen in Table 2. The Table contains data for ten countries which are broadly representative of the three major developing regions of Africa, Asia and Latin America. The total population of the ten countries is over 2.9 billion people, or 59 per cent of the population of the developing countries. The Table includes data on GNP per capita measured in purchasing power parity dollars, the Gini coefficient of the distribution of income and the proportion of the population in each country with an income of less than $1 per day. The reader is warned that the data may not be as accurate as one would wish, but the quality is sufficiently high to permit a few points to be made.

Latin America is noteworthy both for its relatively high average income and for the high degree of inequality in the distribution of income. Compared to the other two regions, Asia is noteworthy for a more equal distribution of income. Africa, apart from South Africa, is noteworthy for its generally low level of income per head. South Africa, however, is an exception: it resembles a Latin American country more than it does a country of sub-Saharan Africa. If one compares China (the largest country in Asia) with Brazil (the largest country in Latin America), it can be seen that the incidence of poverty in China is slightly less than in Brazil despite the fact that average income in Brazil is more than twice as high as in China. The high prevalence of poverty in Brazil is a direct consequence of the extraordinarily unequal distribution of income in that country. Indeed, of all the countries for which we have data, only Siena Leone has a higher degree of inequality.

Table 2

Income Inequality and Poverty

	Population, 1997 (millions)	GNP per capita, 1997 (PPP$)	Gini Coefficient	Percentage of Population Below $1 a Day
Africa:				
Egypt	60	3080	32.0	7.6
Ethiopia	60	500	40.0	46.0
Nigeria	118	860	45.0	31.0
South Africa	41	7190	59.3	23.7
Asia:				
China	1227	3070	41.5	22.2
India	962	1660	29.7	47.0
Indonesia	200	3390	36.5	7.7
Latin America:				
Brazil	164	6350	60.1	23.6
Mexico	94	8110	53.7	14.9
Venezuela	23	8660	46.8	11.8

Source: World Bank, World Development Indicators 1999, Washington, D.C., 1999.

Next compare Indonesia and Mexico. The headcount measure of poverty in Mexico is nearly twice as high as in Indonesia, yet the level of income in Mexico is 2.4 times higher than in Indonesia. Similarly, the incidence of poverty in South Africa is more than three times higher than in Egypt despite the fact that per capita income in South Africa is 2.3 times that in Egypt. Evidently, a high average income is not a sufficient condition for a low incidence of poverty. Conversely, even countries with a low per capita income can go a long way towards eliminating poverty if they have a relatively equal distribution of income.

Broader conceptions of poverty

The notion of poverty as an insufficiency of income has been criticized on several grounds. First, in practice, as we have seen, income poverty often has been reduced to undernutrition. That is, the poverty line has been set at that level of income which barely enables an individual or household to satisfy its calorie needs. The poor thus become defined as those whose consumption of calories is insufficient to provide adequate nutrition. This unidimensional or reductionist approach to poverty is believed by many to be too narrow a view. Second, per capita household income is thought by many to be an inadequate measure of well-being or deprivation, regardless of the poverty threshold that is used, because it fails to take into account the fact that a person's well-being depends not only upon her income or expenditure or private consumption but also on the availability of goods and services supplied by the public sector. Examples include primary and secondary education, basic health care and preventive medicine, communal water supply, public transport and, in some societies, housing.

Recognition that poverty is multidimensional and that deprivation can occur because of inadequate availability of public goods led the International Labour Organization in the 1970s to pioneer the "basic needs" approach. Under this approach, poverty occurs whenever people are

unable to satisfy their minimum needs for "basic" goods and services. These basic needs are somewhat arbitrary both as to the composition of the bundle of goods and services thought to be basic and as regards the threshold level at which a specific basic need is satisfied.

The bundle of basic needs might include, for instance, food, clothing, shelter, access to potable water, primary education, and a means of transport. This list might vary from one country to another, depending in part perhaps on what is required to participate in society without "shame". Similarly, the threshold for each basic need might vary across space and time, depending in part perhaps on the average level of availability of each item in the bundle in each society. A distinctive feature of the basic needs approach is that a person is deemed to be in poverty if any one of the basic needs is not satisfied. That is, at low levels of provision there is no substitutability among basic needs. More than adequate education cannot compensate for inadequate shelter, an excess of food cannot compensate for a deficit of clothing, and so on. Once a threshold minimum need is established for each component of the basic needs bundle, the elimination of poverty requires that each threshold be passed by every person. This feature of the basic needs approach, in common with the capabilities approach discussed next, represents a shift away from an orientation based on welfare to one based on rights and justice.

