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Marginalization in a Globalizing World:

Some Plausible Scenarios and Suggestions for Measurement

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I. Introduction

One curious feature about the debate on globalization is that those who favor it see no negative fallout from globalization and those who oppose it see no silver lining. One can see what lies behind this polarization. It is the result of neither side wanting to hand over to the other any argument that can be used to oppose its agenda. But while this strategy of not giving away on any front may be desirable for college debating competitions, it does not augur well for scientific inquiry. Take for instance the side of the globalizers, those who believe that on balance globalization is a desirable process. By refusing to look at the negative fallout, these advocates of globalization do great disservice to economic policy, since they dampen the effort to counter the negative effects.

The present paper is rooted in the belief that globalization creates enormous opportunities, through greater trade and the flow of capital to where it is most productive, and that its benefits typically outweigh the costs. But the net effect being positive does not mean that it has no negative effects. It will be argued here that globalization does have a tendency to marginalize some people and regions. Such claims are often made by the opponents of globalization but is usually left at the level of hand-waving. I will try to give some concrete shape to how globalization has a concurrent tendency to marginalize people. Once this process is properly understood, we could think of policy measures to counter the process and spread the benefits of globalization .

After discussing the fallouts of globalization in this paper I will go on to discuss how we should measure a nation's economic well-being, drawing on my earlier work (Basu 2001), which is particularly sensitive to poverty and marginalization.

II. Globalization and Marginalization

There is a large activist literature arguing that the current process of globalization will marginalize and even hurt certain sections of the population, especially those who are already on the fringes. Since some of the writers who say this are habitually pessimistic about all changes, we must ask if there is good reason to believe this to be true. The answer in this case is yes. There are two broad routes through which globalization tends to generate forces of marginalization.

First, consider poor fishermen who use simple boats, like the catamaran in Kerala, to catch fish in the seas close to the coast. Suppose that globalization occurs and this brings in larger fishing companies, domestic or multinational does not matter, into the business. These companies, using

sophisticated ships, go deeper into the sea and make larger catches. This is likely to increase the national income of this country but may well leave the coastal fishermen poorer, because their catch becomes smaller as a lot of the fish are now netted in the high seas.¹ This is a case of impoverishment through the “resource route”.

There are other more indirect ways in which the resource route can leave people worse off. An increase in national income and the use of advanced technology can cause a worsening of environmental conditions. Poor farmers and fishermen, who get no direct benefit from globalization and technological modernization in the country and neither suffer any loss of income, may, nevertheless, see their overall standard of living deteriorate, since the environment is now worse and, unlike the direct beneficiaries of modernization and open trade, they do not have higher incomes as a result.

Even if there is no impoverishment of resources and no environmental deterioration, there may be a more complex “market route” through which some sections of the population lose out. Consider a fisherman who owns a pond, catches x kilograms of fish each year, keeps some of it for his own consumption and sells the rest in order to buy other necessities of life. Suppose that he decides that he does not want to be richer and so becomes complacent that, even if the rest of the world modernizes and globalizes, he has nothing to worry because he will continue to do what he has always done. Now suppose technological advancement takes place in producing or catching fish, or for that matter, in the production of any other good that is a substitute for pond fish. Let us assume that environmental conditions remain unchanged. Since this man continues to catch x kgs of fish each year, at first sight it seems that his welfare will remain unchanged. But note that, as the world production of fish or fish substitutes increases, the price of fish will decline. So now when he tries to sell a part of his catch and buy other goods, he will find that he cannot buy enough of the latter. So his real income will have gone down.² This is an important causation, which has seen large sections of people in certain traditional sectors get marginalized by the forces of globalization and technological progress.

1. Stiglitz (1998) makes a more general point when he argues that while free trade can be a powerful instrument of progress, it can fail to create growth if the developing country does not fulfill certain institutional priors, such as having a structure that promotes domestic competition.

2. In case there is technological advance occurring in several sectors, what this argument needs is that technological advance in the production of fish and fish substitutes be greater than in the production of other goods. This causes very little loss of generality, since, if the technological advance in the latter sector were greater than in the fish industry, then those who produce goods, which are substitutes for the products of these other sectors but use traditional technology will now get impoverished.

This may be called impoverishment through the “market route”. Of course, in principle, it is possible to compensate the losers since the total output rises, but that seldom happens.

