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The Poor and the Poorest

Some Interim Findings

Michael Lipton

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Foreword

This paper brings together information from four working papers on the characteristics of the poor and the poorest.*/ The papers deal with nutrition; the control of and returns to labor, land, and physical and human capital; and demography. They contain extensive evidence and references. This paper is confined to the findings. The original findings were based on studies of about 30 villages in rainfed areas of western India and northern Nigeria, but macro- and micro-data from many developing areas were used for later modifications.

The World Bank's projects and policies, like those of other donors and of governments in developing countries, have often benefited "the poor," but have seldom reached the ultra-poor. Almost all of these people are in households in the bottom quintile of income per person in their country. They have so little income that they are at nutritional risk.

Can such people be reached by projects or policies, let alone by the Bank group? If so, how? We cannot answer until we know who the poor and poorest are, and how they differ. Policy suggestions, therefore, are left until the final section, which may also be read as an executive summary.

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*World Bank Staff Working Papers No. 597, Poverty, Undernutrition, and Hunger, April 1983; No. 616, Labor and Poverty, October 1983; No. 623, Demography and Poverty, November 1983; No. 744, Land Assets and Rural Poverty, 1985.

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I. INTRODUCTION

(a) "Measuring poverty" vs. "characteristics of the poor"

Many governments in developing countries, donors, and non-governmental organizations have been trying to use their resources in ways that steer the benefits towards poor people. The success of such resource use can be predicted, monitored, or evaluated by looking at the incidence, intensity or severity 1/ of poverty in the area, or among the persons, affected by the project or program with which the resources are associated. 2/ Preferably this should be done by comparing the severity of poverty before and "after" the project or program, both in areas or groups affected by it and in others not so affected but similar in other relevant ways. 3/ Let us call this "comparative assessment of poverty-impact by income-group (or Sen index) numbers" or CAPIN.

CAPINs have not in general found strong associations -- positive or negative -- between the poverty-reducing content of a project (or program) and its economic rate of return. There are trade-offs at the extremes, especially regionally: high poverty impact, but low rates of return, characterize programs concentrated on areas especially ill-endowed with good land (or with human capital), if there is little new technology that is economically promising. 4/ On the other hand, small labor-intensive industrial and agricultural activities are often the most effective way both to combine resources in economically poor environments and to raise the shares of income that reach the poor. 5/

CAPINs, then, do not reveal a general "trade-off between efficiency and poverty-reduction". Much more serious is the widespread finding, both in the Bank and elsewhere, 6/ that the poorest 10-20 percent of people have not benefited, and may even have suffered, from policies, programs and projects in developing countries that are efficient as sources of growth and/or cost-effective in benefiting say, the second-poorest quintile of people. Important examples occur, in countries where most of "the poor" are self-employed farmers

with small surpluses of grain to sell, but where the incomes of "the poorest" 10-20 percent come mainly from hired labor. A project that favors the poor small farmers need not raise -- may indeed cut -- their demand for the even poorer laborers. A policy of higher food prices may similarly help the rural poor but harm the poorest.

This sort of finding has led some people to conclude that poverty projects and polices do not work -- and others, to deny that the intention ever was to reach the very poorest. However, the main importance of the findings is to suggest that the selection of good projects and policies requires an improvement on the CAPIN approach. Like other work on characteristics of the poorest, the work summarized in this paper 7/ is designed to remedy the inability of that approach to explain why a project has different impact on poor and poorest groups.

Suppose the second-poorest quintile of rural households (by income-per-person) benefits from, say, extra rural primary schools, but the poorest does not. Three sorts of explanation are possible.

First, perhaps the schools program, by nature or in its design, is highly income-elastic in demand (offtake) or in "being supplied" (cost, or other factors, affecting provision of access) between poorest and second-poorest quintile. CAPIN -- because it measures the before-and-after income-level of potentially benefiting income-groups, 8/ but not intervening variables -- encourages that interpretation. It directs our attention towards project or strategy selection and design.

Second, however, the poorest quintile may have a much higher incidence of other, non-income characteristics (e.g. very young age-structure; remote residence; hungry children; larger families) than other quintiles, such that it is less able or willing to take advantage of extra schools. If so, to observe "income-elastic demand (or access) between poorest and next-poorest quintile" is to see only the shadow; the substance, "other characteristics", of the poorest quintile cannot simply be inferred from their pre-project income alone. The analysis of "characteristics of poor groups", attempted in this Summary, encourages the interpretation that these characteristics differ between poor and poorest. It thereby directs our attention towards delinking,

from extreme poverty, some of the characteristics of the very poor -- e.g. lassitude among children who are too hungry to do proper schoolwork -- that may block the flow of benefits that are flowing to the moderately poor.

This approach to "characteristics of the poor" reveals sharp discontinuities between ultra-poor 9/ and poor people, in at least two of the four areas handled in the working papers summarized here (nutrition and labor). Also, these discontinuities are closely linked both to observations on producer behavior 10/ and to policy options. However, the materials reviewed on assets -- and to some extent on labor -- show the need for a third approach, different from both CAPIN and the "characteristics" approach adopted here.

Asset ownership structures crucially affect, in any society, the proportions of persons that are non-poor, poor, or ultra-poor. But this effect is not mainly along the lines of our first, CAPIN-style explanation, i.e. direct association between asset ownership, income, and the capacity to meet basic needs -- indeed, nutritional inequality is far below income inequality, and massively below asset inequality. Nor is asset ownership connected with poverty mainly by direct effects on other characteristics of poverty groups; except in fertile, well-watered, technologically advanced places, a little land gives hardly any better protection against poverty than none at all. Rather, the distribution of the characteristic, "asset ownership", structures the entire economy of a country. The severity of poverty and ultra-poverty in a country depends on labor as well as asset incomes (and on bargaining and political strengths) created by that structuring. One simple example: the "characteristics of the poorest decile" are not directly affected by whether ownership of land is distributed mainly to medium or to big farmers -- but the indirect effect on the poorest decile through labor markets is normally immense, since the distribution of land greatly affects labor demand per acre (and in the case of medium farmers labor supply per acre also, and hence competition against the landless ultra-poor in labor markets).

(b) Poor and ultra-poor

Bank and other data suggest a poverty incidence so large as to induce near-despair. For example, the "absolute poor" -- defined as those with income-per-person too low to afford 2250 calories per person per day and thus at some risk of poverty-induced undernutrition 11/ -- were estimated (on Kravis-adjusted income data) for Asia, excluding China, Japan and the Middle East, at 393 million in 1980. That is 40 percent of the population. 12/

Whatever one's doubts about the numbers, they do roughly indicate reality. Some 350-450mn. people, between one-third and half the people of Asia (with the above exclusions), were, in 1980, able on average to spend less than 12 cents per person per day -- 70 percent of their income -- on non-food items in 1980. 13/ Obviously, such people are poor.

However, a line can be drawn between the ultra-poor and the rest. In several ways, the ultra-poor -- the poorest 10-20 percent of people in India, Bangladesh or the Sahel -- are different from the further 25-35 percent who fall below the 2250-calorie line.

--First, there are sharp differences in nutritional behavior induced by economic change. The ultra-poor, when income goes up a little, spend as if their overriding priority were to obtain more (and inexpensive) calories. Other poor people do not.

--Second, there are corresponding differences in more "physical" indicators of undernutrition. The ultra-poor, despite devoting some 80 percent of income 14/ to low-cost foods, are much more prone than others to the forms of mortality, illness, and inadequate physical and mental performance associated with severe anthropometric shortfalls. 15/ The other poor people, in most studies, do not show such conditions.

--Third, the anthropometry of the great majority of poor but not ultra-poor people (though often classified as "mild" or "moderate" under-nourishment) is not convincingly associated with functional impairments or medical risks. Growing nutritional evidence indicates that these can be avoided, even at considerably lower caloric intakes than those associated with

usually prevalent "poverty lines". However, the low income of people who are poor but not ultra-poor certainly means boring diets and times of hunger -- even though such people are spending 70-75 percent of income on food, most of it inexpensive cereals and roots.

--Fourth, the impact of undernutrition and disability severely affects the capacity of the ultra-poor to supply labor. Age-specific participation rates, as expected, rise sharply with deepening poverty, but that rise is halted or reversed among the very poorest.

--Fifth, casual-labor status, "unemployment", and severe fluctuations in unemployment (as also in participation and wage-rates) are linked to lack of assets and to ultra-poverty.

--Sixth, because (while unemployment rates have risen 16/) real unskilled wage-rates in most large and poor developing countries show long-term stagnation despite substantial rises in real GNP per person, those mainly dependent on unskilled-labor income have done sharply worse than those mainly dependent on other income sources. Casual unskilled laborers are heavily concentrated into the poorest deciles. Hence trends in labor markets, as well as absolute levels of labor and nutrition characteristics, appear to disfavor the very poor, relative to both poor and non-poor groups.

These areas of discontinuity, between ultra-poor and others, in nutritional and labor characteristics and choices, are reflected in production behavior that may also show sharp change around the point of physical risk to subsistence. 17/ However, in our two other areas of enquiry -- demography and access to assets -- discontinuities between ultra-poor and others do not seem to be very important (see, however, p. 30, sec. V.j):

-- In total populations of an area, urban or rural, increasing household size is associated with decreasing income (or consumption) per person (or per consumer unit) in a steady, linear fashion -- the reverse of historical experience, which showed poorer households generally smaller than rich ones.

-- However, and paradoxically, it is groups with higher levels of status or asset-holding that show larger average household size -- the same now as in the past.

-- Access to small amounts of land does not, in a typical year, significantly reduce rural poverty risk, except where that land is exceptionally fertile or well-watered; the incidence of rural poverty decreases steadily with landholding, but in areas of "bad" land only above a certain threshold of land held.

-- Generally (and despite counter-examples), the poorer a rural person, the likelier is it that a substantial proportion of his access to land depends on tenancy. Tenants, because they can sell management as well as labor, usually suffer somewhat less poverty than non-operating laborers (but somewhat more than owner-operators).

-- Roofed-in house area (but not house quality) is a surprisingly weak predictor of poverty risk. Also, urban and rural "home gardens" are in many countries an important asset of very poor, otherwise landless people.

-- Livestock, and more particularly smallstock, are in most areas (but not in East Africa) much more likely to be owned by poor people than are other assets.

These and other characteristics of poor people -- unlike their nutritional and labor-market characteristics -- do not appear to show "turning-points". The probability that a household is large, has a high ratio of owned livestock to owned land, etc., changes smoothly and monotonically as income per person rises. The discontinuities in food and labor-market characteristics 18/ appear to be related to physical threshold variables affecting nutrition, health, and hence labor-market capacity.

Specific policy implications will be considered in Part VI. Here, three general policy implications are drawn.

First, in predicting the likely response to a particular measure by poor people, it is important to know what proportion of households are below an

ultra-poverty threshold that may inhibit response, e.g. because their age-specific participation rates are already at the highest feasible levels, given the position in regard to health, child-care, etc.

Second, the poorest 10-15 percent of people -- more in Bangladesh, less in Mexico -- may require initial help to get over food, health, or labor-market thresholds, before they can respond to policy stimuli that successfully reach other poor people.

Third, it is wrong to see the poorest 10-15 percent in developing countries as an "underclass", accessible, if at all, only at very high unit cost. That may apply to many of the poorest people in developed countries; measures to raise "the productivity of the poorest" may be unpromising where most such people are very old and alone, or addicted to alcohol or other drugs, or severely ill or handicapped in mind or body. This is not the case for most ultra-poor in the developing world. They are mainly young, members of big families, 19/ and able if properly nourished to participate fully in school and work. The poorest 10 percent in a rich country may, in significant part, require welfare services rather than productivity enhancement. The vast majority of people in the poorest 10 percent in India or Kenya are a potential resource, rather than a burden.

II. POVERTY, UNDERNUTRITION, HUNGER

(a) Needed: scalar measures of absolute poverty

To know whether a development policy or project is good at helping the poor, we need to know how many poor people it benefits, by how much, and how poor they were "before" and "after". For these purposes, the effect on "relative poverty" -- say, on the prOportion of persons receiving below 30 percent of a country's average GNP per head -- tells us nothing. Inequality and poverty are different; a project might increase that proportion, yet reduce the numbers in absolute need. Nor does impact on a basic-needs vector, overt or disguised (e.g. as a physical quality of life index"), help us to rank policies or strategies by poverty impact; weighting and other problems are intractable. 20/ To measure the characteristics of the poor, too, we need a scalar measure of absolute poverty.

Yet the most plausible such measure -- a household's income or consumption per person -- gives rise to problems. As between two areas competing for an anti-poverty project (or two groups with different characteristics that may be associated with poverty), the same income per person often "buys" quite different levels of basic-needs fulfillment in the two areas. 21/ To meet this problem yet preserve a scalar poverty indicator, we should measure the level of income or outlay, per person or consumer-unit, at which a household in each group or area just meets one key "basic need".

(b) Food adequacy standard

In many physical and price environments, even the poorest people seem to spend an irreducible minimum, about 20 percent, on non-food. People who spend 22/ 80 percent or more on food, yet fulfill less than 80 percent of the average calorie requirements for their age, sex and activity groups, are probably both hungry and undernourished (i.e. at significant risk of harm); we call them ultra-poor. People spending 70 percent or more of income on food,

and meeting 80-100 percent of requirements, are unlikely to be undernourished (see below), but are sometimes hungry; we call them poor.