The basic needs approach, like the income poverty approach, is centred on commodities. That is, to be poor is to have an insufficiency of certain specific goods and services (unsatisfied basic needs) or to have an insufficient command over goods and services in general (an income below the poverty line). Income, or the commodities that income can buy, is however a means to an end, not an end in itself. Amartya Sen has argued that the ultimate objective is the enhancement of human capabilities, such as the ability to live a long life, to escape avoidable illness, to have access to the world's stock of knowledge and more generally, to lead the life of

one's choice. This shift in viewing commodities (and the growth of total output) not as ends in themselves but as a means to expand human capabilities led to the elaboration of the human development approach and the formulation of the Human Development Index by the United Nations Development Programme (UNDP). Just as GNP attempts to measure a country's total national output and income, so too the Human Development Index attempts to measure a country's achievement in terms of capabilities.

Within the human development framework poverty is conceptualized as deprivation within the "space" of capabilities. That is, to be poor is to be incapable of achieving certain minimum levels of capability. An attempt to translate this notion of poverty into operational terms has been made by UNDP, which has constructed a Human Poverty Index for developing countries (HPI-1).

The HPI-1 consists of three components, each of which attempts to measure an important capability deprivation. The first is concerned with survival, or the deprivation of life, and is measured by the percentage of the population not expected to survive to age 40. The second component is concerned with knowledge, or being excluded from the world of reading and communication, and is measured by the percentage of adults who are illiterate. The third component is concerned with economic provisioning, or an inadequate standard of living. This last component is measured as the average of three elements: (i) the percentage of people who do not have access to safe water, (ii) the percentage of people who do not have access to health services and (iii) the percentage of children under five years of age who are underweight.

The HPI-1 is then calculated, in effect, as a simple average of the values of the three major components. This index is intended to be interpreted as the percentage of the population of a country suffering from capability deprivation. It is therefore analogous to the headcount

measure of income poverty and it is interesting to compare measures of income poverty and human poverty. This is done in Table 3 below, for the same countries included in Table 2.

Table 3

Human Poverty and Income Poverty Compared

	Human Poverty Index, 1997 (%)	Income Poverty Headcount, 1989-94 (% below $1 per day)
Africa:		
Egypt	33.0	7.6
Ethiopia	55.8	33.8
Nigeria	38.2	28.9
South Africa	19.1	23.7
Asia:		
China	19.0	29.4
India	35.9	52.5
Indonesia	27.7	14.5
Latin America:		
Brazil	15.8	28.7
Mexico	10.6	14.9
Venezuela	12.4	11.8

Source: UNDP, Human Development Report 1999, New York: Oxford University Press, Table 4, pp. 146-8.

It can be seen at a glance that there is no consistent relationship between the two measures of poverty. In some cases, notably in Venezuela, Mexico and South Africa, the incidence of poverty seems to be broadly similar whichever indicator is used. In Venezuela, for example, income poverty affects 11.8 per cent of the population and human poverty affects 12.4 per cent of the population. In other cases, as in India, Brazil and China, income poverty appears to be much more severe than human poverty. The headcount measure of income poverty in India is 52.5 per cent whereas the HPI-1 is 35.9. In still other cases, human poverty appears to be

much more severe than income poverty. This is true in Egypt, Ethiopia, Nigeria and Indonesia. In other words, there is no guarantee that countries which are successful in reducing income deprivation will be equally successful in reducing capability deprivation, and vice versa.

There is however a problem in interpreting the Human Poverty Index that arises from the fact that the numerical value of the index is calculated from aggregate data on each of the components. Because of this, it is impossible to tell from the data the extent to which it is the same or different individuals who suffer from the three types of deprivation indicated by the three components of the HPI. This problem was pointed out to me by Prasanta Pattanaik.

The problem can easily be illustrated with the help of two charts. Assume there are three individuals in the society and three components of capability deprivation. In the first example, depicted in the chart below, the deprivation rate for each component is 33%, i.e., one person out of three suffers from each of the three types of deprivation. We also assume that two-thirds of the population suffers no form of deprivation while one-third, namely individual 2, suffers all three forms of deprivation. The HPI is 33 and correctly indicates that 33 per cent of the population experiences human poverty.

