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DEFINITIONS AND MEASUREMENTS

OF POVERTY

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by

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SECTION I

INTRODUCTION

The staff of the Latin American/Caribbean Bureau of USAID is currently involved in a variety of exercises which require some method of defining the poor and arriving at some estimates of their numbers. One of these is the development of guidance in meeting the requirements of 102(d) of the Foreign Assistance Act (FAA), for assessing commitment and progress toward certain aspects of socio-economic development. To assure that development assistance is increasingly concentrated in "countries which will make effective use of such assistance to help the poor to a better life," Section 102(d) calls for:

1. Establishment of "appropriate criteria to assess the commitment and progress of countries" in meeting key development objectives as summarized in Section 102(c), (aimed at increasing substantially the participation of the poor in development).

2. Encouraging the adoption of similar criteria by international development organizations in which the U.S. participates.

3. Selecting these criteria according to their value in assessing the efforts of countries to:

- Increase agricultural productivity per unit of land.
- Reduce infant mortality.
- Control population growth.
- Promote greater equality of income distribution.
- Reduce rates of unemployment and underemployment.

Several important criteria are now used for allocating development assistance within USAID, including those found in the Foreign Assistance Act. The actual development assistance funding decisions for individual country programs depend on a variety of interacting factors and not on any simply

defined quantitative or qualitative criteria. Host country commitment and progress play an important role in decisions but the overall poverty level is perhaps the most important factor.

In interviews with USAID officials in the Bureau of Program and Policy Coordination (PPC) - which has major responsibility for central budget reviews and allocations - it became apparent that no one poverty definition has been strictly adopted and consistently adhered to within the Agency.^{1/} However, a policy decision has been made to adopt measures of an absolute poverty level - which allows a more uniform standard across countries - rather than a relative poverty measure, which would define the poor as a certain percentage of the income distribution of each country. A discussion of these considerations appears in a USAID document, The Congressional Mandate: Aiding the Poor Majority, under a section entitled "Who are the Poor Majority?"

"The first step in designing programs involving and benefiting the poor is to determine who the poor majority are. Few officials in developed or developing countries have spent much time on that question, perhaps feeling that you know the poor when you see them and that attention could more usefully go to designing and implementing programs for people who are obviously poor by any reasonable standard. We are sympathetic to this view, but the need to be sure of our focus at a time when AID appropriations are particularly tight requires that we always have in mind what we want most to accomplish and for whom. A closer look at the characteristics of the poor may suggest ways of improving the effectiveness of AID programs.

The poor are, of course, those living below some minimum standard. To make that standard operational, the poor majority is characterized in terms of rough benchmarks of per capita income, health, and nutrition status: any person who plainly falls short of minimum levels for any of these indicators is within the poor majority and may therefore be a potential beneficiary of AID programs. (We have looked for benchmarks that are practical-that is, measurable with as much accuracy as possible in LDCs where data remain scarce and often unreliable.)

But should these benchmarks be uniform-the same absolute levels-for all countries? Or should AID define the poor majority in relative terms (for example, those in the lower half of the economic scale in each LDC)? The choice between absolute and relative standards is

never easy when the relatively well-off are poor by our own standards. While serious problems of oversimplification inevitably arise, we use broadly uniform benchmarks generally comparable throughout AID assisted LDC's so poverty can be assessed without regard to political boundaries. These benchmarks are not intended to define any sharp breakpoint between poverty and prosperity, between the "have-nots" and the "haves"; rather, they try to identify people who are indisputably poor and clearly among the world's have-nots. The resulting poor majority is indeed a majority of the population of AID-assisted countries taken as a whole but the fraction of a given country's population included in this category will vary. A relative definition-defining the poor to include the bottom half of the income distribution in each country-was rejected because so many in the upper half of countries like Bangladesh or Zaire would be excluded although they are, in fact, poorer than many in the lower half of countries like Colombia.

In considering intercountry AID allocations, such a uniform poverty standard should prove useful, although final decisions will naturally reflect foreign policy concerns as well as an LDC's resources and general absorptive capacity; in any case, every effort should be made to assure AID funds benefit that fraction of the recipient country's population that is poor by AID's benchmark standards. (Emphasis mine)"2/

The actual "poverty" benchmarks which are used are:

1. Income: per capita income below \$150 per year;
2. Nutrition: daily diet of less than 2,160 and 2,670 calories

(depending on the country); and

3. Several Health Indicators: life expectancy at birth of below 55 years, infant mortality over 33 per 1,000 children aged 0 to 1, birth-rates over 25 per 1,000 population, or access to broadly defined health services for under 40 percent of the population."3/

Although these considerations of poverty target groups would suggest an emphasis on identification of poor individuals or groups, rather than countries, AID's emphasis has actually been directed towards helping the poorest countries. Because of the scarcity of concessional funds and the criterion of relative need, AID has stressed allocation of development assistance to lower income countries, particularly the least developed. For example, in FY 1977 over

70 percent of AID's bilateral development assistance program was allocated to countries with per capita income under \$350. AID has considered the level of country development important because it has assumed that those countries now regarded as "middle income countries" in the developing world are able to take measures on their own behalf to address needs of the poor. While it is recognized that they may continue to need inflows of external capital and technology, it is considered that they should be able to obtain these through private channels. Partly on this basis, AID programs have been phased out or are in stages of reduction in several middle income countries - Argentina, Chile, Mexico, Uruguay, Venezuela, Brazil, Turkey, Colombia, and Korea.