A closely related problem occurs by virtue of the price changes that are inevitable with globalization and the opening up of an economy. A farmer who is used to facing a steady price (because of government protection) may suddenly have to cope with the fluctuations in the global price of the good he produces. This may prompt major changes in cropping patterns and bring with it the inevitable adjustment costs.

Another market-route problem occurs when footloose, global companies become major players in world production. By threatening to take their business to another nation, they can strike bigger bargains with workers in each country, than they would have managed when firms did not cross international boundaries easily. This is closely related to the issue of international labor standards, which I have discussed elsewhere (Basu 1999).

If we are to push for development while minimizing these marginalizing tendencies of globalization and technological advance, we need to measure development in ways that points are deducted severely for any increase in marginalization. In the sections that follow, we discuss such a method of measuring development.

III. Measuring Development

The development debate appears to be, at last, coasting toward a consensus: Developing nations must not focus their energies on the growth rate of their gross domestic product (GDP), net national product (NNP), gross national product (GNP) and the like, but instead try to achieve “human development” or “comprehensive development”. A remarkable feature of these new goals is that everyone seems to be supporting them, though few know what the terms mean. This is in some sense understandable though. First, the terms “human” and “comprehensive” are so enticing that no one can proclaim to be against these without sounding absurd and boorish. And given that the aim of these new objectives is to go beyond narrow economic objectives to larger social and political goals, some vagueness in the target is inevitable. Attempts to give these goals sharper focus, as in the United Nations Development Program’s (UNDP) construction of the human development index, have inevitably led to the criticism of arbitrariness. But even on this one may argue that it is better to be somewhat arbitrary but have your broad objective right, than to have a sharply defined but morally indefensible objective.

One of the aims of this paper is to join this debate somewhat idiosyncratically. After a discussion of the concept of development as it has evolved over time in section IV, it goes on to propose and evaluate some particular goals that countries should adopt. Section V suggests some perspectives on measuring and evaluating the progress of nations, without claiming that these measures should be the end all of what nations strive to achieve. Instead, the measures that are suggested should be part of the larger goal of human development.

IV. The Idea of Development

By leafing through some pages of *Forbes* magazine and some recent *World Development Reports* it is easy to compile the following facts. The total income in 1998 of Hollywood's richest 50 individuals exceeds the total income of Burundi's entire population of 7 million. If Bill Gates decided to encash the *increase* in the value of his total assets that occurred over the last year and consume it, he would be able to consume more than the total annual consumption of the 60 million people of Ethiopia. These numbers reflect both the phenomenal scope for wealth and economic well-being that the modern world makes possible and also how easy it is for this enormous potential to bypass large masses of humanity. The fact that even today, in this unbelievably rich world, large numbers of children have to work 12 to 14 hours a day to enable their families to barely survive, that in many countries more than 100 babies die in the first year of their lives from among every 1000 live births, that in many nations more than half the population does not have access to electricity or safe drinking water, shows a massive failure in not our scientific achievements (because technically we can provide for all) but in our social and political institutions. Have we had our goals right? Have we striven too hard for narrow economic amassment, without paying adequate attention to basic human well-being and equity?

For long stretches of history a nation's achievement was measured by its territorial control. So progress was equated with sending out armies and armadas. Though there was always trade that could create value simply by altering the ownership of goods and services, a large part of the global game was viewed as a zero-sum one. As a consequence, development, which connotes advance and progress, was not an important part of human agenda. The aim of a state or a kingdom was to have peace and general prosperity; expansion meant encroachment into what belonged to others. One can see this in one of the earliest books on economics, *The Arthashastra* by Kautilya, which was

written around 300 BC. Despite its attempt to be a comprehensive treatise on statecraft and the economic management of a nation,³ its obsession is with order and static efficiency, on how the king should have a well-defined set of laws and punish anybody who disrupts the functioning of society. There are long tracts on the management of state finances, on how profligacy must be avoided, on fiscal discipline, on effective tax collection. The concern for budgetary discipline is so great that, in times of financial shortage, the *Arthashastra* (p.272) permits the king to exploit the gullibility of the masses and raise funds by “building overnight, as if it happened by a miracle, a temple or a sanctuary and promote the holding of fairs and festivals in honour of the miraculous deity” and (p.273) “using secret agents to frighten people into making offerings to drive away an evil spirit”. Despite such attention to detail and its range of concerns, which trespasses the boundaries of economics, politics, and sociology (not to mention morality), what is surprising about this classic work, viewed from the edge of the 20th century, is how little it dwells on *progress* or growth of aggregate material well-being. This was in general true of the early view of the good life.