<u>Chart 1</u>

Capability Deprivation

Individual	Component I	Component II	Component III
1			
2	X	X	X
3			

In the second example we make the same assumptions as before except that we assume that each individual experiences one, but only one, form of deprivation. The deprivation rate for each component remains 33% and the HPI remains 33, but it is no longer true that only 33 per cent of the population experiences human poverty. Indeed if one believes that all capabilities must be satisfied to avoid poverty, then the poverty rate is 100%. This would be consistent with the basic needs approach and is what is meant by Amartya Sen when he says that capabilities are "co-realisable".

Chart 2

Capability Deprivation

Individual	Component I	Component II	Component III
1	X		
2		X	
3			X

Given that the data do not enable us to distinguish between the two extreme examples, and assuming that one accepts the principle of co-realisability, it is impossible to calculate the incidence of human poverty from the available information. That will have to wait until we have disaggregated data on capability deprivation by individuals. The best that can be done at present is to estimate a range within which the true figure must lie. At the lower end of the range is the deprivation rate of the largest single component. This coincides with the case illustrated in Chart 1, where there is a complete overlap among individuals of capability deprivation. At the upper end of the range is the sum of the deprivation rates of the three components, up to a maximum of

100 per cent. This coincides with the case illustrated in Chart 2, where capability deprivation is evenly spread among the population. The averaging procedure currently used to calculate the HPI is misleading and tends to understate the true incidence of human poverty.

Human development and the distribution of assets

It is evident from what has been said above that a more equal distribution of income would reduce the incidence of poverty whether poverty is conceptualized as income poverty or human poverty. Until recently it was widely believed that a redistribution of income would have only a once-for-all effect on poverty and if the redistributive measures reduced the rate of growth, in the long term the proportion of the population living in poverty might actually be higher than otherwise. Research in the 1990s however has shown that this conclusion is too pessimistic. Indeed the opposite seems to be closer to the truth: the empirical evidence indicates that there is a negative relationship between the initial degree of income inequality and the subsequent rate of growth. Hence the once-for-all impact of a redistribution of income is reinforced by an acceleration in the growth rate of income.

The distribution of income is strongly affected by the underlying distribution of productive assets, i.e., the distributions of natural, physical and human capital. It has long been known that a redistribution of land (and other forms of natural capital) can raise yields and improve efficiency in the allocation of resources. Recent research, in addition, has shown that there is an inverse relationship between land inequality and the rate of growth. That is, a redistributive land reform can be expected to raise the rate of growth. Thus, as with a redistribution of income, a redistribution of land can help to reduce poverty both through a positive impact effect and through longer term dynamic effects.

Broadly similar results are likely to follow from a development strategy which encourages the growth of small and medium sized enterprises. The structure of incentives in many countries is biased in favour of large enterprises (low interest rates, preferential tax treatment, import permits) and against small firms operating in the informal sector (onerous licensing formalities, police harassment, limited access to credit). More equal treatment and the removal of barriers confronting small and medium enterprises would result in a more equal distribution of physical capital, a higher productivity of investment and a pattern of growth which is more labour intensive, all of which would contribute to a reduction in poverty.

Human capital, however, is even more important than natural and physical capital. In fact there is a great deal of evidence which indicates that human capital contributes more to economic growth than either natural or physical capital, and there is some evidence that it contributes more than natural and physical capital combined. Furthermore, the benefits from human capital expenditure are larger, the more evenly spread is the expenditure. In education, for example, there is abundant evidence that the returns to education increase as one moves down the education pyramid from university to secondary and then to primary education. Thus a concentration of spending on primary and secondary education confers dual benefits: it raises human capabilities directly and it also does so indirectly through the effects of educational expenditure on increasing the rate of growth.

Similar arguments apply to health. Better health care, especially for the poor, increases human development directly. It also raises the productivity of labour and hence the level of income. In addition, there is evidence that improved health status, measured as life expectancy, stimulates investment in education. Longevity increases the incentive to invest in training, skill formation and education in general because it increases the length of time people can expect to

reap the benefits from their expenditure. Thus spending on health and education are complementary and self-reinforcing. Good health promotes learning and education in other ways too: it reduces the number of days children are absent from school and it increases the amount children learn while they are in school.