These two food adequacy standards do not assume that only food matters. The poor but not ultra-poor have deficiencies of shelter, clothing, mobility, etc. rather than of food. Nor need the standards be most effectively met by more food -- rather than by reduced requirements, or by more efficient food-energy conversion (e.g. by reductions in gut parasites).

(c) Calories, income and food adequacy

"At risk of being undernourished due to low income" defines the ultra-poor; at risk of being, not harmfully undernourished, but hungry, due to low income defines the poor. But do calories tell the whole story of the income-nutrition link? Protein deficiency is rare without calorie deficiency, and is normally most cost-effectively cured via extra calories. 23/ Micronutrient deficiencies are normally best met by (very low-cost) public action for water or food supplementation. Only calorie deficiency is both (a) caused and cured mainly via levels of private income and (b) a frequent independent cause of undernutrition and hunger. Hence we assess numbers and characteristics of persons in calorie-linked poverty and ultra-poverty.

We can do this in three ways. How many people and people with what characteristics, how severely,

-- for want of income, buy too little food to meet household caloric minima?

-- show physical signs of calorie deficiency?

-- spend at least 75-80 percent of outlay on food?

(d) But today's calorie standards exaggerate even Western needs

US (DHEW) revisions of 1970-73 FAO/WHO "calorie requirements" cut them heavily (e.g. 21 percent for persons aged 30-39). Even these revisions may be too small: the 50th percentile, in a big and reliable US survey in

1971-4, received 14 percent below DHEW "requirements"! The neglect of explicit FAO/WHO warnings by some users, and also their estimation of requirements for pregnancy and for heavy workloads, has further inflated estimates of requirements.

(e) "Transferring requirements to LDCs involves further exaggerations

1. Climates: In 1973, FAO/WHO abandoned its earlier practice of reducing calorie requirements as external temperature rose. Subsequent empirical and theoretical work greatly strengthens the case for earlier practice. Tropical climates probably also lower desirable target fat/lean ratios.

2. Weights and heights: Calories to maintain weight increase with weight, and after age 29 (some experts say after 13) there is hardly ever much benefit from weight gain, except after near-starvation. Yet many LDC requirements estimates assume body weights at full Western reference levels -- despite tropical weights being typically 18-25 percent below. Other estimates, while avoiding this, nevertheless posit caloric requirements for national, e.g. Indian, "reference" persons 10-15 percent above true average weight-for-age. Even for children, the many who are "moderately underweight" for age may well -- if not below their appropriate growth rates -- be well adapted; to meet high target requirements could constitute "mapping into obesity".

Severe height retardation at age 5 greatly damages adult work performance. Mild retardation, if there is subsequent physical activity, produces no clear evidence of damage. In adolescents and adults, if weight-for-height is not seriously inadequate, working efficiency is not retarded by mild-to-moderate height/age or weight/age shortfalls.

As regards mental development, severe undernutrition is clearly harmful. But the impact of mild-to-moderate weight or height retardation -- itself only partly due to food intake -- or psychological variables at age 7 is very weak (r2 usually 0.05 to 0.08), 24/ and on school performance undetectable.

The most tragic effect of undernutrition, synergistically with infection, is infant and child death. Most studies show a zero effect -- a few suggest a very weak effect -- on such death rates of mild-to-moderate "undernutrition" (i.e. anthropometric shortfalls, partly due anyway to non-food factors). But the effects of severe undernutrition are very damaging. This accords with recent work suggesting "threshold" damage by undernutrition to immunocompetence if, and only if, children's weight-for-age falls below 60-70 percent of Harvard standards.

It is thus safe to conclude that somewhat shorter and lighter people, as found in most LDCs, can thrive upon fewer calories than FAO/WHO's "reference" people.

3. Infections and parasites: It seems "obvious" that their greater prevalence in LDCs raises calorie requirements. Extra calories are needed to fight infections; parasites consume calories; and both parasites and infections can reduce calorie absorption. However, ill people reduce activity. If, on balance, they still need more calories, the main victims are children, whose net extra needs are probably small; improved weaning (and a bigger food share for children with diarrhea) may matter more than just extra food.

4. Pregnancy and lactation: Women of childbearing age spend a larger proportion of time pregnant or lactating in LDCs -- raising their calorie requirements per kg. and during pregnancy. But in LDCs the proportion of life spent in childbearing age-groups is shorter, the average body weight of mothers less, and the "normal" level of female physical work (reducible in pregnancy) higher. Also, the evidence suggests that more household income translates very badly into more calories for pregnant and lactating women. For the ultra-poor, however, pregnancy can severely threaten an already dangerously low nutritional equilibrium.

5. Age-structure: The average LDC inhabitant is likelier to be an infant or small child, and has lower calorie needs. Almost all estimates allow for this, but often not for similar facts about poor (vis-a-vis other) LDC inhabitants. This fact -- and the methods of allowing for even the average LDC age-structure, by broad age-sets only -- produces more overestimation of calorie requirements.

6. Work: Work "per kilogram-hour" is much harder in LDCs. But the proportion of persons of working age is smaller, their weight lower, and lost time (in illness or unemployment) probably higher, than in DCs.

* * *

Thus, not only are DC average caloric requirements overstated. Climate, weight, and age-structure require larger proportionate cuts, when "translating" those requirements to LDCs, than are generally made. Supposed offsetting factors (work intensity, infection, pregnancy) in fact increase per person requirements less than such translations suggest, if at all. This is the main reason why "only" the 10-15 percent of ultra-poor, not the 35-50 percent of ultra-poor and other poor, are at nutritional risk -- though the other poor are poor indeed, and often hungry.

(f) Interpersonal, intrapersonal, and adaptive variation

These issues raise nutritional controversies, discussed in other Bank work. 25/ Do people with similar workloads, weights and environments differ much in caloric needs (so that those with lowish intakes may choose them, on account of low requirements?) Do people adapt -- harmfully or harmlessly -- to calorie shortfalls by raising the efficiency their of food-to-work conversion? Do people differ in their capacity to adapt harmlessly -- and, if so, can the less-able adapters learn from the successful ones?

The balance of evidence suggests that the answers are "Yes, to some extent". But which and how many people, at what ages, can tolerate (or adapt harmlessly to) what shortfalls, for how long, under what conditions? The answers have major implications for policy; 26/ Bank-sponsored research should have low costs and high returns (see P 11 on P. 35). It is too soon, however, to be sure of the effect of the answers on calorie requirements. However, the apparently indicated reductions in average caloric requirements, especially in LICs, suggested above do not depend on variability issues. Nor does the implicit distinction between the ultra-poor 10-15 percent (at risk from undernutrition) and the moderately poor 20-35 percent (who, while potentially hungry, are probably very seldom at nutritional risk).

(g) Supporting evidence from economic and nutritional behavior

One of the best-supported findings in economics is "Engel's Law", that in large populations there is a negative correlation between outlay-per-person and the proportion spent on food. However, there is increasing evidence, from village studies as well as large samples, that this relationship does not hold for the poorest 5-15 percent in low-income countries and regions. These people's perceived need for food is so urgent that, as income-per-person rises, they roughly maintain the proportion spend on food. Such behavior is not observed among moderately-poor persons, nor in middle-income regions.

Moreover, the ultra-poor only, in low-income countries, do not significantly diversify their foods as income rises. They tend to maintain the ratio of cereals and roots to both total calories and food outlays. They also maintain the ratio of coarse to fine grains. The moderately-poor, like the non-poor, reduce both ratios as income rises.

Separate observations, on persons apparently consuming "too few" calories in ultra-poor and in moderately-poor groups, also reveal striking differences. Among the moderately-poor, most such people could reach the average calorie requirement for their age, sex and activity levels merely by purchasing somewhat cheaper calories; among the ultra- poor, few people consuming below the average calorie requirement could meet it thus, simply by "trading down". It looks, once again, as if the ultra-poor are revealing an overriding felt need for extra calories, and that the moderately-poor are revealing that other felt needs are overriding.

All three behaviors suggesting that people perceive extra calories as top priority are much more widespread in rural than in urban areas. This strongly suggests -- contrary to some sample-survey income estimates -- that the incidence of ultra-poverty is much higher in rural than in urban areas. This suggestion is supported by the fact that rural areas, as compared with towns, suffer much higher age-specific death-rates, both in Africa and in India -- even where, for poor people, neither environmental risks nor health care levels differ greatly as between town and country.

(h) Variable access to food: seasonal, intra-household, age-group

Common sense, savings theory, and village-study evidence (especially from Nigeria) all suggest that the ultra-poor suffer much more seasonal variation, in ratios of caloric intake to requirements, than other poor or non-poor groups. This interacts with seasonal absence of mothers to affect child health; in Kerala villages, a unit of extra farm income is significantly "better" at improving child weight-for-age than a unit of extra maternal wage-income, but only in the season when food is scarcer.

Intra-household variation in intake/requirements ratios is not strongly supported by the available data. Sex discrimination, in respect of food, seems to be confined to parts of North India and Bangladesh, and to small girls. There is sometimes some discrimination, apparently based on food habits, against the sick (largely children), weanlings, and pregnant women. Age discrimination at household level is otherwise absent. Most of these (rather rare) forms of food discrimination can be explained, medically or economically, by household decisions likely to maximize survival chances -- although only in response to exogenously discriminating labor-market prospects.

The appearance of age-group discrimination at population level is created by the concentration of at-risk under-fives in big, very poor families. High-parity siblings usually have worse food and health prospects than others, and rapid replacement births, corresponding to high infant death-rates among the ultra-poor, deplete the strength, food, and health-care resources of such households. But greater undernutrition among under-fives reflects the high dependency ratios of poor households, not discrimination against children.

(i) Policy implications

There are considered in Section VI below. They all stem from the evidence that poverty-induced undernutrition, while a challenging problem (even 10 percent of Indians would be 70 million people), is much less forbidding and unmanageable than earlier estimates of calorie-linked poverty suggest. 27/ It should be feasible to isolate projects or policies that improve food entitlements for 10-15 percent of people; 50-70 percent would be almost hopeless. But the approach needed, to raise the productivity of poor

households, is quite different for those who need "more food first" and for those who do not.

III. WORK, THE POOR, AND THE POOREST

(a) Poverty, labor and food

The poor in LICs spend 70-85 percent of income on food. They obtain almost all income through labor, hired out or combined with small amounts of owned or rented assets, usually low-quality land. Because labor is overwhelmingly the main source, and food overwhelmingly the main use, of poor people's income, it is useful to analyze poverty as as low transformation capacity of labor into food, and therefore as lack of discretionary income to buy much non-food. Part III of this paper summarizes how this affects poor and ultra-poor people directly, though labor; Part IV summarizes the impact of their assets on transformation capacity.

A household's income from work, per person, is the product of four variables: the proportion of household members of working age; the proportion of these who participate in work; hours worked per participant; and income per hour worked. Poverty arises not only from unfavorable average values of these variables, but also from their interactions (e.g. between low participation and high unemployment), and from fluctuations in unfavorable directions -- especially in more than one variable. Nutritional and other physical problems render ultra-poor people discontinuously more vulnerable than other poor people to unfavorable and/or fluctuating values of labor variables.

(b) Participation and demography

Dependency ratios rise as income-per-person falls. So those who can work seek higher age-specific participation-rates (PRs) in poorer than in richer households, both because the pressure to earn is more severe at low income levels, and because a larger proportion of persons is too young to work, increasing the pressure on the others.

However, there is a limit to the extent that age-specific PRs can be pushed up as poverty presses harder. In almost all income-groups, well over 90 percent of prime-age men are regularly in the workforce, and many of the rest cannot work. Women's PRs do rise as poverty and demography press harder, but are constrained in poorer families by more frequent childbirth, and by the lower incidence of extended kin-groups to help with child-care. Demographic and other factors mean that even age-specific PRs, although steadily rising as income-per-person falls over most of its range, cease to rise among ultra-poor people. Having reached the limit -- whether of labor-input, of diversion from child-care, or in some cases of activity in circumstances of hunger or physical disability -- the poorest workers cannot, as poverty presses harder, respond by participating even more in work.

The costs of such participation to them are raised further by absence of owned assets. They must therefore use up calories in searching for an employer with land or other assets to work with. That search -- especially in slack seasons -- can take so long that it deters participation. (Seasonal and cross-section data suggest that PRs among men, not women, in the poorest groups are significantly cut by these "discouraged worker effects,")

Since the ultra-poor depend so heavily on labor income, these limits to their capacity to "work their way out of poverty" are especially severe.

(c) Sickness, disability, seasonality

Casual adult laborers -- a group that includes many of the poorest -- lost 5 percent of working time to acute illness, and a further 1-2 percent to chronic disability, in India in 1977-8. Most other LDCs showed higher losses. Illness seems to be concentrated in seasons of peak labor demand; probably, if illnesses were reduced, substantially more labor income would accrue to the poorest through higher participation. There is evidence of some partial "catch-up participation" after illness, but even then the cost and unpleasantness of work are raised by illness, which must reduce PRs.

The fragility of nutrition among the ultra-poor is linked in three ways with their problems in labor participation. First, resistance to illness is weakened. Second, there are few spare calories to fuel the search for work.

Third, child deaths and replacement births are more frequent, raising both dependency-ratios and workforce withdrawals by mothers.