With the growth in trade and breakthroughs in science and technology, of which in theory there need be no end, this has changed. Our goals have moved away from purely tangible wealth (like land and gold) and from static well-being. One can have a large income, despite very little control not just over land but anything tangible. By sending one’s capital to distant lands one can partake in the success of faraway places without the aid of soldiers and guns. The discovery of a new technology in one laboratory in one city can spread to faraway lands. In principle, this prosperity can be there for all and greater income over time can accrue to all. Yet that has not happened. For a People’s Republic of China, whose per capita income grew at the astonishing rate of 6.7 percent per annum for 30 years starting from 1965, there is a Sierra Leone whose per capita income fell during the same period at the rate of 1.4 percent per annum. For a Chile, whose per capita income grew at the more sober rate of 1.6 percent over the same 30 years, there is Ghana whose per capita income declined at the rate of 0.9 percent. Negative average growth over the last 30 years was also observed in Bolivia, El Salvador, Madagascar, Senegal, and several other nations (World Bank 1998). These anomalies raise a host of new questions concerning development and distribution. What policies

3. *Arthashastra* literally means “the doctrine of wealth”.

should Third World nations follow? What policies should global organizations, such as the World Bank or World Trade Organization follow or advocate?

With the rise in the popularity of measuring and keeping tab on national incomes, which is clearly a phenomenon of this century, progress and development had also come to be measured in terms of the GNP or the per capita income of a nation. This intellectual tradition with its limited objective helped nations focus their energies narrowly and must have played a role in the rapid growth of national incomes. But it also brought in its wake, dissension and disappointments. To maximize income growth, environmental considerations were left to languish in the sidelines; often the standard of living was allowed to slide; large inequalities between the classes, regions, and genders were ignored; and poverty was tolerated more than it should have. Fortunately, that has been changing. A large number of economists have argued the need for moving beyond this narrow goal.⁴ This is precisely the line along which Stiglitz (1998, 31), for instance, has contested the so-called “Washington Consensus”: “The Washington consensus advocated use of a small set of instruments ... to achieve a relatively narrow goal (economic growth). The post-Washington consensus recognizes both that a broader set of instruments are necessary and our goals are also much broader.” And Stiglitz goes on to rightly emphasize the need to focus attention on better income distribution, environment, health, and education.

In a series of influential publications, Sen (1983, 1985, 1999) has contributed to the broadening of the goals of development. He has argued the need to move away from the commodity fetishism of the earlier approaches to the evaluation of development and progress in terms of functioning and capability. A functioning is what a person manages to do or be. A good can enable a functioning but is distinct from it. A bicycle is a good, whereas being able to transport oneself rapidly to work is a functioning. And several persons, each owning a bicycle, may be able to achieve very different kinds of functioning depending on their other attributes, like how well-fed they are, their morbidity statistics, and so on. As Sen has pointed out, this approach has its roots in an intellectual heritage that go back to Adam Smith and Karl Marx (see discussion in Basu and Lopez-Calva 2001) and was lost in the increasing fervor of evaluating the progress of nations in terms of incomes, which we have seen in this century.

4. For a lucid and comprehensive account of the changing objectives of development over the last 50 years see Thorbecke (1999).

This broader approach to the concept of well-being and progress has generated two kinds of literature. The first formalizes this still somewhat nebulous idea (see, for instance, Atkinson 1995, Herrero 1996, Romer 1999, Suzumura 1999). The second tries to put it into operation, e.g., Dasgupta and Weale (1992), Brandolini and D'Alessio (1998), and the various *Human Developments Reports* of the UNDP. Since in this paper I am concerned with some of the more practical and policy-oriented issues of development goals, and the modifications I suggest are a takeoff on that, the next section begins with a statement of the method used by UNDP.