It is also quite possible that health status and investment in physical capital are complementary. The link between the two is the savings rate. Greater longevity increases the incentive to save in order to make adequate provision for one's old age. Greater savings, in turn, make it possible to finance a higher level of investment in plant and equipment and housing, thereby increasing the rate of growth. In these ways expenditures on health services for the poor can have multiple benefits: first, they increase human capabilities directly; second, because of complementarities with education (and other forms of human capital such as family planning), they increase human capabilities indirectly; third, because of the impact on labour productivity, they increase average incomes; fourth, because of the complementarity with savings, they increase the stock of physical capital; and finally, they also increase the rate of growth by accelerating the pace of accumulation of human and physical capital, thereby creating a virtuous circle which further reduces poverty and increases human capabilities. In other words, a more equal distribution of physical assets and an emphasis on human capital can generate a process of cumulative causation and a rapid decline in poverty.

Poverty and marginalization in rich countries

Although most poor people live in poor countries, the rich countries have not succeeded in eradicating poverty despite their very high average incomes and a panoply of policies designed to diminish hardship and increase economic security. There are state funded pensions to provide security in old age, unemployment compensation schemes to help those who are

temporarily out of work, child allowances to prevent children falling into poverty, paid maternity leave to enable mothers to withdraw from the labour force for a period without incurring a penalty, and so on. In addition, almost all rich countries have a universal health care system. This "welfare state" expanded steadily but unevenly throughout most of the 20th century, but in the United States there was some retreat in the 1980s and in Europe there was a reduced commitment to full employment combined with a leveling off of the welfare state. Even so, the state continues to provide a substantial package of entitlements to all members of society.

Nevertheless, poverty persists in the rich countries. The extent of poverty varies from one country to another as well as from one period to another, depending in part on the phase of the business cycle. This makes comparisons difficult. In addition, each country has its own poverty line. There is one study, however, using data from the mid-1980s, that enables us to compare the incidence of poverty in eight rich countries and to assess the effectiveness of welfare policies in reducing the incidence of poverty. The data are summarized in Table 4 below.

The unit of observation in the Table is household income per adult equivalent, where the first adult is given a weight of 1.0 and each additional person a weight of 0.5. The poverty line is 50 per cent of each country's median income adjusted for family size. Thus a relative concept of poverty is used rather than the more usual absolute poverty line. The poor are those who have less than half the median income in the country where they live.

As can be seen in the first column of data in Table 4, the incidence of poverty before transfer payments are taken into account varies from 15.6 per cent in Switzerland to 29.7 per cent in Sweden. The next column indicates the incidence of poverty after taking transfer payments into account. Sweden switches from being the country with the highest pre-transfer incidence of

poverty to the country with the lowest post-transfer incidence, namely, 5.3 per cent. The United

States has the most post-transfer poverty with 18.1 per cent of the population having less than

half the median income.

Table 4

Headcount Poverty Rates in Rich Countries, Mid-1980s
(percentages)

Country	Pre-transfer	Post-transfer	Percentage Reduction
Australia	21.3	10.8	49.3
Canada	21.0	11.0	47.6
Germany (West)	24.2	5.8	76.0
Netherlands	25.1	7.2	71.3
Sweden	29.7	5.3	82.2
Switzerland	15.6	7.4	52.6
United Kingdom	21.4	7.9	63.1
USA	23.4	18.1	22.6

Source: Nicholas Barr, "Economic Theory and the Welfare State: A Survey and Interpretation,"
Journal of Economic Literature, Vol. XXX, No. 2, June 1992, Table 5, p. 775.

Some countries are much more successful than others in using public policy to

reduce poverty. The last column in the Table shows that Sweden, West Germany and the

Netherlands were able to reduce poverty by 70-80 per cent whereas at the other end of the

spectrum, the United States was able to reduce poverty by only 22.6 per cent. The next worst,

Canada, was more than twice as successful as the United States (47.6%). These differences in

outcome reflect in part differences in the design of welfare programmes, but perhaps even more

important are differences in the commitment of resources. It is notable that the four English speaking countries in the Table, namely, the United Kingdom, Australia, Canada and the United States, have the highest incidence of post-transfer poverty and (along with Switzerland) the lowest state spending on public welfare (expressed as a percentage of GDP). It is quite possible that the English speaking countries have a common social philosophy and that this social philosophy differs in important ways from that of continental Europe.