Thus, the bad physical condition of the ultra-poor -- but not of other poor -- helps to impede them in "working their way out of poverty". This is in large part remediable at acceptable cost (Sec. VI) and does not mean that the ultra-poor are an unreachable "underclass".

(d) Urbanization and lower participation

Urban residence drastically reduces age-specific female PRs, even in the poorest income-groups. Moreover, tribals and remote villages show relatively high female PRs.

One reason is demographic: urban women are likelier to be married, and rural households to be female-headed. Second, formalized urban working and residential patterns often restrict workers' capacities to earn income while also discharging traditional family roles. Third, sex discrimination in education reduces women's capacity to compete in urban (more than in rural) job markets. Fourth, especially in towns and among more developed rural groups, even some very poor husbands seek status by preventing female participation. A* fifth reason is smaller inequality of both income and asset ownership in remote and tribal places, and generally in rural areas; this reduces the cost of participation where self-employment is feasible, and may raise the chances of successful search for hired employment by increasing labor-intensity. 28/

Numerous intensive and macro-samples confirm that -- whatever the reasons -- ultra-poor women feature sharply lower PRs in towns than in rural places. Diagnosis and treatment are urgent policy issues (Sec. VI), especially because in lower income countries women now form a growing part of the urban poor, often nearly half.

(e) Custom, participation and poverty

While sometimes relaxed among the extremely poor, constraints on PRs -- especially female -- through traditional custom, modern emulation, and religious belief have large effects in many LICs. Such PRs are under-reported,

in censuses and large samples, by respondents wishing to appear observant of custom; but even careful, intensive micro-surveys confirm that such custom does depress PRs, especially in publicly visible work.

The issues are complex. Groups that enforce depressed female PRs may be richer or poorer than groups that do not. Demand for labor may be price-elastic or not. Customs may be more or less flexible. Brash policy intervention is therefore unwise. But policies, not least of foreign sources of project funding, have often taken much too little account of customary constraints on poor people's PRs, or of ways in which policy or project design could acceptably change -- or use -- such constraints to help the poorest.

(f) Poverty and fluctuating PRs

Seasonal variation in PRs, especially for women, is greatest among casual laborers. It is also greater, the smaller the locality considered. The very poor, who are likelier to be casual laborers yet to lack long-distance mobility, 29/ are thus most exposed to such seasonal variation. Both micro-data and large samples confirm this.

(g) Unemployment: for the poorest, meaningful and worsening

The long debate about what (if anything) "unemployment" means, in societies where self-employment in farming or informal trade and crafts predominate, has led to enormous improvements in concepts and measurement practices. At the same time, hired work has become increasingly important in poor people's incomes in most LICs. 30/ Many persons in LICs, on many days, want and cannot obtain employed or self-employed work -- though they are willing to accept the going return or less, or even a return that just covers calorie needs and search costs.

Seven main conclusions emerge from the data.

(h) Unemployment understated, especially for poorest

Domestic work and cattle-care are spread over much longer periods, and done in a more relaxed way, when and where hired employment or own-farm

crop-work is unavailable. Time spent in job search, and of course not reported as unemployment, also rises in such places and times. All three "disguises" of unemployment have most incidence upon, and most spacial and temporal variations for, the poor.

This apart, intensive micro-studies usually show higher unemployment than sample surveys, which in turn show more than censuses, in the same area. Such under-reporting is greatest for the poorest.

(i) Even estimated unemployment rates increase with poverty

A very big Indian sample (1972-3) showed that, from the poorest 0.7 percent of rural homes, women were unemployed for 22 percent and men for 18 percent of the half-days on which they had sought work in the previous week. For the next-poorest 9.8 percent of households, the rates were: women 18 percent, men 12 percent. The overall rural rates were: women 11 percent, men 7 percent. In towns, rates were higher, and concentration on the poorest more extreme. Macro- and micro-studies throughout Asia and Africa largely support this picture (see fn. 31). It is all the more striking because education, except to high levels, is positively correlated with unemployment risk, yet also with lack of poverty. Hence, if we hold education constant, the linkage between poverty and the most distressful forms of unemployment -- as opposed to periods of waiting for more attractive or secure "educated" work -- is extremely strong.

This is because unemployment is concentrated in groups especially likely to contain poor, and even more ultra-poor, people -- notably the assetless. Landless and near-landless families are much more prone to unemployment than those with about enough land to feed themselves -- who, in turn, show rates are only slightly above those of clearly non-poor landholders. Asset inequality in an area appears much more strongly linked to unemployment than is low average asset availability.

Plainly, casual laborers are likelier to be both poor and at risk of unemployment than contract workers. This shows up clearly in several Indian rural and urban studies. Such unemployment of casual workers is concentrated among women and in rural areas, but tends to be relatively brief.

Women also suffer higher unemployment rates than men, especially in towns. Rurally, females from the poorest households show higher unemployment in several studies. Female disadvantage is less in irrigated areas.

Persons aged 15-19 appear to suffer much higher unemployment rates than the average; only part of this is linked to "educated unemployment" and/or to first entry into the workforce. Little is known about how the "life-cycle" variation in exposure to poverty is linked to unemployment: are these young people from households at the peak or the trough of their fortunes overall?

Urban unemployment rates much exceed rural, despite rural seasonality, and despite the sharply greater incidence of rural poverty. This is due mainly to higher rural seasonal workforce withdrawal; seasonal migration; much more widespread asset ownership (and very low-income self-employment) in rural areas; and rural age- and education-structures less concentrated upon persons likely to be participant and unemployed. (Especially in view of growing unemployment -- and of its concentration, rurally, in "unequal" and commercialized villages, not in "poor but equal" ones -- this has major, disturbing policy implications.) In urban areas, the relationships between recency of immigration, poverty, unemployment, and "informality" are much more complex than is suggested by either the old conventional wisdom (near-overlap of risks) or its new reversal (immigrants less poor than others, unemployed less likely to be immigrant or informal, etc.).

Large regional unemployment variations also penalize the immobile among the poor. In 1972-3 some two-thirds of Indian rural unemployment was concentrated in six States, containing only 44 percent of the rural workforce, and the disparities persisted in 1977-8. At district and village level, and in urban and rural areas outside India, similar gaps persist. High-unemployment areas, moreover, appear to show somewhat lower PRs and wage-rates overall.

(j) Fluctuation, poverty and risk

Most published data understate not only unemployment but, for similar reasons, its downside fluctuations. Yet even such data, from many areas,

reveal far greater susceptibility to such fluctuation among the poor, and especially the ultra-poor.

Longer-term studies show that in bad years, as in bad seasons, it is hired laborers, not asset-owning households, who are "crowded out" as demand for labor declines. Moreover, fluctuations in unemployment are heaviest for casuals, agricultural employees, rural areas, and women. The poor tend to be where unemployment fluctuates most -- and, within such places or occupations, to bear the brunt of fluctuations, as residual workers. The social structure of employment, in which farmer households with non-overlapping peak-seasons often exchange labor rather than employing the landless, is one of several factors leaving the assetless especially prone to job fluctuations.

This has major policy importance in connection with the central suggestion from the work on assets (Secs. IV and VI). Ownership of smallish amounts of low-yielding, work-requiring assets -- say three or even five acres of semi-arid land in Maharashtra; or secure claims on farmland, as opposed to off-farm labor, in Northern Nigeria -- appear to provide little more expectation than assetless labor of avoiding extreme poverty in the average year or season. Assetlessness may threaten poor households with descent into ultra-poverty and nutritional risk mainly in a bad season or year, when they are most exposed to lack of labor demand from other households.

(k) Unemployment, an increasingly important cause of poverty?

Labor-productivity is normally the main difference, as between large groups of households, in their effectiveness in converting a year's work into a year's income. Also, some economists have argued that the poor cannot afford to remain involuntarily unemployed, but must accept lower earnings. Our data suggest that, nevertheless, involuntary unemployment has become a growing part of the causation of poverty. Its incidence is higher among the poor, and it is positively related -- in space and time, both statistically and causally -- to reduced participation and lowered labor-productivity.

There are a priori grounds for expecting unemployment to rise, and to be increasingly concentrated on the poor, in LICs. .

--First, persons of working age are increasing at 2.2-3.5 percent yearly. This cannot be slowed down, even by instant fertility control, for 15-20 years. Output-elasticities of aggregate demand for labor have been around 0.3-0.5. Hence very rapid growth would be required to avoid rising unemployment rates, unless PRs fell sharply.

--Second, urbanization and industrialization are reducing labor-intensity, while both -- alongside younger and "more female" workforces -- are raising the proportions of poor persons who seek formal employment.

--Third, labor market structures are tending to concentrate workers in large private firms (with internal job markets and risk-aversion from new hirings), and in public employment of unionized staffs. In both cases, this tends to raise unemployment among new, poor, pressureless and uncertificated entrants.

--Fourth, both conjunctural and technological changes in the world economy since 1973 have tended to raise unemployment, in LICs as elsewhere.

Successive rounds of several large-sample inquiries in India, plus some village resurvey material, indeed suggest both growing unemployment and inceasing concentration among poverty-prone groups. There are also bits of evidence from other LICs pointing the same way.

(1) Wage-rates: demography of who gets least

The great bulk of evidence suggests that in most LIC environments discrimination against women does not take the form of significantly lower rates-for-the-job (or -- p. 10 -- calories-for-requirements). Unskilled wage-rate gaps are small, and are mostly (and increasingly) explained by workday length, task type, and bodily characteristics. It is through discrimination in respect of health, education, mobility, and job entry that women are pushed into lower-wage groups, much more than through rate-for-the-job discrimination.

What of age-wage links? For children as for women, unskilled-wage differentials vis-a-vis adult males appear mostly to be shrinking, and not to

reflect significant "discrimination". But there is a clear inverse-U age-wage relationship, especially holding education constant; the effects on poverty are worsened by a similar, weaker, relationship for participation, and among young people by high unemployment, but modified by lower unemployment rates among the old.

(m) Other personal characteristics and low wages

Few studies have tried to separate such personal characteristics as race, caste, or tribe from other possible sources of low wages (e.g. education). However, race has been linked to wage-rate (holding education constant) in Nariobi, as has caste in Delhi. Rural areas do not appear to feature significantly higher wage discrimination than towns.

(n) Geography of low wages

Persistent regional wage gaps, aggravating rather than compensating unemployment gaps (p. 14) and not clearly skill-related, suggest that immobility among the unskilled may be associated with poverty that is not confined to a few years of the life-cycle. These wage-gaps appear to reflect supportive factors of production, notably land and irrigation, per worker as influences on regional labor-productivity. Wage-rate dispersion over large regions shows no overall trend, but appears to be declining within more rapidly-growing sub-regions.

Within small areas, the larger villages, and those with higher land/man ratios, have in some studies shown considerably higher unskilled wage-rates and lower harvest-time unemployment. In urban areas, residence, workplace and wage-rates are firmly linked, perhaps in part via differential access to education.

(o) Work-linked low-wage groups

Employers may -- to an extent limited by competitive forces -- pay above-market wage-rates, either to screen out workers who may be (but cannot economically be tested as) less able, or to exercise a taste for discrimination. This would penalize poor workers, if excluded from higher-wage

groups. Given age, skill and education, low-wage urban workers do tend (weakly) to concentrate in small, non-foreign-owned, or capital-intensive firms; and low-wage rural workers, in bigger farms (while smaller surplus farm households, with different peaks, employ each other at premium rates). Such tendencies appear to increase with early development, but remain of minor importance.

Both supply and demand factors exist to push casual employees' rates either up or down relative to contract workers. A substantial balance of both rural and urban evidence suggest that downside forces usually prevail. In determining yearly income, casual workers' daily- wage differentials usually reinforce, hardly ever compensate fully for, attached workers' lower unemployment rates and higher PRs.

Activity types show unskilled workers poorer in agriculture than in construction, and much poorer than in manufacturing. Regional differences in activity structure, plus low mobility among the poorest, help maintain such gaps. There is little sign of wage-discrimination by activity, except for Indonesian rural evidence linking premium (rice) unskilled work to kin preference.

(p) Wage fluctuations and trends

Wage income, per worker but not necessarily per household, fluctuates more for hired laborers than for those dependent mainly on their own farms. Casual workers and women are prone to greater fluctuations in wage-rates than are men. Accordingly, these groups benefit most from employment guarantee schemes.

Real unskilled wage-rates thus show much variation over space and time. Yet trends, in most LICs, seem absent, though special and inter-group differentials have generally narrowed somewhat. Money-wage relativities among occupations and seasons (except in areas of very rapid technical change), and lags between wage and price changes, appear fairly stable for unskilled workers.

(q) Why?

Big and persistent cross-section differences and fluctuations in unskilled real wage-rates -- increasingly the main source of income for the urban, and Asian rural, ultra-poor -- coexist with long-run stagnation, despite vast structural change in labor demand and supply. How is this paradox explained? The evidence suggests net upward pressures on real unskilled wage-rates, which however have little effect on wage-rates because of the large "pool" of unused labor-time. The low responsiveness of labor supply to wage-rates, noted in some recent work, 31/ is a short-run phenomenon; in the longer run such elasticities are probably quite high.

The persistence of low real unskilled wage-rates, therefore, has to do with the "successful" working of labor-markets -- not, in a large majority of cases, with their "failures" or distortions. Even during periods of fast growth in big, poor countries -- India, Bangladesh, Indonesia, Nigeria -- good and supply-responsive labor markets have been associated with severe short-run fluctuations, and at best static average levels, in wage-rates, PRs, and employment. The poorest, in particular, continue to experience lower levels and more instability in each of these three variables.