V. Quintile Income, Quintile Growth

The UNDP, beginning with the *Human Development Report 1990* (see UNDP 1990), has argued strongly for an indicator of a nation's progress, which is a weighted average of (i) the nation's literacy and educational achievement, (ii) the citizen's life expectancy, and (iii) the nation's per capita income. More recently, the World Bank has argued for widening our goals so as to go beyond the traditional macroeconomic goals, such as national income and fiscal health and balance of payments stability, and to include "societal development", including basic human rights, access to a just legal system, literacy, and good health (see Stiglitz 1998a and Wolfensohn 1999). Streeten (1994) has tried to bring order into these growing objectives by classifying them into two categories: resource development and humanitarian progress, and giving six reasons why we should be interested in human development (HD). These are, briefly: (i) HD is desirable as an end in itself; (ii) HD can promote higher productivity and so enhance human command over goods and services; (iii) HD reduces human productivity, which is generally considered desirable; (iv) HD is good for the environment; (v) HD can contribute to a healthy civil society and democracy; and (vi) HD can promote political stability.

Most of these objectives are however related to the objective of equity and poverty reduction, of people being included in the development process rather than being excluded or abandoned. Thus Streeten points out how the poor are not just victims of environmental degradation but often its cause, and how HD promotes a healthy civil society by improving the lot of the poorest people and making them feel included.

This suggests a natural correction for the way we evaluate different economies. Essentially this says that, in evaluating an economy's state or progress, we must focus primarily on how the poorest people are faring. A first cut at doing this, and that is the criterion that I want to advocate in this

section, is to look at the economic conditions of the poorest 20 percent of the population. In other words, instead of bothering about the per capita income of the nation, we should be concerned about the per capita income of the bottom quintile of the population. Likewise, instead of equating a country's progress with the growth rate of per capita incomes in general we should look at the growth rate of the per capita income of the poorest 20 percent of the population.

In recommending the use of these measures and, therefore, commending these as goals of development, I am not joining issue with the advocacy of noneconomic goals, which has gathered strength in recent years with the publication of UNDP's annual *Human Development Reports*, and the World Bank's new interest in "comprehensive development". My suggestion is not meant to be a denial of the larger aims of trying to achieve political stability, environmental goodness, and a higher general quality of human life. In understanding this recommendation two factors have to be kept in mind. First, *to the extent that we do look at income and income growth*, I am suggesting that we should instead look at the per capita income of the *poorest 20 percent* (henceforth, "quintile income") and growth rate of the per capita income of the poorest 20 percent (henceforth, "quintile growth rate") of the population. Secondly, these quintile objectives are likely to correlate better with other noneconomic indicators, such as environmental conditions and social stability.⁵ This is for the reasons that Streeten has suggested, as mentioned above (see also Aturupane, Glewwe, and Isenman 1994).⁶ Thus, even when we decide to play the dismal scientist and focus on income, if the focus is on *quintile* income, we will automatically capture some of the social indicators emphasized in broader notions of human development.

Before proceeding further it is useful to write down some of the definitions formally. Let us define an *income profile* of a country with n persons as a vector, $x = (x_1, x_2, \dots, x_n)$, of non-negative numbers, such that x_i denotes the income of person i . Without loss of generality, it will be assumed that, if x is an income profile, then $x_1 \leq x_2 \leq \dots \leq x_n$. This simply entails renaming the citizens so that the poorest person is named person 1, the second poorest person is named person 2 and so on, with ties being broken arbitrarily. Since populations can vary, we will for explicitness, use $n(x)$ to denote the number of elements in x . Now, let $t(x)$ be the largest integer r such that $r/n(x) \leq 1/5$.

5. One cannot deny though that for certain kinds of social problems, such as crime, the crucial variable may be the *gap* between the per capita incomes of the richest and the poorest people in a society.

6. A similar exercise that broadened the idea of human well-being to more explicitly take account of political and civil liberties was undertaken by Dasgupta and Weale (1992).

Given a country with an income profile x , the *quintile income* of the country is denoted by $q(x)$, which is defined as follows:

$$q(x) = [x_1 + \dots + x_{t(x)}] / t(x).$$

Suppose a country's income profile changes from x^t , in period t , to x^{t+1} , in period $t+1$. Then the *quintile growth rate*, call it g , of this country between years t and $t+1$ is defined as:

$$g = 100[q(x^{t+1}) - q(x^t)] / q(x^t).$$

This criterion for assessing the *economic* performance of an economy stems from a combination of normative and pragmatic considerations. Suppose one looks at the gross inequalities of income that prevail in the world as suggested by the few striking examples cited at the start of this section. A question that the lay person often asks, even though it may not arise in discussions among professional economists, is whether there is a case for limiting the incomes of the richest people. It seems to me that the answer to such a question should depend most crucially on what such a policy would do to the poorest people? It is indeed a shame that Bill Gates earns so much more than the average person in Burundi and, for that matter, in the United States. But if it were the case that trying to curb Bill Gates' income would cause the poor people to be worse off, then there would be no case for such a curb. Not only in distributional questions such as this but in deciding on any economic policy, it seems morally appealing to check on what the policy change will do to the poorest people.⁷ This is the normative consideration.