Given the fact that, by World Bank standards, all of the Latin American/Caribbean countries with the exception of Haiti have been designated as "middle income" countries, the Latin American/Caribbean Bureau currently has appointed a Special Task Force to develop its Middle-Income Strategy Paper and suggest new program directions for the Bureau. The question of definitions of the poor and accurate poverty estimates has also arisen in this context.

A third consideration is the fact the Latin American/Caribbean Bureau soon must issue guidelines to its missions on development of poverty profiles and definitions of poverty which are to be incorporated into the new Country Development Strategy Statement (CDSS). The general Agency guidelines have already been issued, but the Bureau intends to supplement these with more regionally-specific directives.

It is within these three operational contexts that a need arose for commissioning a review of the state of the art of poverty definition and measurement. It is important to recognize these strictly operational requirements when reviewing the content of the study because it is obvious from the outset that

some of the more interesting, controversial, and perhaps philosophical aspects of the consideration of the problem of defining and measuring poverty have been omitted.

The scope of work of the study specifically calls for information on how poverty is being defined by various international assistance agencies. Special reference was made to the World Bank (IBRD), the Inter-American Development Bank (IDB), the Economic Commission for Latin America (ECLA) and the Inter-American Foundation. It was specified that this state of the art report should be based on review of documentation and on interviews with development agency staff.

The scope of work also called for an analysis of attempts to develop social indicators, especially in handling measures such as life expectancy, infant mortality, literacy, etc. After two weeks into research in compliance with this aspect, a report was discovered which directly addressed these issues but was unknown to the Latin American/Caribbean Bureau since it had been commissioned by the Policy Planning and Coordination Bureau of the Agency.^{4/} Since only a short nine-week period had been allotted to the entire investigation, a decision was made (in consultation with relevant Bureau officials) to excerpt relevant aspects of this report on social indicators to be read in conjunction with the findings of the present investigation. The current research was, thereafter, directed entirely to the comparative institutional aspects. The information on social indicators and measures of the five categories of data required under section 102(d) appear as Appendix I to this report.

This written report has also been supplemented by a three-hour seminar (held on December 12, 1978) in which an oral report of some findings was given to relevant Bureau officials concerned with the problems of definition

and measurement of poverty. This supplementary reporting was found to be essential because, in the course of the investigation, certain sources of information were brought to my attention with a request that they nowhere be quoted or officially cited. Permission was, however, given to relay the essence of the information orally. The same was true for a number of direct and frank "off the record" comments on methodology and data base problems which various development officials in other agencies wished to have related to concerned USAID officials but with which they did not want to be formally identified. Therefore, to preserve the confidentiality of informants and privileged source material, while at the same time conveying essential information to Bureau officials, the seminar format was adopted.

A summary of findings from the written report and recommendations for further data analysis follow.

FOOTNOTES TO SECTION I

- 1/ Based on interviews with Alex Shahow, Charles Palalillo, Jim Brown, Herb Turner, and Charles Montrie, all key officials within PPC.
- 2/ The Congressional Mandate: Aiding the Poor Majority appears as Appendix 5 in Implementation of "New Directions" in Development Assistance, Report to the Committee on International Relations, July 22, 1975. The quotation on poverty is from pp. 64-65.
- 3/ Ibid, pp. 65-68.
- 4/ Issues in Measuring Development Performance, by William P. McGreevy.

SECTION II

A SUMMARY OF FINDINGS AND RECOMMENDATIONS FOR FURTHER ANALYSIS

This report covers efforts to define the concept of poverty and to arrive at a methodology for estimating poverty levels in four international development assistance agencies: The World Bank (IBRD), the Inter-American Development Bank (IDB), the Economic Commission for Latin America (ECLA) and the Inter American Foundation.

Of all the agencies, only one, the Inter-American Foundation, has resisted adopting a quantitative measure of poverty. The Foundation operates on the assumption that the poor are readily visible to its field representatives and it relies on direct contacts with the poor and groups that serve them to help them identify other needy poor (a process referred to by them as "the grapevine effect"). The Foundation has, however, developed a set of indicators which are used to measure progress of self-help development projects. The qualitative indicators - known as "social gains" - and the current attempts at their field validation are reviewed here.