IV. ASSETS, THE POOR AND THE POOREST

(a) The special role of assets

It is useful to ask how ultra-poor, other poor, and non-poor people differ in demographic, nutritional, or labor-market characteristics -- and how such differences change. This is a less useful, or rather more incomplete, way to understand the links between poverty (or ultra-poverty) and asset-holding characteristics. First, differences in asset-holding grossly exaggerate poverty differences; the richest decile of households in a LIC typically eats fewer than three times as many calories per consumer-unit as the poorest decile, but has assets over 250 times more valuable. Second, as we shall see, many assets do little to cut the owner's poverty risk, unless owned in large amounts .

Above all, the distribution of assets structures societies, by assigning characteristics -- alongside poverty risk -- to groups that have different relationships to various asset types. The (asset-linked) labor-market or demographic characteristics of, say, landed and landless, or educated and illiterate, may well be more closely linked to these groups' poverty-risk than is their mere level of asset ownership. Asset distribution between Group A and Group B can have most effect on poverty risk in Group C -- as when a shift of land from small to big farmers increases capital/labor ratios and reduces hirings of landless laborers. So asset-linked "characteristics of poor and ultra-poor" must be approached more subtly. They do include direct, statistical associations between income-per-person and various types and levels of asset-ownership -- but they also include other important things.

As for the direct link, the control of assets influences the conversion efficiency of one's effort into income in two ways. ADDER assets provide an income bonus independent of amount of work done. MULTIPLIER assets provide extra income per unit of work done. Financial and durable-consumer

assets are adders; human capital is a multiplier; producer goods are multipliers as a rule, but adders in the case of owners who rent them out. Given the value of assets-per-person, old, single people gain most if their assets are adder assets; but the vast majority of poor people in LICs depend mainly on labor income 32/ and gain more from multipliers than the non-poor, because their PR is greater, as are their search costs for hired work. However, risk is also normally more with multipliers, so the very poor may prefer the safety of adder assets. None of the few observations on asset structures at different income-levels in LICs sorts out demand from supply, or price factors from taste and technology, in reporting who owns what sorts of asset.

Looking at assets one by one -- as the data limitations largely force us to do -- sets some policy traps. First, ownership of some assets may affect a person's yield from other assets (e.g. a well and farmland). Second, even if people with an asset are richer than people without, "more of the asset for those without" need not reduce poverty in the society -- e.g. more literacy among the poor might drastically cut wage-rates for already-poor households with a literate worker. Third, ownership of some assets (e.g. land) might for some people bring wealth, but for other people merely compensate for lack of other assets (non-farm craft skills in Nigeria), or for large household size (in almost all studies).

Some of the perverse effects that reduce the equity benefits from redistribution happen precisely because the poor use capital and land labor-intensively, i.e., with high yield, and this may glut product markets. There can, too, be positive complementarities. The arguments, therefore, are not against "assets for the poor", but for care, and for greatly increasing our knowledge about supply and demand for different asset structures as related to poverty, household size, and return to each type of asset.

b) Where does access to land affect rural poverty least?

Usually, rural people are much likelier to be poor if they control no, or very little, land. Exceptions include four familiar types of egalitarian land allocation system.

-- Tribal or customary tenure has been much exaggerated; in practice it usually, and increasingly, approximates to freehold.

-- Collective tenure systems, as still practised to some extent in China, are massively important. Their undoubted equalizing impact tends to reduce poverty within a region. But this may be offset by efficiency losses, and by neutral or harmful impact on inter-regional differences in poverty incidence and on mobility.

-- Co-operative farming systems, while reducing poverty risk for members, often (i) exclude the poorest, (ii) damage them as managers displace hired labor with machinery, (iii) pull subsidies and credit from poorer family farmers, (iv) may lack incentives to efficiency. However, there are small-scale and little-reported success stories, in which such asset distributions have cost-effectively reduced poverty.

-- Common property resources -- in grazing, building materials, and fuel -- in the 1960s comprised significant parts of poor people's incomes in many semi-arid lands. But they have severely declined under the influences of population growth, farm intensification, and the spread of both market forces and State enclosure laws.

Second, high or rising rural diversification can also cut the link between landlessness and poverty. This is desirable where, as in the Punjab, it signals development, so that today's "landless rural proletariat" are less at risk of poverty than when they used to be small farmers. 33/ It is undesirable if, as in parts of Northern Nigeria, it represent retreat by a growing population from a constrained and unprogressive agriculture to other, only slightly less unattractive, rural activities.

Third, landholding has little effect on rural poverty where spare land can be cultivated with neither rapidly-rising break-in costs nor rapidly-falling net marginal value-product. Such places, if they were ever plentiful, are now rare. Population growth and land-loss apart, numerous hidden constraints and costs impede land expansion.

(c) "Bad" and "good" land, poverty and micro-holding

However, both large samples and village studies, in low-fertility or ill-watered lands of several LICs, show weak or absent links between (a) poverty incidence in an average year and (b) variations, in owned or operated landholding, between landlessness and, say, 5 to 7.5 acres. The link is weak partly due to lower family size in landless groups. However, small landed groups typically have somewhat lower dependency ratios. Evidence from India, Egypt, Thailand and the Philippines shows that even a quarter-acre or so of "good" land, irrigated or of high fertility, decreases poverty risk in a typical year. Even "bad" land can be mortgaged or sold in a critical season or year, and may reduce the effort (search costs) needed to attain a given level of income. Both why does an acre of good land serve to provide a "competency", while five acres of bad land acts as an "encumbrance"?

On irrigated, fertile land with a settled technology, there is usually more choice of techniques and crops than elsewhere. So the small farmer can benefit from high person/land ratios, put in lots of labor, and get high return per acre. This is much harder on "bad" lands, where choices are fewer. This helps explain the advantage of small farmers over landless laborers on good (but not bad) soils. But it increases our puzzlement that, on bad and ill-watered soils like those of most of Maharashtra State, India -- but not on good lands! -- rising farm size from 1 to even 10-12 acres does little to reduce the farmers' poverty incidence.

Perhaps the reason concerns the structure of capital assets? On good lands, yields suffice to pay for -- and physical conditions often encourage -- tractorization. On "bad" lands livestock, often owned by smallholders or even the landless, lead to much more labor-intensive cultivation. So biggish farmers on "bad" lands transfer larger parts of their incomes to the landless than on good lands. Therefore, small farmers on "bad" lands are not so much better off than the landless, nor so much worse off than larger farmers, as is the case on "good" lands. The tractor-livestock choice is one of several examples of how types of capital, determined by farming possibilities and methods, structure the characteristics and locations of poverty within a region.

(d) Tenancy and poverty

Tenancy is a relatively unimportant component of poverty on "bad" lands. First, on such lands, quite substantial holdings of owned or operated land are, normally, necessary and sufficient protection against poverty for families dependent on agriculture. Second, the incidence of tenancy increases sharply with land quality. In irrigated, reliably rainfed, or highly fertile soils, tenants show poverty incidence lower than hired-labor households, and higher than owner-operators, working similar amounts of land per person-year.

Is tenancy a way for owners and non-owners to combine resources so that operated farm areas approach the best size for efficiency -- and does the process also increase equity (and reduce poverty) by enabling non-landowners to hire out both labor and managerial skills as operating tenants, not only labor done as farm employees? Or is tenancy not required for efficient resource combination, but a source of "exploitation" and poverty through linked factor markets and/or growing power of a few large landlords in areas of rapidly growing populations of would-be tenants?

For either story to be plausible, tenancy must shift land from larger owned holdings to smaller operated holdings, thus providing farms to the otherwise landless or near-landless, who usually gain a share in farm output (as income for their management and labor) from rich landlords. This pattern does not always apply, but is certainly the general rule, especially where land is scarce and fertile -- i.e., where tenancy is both prevalent and related to poverty incidence. Distribution of operated land, and of farm income, is much less unequal than that of owned land.

However, the main motive for renting-out is not achievement of optimal size but "resource adjustment", usually to align a household's farmed area more closely to its available draught-power. As a result of growing land shortage, landlords can increasingly select tenants for several characteristics, some linked to poverty (shortage of owned land), some not (possession of draught oxen). Nevertheless, while tenancy in most LICs "covers" below 25 percent of land, its absolute importance to the poor is large. In 1971-2, of the 7.5 mn. non-landowning rural households in India, over 7 in 10 rented in land, averaging 0.8 acres per tenant; and the "average

marginal-farm household" (there were 41 mn., owning 0.01-2.5 acres each) raised its operated area by 50 percent above its owned area through net renting-in. 34/

Yet the links between tenancy and poverty, while clear on "good" land, are even there usually weak. In Asia, that is because very many rural households are part laborers, part owner-operators, part tenants, and in each capacity not wholly agricultural. In most of Africa, tenancy is as yet unimportant. In Latin America, politically plausible "co-operative" alternatives to tenancy -- as opposed to redistribution of owned land -- often reduce demand for labor, and thus harm the poorest. However, where owned and share-rented land on small farms can be compared, owned land shows somewhat more labor-hire per acre.

Several surveys cast light on the question, "Is tenancy a characteristic of the poor?" The answer is probably: usually, to a small extent, but tenancy also ameliorates poverty as well as creating new possibilities for exploitation. 35/ Probably much more important is another question: do places with more tenancy offer higher or lower, more or less stable or dynamic, income-per-person to potentially ultra-poor laborers, who neither own nor operate significant assets? The answer is that we are very ignorant. More generally, we know that within a rural area owner-occupier households are not much more "efficient" resource users, and only a little less likely to be poor, than tenant households 36/ -- but whether a rural area or system, by virtue of being based on tenancy rather than on owner-occupancy of a given (small) median farm size, becomes more, or less, efficient or poverty-reducing, in regard to labor and lending (not just land) channels and uses, is almost unresearched.

(e) Land reform, tenancy reform, and poverty

Yet persons relying mostly on labor -- especially if in debt -- are often poorer than persons relying mainly on land, whether owned or rented. So the leap, from observing (or theorizing) that sharecroppers are (sometimes slightly) less efficient and poorer than comparable owner-occupiers to arguing that "tenancy reform" cost-effectively attacks poverty, is -- apart from its

other faults 37/ -- a logical mistake. Unless there is enough land for all, in which case tenancy is probably rare anyway, that mistake can harm the poorest.

Land reforms are of two main types. Tenure reform seeks to discourage land-rent, especially sharecropping, or to control its terms in ways that favor tenants. Ceilings-plus-distribution legislation seeks to transfer parts of big ownership holdings to needy rural people. How do these measures affect the poor and ultra-poor?

Neither reform directly brings operational holdings towards poor users. Yet this is the change that evidence on land economics most clearly indicates. If land and capital rather than labor are constraining output -- and if there is not rapid technical change, requiring medium (not big) farmers to lead risk-taking innovation -- social rates of return are highest, relative to private rates, on farms with little land per family worker. 38/ Thus land redistribution towards small operational farms, by enabling the poor to realize their potentially high PRs, both increases the intensity of land and capital use (and the extent of land improvement with slack-season labor), and reduces poverty incidence. Tenure "reform" restrictions and controls actually discourage private processes that would otherwise move towards the above goals. It is almost impossible to implement without effective ceilings-plus-redistribution first (because landlords are powerful enough to prevent implementation of tenancy laws). And it creates patterns of avoidance, notably through frequent changes of tenant, that damage efficiency and equity alike.

Ceilings-plus-distribution legislation only appears to suffer from the same drawbacks. It, too, does not directly redistribute operated land; but the predominance of owner-operation (especially for owners of 1 to 5 acres) ensures that it does so indirectly. Ceilings-plus-distribution legislation, too, gets avoided; but, in contrast to tenancy reform, the main methods -- sales, or bad-faith transfers to poorer kin -- themselves tend to redistribute land rights. As for hired laborers, who get no land from tenancy reform (and have tended to lose work, if avoidance takes the form of installation of farm-managers as intermediaries) , they may do so from ceilings-plus-redistribution. Even if they do not, they will be helped by the rise in labor-intensity (and usually, in production of cheaper foods) as land is shifted into smaller units.

It is often stated that avoidance has paralyzed both ceilings reforms and tenancy reforms. This is a gross exaggeration. Tens of millions of acres -- often of not-very-good land, often not reaching the very poorest, always piecemeal regionally -- have been redistributed under ceilings legislation in LICs since 1955. Millions more acres have been sold or transferred, by owners, to poorer people to avoid the legislation. Time-series as well as cross-section evidence confirms both reduced poverty and -- at worst -- no decline in land or capital use efficiency, or in innovativeness, as a result of most such reforms.

(f) Landlessness, micro-farming, poverty

There are several problems with proposals to seek "the poor" overwhelmingly among rural people owning no arable, non-homestead land. Data on poverty incidence suggest that it is reduced both by "home gardens" and by rented-in land (i.e., capacity to hire out farm-management skills). On the other hand, a little bad land may be no more use than none at all.

The rural "landless or near-landless" are perhaps best defined as those households who neither own nor operate land, plus those owning holdings too small -- given typical quality of local land -- to provide, after meeting off-farm costs, even one-third of food needs. 39/ Substantial tenants, and owners of significant non-farm assets, should really be excluded. In India these totals can be roughly estimated. Several sources and methods confirm that they are small -- well below 15 percent of rural populations -- and that proportions are not rising much, if at all. In Bangladesh and probably Java, the statics and dynamics are both worse.