One may legitimately ask if it is reasonable to hold up the progress of a society's better-off segment of the population, because of the bottom quintile, which may contain a disproportionate amount dysfunctional individuals. There are several possible responses to this. First, thanks to a variety of market failures, a society's bottom quintile is likely to contain not just dysfunctional individuals but also many talented people, whose talents are not realized and nurtured because of limited access to education and credit. Second, even for the dysfunctional people there is a moral case for transferring direct support to them by taxing the rich. Of course, if the tax becomes too large and therefore inefficient, the society in question will do badly in the long run; so by the criterion of the long-run interest of the bottom quintile itself such a policy will turn out to be undesirable. So what is at-

7. Answering an interviewer's question about what is a "successful" economy, Sen (*Chicago Tribune* 1999) pointed out: "This concerns how the worst-off members of society share in that society. Neglect of people at the bottom of the ladder would indicate a failed economy."

tractive about this criterion is that it sets limits to how much government should try to redistribute wealth and income to the poor through a self-referential calculation, which looks at the long-run interest of the poor.

While Rawls (1971) in his abstract models could focus attention on *the* worst-off person, in reality we seldom know who the worst-off is. Indeed, thanks to the earnings from the informal sector, income data for the poorest persons is very difficult to collect. However, most nations do provide information on the income or expenditure share that goes to the poorest 20 percent of the population. And so the suggestion that we concentrate on the poorest 20 percent is the pragmatic part of the recommendation.

Note also that designing policy by focusing attention on the poorest 20 percent has the advantage that one cannot totally ignore the effect on people outside this group. This is because if others fare too badly they will become part of the poorest 20 percent and so will automatically come into focus. For this same reason, raising the quintile growth rate can never mean ignoring the overall growth rate of the country totally. For certain periods of time a positive quintile growth rate can occur together with negative per capita income growth rate. But if that happens for too long, there will be perfect equality of income in the country and at that point the per capita growth rate will coincide with the quintile growth rate. For this reason, the criterion being suggested here is distinct from that of mere poverty reduction. The objective of reducing poverty satisfies the property of satiation, that is, it is a self-liquidating objective: once poverty is removed there is nothing more to strive for. On the other hand, the aim of improving the lot of the poorest 20 percent can never be satiated. It gives us a moving target.

The relation between this criterion and inequality reduction is more complicated. If a society is locked in a zero-sum game, then improving the condition of the bottom quintile of society is also to reduce inequality (for reasonable definitions of inequality), since in a zero-sum society one has to take from Peter to give to Paul. On the other hand, as already discussed allowing some people to become richer may be essential to enable the bottom quintile of society to do better. In such situations, my criterion will tend to exacerbate inequality. One may of course, bring in a special inequality consciousness by requiring that inequality reduction should be a lexicographically secondary objective. That is, if there were two policies that leave the quintile income same but one of them lowers inequality,

then we should choose the latter. In general the principle worth upholding is that equality is a desirable objective as long as it does not occur at the expense of the poorest people. If some aggregate welfare has to be sacrificed for greater equality, that is worthwhile, but if poverty has to be increased in order to have greater equality, then the greater equality is not worth it.

Measuring welfare in terms of the welfare of the bottom quintile of society also has the advantage of satisfying the criteria of anonymity and weak Pareto principle. In other words, if two societies were such that one can be made to look just like the other through a permutation of the individuals, then under my criterion the two societies would be judged as equally good; and if everybody's income rises, then this will be considered a better society according to this criterion of evaluation.