The three other institutions are all exploring various forms and methods of quantitative measures. These fall into two general categories: absolute poverty measures or relative poverty measures.

Absolute poverty measures always involve some measure of minimum levels of consumption or income that allow a separation of "the poor" from the rest of the population. These minimum levels are obtained by defining "basic needs" which determine the minimum income or consumption require.') attain the necessities considered minimum. As analysis of the findings of this report reveal, the most commonly adopted measure of absolute poverty now being used involves a basic nutrition measure. The approach generally is to estimate the income needed for a minimum diet (plus additional non-food expenditures) and to

determine how many people have incomes too low to purchase the necessary quantity of food. The variations in estimates are due to differences in composition of the food basket and differences in the costing procedures.

Relative poverty measures always are defined as some percentage of per capita income distributions of the country. Cut-off lines are variously set at 20 percent, 33.3 percent, 40 percent, or 50 percent. The number of persons falling below this line are classified as "the poor."

In reporting on the World Bank, efforts to arrive at alternative measures of GNP were reviewed. The attempts to define an adequate measure of income distribution and the numbers living below a poverty line were best seen as aspects of the broader problem of developing new, more appropriate measures of basic needs. Certain World Bank "poverty studies," covering the range of basic needs, were cited. The one centralized operation for maintaining rural and urban poverty groups was reviewed. The definitions, methodology and some tentative estimates of incidence of both absolute and relative poverty were presented.

The Inter-American Development Bank is currently in the process of making a policy decision on adoption of a formal definition of poverty. The choice will be made between one of the following three definitions:

- Income less than \$416 per capita.
- Income less than 50 percent of average but not less than \$416 per capita.
- Income less than 33.3 percent of average but not less than \$416 per capita.

The methodologies and resulting poverty estimates are presented and analyzed.

Information from the on-going ECLA study, the Inter-Institutional Project on Critical Poverty in Latin America, was reviewed. The preliminary nature of the results and the restricted circulation of the documents (some of which are just now being issued) have handicapped efforts at extensive analysis.

This ECLA study utilizes a measure of absolute poverty rather than relative poverty. Within this category two distinctions appear: the poor and the critical poor (also referred to as the indigent or destitute).

The methodology for arriving at these measures is reviewed, along with methods of determining a poverty gap and arriving at profiles of poverty. Comparative information is also presented which contrasts preliminary ECLA findings with estimates made by the ILO and the World Bank. Some relative poverty estimates are also calculated for comparison with the absolute poverty measures regularly utilized throughout the study.

One general conclusion that is readily drawn from comparing results of the estimates of poverty produced by these various organizations is that even attempts to measure the poor by the most rigorous of quantitative methods yield, at best, approximations. Apart from limitations of the available income distributions and lack of pertinent information for some countries, various assumptions, subjective considerations and use of proxies affect the reliability of final results. This is clearly recognized, and frankly admitted, by all investigators working on the problems of definition and measurement. It is demonstrated in the fact that the World Bank refuses to publish its estimates or cite them in any cross-country comparison because of the acknowledged tentativeness of the results of their annual data gathering on estimates of urban and rural poverty.

Because the intricacies of the methodological considerations are now

the subject of open and lively debate among investigators in the various international development assistance agencies, the recommendation is made that the present report be considered a working document for future analysis and that a methodological workshop be organized which would bring together concerned Latin American/Caribbean Bureau officials with their counterparts in other agencies. The purpose of the workshop would be to discuss the specific problems of measurement and discrepancies in poverty estimates pointed to in this report.

Many persons who served as key informants and supplied documents for this report have indicated an interest in participating in such an exercise.

A list of suggested participants follows:

The World Bank: Marcelo Selowsky, Richard Webb, Ted J. Davis,
Alastair J. Stone

The Inter-American Development Bank: Francisco J. Thoumi

Economic Commission for Latin America: Sebastian Piñera, Oscar Altamar*

Should an interest be taken in exploring qualitative measures, the following persons should also be included:

The Inter-American Foundation: Charles Wylie, Eugene Meehan, Thomas Ramey

* These two investigators are based in Santiago, Chile, but do travel to Washington, D.C., two or three times a year. David Pollack and Marco Polner, who are local ECLA officials, are mainly administrative officers who can help in furnishing documents but who do not have any involvement in the methodology or data collection procedures of the project.

SECTION III

THE WORLD BANK

There is a popular misconception that the World Bank has arrived at a formal definition of poverty, and that this definition relies solely on GNP considerations. Part of this confusion has arisen since the publication of the 1978 World Development Report. This report established a category of Developing Countries with populations over a million and divided them on the basis of 1976 per capita GNP into:

- Low Income Countries - with per capita income of US\$250 and below (34 countries)
- Middle Income Countries - with per capita income above US\$250 (58 countries)1/

The fact that all of the Latin American and Caribbean countries with the exception of Haiti have now been classified as middle income countries has led some to the erroneous conclusion that this is evidence that poverty no longer exists in Latin America. And in answer to these claims, others have countered with attempts to demonstrate that very real poverty still does exist.