Micro-evidence supports this. Save in areas of acutest land pressure and rather low rural diversification, 40/ "landlessness and near-landlessness" plus agricultural dependence appears to be a problem affecting as yet, below half the rural poor, However, where land is good, these households are at highest risk, in an average year, of nutritional danger through ultra-poverty. Also, it is in these areas that efficiency gains from land redistribution appear likeliest. Policy implications (Sec. VI) appear to be that land redistribution in crowded areas of good land can be an important and efficient

part of an attack on ultra-poverty. But in such areas the political difficulty of land reform is greatest.

(g) Land requirements, land quality and location: links to poverty

In one important way, lack of land is less characteristic of poor people than it seems to be. Groups of households operating (or owning) less land almost always show lower average family size than bigger holders. Typically a household operating half the average farm size would have only 70-80 percent of the workers (and persons) of average farms -- which makes its typically above-average annual output-per-acre yield even more impressive, since labor-per-acre (compared to big farms) is less than it appears. The landless have the lowest average household size, partly because some are recently-married couples waiting to inherit. 41/

Within smallish areas, poor people owning a little land do not show systematic differences in land quality from the average. Their high labor/land ratios do encourage family work for land improvement; but their low savings, and restricted access to credit, reduce purchased improvements, especially of "modern" irrigation services.

In surveys covering big areas, smaller holdings do tend to crowd into areas of good land, so that aggregate measures often overstate the link between poverty and land hunger; this should be corrected by measuring land in "efficiency units". 42/

Poor people's land tends to be further from the village (except of course for homesteads). Also -- partly to spread risk -- it tends to be fragmented into smaller plots. Both these tendencies compel poorer farmers to spend more travel-time to put in a given amount of labor on a plot. Also, high-value labor-intensive production -- to which their small areas are often otherwise well suited -- is deterred by such spacial factors.

(h) Assets ancillary to land

The evidence on whether irrigation is more, or less, available to the poor then land is mixed. Normally, if a whole village gets irrigation, this

(i) is at first size-neutral, but (ii) may later induce changes in holding-size patterns, (iii) will almost certainly raise demand for the labor of the very poor, and (iv) raises village average income relative to already irrigated villages, where poverty incidence was normally less. Anti-poverty effects are clearest for handpumps and small wells; most doubtful for tubewells; and, whether positive or negative, tiny in proportion to "top-tail" effects for large gravity-flow schemes. 43/ Drinking-water improvements, and greater seasonal and annual stability of labor income, are often associated with irrigation and are much likelier to add new value for the poor than for others.

Except in some East African cases, livestock are much more equally distributed than land. The poor, even the ultra-poor and landless -- especially among female-headed households -- are relatively likely to own poultry and smallstock. Draught animals are much less likely to be owned by the poor than are cows or she-buffaloes; poor landowners, if forced to rent out, often do so for lack of adequate draught-power, especially after a drought year.

Farm implements, where valued as a whole in village and sample studies, usually add up to less per hectare on smaller farms, and are very seldom hired out with the services of landless labor. Much of this overall finding, however, may be due to lift-irrigation; cheap, simple plows and hoes appear to be more equally distributed than land, except to poor female household heads.

(i) Other physical producer assets

Surprisingly little is known about poor or ultra-poor people's propensity to own these. In a sample of 77,035 Indian rural households in 1971, some 11 percent owned less than 500 rupees' worth of assets (average value Rs.232) and a further 8 percent owned Rs. 500-1000 (average Rs. 720). These groups probably overlap closely with the ultra-poor. Of the 11,244 households mainly dependent on farm labor, 44 percent were in the "below Rs.500" asset-owning group (average Rs. 229) and 25 percent in the "500-1000" (RS. 701). Among the 1,868 artisan households, the proportions were 23 percent (Rs. 260) and 19 percent (Rs. 7474) respectively. So artisan capital, while "better" than farm labor, was much less of a guarantee against extreme poverty

than cultivator capital. However, producer capital loomed larger in total assets for poor artisans than for other poor rural indians or for less-poor artisans. Among the two probably ultra-poor groups of artisan households, about 15 percent of assets comprised "implements and machinery" -- as against only 3 percent for equally poor farm-laborers, and 8 percent for all rural artisans. 44/ Village studies confirm these patterns.

Certain sorts of rural producer assets, e.g. rights in intensive fishponds in Java, appear especially well suited to the poor. Compatibility with large families and child care seems important. In towns, selective damage to poor asset-owners from many forms of "quality-conscious" controls and restrictions (e.g. against hawking) is well documented. Overall, the equation "small is labor-intensive and efficient" -- widely valid in farming -- appears to apply only to the very small artisan producer. But the main answer to the question, "What structures of non-farm asset expansion lead to higher asset income for the poor?" is, "Nobody has much bothered to find out".

(j) Durable consumer goods

Buildings (almost entirely homes) and durable household goods comprised 57 percent of the gross assets of the poorest one-third of rural Indian households in 1971 (as against 81.5 percent for the very poorest 11 percent, but only 22 percent for the average household). Village studies confirm that house quality and value, while rising more than income as we pass from ultra-poor through poor to non-poor groups, rise more slowly than producer assets. There is, however, some evidence that small urban house size constrains productive activity among some very poor people.

(k) Other asset issues 45/

Capacity to borrow rises more or less linearly with assets (collateral). Assets are disproportionately smaller as the income-group is low. So, therefore, is capacity to borrow. Need to borrow, however, rises more than in proportion to declines in income. Unless capital markets are perfect, therefore, poorer people (groups, villages) pay more for credit. This increases liabilities, relative to income, among the poor. In stagnant areas, or where poverty is lifelong, this increase is soon constrained by a lack of

creditworthiness. In growing areas, or where poverty is concentrated in the early years of a marriage, liability/income ratios can often increase steadily as poverty presses harder. Consumer and emergency credit is an especially high proportion of total liabilities among the poor.

Total asset-and-liability statements by poverty-groups can sometimes be drawn up. These invariably, however, omit "human capital" and social assets. Literacy rates demonstrably affect earnings capacity, even among farm laborers, especially in dynamic agricultures; the disadvantages of poorer deciles, in adult and child literacy and in schoolgoing, are much greater in rural areas, especially remote ones. Disadvantages cumulate: females are further behind males in literacy in villages than in towns, among laborers than among cultivators; the literacy gap between rich and poor, and between men and women, has been growing in many rural areas, but falling in most towns.

Order, stability, and predictable government action -- given the balance of political forces -- appear especially important "social assets" for the poor. Comparisons of several villages suggest that in Bangladesh, much more than in India, illegal activity has regularly "bent the rules" to transfer rights, stocks, and land from poor to rich. 46/ More conventional social capital -- clean water supplies, public works, and health facilities -- is often skewed towards the poor, who alone may be unable to afford such benefits privately.

V. POPULATIONS OF POOR PEOPLE

(a) Historical reversal: poor LIC households now much bigger

Of the poorest one-fifth of households in developing countries, between 55 and 80 percent -- depending on the country -- have eight or more members. For populations as a whole, the proportions are 15 to 30 percent. Numerous micro-studies confirm these big samples: poverty risk is almost always (there are a few West African exceptions) much greater among members of big households, and among children. Conversely, single-member households -- and old people in general -- are heavily under-represented among the poor. Both the predominance of big households (and children) and the scarcity of small ones (and old people) among the poor are much less clearly established in now-developed countries (NDCs). More strikingly, most of this completely reverses NDCs' experience from 1400 through 1900, when large households generally were better-off than others.

(b) Historic continuity, recent paradox: low-status households smaller

Yet -- both in the NDC past and in the LIC present -- higher status, assets, and job-type accompany larger household size. Among 4,118 rural Indian households in 1968-70, 65 percent of those with only one person were landless, 36 percent with 2-6, and 21 percent with 7 or more; also, average household size rose steadily with land ownership, from 4.8 among households owning below 1 ha. to 9.8 above 14.5 ha. Yet 31 percent of households with 1-2 persons fell below a "poverty-line", rising steadily to 88 percent at 7-9 members. 47/

Many micro-studies, and large urban and rural samples, confirm this. Yet it is a paradox; 48/ for high status, assets, and job type remain inversely correlated with poverty. Correlates of low household status in various societies -- low caste; female-headedness; even remote location -- as well as standard indicators of low access to land, assets and good jobs, have been

linked to small families but also to poverty: yet big families are poorer in total populations.

(c) The role of rural mortality

Always (and everywhere), age-specific (AS) mortality increases alongside poverty. In LICs now, the differentials are probably sharper than in NDC history. Certainly they are much sharper for children and under-fives, and among the ultra-poor, than for poor or non-poor, or over-fives. This reflects the nature of undernutrition (p. 10). It is also part-cause, part-consequence, of the heavy concentration of under-fives (and therefore of deaths linked to the nutrition-infection synergism) among the ultra-poor.

Rural AS death-rates are well above urban rates in most LICs (again reversing the large majority of historical experiences in NDCs). This usually renders poor households bigger in towm than in country. Female AS death-rates are often above male rates. Bad housing and lack of nearby water and electricity raise death-risk in a village. All these status-linked "killers" affect the poorest most -- but apply to some extent even to the non-poor.

On its own, death obviously makes households smaller. So higher AS death-rates have something to do with persistent smallness among low-status households -- but make it harder to understand the "new" LIC largeness among poor households. Fertility, or other household demographics, might help.

(d) Couple fertility, marriage age, family size

Ultra-poor couples show slightly lower AS fertility than poor couples, partly for health and food reasons. But, as income-per-person rises above (say) the second poorest decile of Indian households, AS fertility falls steadily. This "inverse-U" fertility-income link is . matched by an inverse-U income-status link, with the worst urban housing and the poorest farm-labor status in several cases linked to low AS fertility, but otherwise clear falls in AS fertility as poverty is surmounted. Within status groups, there appears to be a monotonic, and positive relationship between poverty and AS fertility. Parental choices

due to changing income expectations, and the role and rewards of child labor, are important parts of the explanation.

It is sometimes argued that high fertility in poor groups does not explain their large household size, because much of it is to replace child deaths, which have already reduced size. However, this replacement effect is roughly offset by sib crowding effects -- high fertility produces extra siblings, which in poor households raises AS mortality.

Ages of marriage, in conjunction with domestic-service patterns (see below), are probably the main explanations of the reversal in the size-poverty link, as between NDCs in 1400-1900 (when poor households were smaller) and LICs now. NDCs offered few chances (or rewards) for higher, especially female, education -- but many chances for adolescents from big, poor households to "go into service" with richer families. In NDC history the poor deferred marriage and reduced lifetime fertility, while the wealthy could afford to marry early and saw no reason not to; Romeo and Juliet married young, but might have deferred marriage had they seen profit in attending a university. 49/ In LICs now, greater poverty goes with earlier, more tradition-bound, less education-influenced marriage. Less-poor couples' longer education not only raises marriage age, but also reduces marital fertility. 50/

(e) Family structure seldom enlarges poor households

Complex households (including "extended families") are much rarer, on recent but massive evidence, than was once believed -- in both the NDC past and the LIC present -- and are especially rare among the poor. Yet complex households do tend to be relatively large. The greater size of poor households in LICs today, therefore, occurs despite their low incidence of "complexity". However, complex households are heavily concentrated in certain castes and other high-status groups, and are especially unlikely to be female-headed. This helps explain the link between low status and small households.

(f) Migration, poverty and household size

The main type of migration that affects household size is long-run; affects individual household members; and takes them from rural to urban areas. In NDC history -- and even now in Latin America this tended to produce female-headed, small urban households, concentrated among the poor (but not often ultra-poor). In Asia and Africa since 1945, such movement has created male-headed, initially small and poor, but later quite large and upwardly mobile urban households.

Recent individual townward migrants are of two types. The typical "educated" migrant reduces the size of his family rural household from 5 to 4 and sets up a 1-2 person urban household; neither household is poor. The typical "low-income" migrant reduces his rural household size from 7 to 6, also setting up a 1-2 person urban household; both households are poor but not ultra-poor. 51/

In low-income countries, such migration is far below the levels popularly claimed. At the 1961 census, only 3 percent of Indians were rural-born town-dwellers -- many of them temporary, others "offset" by urban-born village residents. In some LICs the incidence of international migration was substantially raised in 1973-1980 by the oil booms, but this was largely temporary and had little direct effect on the poorest. Migration is linked to poverty in important ways (see footnote 29), but is unlikely to be a major explanation of why poorer households are bigger, or low-status households smaller, than the average.

(g) Family cycles, poverty, household size

A couple's poverty risk changes over the "family cycle" between marriage and the surviving spouse's death -- especially as children arrive, start to work, and leave. These events also affect household size. But they alter poverty risk much less in today's LICs than in today's -- or pre-industrial -- NDCs. The more that jobs (and associated incomes) depend on lifelong status, e.g. caste, the less does poverty risk change during the family cycle. This latter finding helps explain why some couples, whose

children are likely to be assigned low status and earnings, have low family size in LICs.

At the "old" end of the family cycle, extremely few very poor households are single-membered. Couples take special pains to "insure" against the combination of solitary widowhood and poverty. This helps to de-link poverty from low average household size; better-off couples are under much less pressure to make economic sacrifices to avoid being alone in old age, especially through widowhood.