There are, however, some desirable axioms that the quintile measure does not satisfy. One such axiom is what I will call the "weak transfer axiom". This says that when a fixed sum of money is transferred from a rich a person to a poorer person who also happens to be in the bottom quintile of society, such that the income ranking of people remains unchanged, the new income profile thus created should be considered socially superior to the old one. It is now easy to see that when money is transferred from a person above the bottom 20 percent to someone in the bottom quintile, the quintile income will rise. However, when the transfer takes place from a person in the bottom quintile to someone poorer, the quintile income remains unchanged. Hence, the quintile income as a measure of welfare violates the weak transfer axiom.

This weakness may be rectified by using an index which I shall call the rank-weighted quintile income. This is essentially an ordinal index that penalizes a country if, within the poorest 20 percent, income is distributed in favor of the relatively rich. Let x be an income profile. Then the rank-weighted quintile income (RQI) is denoted by $\hat{q}(x)$ and defined as follows:

$$\hat{q}(x) = \frac{\sum_{i=1}^{t(x)} (t(x) + 1 - i) x_i}{\sum_{i=1}^{t(x)} (t(x) + 1 - i)}$$

$\hat{q}(x)$ is the weighted average of the incomes of the poorest 20 percent with the weight for the poorest i th person's income being given by $t(x) + 1 - i$. Hence, the poorest person gets the highest weight, $t(x)$, and richest person in the bottom 20 percent group gets the lowest weight of one.

By rearranging terms the above equation can be rewritten as:

$$\hat{q}(x) = 2q(x) - \frac{2\sum ix_i}{t(x)(1+t(x))}$$

One can proceed in this vein and create variants that are more complex. These more nuanced measures may be pursued in the future for more sophisticated measurement of welfare based on the general idea that the welfare of a society ought to be equated with the welfare of the poorest people; but to spend more time on these here will distract us from our present objective. So let me turn back and, from here onward, focus on quintile income and quintile growth.

There are some changes in welfare criteria, which may be important notionally but which make very little actual difference when put into practice. This possibility prompts me to ask: If international organizations displaying comparative income and growth information, such as in the World Bank's *World Development Reports*, instead give data on quintile income and quintile growth, will this make in important changes to rankings? If not, then the whole exercise would be academic and not of much consequence from the practitioner's point of view. It is however easy to see that the changes in rankings could be quite sharp. Table 1 shows the relative performance of a group of nations using the criteria of income and quintile income.

Table 1 takes a selection of 40 countries, which includes the world's richest ten nations and poorest ten. There was one handicap in doing the calculation, since for most nations the share of income going to the bottom 20 percent is not available on an annual basis. I therefore, use the latest available data on income shares. The figure in parenthesis in the second column gives the year from which the share data is obtained. Subject to this caveat, it is interesting to see how large a difference the shift from per capita income to quintile income makes. Switzerland, which was the richest nation in terms of per capita income, drops down to below Norway and Denmark. The United States, which was the fourth richest country, drops to below all the other nine richest nations. Among poor nations, Sierra Leone's per capita income of US\$160 is low enough, but its quintile income is a shocking US\$9. The South Asian countries are very poor but they do relatively better viewed through the lense of quintile income.

It is one thing to present data and information on the bottom quintile of societies (as this section urges), and another to actually design policy and set development goals. When we move on to designing policy, there are two issues that crop up that I want to address. First, there is the trade-

off of economic well-being and other indicators of welfare; second, we have to worry about conflicts between global goals and the goals of nations. The latter takes us into some new analytical territories concerning strategic issues in policy making and conditional morality. Let me first take up the matter of trade-off between different goals since I have relatively little to say on this, and so I want to put it aside and concentrate on the latter.

Given the recent effort to make economists, international bureaucrats, and policymakers aware that “there are things in life that matter, apart from income and wealth”, it is easy to believe as if the focus on income was always the principal focus of nations. But, as was mentioned in the previous section, that is not so. Classical writers had talked about the significance of a good quality of life in general, and this typically goes beyond material plenty. Adam Smith in a letter to Lord Carlisle, written on 8 November 1779, wrote about how Ireland could make greater progress: “It wants order, police and a regular administration of justice both to protect and to restrain the inferior ranks of people, articles more essential to the progress of industry than both coal and wood put together. ...” (Mossner and Ross 1987, 243). In discussing the alienation of labor, Marx (1844) stressed how a life in which only one’s material wants are met is animalistic; freedom to choose being an essential constituent of good human life. As mentioned earlier, these traditions, via modern formalizations, have influenced the construction of the human development index.