It is important to clarify at the outset that the World Bank groupings of countries in no way should be interpreted as a definition of poverty, or substituted for estimates of number of persons living in poverty. The World Bank report discusses the incidence of poverty and policies which will lead to an alleviation of poverty in a number of contexts. The term "absolute poverty" is used in the report, and in one discussion, 800 million people are said to live in absolute poverty.2/ But nowhere is the term "absolute poverty" defined.

In Chapter 4, entitled "Prospects for Growth and Alleviation of Poverty," detailed examination of the text reveals references to "the poor" and

"the absolute poor," but no definitions or distinctions between the two categories are offered. Even when estimates of 1975 absolute poor and projections of decline in the year 2000 are given, there is no discussion of the methodology by which either figure is arrived at.^{3/}

The World Development Report - 1978

Projected Decline in Absolute Poverty, 1975-2000

	1975		Simulated Result in 2000			
	Percentage of Population	Number of Absolute Poor (millions)	Base Scenario Percentage of Population	Base Scenario Number of Absolute Poor (millions)	Alternative Scenario Percentage of Population	Alternative Scenario Number of Absolute Poor (millions)
Low Income Countries	52	630	27	540	13	260
Middle Income Countries	16	<u>140</u>	4	<u>60</u>	-	<u>-</u>
All Developing Countries	37	770	17	600	7	260

- Negligible.

Overall GNP is nowhere in the report recommended as a measure of persons living in poverty. And, in fact, its reliability for ranking or comparing countries is even brought into question. The technical notes point out that:

"The conversion of the GNP of different countries to a common denominator is known to create distortions. The UN's International Comparison Project (ICP), in which the World Bank has been a major participant, is designed to provide more realistic comparisons of income levels based on comparisons of purchasing power. To date work has been completed for 16 countries, based on 152 detailed categories of expenditures in each country."^{4/}

Tables are provided which give examples of the differences between the conventionally computed GNP per capita data for 1970 and 1973 and incomes as calculated using the ICP methodology. For example, in Colombia, 347 US dollars in 1970 convert to 858 international dollars when purchasing power is taken

into account. In 1973, 452 US dollars are considered the equivalent of 1,126 international dollars. The implications of these differences for relative position in rankings of countries are significant, and would have enormous impact for the estimate of relative poor persons living in these countries when overall income measures are entered into the calculations.^{5/}

The fact that no one formal definition of poverty has been adopted for general use within the World Bank is not to say that no work is being carried out along these lines. It is, rather, to point out the decentralized nature of the inquiries, and the variety of approaches, definitions, and methodologies which are being proposed and explored.

In general, although the Bank through its annual Atlas has continued to reinforce the use of GNP per capita as the most common measure and performance test of development, its own growing recognition of the inadequacy of this measure has shifted to an emphasis of eradication of poverty by concentrating on basic human needs. Meeting these needs in nutrition, education, health and shelter may be achieved by various combinations of growth, redistribution of assets and income, and restructuring of production. It is the composition of production and its beneficiaries, rather than indices of total production or of income distribution, that have become the principal concerns. This new focus on meeting basic human needs requires an indicator or a set of indicators, therefore, by which deprivation can be judged and measured, and policies directed at its alleviation and eradication can be initiated and monitored. Since the problems inherent in using GNP as a measure of social welfare have come to be generally recognized, four different alternatives to GNP are now being explored in the Bank:

1. Adjustments to GNP through which modifications of standard national

income accounting concepts are undertaken in order to capture some of the welfare aspects of development and to improve international comparability. The aggregate income and growth rates may in this way be made to reflect more accurately social and distributional considerations. But these revised measures still fall short of being true indicators of social welfare, and some investigators reject altogether the attempt to convert a measure of production into a measure of welfare.

2. Social Indicators which attempt to define non-monetary measures of social progress. Whole series of direct indicators for various sectors have been collected, some of which represent human and social development (such as life expectancy, literacy, infant mortality, school enrollment, calories per head, etc.), while others indicate economic, demographic, political or cultural development. The Bank's social indicator data file is now being expanded to include 115 such indicators. These are useful to show fulfillment of certain basic needs and other aspects of social development and overcome the problems of international comparisons. But the absence of a money or price converter has meant that, unlike components of the national accounts which add up to GNP, social indicators cannot be easily combined into a single measure of social development. Therefore, although they are considered useful for judging social performance, they have not as yet proved to be an alternative as easily interpreted and understood as the GNP.

3. Systems of Social Accounts which attempt to integrate social indicators though some unifying concept or organizing framework. One such system centers on life expectancy for organizing time periods spent in education, employment, unemployment, etc. But for the most part these have failed because of the lack of focus of the concept, excessive number of indicators, etc.