(h) Non-family members of households

In 100 English communities in 1574-1821, over 13 percent of all persons were -- and over 28 percent households contained -- resident (domestic or farm) servants. Other NDCs show similar results. For various reasons, the proportion in today's LICs are much lower -- 1 to 5 percent.

These servants moved from poorer to richer households. Poorer households thus got smaller and richer households bigger. Moreover, most of the servants were young, single and deferring marriage and thereby delaying the formation of their own (generally poor) households -- thereby reducing their probable number of children. Through both routes, the absence of this "domestic service pattern" in LICs links poverty to big households. (For a few poor households -- but rarely for the ultra-poor -- townward migration or military service substitutes for this pattern.)

(i) Size, choice, poverty, transition

Formerly, many poor families sent adolescents to richer families for "service". Today, the better-off have responded, to lower mortality and higher income, through a rapid demographic transition -- more education, later marriage, and hence lower fertility. Today's LIC poor, and especially the poorest with few prospects of successful urbanization, are less able to choose rapid, non-bumpy adjustments to demographic and macro-economic change. So their households stay big and young, with high mortality (and higher fertility) relative to the non-poor -- and hence less chance to compete against them. 52/

(j) Household composition and poverty: age and sex

Large size is the most important demographic characteristic of LICs' poor households. It even has major arithmetical consequences: that a larger proportion of people than of households are poor; that poverty must never be measured via income-per-household; and that an X percent reduction in everybody's (planned and achieved) total family size helps the poorest most. 53/ But composition, too, differs among households by poverty level, with major consequences for policy.

Poor households, especially in towns, have much higher proportions of children under ten than non-poor households. But the curve flattens as poverty bites harder; the ultra-poor do not have much higher child/adult ratios than the poor. On the other hand, as poverty decreases, the proportion of over-sixties rises, but in LICs it is too low, even among the rich, to offset their smaller child/adult ratios, so that the "dependency ratio" -- persons not aged 15-59, as a fraction of persons aged 15-59 -- rises dramatically 54/ as poverty increases, though the rise is less sharp among the ultra-poor. This corresponds to some flattening of the rise in household size as poverty becomes extreme. It confirms the limiting impact of ill-health and undernutrition among the ultra-poor, this time in respect of fertility as well as child survival.

Do poorer households have older heads? The question is important for policy, because the answer affects the likely incidence of vulnerable under-fives among the poor. Unfortunately, the answer is also highly specific to local circumstance, complex, and seldom clear-cut .

* * *

We saw that women and girls do not suffer general or major nutritional or labor-market disadvantages, but that they do lose out in asset control and in education. Income-per-person data do not suggest that the proportion of females in a household is systematically related to its risk of poverty. However, the very poorest 1-5 percent of households do have rather higher female/male ratios than others. Also, there is a new demography of urban poverty: in the poorest three urban deciles, there are about as many men

aged 15-59 as women of that age; but the ratio rises steadily with income per person, to 1.2-1.5 by the time the richest decile is reached. This helps to create a nexus of dominance -- rich, male, urban, educated -- in which each attribute raises the prospects both of possessing all the others, and of obtaining and being involved in allocating resources. It is a nexus to which poor, uneducated rural women, above all, have minimal access. The harm cannot be fully captured by income indicators. Indeed, the risk of being in, say, the second-poorest rather than the richest LIC decile may not be much more for a rural woman. But the effect is worse, because female effort rises so sharply alongside deepening poverty. First, the child/adult ratio rises -- typically from about 1.1 to about 1.8. Second, the participation rate rises -- typically from about 20 percent to about 40 percent. Not just work, but the "double day", press harder on poorer women; men have only slightly higher PRs, and if anything less involvement in housework, in poorer than in richer households.

Similar conclusions apply to female-headed households. They are not, as a rule, greatly over-represented among the poor -- though slightly so among the ultra-poor, However, their members must work harder to attain a given, even a very low, level of living. And prospects of "working their way up" are impeded by the nexus of male dominance.

Females are at special disadvantages in LICs. However, this is not reflected very much in' lower income per person. Nor is it due mainly to discrimination within households, or in wage-rates. The problems lie with the "double day", asset control structures, educational and job access, and the male-enforced structures of custom -- including the "nexus of dominance".

* * *

Family cycles affect poverty via household size, but also via composition. They do mean that "point" surveys -- usually all we have overstate poverty, 55/ but probably not, in most LICs (at least rurally), by much. Family cycles heavily concentrate children among the poor, and (many fewer) old people among the less-poor; but they enable household members to move out of poverty, as household age-structure changes, only where mobility is high, and where job access and information are good.

VI. CHARACTERISTICS OF POOR AND POOREST: POLICY IMPLICATIONS

Sharp discontinuities exist"between poor and ultra-poor, but not between poor and non-poor. These differences -- especially in regard to labor-market and demographic behaviors and responses -- are related to income-linked nutritional risks incurred, often lifelong, by ultra-poor households only. This does not prove that policies, aimed at raising productivity among the poor, do not help the ultra-poor, but it does strongly suggest that the ultra-poor may require different policies, in particular "calories and health first", if they are to be able to raise their productivity. The most clearly indicated policy suggestions, in what follows, are probably those numbered P7, P8, P10, P19, P20, P22, P23, P28, P29 and P30.

(a) Identifying poor and ultra-poor potential beneficiaries

Most projects or policies provide -- or destroy -- benefits 56/ in different proportions for persons of different regions, age-groups, nutritional levels, relationships to land, etc. Policymakers should want to know, at least roughly, how much the gains or losses matter for the affected groups. That question has two parts. Are the people likely to gain most if they get the benefits, such as poor and ultra-poor people, 57/ heavily or lightly concentrated in the areas or groups affected by the project or policy? Within such affected areas or groups, do the poor and ultra-poor "target" people have the characteristics permitting them to benefit from the project or policy in numbers sufficient to make it cost-effective against poverty, and in ways that give it an adequate rate of return over cost? The use of poverty-measurement, to select and assess alternative projects or policies, has been bedevilled by the confusion of these two questions.

The first question -- "In what groups or places are the poor and ultra-poor heavily, or lightly, represented?" -- is that of poverty measurement and identification. For tracking the severity 58/ of poverty

"before, during and after" a project or policy, or in a place or group, our evidence suggests several policy guidelines.

P1. Where income-related caloric risk is still significant, separate indicators for the "poor" and "ultra-poor" should be gathered. The groups differ not only in needs but in characteristics, and thus (see P4) can be identified fairly cheaply. Tracking of ultra-poor, as well as poor, following a project or policy, is (i) necessary to see whether the poorest groups are benefiting, (ii) usually more feasible than other ways to do this. 59/

P2. One should never "identify the poor" or ultra-poor by total household income. Many -- often, most -- households with low total income are small, not poor.

P3. Low outlay (or income) per person usually is almost as good a broad-brush poverty measure, for households, as "per consumer unit"; but the latter should be used if cheaply available (e.g. via household survey), as it enables more accurate selection of groups or places in greatest need -- especially if household-structures vary greatly among areas or groups, e.g. if family planning has been spreading, or if migration is substantial.

P4. The ultra-poor can be fairly accurately identified in at least three ways. In tracking poverty (e.g., for project or policy selection or post-evaluation) the cheapest and most convenient should be used. 60/ In any group, in a typical LIC, very similar proportions of persons (i) spend more than 80 percent of income or outlay on food, (ii) but satisfy below 80 percent of the 1973 FAO/WHO calorie requirement for their age, sex, activity-group, and (if aged over 15) actual body-weight, and (iii) have income or outlay, per person or consumer unit, insufficient (with typical spending patterns) to meet this requirement, given household structure. "Poor but not ultra-poor" proportions, in alternative groups or project-outreaches, can be estimated analogously. 61/

P5. If none of these three indicators can feasibly be estimated, in the alternative project or policy outreach groups, within the decision time available, other characteristics of poor and ultra-poor may be useful -- though

these require fairly strong "other things equal" assumptions, before we can safely assume that "more means poorer" on any indicator. Nutritional indicators 62/ include high ratios of cereals and roots to total calories consumed (or total food outlays), or of "coarse grains and roots" to "cereals and roots", which signify greater poverty incidence; and maintenance of these ratios, in a group or area experiencing some income increase, suggests high ultra-poverty incidence. 63/ Perhaps the best demographic indicator is the incidence of households with over seven members; 64/ others include high child/adult ratios, very low proportions of over-sixties, early marriage, and (among the ultra-poor) raised infant and child mortality. In labor-market behavior, high age-specific female participation normally signals poverty 65/ -- but failure to increase it as conditions worsen signals ultra-poverty; and the ultra-poor, especially urban people and women, feature sharply higher unemployment rates. As for asset-holding, absent or tiny landholdings, whether owned or operated, "signal" poverty only in fairly undiversified agricultural areas where land quality is fairly high.

P6. Plainly, if nearly all potential gainers in a group or area are ultra-poor, it suffices to show that a project or policy benefits mainly that group or area; if cost-effective, such a project helps the ultra-poor. Normally, however, identification of poor or ultra-poor (P1-P5 above) in a project or policy outreach -- while necessary -- is not sufficient to demonstrate that such people benefit. (Some Bank procedures may sometimes, unintentionally, encourage staff to make this mistake. 66/). Poor and ultra-poor people's characteristics, however, do allow selection of projects and policies likely to benefit target groups. Country and economic sector work, and its communication to staff concerned with each stage in the project cycle, should place more stress on specifying these characteristics, as affected by project, sector and policy options, for major urban and rural poverty groups. This is probably much more fruitful than major further measurement work; P1-P5 are meant to simplify, not to increase, such measurement. Details of what can be done to specify the effect of policy options upon poverty "characteristics" are explicit or implicit in the remaining sections.

(b) Nutrition, poverty and ultra-poverty: policy implications

The numbers so poor as to be at nutritional risk in LICs are almost certainly much smaller than was hitherto thought. Similarly -- for example -- numbers of landless and near-landless appear much lower than is often claimed. 67/ Does this make policies against poverty less important? On the contrary. First, many more people are by any reasonable standard poor (and often hungry) than are ultra-poor (and at nutritional risk). They too need improvements.

Second, what of the ultra-poor? If we believe that 70 percent of, say, Indians are so poor as to be at major risk of nutrition-based damage to health, then targeted policies or selective reforms are hopeless; only very rapid general growth (and "trickle-across", for 70 percent are hardly "down"), or very radical redistribution, could help. But, if "only" 10-20 percent are that poor, it is feasible even in a LIC to benefit them with affordable, targeted programs of growth and/or redistribution.

Indeed, if the moral statements of donor and recipient governments are not entirely empty rhetoric, the apparently smaller size of the ultra-poverty "target" renders its persistence inexcusable. If 10-20 percent of people, initially receiving at most 5-10 percent of GNP, need income increases of 5-15 percent to obtain enough calories, that is at most 1.5 percent of GNP, even in Bangladesh. 68/

Moreover, although the ultra-poor are not all that many, their nutritional -- and other -- characteristics show that very few of them fall into an "underclass" (of, say, alcoholics or the senile). Most are underfed children who have not (yet) been permanently harmed. Most others are adults with no, or low-quality, physical and educational assets.

Yet, despite the smallness and accessibility of the ultra-poor target, even most anti-poverty projects and policies have failed to hit it. World Bank project evaluations show massive project penetration to the poor, but little to the ultra-poor. The ultra-poor, on income surveys, appear in most LICs to have increased as fast as population. Clinical undernutrition in big LICs, except perhaps China, shows no downtrend.

The first policy requirement, therefore, is to send clear signals, to those at the "sharp end" of donor or public-sector programs, that the attack on poverty-induced undernutrition is not just another of the many fads and fancies of development studies in the past thirty years. The priority, attainability, and (so far) inadequacy of projects and policies for the ultra-poor 10-15 percent has to be made clear -- and separated from the different job of raising the productivity and income of people who, while below some "poverty line", have enough income to avoid caloric risk.

P7. The World Bank should consider a major initiative to eliminate poverty-induced nutritional risk -- a re-commitment, extending far beyond the (fully legitimate) search for a "human face" to temporary programs of structural adjustment, to durable measures for food security, achieved mainly through higher productivity, of the most "truly needy". It should not be assumed that the Bank group's comparative advantage lies in direct support of policies for the ultra-poor -- though in some countries and sectors that will be the case. But each LIC, with Bank group help as appropriate and in consultation with it, should be helped to estimate how many people are ultra-poor; how much extra income they needed to avoid clear caloric risk (i.e. shortfall of over 20 percent below requirements, 69/ despite 80 percent food/outlay ratios); and what acceptable, cost-effective project and policy mix, given these people's location and characteristics, would in a given period (5-10 years) 70/ render, say, 9 out of 10 currently ultra-poor households sufficiently productive to reach that income-level, and thus to avoid caloric risk throughout a typical year. 71/

P8. At the same time, to strengthen the project and policy base for this strategy, OED should review -- together with appropriate project, program, and CESW experts -- the experience of otherwise efficient Bank and other, especially national, 72/ policies and projects in raising income-levels and improving nutrition among the ultra-poor. This policy and project evaluation process should interact iteratively with the identification process to grow out of P7.