The United Nations Development Programme has constructed a Human Poverty Index for rich countries (HPI-2) similar to the HPI-1 used for poor countries. The HPI-2 has four components: longevity (measured as the percentage of people not expected to survive to age 60); knowledge (the percentage of people who are functionally illiterate); a decent standard of living (percentage of people below 50 per cent of the median disposable personal income); and social exclusion (measured as the rate of long-term unemployment). The HPI-2 suffers from the same problem of interpretation as the HPI-1, but even so, it is interesting to compare the rates of human poverty among the rich countries and then to compare human poverty with income poverty. This is done in Table 5 for 10 representative high income countries in Europe, North America and the Pacific region in the 1990s.

Human poverty varies from a low of 7.0 per cent in Sweden to a high of 16.5 per cent in the United States. The English speaking countries (Australia, Canada, the UK and USA) plus Japan cluster at the top of the range while the continental European countries cluster at the bottom of the range. Once again, this probably reflects differences in social philosophy in the two groups of countries. Income poverty, measured in Table 5 in a relative sense as the population with less than half the median income, exhibits a wider range than human poverty. Germany has the lowest rate of income poverty (5.9%) and the United States the highest rate

(19.1%). Here, too, the English speaking countries and Japan have the highest incidence of poverty. If one compares human poverty with income poverty in the ten countries, it is striking that the incidence of human poverty is higher than the incidence of income poverty in all but two countries, namely, the United States and Australia. This is in contrast with the 10 low income countries included in Table 3, where in half the countries human poverty exceeds income poverty and in the other half the opposite is the case. Moreover, if one accepts our earlier argument that the averaging procedure used to calculate the human poverty indexes tends to understate the incidence of human poverty, then the patterns discernible in Tables 3 and 5 suggest that as per capita incomes rise it may become increasingly difficult to make continued progress in raising human development and reducing human poverty.

One reason for this may be the heterogeneity of the poor. The poor are not a homogenous group, in rich countries or in poor. They do not form a single class. They are not members of a single occupation. They do not belong to a single age group or ethnic group. The poor are a heterogeneous collection of individuals who have only one thing in common, their poverty. Their poverty, however, often results in social isolation and marginalization.

Estimates of poverty are published annually in the United States using an official income poverty line. In 1999 the poverty line for a family of four persons was $17,029. Using this standard, there were 32.3 million people living in poverty, or 11.8 per cent of the population. Most of the poor are white (68%), but the incidence of poverty among the white population (9.8%) was well below the national average whereas the incidence of poverty among African-Americans (23.6%) and people of Hispanic origin (22.8%) was about twice the national average and nearly two and a half times the incidence among whites. Women are particularly vulnerable. Poverty affects only 4.8 per cent of families headed by a married couple but 27.8 per cent of

female headed households. Children also are vulnerable. The incidence of poverty among children less than 18 years old is 16.9 per cent as compared to an incidence of 10 per cent among adults of working age and 9.7 per cent among those older than 65.

Table 5

Human Poverty and Relative Income Poverty Compared
In Ten Rich Countries
(percentages)

Country	Human Poverty, 1997 (HPI-2)	Income Poverty, 1989-94 (population below 50% of the median income)
Australia	12.5	12.9
Canada	12.0	11.7
France	11.9	7.5
Germany	10.4	5.9
Italy	11.6	6.5
Japan	12.0	11.8
Netherlands	8.3	6.7
Sweden	7.0	6.7
United Kingdom	15.1	13.5
USA	16.5	19.1

Source: UNDP, Human Development Report 1999, New York: Oxford University Press, 1999, Table 5, p. 149.

Thus it is obvious that poverty is not randomly distributed. Some groups are much more vulnerable than others. Those most at risk include the uneducated or workers with few skills, who find difficulty competing in the labour market; the ill and the handicapped, who can enter

the labour force only with difficulty; and the unemployed, who are deprived of a source of income in the absence of generous unemployment compensation. Education, health and employment policies – three pillars of the welfare state – thus play a central role in the struggle to eliminate poverty. Women and members of racial or ethnic minorities also are at risk, and hence policies to combat discrimination in all forms are essential in reducing poverty. The elderly once were at great risk, but state pensions have gone a long way in reducing hardship among this group. Today it is children in large families who are at greater risk and despite the decline in fertility rates in rich countries, more attention in future will have to be paid to the needs of children and young people. The homeless, drug addicts, petty criminals and other marginalized groups such as beggars form pockets of poverty which require specific remedies, but their problems often are symptomatic of failures of more general policies to provide skills, create jobs and generate incomes.