4. Composite Indices which combine various social indicators into a single index of human and social development. To date these attempts have been handicapped by a problem of weighting. Without a common denominator of prices determined by market transactions or some other basis for individual or social valuation, there is no way to combine various social indicators into a single index.6/

Within the Bank, there has been considerable effort expended in defining an adequate measure of income distribution and the numbers living below a poverty line. The development of indicators of distribution and poverty lines are, however, best seen as aspects of the broader problem of developing appropriate measures of basic needs.

At present, the essential basic needs are considered to cover six areas: nutrition, primary education, health, sanitation, water supply and housing.7/ The problem for selecting the appropriate index in each field is now being explored by technical experts in each sector. In specifically relating basic needs to poverty estimates, most of the investigations underway follow the same general procedure:

- a. A mean indicator is selected (calorie consumption, level of schooling, life expectancy, infant mortality, etc.).
- b. The mean distribution of this indicator in the total population is calculated.
- c. A cut-off line is established. People below this line are defined as being deficient in the given basic need, and therefore are defined as "poor."

Great methodological debates rage at each of these steps: the selection of the most adequate indicators, the adequacy of the mean distributions, the

proper delineation of the cut-off line. In these debates, however, no one speaks definitely of the poverty line. Discussions are couched more in terms of "Given this definition, these results will follow." Once deficiencies of certain basic needs are estimated, the emphasis within the Bank has been on calculating the cost of the deficiency and proposing Bank policies most adequate for elimination of the deficiency.8/

The Bank's "poverty studies" cover the range of "basic needs." For example, in education, the study by Philip H. Coombs and Manzoor Ahmed, Attacking Rural Poverty: How Non-Formal Education Can Help, focuses on educational efforts outside the formal school system, offering potential for rural development to increase skills and productivity of farmers, craftsmen and small entrepreneurs.9/ In housing, the work of Orville F. Grimes, Jr., Housing for Low Income Urban Families: Economics and Policy in the Developing World, analyzes the operation of urban housing markets in developing countries to determine the kinds of dwellings affordable by the urban poor. Housing policies which have been successful in providing at least a minimum of shelter, land, public services and access to jobs and community facilities are examined.10/

However, most of the actual studies which have attempted to make poverty estimates or draw poverty lines have involved measures of food and nutrition. The approach generally adopted is to estimate the income needed for a minimum diet (plus additional non-food expenditures) and to determine how many people have incomes too low to purchase the necessary quantity of food. In his study On the Statistical Mapping of Urban Poverty and Employment, Richard Webb used this approach to estimate the extent of poverty in Lima, and other urban and rural areas of Peru. Webb made the assumption (drawn from a budget study) that non-food costs were half of food costs in Lima and one-fourth of food costs in

rural areas. The percentage of the population below the poverty line calculated in this manner was 8 percent for Lima, 15 percent for other cities and towns, and 50 percent for rural areas. The national average was estimated at 29 percent.^{11/} Other studies which specifically relate poverty to nutrition are those by Marcelo Selowsky, The Economic Dimensions of Malnutrition in Young Children; Shlomo Reutlinger, Nutrition and Basic Needs; and Reutlinger and Selowsky, Malnutrition and Poverty: Magnitude and Policy Options.^{12/}

The one centralized operation for maintaining rural and urban poverty target group information within the Bank is the responsibility of the Rural Operations Review and Support Unit (RORSU) and the Urban Operations Davis and Alastair J. Stone, respectively. This exercise was first initiated in 1976. With the continued growth of poverty lending, estimates are essential to the operational project staff in preparing and appraising projects for rural development and urban poverty lending. However, it is generally acknowledged that the exercise is plagued by lack of reliable data, and various proxies and assumptions are used. Therefore, although the figures are updated annually, they are used strictly for project classification purposes and are never published or used in cross-country comparisons. They are in no way considered formal or official Bank estimates of poverty. The suggestion that the poverty estimates be published in the Atlas has been vigorously resisted because of their acknowledged tentativeness. In interviews with Bank staff members, it was stressed that these figures are considered only "indicative guidelines" to direct lending towards intended target groups. The specific figures are not considered accurate.

With these caveats, however, the fact remains that each year the country

economists are asked to calculate absolute poverty estimates and relative poverty estimates for their respective countries.

The relative poverty income level is defined as one-third of per capita personal income, including valuation of income in kind as well as cash income. In calculating total personal income where national account figures are available, usually a proxy is used - "household income" - which is defined by the United Nations and includes "private unincorporated non-financial enterprises." It is derived by:

1. Subtracting from national income
 - a. Savings of corporations;
 - b. Direct taxes of corporations;
 - c. Government income from property and entrepreneurship;
2. Adding in
 - a. Interest on the public debt;
 - b. Interest on consumer debt.

For countries where national income data is unattainable, use of a per capita GDP figure is suggested.