Before proceeding further one question worth asking is this. Even though the need to broaden our goals of development, as suggested in the *Human Development Reports*, has great normative appeal, is there a case for constructing a single index out of a composite of varied indices? While it is true that such an index can have (and indeed has had) the desirable effect of mobilizing popular opinion, its conceptual underpinnings are questionable. Some of the weaknesses of aggregating over diverse indicators of the quality of life has been rightly questioned by Ray (1998). There is another problem with the use of such aggregate measures, which has not always been noted. Let us suppose that we take all the variables that are worthwhile and construct a strictly concave welfare function in which these variables enter as arguments. For simplicity we often use a linear aggregator, such as the human development index, but clearly as we have too much of one variable, we would expect the weight on that to decrease. Hence, the strict concavity is natural. What I want to argue is that if we use such an aggregate notion of welfare and do cost-benefit analysis to determine which projects are desirable, we are likely to run into important flaws in our decisionmaking.

Note that in standard treatments of cost-benefit analysis or project evaluation it is considered unimportant what the project is actually all about. Whether it be a school or a dam the same method of analysis is supposed to apply. This would be fine if all projects were fully specified, and alternative courses of action open to a nation. But in reality projects do not come in that form. Separate projects come up one at a time and each is typically evaluated separately. And therein lies the problem of evaluating all projects against one aggregate measure of welfare. To see this, suppose that welfare depends on only two variables, income and literacy, and the welfare function is strictly convex. Hence, the indifference curves (or more precisely the superior sets) in the income-literacy space are strictly concave. Suppose there are two projects: a school and a dam. The former generates two units of literacy and causes a drop in one unit of income, whereas the latter causes a rise in two units of income and a drop in one unit of literacy. It is entirely possible that if each of these projects is evaluated individually (as they usually are in reality) *by the yardstick of this all-embracing welfare function*, each will be rejected, though the combination of the two projects is clearly desirable.

What this suggests is that projects will either have to be bunched up together and evaluated all at one go or we must evaluate different projects against different yardsticks. Since it is virtually impossible to conceive all projects all at once, we are forced to rely on the latter course. In other words, we must evaluate a school for what it does to schooling and literacy. If it contributes a lot to literacy without “too much” damage to other things, it must be considered desirable. Likewise a dam may have to be evaluated in terms of what it does mainly to income. This is not a well-defined rule for project analysis (since here the worth of a project depends on what other projects are *likely* to come up in the future, for which there may be no hard information at the moment), but this is close to what policy planners, through their intuition, tend to do. In this case the policy planners may be right.

To reject the use of an aggregated index is, however, no reason to reject the importance of the components of an index. One way of capturing this is to look at a *vector* of a nation's achievements, leaving the exact trade-offs one considers reasonable to be determined at the time of specific decisions, and perhaps varied depending on the context. What this section has argued is that an important component of this vector should be the quintile income. This is data that international organizations, such as the World Bank and the UNDP, should make widely available.

In addition, one can take the spirit of this proposal further and focus on the performance of the bottom 20 percent of various dimensions of well-being, such as life expectancy and various health indicators. Concerning literacy, one has to be more innovative, because whenever a country has less than 80 percent literacy rate, the least literate quintile will be completely illiterate and so there will be little to distinguish between most developing nations on this score. In a recent paper, James Foster and I have argued that there are two kinds illiterate persons: an “isolated illiterate”, who is an illiterate who lives in a household consisting of all illiterates, and a “proximate illiterate”, who is an illiterate who lives in a household that has at least one literate person (Basu and Foster 1998). We argue that an access to a literate person, as a proximate illiterate would have, can relieve the darkness of illiteracy nonnegligibly.⁸ Thus a nation in which the literacy rate is 50 percent by virtue of half the members of each household being literate is much better off than another nation in which 50 percent of the people are literate and 50 percent are isolated illiterate. An implication of this is that, if we were to start bottom up, as the quintile approach would require us to do, in devising literacy programs, we would first start with the isolated illiterates.