P9. Both processes (a) should elicit and use knowledge about who the ultra-poor are -- e.g. concentrated rurally; mainly in families of 8 or more; mainly dependent on casual labor in large parts of S. Asia, on rainfed

smallholdings in Africa; etc. -- in particular LICs; and (b) should assess the benefits and costs, not mainly to persons below some "poverty line", but to those initially at income-induced caloric risk.

P10. Major projects and policies (e.g. pricing of cash-crops) should be scanned, at least cursorily, for their effect on caloric availability -- and on caloric entitlements among at-risk groups -- and on their caloric requirements, not only 73/ where health policy options are under review -- among the poorest 10-20 percent in an affected region. The amount and mix of produced and net-imported calories (especially the proportion comprising costly dairy foods vis-a-vis coarse grains and roots), and land-use (especially as it affects labor incomes) are the main relevant factors, affected by project and policy options, and in turn affecting caloric intake among the ultra-poor.

P11. Some poor people avoid ultra-poverty because they have relatively low caloric requirements, or can adapt relatively well to seasons of low caloric availability. How do they do it? Under what circumstances are they unharmed by it? Research here promises a very high pay-off. 74/

P12. Ultra-poor people are usually the most vulnerable to seasonal variations in caloric adequacy. Programs that smoothe the flow of cheap caloric availability relative to the flows of work requirements thus have a major hidden advantage. We have been lucky in that the high-yielding cereal varieties have usually done this. Major project and policy options in ARD (and CGIAR), and in price policy and health policy, should in future be scanned for seasonal impact on undernutrition -- so as to warn of possible "bad luck" in future.

P13. Under-fives are very heavily over-represented among the ultra-poor. 75/ Determined policy efforts to improve feeding (and especially hydration) during diarrhea -- and concentration of family-planning and linked positive incentives where there are most ultra-poor -- could help. Evaluation of the durable effects, on children in poor and ultra-poor households, all UNICEF's actions in these areas could be very fruitful.

P14. Behavioral as well as medical evidence clearly shows that undernutrition linked to ultra-poverty is overwhelmingly (though not entirely)

rural. Before supporting projects or policies that tend to centralize food stocks in towns, authorities should satisfy themselves that caloric adequacy among the potentially ultra-poor is not worsened.

P15. Current methods of project and policy selection and evaluation, even if they give extra weight to poor people's incomes, do not explicitly stress ultra-poor people's caloric adequacy. The latter is the core of ultra-poverty, and is a problem mainly in LICs. Assessing it, at each stage in the project cycle (and of policy formulation and implementation), could improve impact on the ultra-poor -- and replace many current approaches to poverty measurement -- at low cost.

(c) Labor, poverty and policy

The evidence on labor and ultra-poverty (SWP 597) is rather gloomy. Many small children mean lowered participation rates; poorer adults try to compensate by participating longer, but the poorest are impeded, perhaps by illness, hunger, child-care and immobility. Unemployment rates rise sharply as poverty becomes extreme. Wage-rates are kept down, not mainly by discrimination, but by an "unskilled" balance of tasks and locations. Participation, employment, and wage-rates fluctuate most -- and are likeliest to look bad at the same times -- for the poorest. Can any hints on policy emerge from this sad litany?

P16. Although age- and sex-specific participation increases with poverty, this increase is impeded among the ultra-poor. Their income would be increased by reducing these impediments 76/ (particularly since some, notably illness, strike hardest in the seasons of peak demand for labor) -- and above all where the poor are mainly self-employed, so that extra supply of their participating labor need not greatly reduce wage rates. Education policy options (e.g. timing of school terms) 77/ should be evaluated in regard to impact on opportunity-costs, and hence on work as well as school participation, by the ultra-poor. Health policies and programs should be reviewed to see whether it is feasible to increase their impact on seasonal peaks of workforce illness and disability. 78/

P17. Urbanization means huge cuts in women's participation, even in the poorest deciles of households. Since these deciles contain about as many women as men, 79/ there would be major potential gain to the urban ultra-poor if their adult female participation rates could be restored from 20-30 percent to the more typically rural 40-60 percent levels (without major rises in unemployment or falls in hourly rewards). Design of urban housing, and linked informal crafts and trade, should be examined in major projects, to see whether workforce entry by low-income women could be eased, e.g. by work more consistent with child care.

P18. Unemployment is strikingly higher among the ultra-poor, especially women. Especially where search facilities are bad or costly, it is worth asking whether information about unskilled or artisan labor prospects within, say, a 10-15 mile radius can be piggybacked onto other mobile government services, or purchased by government from private suppliers; for example, a mobile clinic or extension officer could carry around a register of "work wanted and work offered", leaving it available for update and information at each stopping-place. 80/

P19. The ultra-poor -- unlike the poor -- lack even the minimal capacity to bear risks and costs required for medium-term, medium-distance migration and search, unless work is fairly certain. The case for employment guarantee schemes -- providing work within a few miles of home -- as a potentially high-return way to create public works, has been well made by the Maharashtra experience, which has benefited millions of ultra-poor, more than half of them women, and many from the "lowest" castes. One great merit of such public schemeS is that they provide a reserve position, increasing unskilled laborers' bargaining strength in private negotiations with an employer (provided that labor-displacing investment is not near his margin of profitability).

P20. Another such "reserve position" may be provided via the surprisingly large -- and in India increasing -- proportion of laborers that do own some garden-land, livestock, micro-farms, or trading or artisan assets. Measures for rural off-farm development have often tended to devalue these assets of the ultra-poor, especially by subsidizing the competition via near-free training, inputs or credit to much wealthier persons known as "small

businessmen" (e.g. in: brickmaking or milling). Donor and domestic informal-sector projects and policies should take special care to avoid restrictions or subsidies that damage ultra-poor family labor, especially in hawking and artisanship. More positively, much could be done to develop profitable technologies -- in accounting and stock control as well as production -- for these very small self-employed families. Compatibility with women's family tasks is important here.

P21. The extreme instability of all components of labor income for the ultra-poor often forces steady decumulation of assets via mortgage or sale. The evidence suggests that a bad season, year, or period of personal health is a major factor propelling poor people into ultra- poverty. Not another impact statement or a lot of numbers, but a couple of hours of thought at each stage of a project (or policy) cycle, would often suggest important and low-cost was to improve impact on the stability of poor people's labor income.

(d) Assets, poverty and policy

Most of Africa's ultra-poor, and perhaps a third of South Asia's, own or operate significant amounts of farmland (including cultivated homesteads). Labor-intensity and family overview ensure relatively high cropping intensities, low fallowing, and often high yields per acre. Despite frequent use of credit for consumption or emergencies, these micro-farmers usually feature lower default/loan ratios than less-poor borrowers, both on private and on institutional credit. 81/ Yet it is often believed, quite wrongly, that farmers too small to meet total family food needs cannot effectively borrow or grow.

To help such people, however, we need to know something about the changing asset characteristics of the very poor. The overlap of landlessness and near-landlessness with high poverty incidence and severity is significant only on good or well-watered lands -- where the advantage of the small farmer's labor-intensity is also greatest, unless inappropriately labor-saving methods are subsidized. Tenancy is (weakly) correlated with poverty, though it is micro-farmers, whatever their tenurial status, and the landless who are likeliest to be poor; and "tenancy reform", with land ownership very unequal, seldom helps the poor. Unless land is almost free, it is less likely to be

owned, or even managed, by ultra-poor people than are productive animals -- especially milch cattle and (even more) smallstock and poultry. Artisan and (especially) housing capital, and increasingly some forms of human capital, loom larger, relative to physical producer assets, in poor people's portfolios than in others.

P22. Land redistribution, with ceilings on ownership, is widely thought to be crippled by evasion. In fact, tens of millions of acres have been redistributed, often not ideally. Unlike tenancy reform, the process (a) if implemented usually raises output, and (b) even if evaded often benefits the poor. But 3-6 acres of bad, ill-watered land give hardly any more protection against ultra-poverty than does landlessness. Hence the most promising areas for land reform (ceilings with redistribution) are well-watered, good soils with initially severe inequalities. For such areas, the Bank should publish more widely its position from the 1975 and 1982 Policy Papers on Land Reform -- viz. willingness to lend in support of productive, well-considered redistributions.

P23. "Bad" land -- Where redistribution is often unpromising -- has traditionally provided the ultra-poor with common property rights (CPRs), from slash-and-burn or even settled agriculture, through grazing, to firewood or thatch-grass. Partly because the ultra-poor are not very articulate, partly because these rights are often exercised via circular migration (so that land looks empty), market and population pressures have increasingly induced enclosure for ranching or plantations, displacement by irrigation dams, buildings, or other destruction of this ultimate resource for the ultra-poor. Wherever a project envisages use of allegedly empty or near-empty lands -- or relies on claims that very poor ex-users, often without formal title, will be compensated -- in-depth prior enquiry, involving anthropologists not linked to project or government, is necessary to establish poverty impact via CPRs.

P24. Ultra-poor households' land, while not generally worse than other people's, tends to be more remote and divided into smaller fragments. Consolidation and irrigation programs -- whole allowing for the fact that some fragmentation is done to cut risk -- should seek to reduce these disadvantages.

P25. Perhaps because they are so often self-consumed, tropical farming of major poor people's crops -- millets, sorghum, cassava -- has until recently been rather little researched. Research outlay is still a much lower proportion of value added than for wheat or rice. Given the nutritional barriers facing the ultra-poor, ongoing expansion of such research should stress labor-intensive, reasonably safe ways to increase cheap calories per acre. More stress on root crops on home gardens (rural as well as urban), and perhaps on some local vegetables, is indicated. Care is needed to avoid forms of aid-financed testing or research that displace labor without significantly raising output, for example by subsidized screening of weedicides, threshers, etc.

P26. In irrigation, too, the ultra-poor will be helped by much greater emphasis on labor-intensity and food-orientation of asset use. Some forms of irrigation, e.g. hand and pedal pumps, produce returns far more concentrated on the poor than does land. Dug wells, and irrigation facilities that also supply clean drinking water, are also skewed towards the poor. "Choice of techniques" in irrigation projects -- and in water pricing policies -- should always consider 82/ the effect of alternatives on the ultra-poor.

(e) Demography and anti-poverty policy

Much more is known about demography and nutrition, as they affect the ultra-poor, than about labor and capital. The following policy implications, therefore, are drawn with more confidence than those of the previous two sections.

P27. However, while we know that "economies of scale in consumption" are of major importance in the USA, 83/ the effect of alternative household sizes and structures upon poverty risk at a given level of income-per-person in LICs is very little researched. More work is urgently needed.

P28. We know, though, that most of the ultra-poor are in families of eight or more, with very high child/adult ratios. The question, "How will this major project, choice of techniques, or policy affect big families with several young children?", ought regularly to be asked -- even where the answer is expected to be "very little". The special circumstances of the ultra-poor mean

that such a demographic assay of options could make a major difference to their welfare.

P29. There is probably a major differential effect of direct and indirect tax and subsidy policies, and of price policies, on both welfare and behavior of households of different sizes and child/adult ratios. The special nutritional risks of younger siblings in large families, with their high incidence of ultra-poverty, significantly affect the case for, and against, alternative schemes to supplement or subsidize calories. Some analysis of such differential impacts on big, poor, child-intensive households -- which spend exceptionally high proportions of outlay on food -- should always precede major policy recommendations or conditionalities affecting food prices.

P30. The apparently "economic" 84/ concentration of early family-planning efforts upon low-cost acceptors militates against attempts to de-link ultra-poverty from big family size. It thereby helps to concentrate nutritional danger upon the most vulnerable -- children under five. Increasingly, family-planning efforts and associated positive incentives 85/ (including perhaps some old-age insurance for couples with no or few offspring?) should concentrate on young women in places and income-groups with traditionally big families.

P31. The effects upon fertility greatly strengthen the case for some continued expansion of post-primary 86/ schooling -- to the extent that it can be spread to poor people, especially girls.

FOOTNOTES

1. Let us write H, head-count, for the incidence or proportion of persons below a "poverty line"; I, intensity, for ratio, to poverty-line income, of the gap between average consumption of the persons in H and the poverty line; and G for the Gini coefficient of income among the poor. Then the only consistent index of S, the severity of poverty, is $S = H[I+G(1-H)]$. A. K. Sen, Poverty and Famines, Oxford, 1981.

2. Familiar problems are: to what extent is the project (program, policy, strategy), thus funded, truly and precisely additional? If it had not been forthcoming, what alternative project, etc., set would have been adopted?

3. If no control group is available, it may be possible to regress the rate of change in S upon the rate of change in explanatory policy variables, projects, etc. See R. Dasgupta, 'A cross-sectional analysis of poverty and undernutrition in rural India', Economical Political Weekly (hereafter EPW), XVII, 39, Sep. 25, 1982.

4. For example, in most drought-prone semi-arid tropical areas.

5. Evidence on farm sizes and yields appears in A. Berry and W. Cline, Agrarian Structure and Productivity in Developing Countries, Johns Hopkins, 1979; on micro-industry, see the discussion and references in Focus on Poverty, World Bank, Feb. 1982.

6. Ibid. The 1983 round of the Indian National Sample Survey shows some improvement since 1977, but the poverty indicators seem about the same as the early 1960s.

7. Specifically, World Bank Staff Working Papers No. 597, Poverty, Undernutrition, and Hunger, April 1983; No. 616, Labor and Poverty, October 1983; No. 623, Demography and Poverty, November 1983; No. 744, Land Assets and Rural Poverty, 1985.