The absolute poverty level is defined as that income level below which a minimal nutritionally adequate diet (plus essential non-food items) is not affordable. It is arrived at by determining the value of a least cost diet acceptable to local tastes. The data base requires four distinct sets of information:

- Minimum nutritional needs of the population.
- Predominant dietary patterns of that same population.
- Nutrient values of the local foods.
- Appropriate prices of those foods.

It is suggested that separate computations be made for each major identifiable country region manifesting significant differences if statistics are available. However, urban and rural areas are always computed separately.

Although the resulting estimates of urban and rural poverty are for restricted operational use within the Bank, and are not to be formally quoted or cited, the 1975 urban and 1976 rural estimates for Latin America are reproduced here for illustrative purposes, only.13/

TABLE III-1

ESTABLISHING POVERTY LEVELS FOR URBAN POVERTY PROGRAM1975 Estimate

Country	Urban Poverty	Percentage of Poor in	Urban	Urban
	Income Threshold 1/ (\$ per capita)	Urban Population 2/ <u>L.A.C.</u>	Population ('000)	Poor ('000)
Argentina	453	21	20,293	4,250
Brazil	405	26	63,128	16,933
Bolivia	105	20	2,012	602
Chile	209	23	8,498	1,954
Colombia	154	26	15,978	1,825
Costa Rica	310	20	753	151
Dominican Republic	208	17	2,248	382
Ecuador	161	23	2,953	546
El Salvador	176	18	1,666	296
Guatemala	290	16	2,134	361
Guyana	193	21	265	54
Haiti	71*	50	1,269	630
Honduras	155	15	854	128
Jamaica	377	16	830	133
Mexico	484	29	37,349	10,831
Nicaragua	279	26	1,116	267
Panama	381	17	862	146
Paraguay	239	21	1,006	211
Peru	813	24	8,750	2,100
Uruguay	551	26	2,526	657
Venezuela	2,207	23	10,084	2,521

1/ Based on absolute or relative poverty threshold, whichever is higher.

2/ i.e. those with income below poverty threshold shown in Column 1.

* Based on absolute poverty estimates.

Not to be formally quoted or cited.

TABLE III-2

ESTABLISHING POVERTY INCOME LEVELS FOR RURAL DEVELOPMENT1975 Submissions

Country	Rural Population (Million)	Family Size Rural Area	Absolute Poverty Level (\$ per cap.)	Relative Poverty Level (US\$ per cap.)	% of Rural Pop. Under Poverty Level
<u>LATIN AMERICAN & CARIBBEAN</u>					
			*		
Argentina	4.9	---	---	504	60
Bahamas	0.2	6.0	---	320	65
Belize	---	---	---	---	--
Bolivia	3.6	7.0	134	75	85-90
Brazil	41.1	5.4	150	289	90
Chile	2.5	6.0	65	149	50
Colombia	2.5	6.1	145	153	55
Costa Rica	1.1	5.9	163	221	40
Cuban Republic	2.6	8.0	239	149	60
Cuba	4.0	7.0	196	115	90
El Salvador	2.1	6.0	---	125	70
Ecuador	3.2	4.0	---	207	60
Guatemala	0.4	5.0	---	138	70
Haiti	3.5	6.0	85	51	90
Honduras	2.0	6.0	101	111	70
Jamaica	1.4	8.0	---	305	50
Mexico	12.0	5.7	350	345	60
Paraguay	1.1	5.0	---	171	60
Peru	0.8	7.0	266	272	50
Uruguay	1.5	6.3	---	171	64
Venezuela	5.7	6.0	204	186	70
Vietnam	---	---	---	---	--
Trinidad & Tobago	0.5	6.0	---	391	90
Guayana Francesa	0.4	5.1	181	257	30
Venezuela	2.5	8.0	318	302	80

Estimated by increasing the absolute poverty level in the 1975 submission by the increase in the food component of a lower income price index, and adjusting this for change in the exchange rate vis-a-vis the dollar.

to be formally quoted or cited.

FOOTNOTES TO SECTION III

- 1/ World Development Report, 1978, The World Bank, August 1978, Technical Notes p. 113.
- 2/ Ibid., p. 1.
- 3/ Ibid., p. 33.
- 4/ Ibid., p. 114.
- 5/ Ibid., p. 115.
- 6/ For further discussion of the search for alternatives to GNP within the Bank see Indicators of Development: The Search for a Basic Needs Yardstick (mimeo) by Norman Hicks and Paul Streeten, February 28, 1978.
- 7/ "Basic Needs: A Progress Report," by Mahbubul Hag, World Bank, August 10, 1977.
- 8/ These comments on the general approach to development of poverty lines are a result of interviews with Marcelo Selowsky, economic advisor in the Development Economics Department.
- 9/ Attacking Rural Poverty: How Non-Formal Education Can Work, Philip H. Coombs and Manzoor Ahmed, The Johns Hopkins University Press, 1974.
- 10/ Housing for Low Income Urban Families: Economics and Policy in the Developing World, Orville F. Grimes, Jr., The Johns Hopkins University Press, 1976.
- 11/ On the Statistical Mapping of Urban Poverty and Employment, Richard Webb, World Staff Working Paper No. 227, January 1976.
- 12/ The Economic Dimensions of Malnutrition in Young Children, Marcelo Selowsky, World Bank Staff Working Paper No. 294, October 1978; Nutrition and Basic Needs, Schlomo Reutlinger (mimeo), December 1978; Reutlinger and Selowsky, Malnutrition and Poverty: Magnitude and Policy Options, World Bank Staff Occasional Paper No. 23, 1976.
- 13/ Internal memo on Updating Poverty Income Levels, World Bank, July 7, 1978.