One reason why individual nations do not give adequate attention to quintile incomes, environment, education, and minimal labor standards, is that in the rough and tumble of international competition, they find little room for such soft targets. Just as, according to one theory, firms that do not maximize profit risk getting wiped out by the process of evolution, nations fear that to keep afloat in the global economy, they must try to achieve higher growth. Thus a part of the problem is not of persuading that quintile income matters, the environment matters, and so on, since not too many national leaders will disagree with these *in principle*, but to create global institutions that make it possible for countries to pursue these goals. This requires us to understand why even when each country wants to pursue a certain goal, in the strategic environment of the global economy they may fail to do so. That is the subject matter of the section that follows.

8. An empirical study by Basu, Narayan, and Ravallion (1999) based on individual income and literacy data from Bangladesh confirms the enormous externalities of having a literate person at home. Illiterate persons, who have literate members at home, seem to earn systematically more than isolated illiterate persons. Gibson (1999) finds confirmation of the same in his study of nutrition in Papua New Guinea.

VI. A Remark on Policy

Globalization, I argued at the start, creates opportunities for all. By taking advantage of the gains from trade and by channeling capital to where it is most productive, it creates wealth in ways that were inconceivable even a few decades ago. However, what this implies is that globalization gives rise to a *potential* Pareto improvement. But a potential Pareto improvement is compatible with some groups being marginalized and even becoming worse off in absolute terms. If, however, we measure progress in terms of the quintile measures described above, then a potential Pareto improvement will not be cause for celebration unless it translates into progress for the poorest people.

Take the case of India since 1992. In terms of overall growth India has made rapid progress, with its real national income growing at an average rate of over 6.5 percent per annum. What the focus on this average however hides is that India's regional distribution of income has been steadily deteriorating through the 1990s (see Rao, Shand, and Kalirajan 1999). If international organizations, such as the Asian Development Bank, managed to shift focus to quintile income rather than income per se, nations would be forced to pursue policies that were equity-conscious if they wanted to move up the global charts. India would then have an additional incentive to pursue policies that coupled fast growth with better distribution.

At one level, measurement is a technical, value-free activity, with no direct relation to policy. Yet when some method of measurement becomes widely accepted and global policymakers begin to watch the charts in terms of that measure, this innocuous, statistical exercise comes to wield enormous influence in terms of the design and implementation of policy.

Table 1. Per Capita Income and Quintile Income, 1997

Economy	Percentage Share of Income of Poorest 20% (various years as indicated)		GNP Per Capita in US Dollars (1997)	Per Capita Income of Poorest 20% or Quintile Income (1997)
Ethiopia	7.1	(1995)	110	39
Sierra Leone	1.1	(1989)	160	9
Niger	2.6	(1995)	200	26
Rwanda	9.7	(1983-1985)	210	102
Tanzania	6.8	(1993)	210	71
Nepal	7.6	(1995-1996)	220	84
Guinea-Bissau	2.1	(1991)	230	24
Burkina Faso	5.5	(1994)	250	69
Madagascar	5.1	(1993)	250	64
Mali	4.6	(1994)	260	60
Viet Nam	7.8	(1993)	310	121
Bangladesh	9.4	(1992)	360	169
India	9.2	(1994)	370	170
Pakistan	9.4	(1996)	500	235
People's Republic of China	5.5	(1995)	860	237
Ukraine	4.3	(1995)	1040	224
Indonesia	8	(1996)	1110	444
Egypt, Arab Rep.	8.7	(1991)	1200	522
Romania	8.9	(1994)	1410	627
Russian Fed.	4.2	(1996)	2680	563
Thailand	5.6	(1992)	2740	767
South Africa	2.9	(1993-1994)	3210	465
Venezuela	4.3	(1995)	3480	748
Poland	9.3	(1992)	3590	1669
Mexico	3.6	(1995)	3700	666
Hungary	9.7	(1993)	4510	2187
Malaysia	4.6	(1989)	4530	1042
Brazil	2.5	(1995)	4790	599
Chile	3.5	(1994)	4820	844
Israel	6.9	(1992)	16180	5582
Netherlands	8	(1991)	25830	10332
Sweden	9.6	(1992)	26210	12581
France	7.2	(1989)	26300	9468
Belgium	9.5	(1992)	26730	12697
Austria	10.4	(1987)	27920	14518
Germany	9	(1989)	28280	12726
United States	4.8	(1994)	29080	6979
Denmark	9.6	(1992)	34890	16747
Norway	10	(1991)	36100	18050
Switzerland	7.4	(1982)	43060	15932

Source: World Bank (1998).

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