8. Or the proportions in "poor" groups before-and-after.

9. Ultra-poor: at significant risk of income-induced caloric undernutrition. Poor: sufficiently low-income to be at risk of hunger, but not of undernutrition. See below.

10. On the "link" in risk-profit choices around the level of "subsistence" income, see the work of Ortiz, Dillon and others, reported and reprinted in J. Boussard et al. (eds.), Risk, Uncertainty and Agricultural Development, Agricultural Development Council/SEARCA, Manila, 1979.

11. M. Ahluwalia, 'Rural poverty in India, 1956-57 to 1973-74', in World Bank, India: Occasional Papers, Staff Working Paper No. 279, Washington, D. C., May 1978, p. 7.

12. Calculated by S. Kamin in 'World Poverty Projections', background paper for World Development Report 1984, mimeo, World Bank, Jan. 1984. Total populations from World Development Report 1983, p. 168, and World Bank Atlas, 1983, p. 14. Note that "only" 36m persons in sub-Saharan Africa were "poor" on Kravis-adjusted income data in 1980 -- a much lower incidence, although of course data quality is very poor.

13. Assuming 8 percent annual inflation, 1974-80, of the 60-rupee 1974-5 "poverty line", and 30 percent of outlay spent on non-food.

14. Includes subsistence (self-consumed own-farm) income and income-in-kind. For very poor groups, income and outlay seldom diverge greatly for long.

15. M. Lipton, Poverty, Undernutrition and Hunger, World Bank Staff Working Papers, No. 597, 1983 hereafter SWP No. 597), p. 86, fn. 40, for precise definitions.

16. See below, pt. III, sec. (k).

17. See above, fn. 10.

18. SWP no. 597, p. 2, sec. (i).

19. Given real income per consumer unit, (a) bigger families enjoy some economies of scale in consumption (though less in LICs than in developed countries -- M. Lipton, Demography and Poverty, World Bank Staff Working Paper No. 623, 1983 (hereafter SWP No. 623), pp. 66-68); but (b) there are multiple nutritional, health and educational disadvantages for younger siblings (ibid., p. 23). And real income per CU is smaller, in fact, in large families.

20. SWP No. 597, p. 6.

21. Due partly to composition of outputs (especially public-sector health outputs), partly to environmental differences. Both effects in Kerala are discussed in ibid., p. 5.

22. Assuming spending patterns among foods, typical of households with incomes, age, sex, and activity-structures at the level typical of households containing people with this (80 percent +) food/outlay ratio.

23. SWP No. 597, p. 8.

24. Not "0.5" and "0.8,, as per the misprint in ibid., p. 17.

25. See, for example, the World Bank Staff Working Papers by S. Reutlinger and H. Alderman (1980, No. 374) and T. N. Srinivasan (1980, No. 373).

26. For example, what are priority groups for concentrating scarce extra calories? Among what groups will they be largely dissipated via reduced food-to-work conversion efficiency?

27. See, for example, estimates around 70 percent of Indians so poor as to be undernourished (Reutlinger and Alderman), as compared with 3-5 percent incidence of observed clinical symptoms.

28. B. Dasgupta, Village Society and Labor Use, Oxford University Press, Delhi, 1977, uses factor analysis to show that there are two types of village as regards labor correlates of poverty: relatively equal, remote, little-commercialized places, with high female PRs, low unemployment, but also low wage-rates; and relatively integrated, commercialized, unequal places, with the opposite labor-force characteristics.

29. J. Connell, B. Dasgupta, R. Laishley and M. Lipton, Migration from Rural Areas: the Evidence from Village Studies, Oxford University Press, Delhi, 1976.

30. (a) At least in India, it is nevertheless true that at least one-third of persons dependent mostly on farm-labor income also operate significant amounts of land. (b) Growing dependence on assetless-labor income is, however, real -- due to urbanization, declining land availability per person, and in some cases (Bangladesh) polarization of holding sizes.

31. Discussion and references in Staff Working Paper No. 616, pp. 90-94.

32. Where poor people own or rent in land, its contribution to income (as compared with pure hired-labor earnings) is relatively small (though in India it seems to have been increasing). Also, poor people's generally high PR and low asset endowment ensures generally great labor dependence.

33. The Punjab and Haryana clearly show (a) downtrend in the severity of poverty (Sen index) -- S. Mundle, 'Land, labor and the level of

living in rural Punjab', mimeo, ILO, Geneva, 1982 -- despite considerable immigration; and (b) land polarization and proletarianization -- S. Sanyal, 'Trends in landholdings and poverty in rural India', in P. Bardhan and T. N. Srinivasan (eds.), Poverty in South Asia, Columbia, 1984.

34. If concealment could be allowed for, acreages and proportions would be considerably larger.

35. Not in the rather unsatisfactory sense of extraction of part of the average product of labor (which occurs in all types of economy), but, more precisely, reducing the share of labor in total income via (a) monopoly or oligopoly power in hiring out land, (b) use of capacity to deny land-to-rent to force up the returns of landlords active in other markets -- for credit, hired labor, trading facilities, etc.

36. The differences are even smaller on "bad" land -- or if we compare land access per person, not per household.

37. E.g. not considering the effects of forseeable evasion (evictions); assuming that major tenancy reform is feasible if against the interests of unreformed big landowners.

38. Because this (plentiful) labor usually saturates (scarce) land and capital more on smaller farms, since the farmer-cum-worker avoids search and supervision costs that, on bigger farms, fall on employers and employees. The "inverse relationship", between size and output per arable acre-year, is usually clear (A. Berry and W. Cline, Agrarian Structure and Productivity in Developing Countries, Baltimore, 1979) -- and is even stronger if size is measured as area per worker or per person, not per household.

39. "Costs" exclude and rent (as land is owned by the farmer) and labor (almost all family, on such small holdings).

40. This includes much of Bangladesh and Java.

41. That larger households are normally supported by larger farms should perhaps be allowed for in setting ceilings and floors for redistributive land reform, though there are counter-arguments -- that not allowing for it reduces damage done by the fact that ceilings are normally "too high" and evaded; and that allowing for it might encourage high fertility.

42. "Fair" correction is not easy, especially where land improvements are due to extra labor input by smaller farmers.

43. .e. insurance-based overuse of water -- especially, but not only, if subsidized -- by those near the headwater or canal junction, leaving uneconomically little for those further away. This need not be regressive; it is "merely" inefficient!

44. All India Rural Debt and Investment Survey 1971-2, Reserve Bank of India, 1977, Statistical Tables, Vol. 1, pp. 7, 9.

45. Work on these topics, as on sections (h), (i) and (j), is still in progress but the general direction of the evidence is fairly clear.

46. M. Cain, 'Risk and insurance: perspectives on fertility and agrarian change in India and Bangladesh', Population and Development Review, 7, 3, Sep. 1981.

47. See Staff Working Paper No. 623, p. 10.

48. Since we are dealing with coefficients of multiple determination well below unity, the "paradox" is of course not a logical impossibility -- merely (a) fairly strongly counter-intuitive (in my experience), (b) a challenge to policy: to what extent will policies that "aim to help big households" help poor people, as against big landholders, if both groups tend to have big families?

49. Of course this couple did not survive to produce children, but in general in NDCs, at least until about 1850, it was "the gentry" who tended to marry younger, and produce larger families, than others.

50. This is only slightly offset by the greater propensity of poor couples to interruptions in cohabitation, due e.g. to seasonal migration by one partner.

51. Because few of the ultra-poor can afford the "investment" costs and risks of long-run rural-urban migration; see fn. 29.

52. In land markets, this polarization hypothesis -- poor tenants and laborers increasingly populous; rich, family-planning landlords increasingly "monopulous" -- is an unlikely marriage of Malthusian and Marxian theory, arranged by Sir James Meade.

53. mong the other "reasons", poor people's (already high) dependency-ratios are much less prone to fall in early development than rich people's -- yet another part-explanation of the "Kuznets curve" (inverted-U where inequality = Y, GNP-per-head = X)?

54. In Sri Lanka in 1969-70, there were 1319 persons of "dependent ages" per 1000 aged 15-59 in the decile of households with lowest income-per-person, falling steadily to 506 in the richest (Staff Working Paper No. 623, p. 43) -- by no means an extreme case.

55. Because it is not plausible that those counted as "poorest" on survey day are always so.

56. These need not be tradeable -- e.g., health, for old people or infants--or even "evaluable" by any clear market test.

57. Of many possible justifications of this "such as", the best is expected diminishing marginal utility of real income (as real income rises) -- assuming, boldly, that we can, as indeed in policymaking practice we always do, make these interpersonal comparisons.

58. Incidence (numbers below a poverty line) and intensity (distance below it) are normally tracked with a "Sen index" of severity of poverty; see fn. 1, but also fn. 59.

59. A "Sen index", requiring us to know in some detail the distribution of income among the poor, asks too much of the data in many cases. Also, while demonstrably (A.K. Sen, ibid.) the only consistent poverty index, it has uncomfortable properties -- most of the second derivatives are quite counter-intuitive, welfare-wise. Perhaps this is because the index tries to measure too much? Two incidences (poverty and ultra-poverty) avoid this and give some indication of severity (ratio of ultra-poor to poor). See M. Lipton 'A Problem in Poverty Measurement', Journal of Mathematics and Social Science, April 1985.

60. Of course, these indicators show (rough) incidences in a group. They cannot show if an individual is clinically undernourished, or economically ultra-poor.

61. Using "80-100 percent" (instead of "below 80 percent") in (ii) and -- dependent on relative prices of food and non-food -- "70-80 percent" or "75-80 percent" (instead of "above 80 percent ") in (i).

62. Anthropometric (and, even more, clinical) indicators of "severe undernutrition" typically affect, at any survey time, well below 5 percent of LIC populations. But far more are ultra-poor -- substantially at risk of being affected, at some time, for a significant period.

63. Flows of cereal types into and out of an area can often give some guidance.

64. Adjustment for differences in kinship patterns and landholding is desirable.

65. Except at the top end of the income distribution -- among (increasingly) educated, well-off and participant women as one moves up the income scale.

66. Changing the way in which poor people are counted will not, of itself, help to solve this problem.

67. Households that (1) both own and operate no land at all, or (2) own too little land to provide even one-third of food requirements, add up to below 20 percent of all Indian rural households.

68. A check is that, if 20 percent of Bangladeshis average 15 percent below the "basic minimum" (i.e. below 80 percent of FAO/WHO caloric requirements), 3 percent more food is needed by the average Bangladeshi. Allowing for the heavy concentration of under-fives in the "bottom 20 percent" lowers this to about 2.5 percent. To raise Bangladeshis' calorie availability by 2.5 percent requires about 1-1.5 percent of GNP.

69. i.e., below FAO/WHO 1973 requirements for age up to early adolescence, thereafter per kg. of actual (not reference) body weight.

70. Dependent on the size of the task, and the priorities of government; but some fixed time, and monitoring of progress, should be required.

71. On variations, see p.12 below.

72. For a very useful Indian review, see S. Paul and A. Subramanian, 'Development programs for the poor: do strategies make a difference?' Economic and Political Weekly, XVII, 10, March 5, 1983.

73. Many policy and project choices greatly affect caloric requirements of the ultra-poor, especially for work-linked farm travel and for water-collection. This is usually ignored in appraisals, yet can push many poor households into -- or out of -- caloric danger.

74. At best, one could learn from low "requirers" (or efficient converters) how other poor people might avoid caloric risk. At worst -- if interpersonal differences are entirely genetic or otherwise unalterable -- knowing what sort of regions, groups, etc. were less

able to harmlessly reduce or adapt requirements would enable policymakers to steer appropriate resources thither, and to avoid inappropriate projects that demanded high inputs of human energy before extra calories arrived.

75. In these groups, high female workforce participation and low incidence of extended families further exposes under-fives to risk.

76. Even if demand for labor is wage-inelastic; at work, the ultra-poor gain at the cost of moderately-poor laborers.

77. For children of potential working age in an area with much ultra-poverty, this probably means scheduling terms into agricultural slack(er) seasons. For very young schoolchildren, it means scheduling terms into the peak seasons, so that very poor women (who are unlikely to have extended families) can more readily raise their participation and income then.

78. Of course it is not suggested that this is a major goal of health policy: only that hidden gains, to health of children (in ultra-poor homes where reduced peak seasonal disability or illness means more labor income) as well as to GNP, from such an emphasis would be significant.

79. The richer urban income-per-person deciles remain heavily male-dominated.

80. A detailed discussion appears in M. Lipton, Botswana: Employment and Labor Use, Ministry of Finance and Development Planning, Gaborone, 1979.

81. Partly, this is because lenders select more rigorously. And it does depend on local knowledge of credit risks -- administrative costs, partly for that reason, are higher (per rupee lent) on small loans.

82. As always, "consider," but not necessarily "be influenced mainly by". Many circumstances may justify project or policy decisions that have

few good effects on the ultra-poor. But can one justify taking such decisions without giving thought to such effects?

83. See Staff Working Paper No. 623, pp. 66-68.

84. But perhaps not really so, if these acceptors are mainly substituting a more aesthetic method, not reducing total fertility.

85. Ibid., pp. 78-9; discussed in detail in World Development Report 1984.

86. The case has lately been weakened by increasing LIC evidence that,until quality in primary schools was substantially improved, marginal social return to post-primary expansion would increasingly prove disappointing.

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