SECTION IV

THE INTER-AMERICAN DEVELOPMENT BANK

The Inter-American Development Bank (IDB) was the first regional bank to be established, and it has accumulated considerable experience during its nearly 20 years of experience. Since its activities have included financing and technical cooperation on a large scale, IDB has become the most important of the regional institutions. In addition to having lent over \$11.9 billion, the Bank has contributed to strengthening development planning and preinvestment activities, establishing a large number of national development banks and other development institutions, and training several thousand Latin Americans in development techniques. It also has made a special effort in support of economic integration, by financing integration projects, promoting studies and training and participating in the establishment of three subregional integration banks.

As a consequence of an intensive domestic effort, supported by public and private external financing, Latin American countries have achieved a high level of economic growth during the last 20 years. And the fact that all of the Latin American and Caribbean countries, with the exception of Haiti, are now being categorized as "middle income countries" has posed a new dilemma for the Inter-American Bank as a lending institution. In a recent address at the meeting of the Development Assistance Committee of the organization for Economic Cooperation and Development (Paris, France, October 17, 1978), Mr. Antonio Ortiz Mena, President of IDB, discussed the problem in these terms:

"In practical terms, this differentiation (between 'low income' and 'middle income' countries) is used to support the argument that concessional development assistance should be concentrated in the 'low income countries' while the 'middle income' ones are urged to meet their financing needs in the capital markets.

While I do not question the 'low income' countries' urgent need for concessional assistance, I consider the 250 dollar benchmark both unrealistic and misleading.

Economic and social development is a process too complex to be measured by a single indicator, particularly when this indicator is going to be used as a criterion for defining the conditions of international cooperation. In the case of Latin America, for instance, about two-thirds of the population living in poverty is concentrated in four countries with an average per capita income of between 600 and 1,000 dollars.

Recognizing the limitations of the per capita GNP indicator, our Bank has been using, in its own operations, a classification of countries based on a set of indicators, including, in addition to per capita income, the absolute value of the GNP, as well as indicators of the quality of life, resource potential, and the external sector.

We have had to do this because, in spite of the progress achieved, a very large portion of the Latin American population continues to live in a condition of poverty. A study carried out by the Economic Commission for Latin America estimates that more than 35 percent of the population of the region, that is more than 115 million people, fall in this category. The same study warns against using averages that hide great inequalities, because poverty is unevenly distributed. In Argentina, for example, it is estimated that less than 3 percent of the population subsists at the poverty level. Comparable percentages for Chile and Costa Rica are 15 to 25 percent; for Brazil and Colombia, close to 50 percent; and for Honduras and Haiti, more than 70 percent.

All of the countries of our region are undertaking, with different degrees of success, policies and programs aimed at improving the conditions of their poor. A common characteristic of the success of these programs, and of more equitable income distribution, is their linkage to economic growth.

On the basis of our long experience in the region, we feel that it is absolutely unrealistic, at this stage of their development, to expect the Latin American countries to finance, with domestic and conventional external resources, the service of their external debt, their urgent investment needs, plus a significant increase in consumption through income distribution."^{1/}

It is significant to note that as late as this address, the President of IDB was citing ECLA estimates of poverty to substantiate his argument. This is because, until very recently, IDB had felt under no pressure to determine its own formal definition of poverty. For example, neither the term "poverty" nor any estimate of "the poor" has appeared in the annual series published

by the Inter-American Development Bank since 1961, entitled Economic and Social Progress in Latin America. This is true even of the latest volume (1977) - which covers trends since 1970 with particular emphasis on 1976-77 - despite the claim that "the report, especially in the regional part, covers the year 1977 in virtually every concept."2/ The report is produced by the Economic and Social Studies Sub-Department in the Bank's Economic and Social Development Department. It is divided into two parts: the first one comprises a regional description of general and sectoral trends; the second one consists of such an analysis on a country-by-country basis. Although birth rates, mortality, infant mortality, life expectancy and literacy rates appear in a general statistical profile for each country, the concept of poverty is nowhere introduced or discussed.