Some people experience poverty as a transient phenomenon, perhaps crossing poverty thresholds repeatedly as their circumstances change, say, because of temporary bouts of unemployment or because of episodes of illness in the family. Others experience poverty as part of the life cycle, perhaps during the period when they have lots of young children or when their working life has come to an end. Still others may be caught in a "poverty trap", experiencing simultaneously many forms of deprivation (poor education, ill health, labour market discrimination) which reinforce one another and create a vicious downward spiral or chronic distress. We know relatively little about the dynamics of poverty and the ways poverty traps can transmit poverty from one generation to the next.

Widespread poverty persists and the number of poor people in the world continues to rise, whether income poverty is measured in relative or absolute terms. The fundamental solution to global poverty is sustained and rapid economic growth combined with a reduction in inequality in the distribution of income. Few countries have satisfied this dual criterion for success. Much of sub-Saharan Africa has experienced negative growth of per capita income during the last thirty-five years and the Middle East and North Africa have stagnated during this period. Latin America suffered a sharp decline in average income during most of the 1980s and the transition economies of the former Soviet Union and much of Central and Eastern Europe have a substantially lower income today than they did at the end of the 1980s. In addition, there has been a tendency for inequality in the distribution of income to increase in the majority of countries for which data are available, and this has occurred in countries where incomes have fallen (e.g. Russia) as well as in countries where incomes have increased rapidly (e.g. China).

In many countries there is a need, first, to create a structure of incentives that is not biased against the employment of labour and, second, to strengthen policies which temper the consequences of long term unemployment (particularly in rich countries) or create productive employment (e.g., on public works projects in low income and transition countries). Relative factor prices – particularly real interest rates, foreign exchange rates and trade policies, and the price or cost to employers of hiring workers – often are biased in favour of capital intensive methods of production and, in effect, discourage job creation. Poverty is aggravated by discrimination in the labour market which puts some groups at a competitive disadvantage because of their sex, ethnicity, religion or language. Unequal treatment of different groups (or horizontal inequality) may take the form of wage discrimination for the same or comparable

jobs, or differences in access to well paid jobs for people with similar qualifications, or differences in access to educational and training institutions which enable people to acquire the qualifications necessary for a well paid job. Malfunctioning labour markets result in a low output-elasticity of employment and are a major cause of poverty among the working poor and the unemployed.

Well functioning markets are unlikely to be able by themselves to eliminate poverty. A relatively equal distribution of natural, human and physical capital also is important. In many developing countries a reform of land, water and forest rights would directly benefit the poor. Land reform in this broad sense deserves to be high on the agenda. So too do policies to promote small and medium sized enterprises, e.g., by correcting market failures and improving access to credit by small borrowers. Redistributions of natural and physical capital are not commonly espoused today, although they once figured prominently in policy debates. In recent years there has been an emphasis instead on the privatization of state owned enterprises by transferring property rights from the public to the private sector. This asset redistribution, however, has made the distribution of wealth more unequal and made it more difficult to eliminate poverty. This is especially true in some of the transition economies where there has been a wholesale transfer of assets to the elite (or former nomenklatura) at prices well below market value.

One cannot of course redistribute the stock of human capital because it is embodied in human beings, but a redistribution of the flow of expenditure in favour of human capital formation would help to reduce human poverty directly and income poverty indirectly through its impact on the growth of aggregate output and income. An equitable investment in education, basic health services, nutrition and food security programmes is an essential component of a poverty reduction strategy.

Finally, some transfer payments will be essential to protect the most vulnerable members of the population, even in the lowest income countries. In particular some measure of protection will be necessary for those who are economically inactive and for those who are unable to participate in the labour force. Examples of vulnerable groups include the elderly, young children, the disabled and the unemployed. Humane treatment of those who are unable to help themselves is perhaps the clearest indicator that society is seriously engaged in the struggle to eradicate poverty and enable all people to live with dignity.

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