It is only since late October of this year that the first efforts have been made within IDB to arrive at some formal definition of poverty. The impetus for this has come from the replenishment exercises that same month which resulted in a new mandate issued by the Treasury Department: that IDB must, in the future, demonstrate that 50 percent of its projects impact directly on the poor. Now that there is a need to justify that the Bank is reaching a certain target group, there is urgent need to define who that target group is. But who are the poor of Latin America?

The attempts to answer this question are centered in the Bank's Economic and Social Development Department. The person responsible for having developed alternative methodologies and definitions of poverty which are currently being considered at highest policy levels for adoption by the Bank is Francisco Thoumi, Chief of the Section of Social Studies.3/

In his definition of poverty, Mr. Thoumi has utilized the two general

categories now generally being employed by the World Bank and others, i.e., those that define poverty in absolute terms and those that define poverty in relative terms. The definitions of absolute poverty are based on minimum levels of consumption or income that allow a separation of "the poor" from the rest of the population. These minimum levels are obtained by defining basic needs, which determine the minimum income or consumption which is required to satisfy the necessities considered minimum. This is the same method used by the United States to set the minimum income for its "poverty line." Poverty can also be determined in relative terms. Definitions of relative poverty are always arbitrary because the line that separates "the poor" from the rest of the population is based on a value judgment and not on a generally accepted theory or set hypothesis. Nevertheless, definitions of relative poverty have the advantage of reflecting what many investigators consider an important dimension of poverty, i.e., the psychological dimension often referred to as "relative deprivation."

Mr. Thoumi first calculated five different estimates of poverty for each of the Latin American countries. Three of these were absolute poverty measures. One which set poverty level at income less than \$416 was based on a minimum basket of consumption which included certain basic needs, such as food and nutrition, housing, basic education, health, clothing, transportation and communication. In a separate estimate he pared down the level to \$300 by eliminating all but food, health, clothing, and education. His third estimate of \$200 is the basic minimum required for food and nutrition only. Two other definitions are relative poverty measures, i.e., incomes less than 50 percent or less than 33.3 percent of national average.

In a second estimation, corrected for some earlier errors in calculation,

he regrouped data to conform to the following definitions of poverty:

- Income less than \$416 per capita (absolute).
- Income less than 50 percent below average but not less than \$416 per capita.
- Income less than 33.3 percent of average but not less than \$416 per capita.

In arriving at the estimate of absolute poverty, Mr. Thoumi admits that the definition of basic needs is very arbitrary and difficult to quantify. Therefore, although his approach is similar to that utilized by the World Bank, ECLA, and others, the actual numbers arrived at will vary substantially. What he has done in this exercise is to estimate the cost of a basket of goods that satisfies some of the following basic needs:

1. Minimum Cost of Food and Nutrition

The minimum cost of obtaining a quantity of calories, proteins, minerals, etc., as a minimum requirement for human sustenance has been the object of intense study and debate. In general a review of the studies confirm that there is no consensus on what is considered a minimum of calories, proteins and minerals necessary for life; that the basic minimum will vary according to altitude and climate; that the cost of the diet will vary greatly depending principally on the quantity of animal proteins consumed. Studies for Latin America based on a diet that includes animal protein and that also has a limited amount of diversification (27 different food products) indicate that at 1976 prices the cost of satisfying these minimum nutritional requirements would be approximately \$200 per capita. Less diversified diets, without animal protein and probably impossible to utilize in Latin America, permit the same results at lower costs (around \$110 to \$120 per capita).

2. Minimum Cost of Housing

These costs also vary substantially with the definition of minimum requirement which is utilized. The HABITAT conference concluded that in 1976 a family of six persons required a house and infrastructure (water, sewage, and other services) which had a minimum cost of \$4,000, or \$667 per capita. This amount is a stock, assuming a real rate of return on capital of 10 percent, which is typical of the estimates made for poor countries. This stock is then converted at a rate of \$67 a year. It should be noted that the HABITAT estimates exclude the cost of the land and, consequently, underestimate the real cost of the housing.

3. Cost of Education

Approximate estimates of the real cost of basic schooling necessary to produce a person who has achieved a basic level of literacy is approximately \$500 in Latin America. Utilizing the stock conversion discussed earlier, this is equivalent to \$50 annually.

4. Cost of Health

The minimum annual cost of health is difficult to quantify. Nevertheless, the cost of furnishing potable water and minimum medical treatment is probably not less than \$30 per capita per year, the amount used in this estimation.

5. Transportation Costs

These costs are also difficult to estimate, since they depend on the localization of the production of many products, the availability of roads, the organization of cities and the class of vehicles utilized, etc. Given actual energy prices and the physical structure of cities in Latin America, the amount of \$0.12 daily per person or \$44 per year probably is

not an exaggeration.

6. Clothing

Annual cost per person can be estimated at about \$20.

7. Communication

This is set at a minimum of \$5 per year per person.

Summing up these rough estimates, it was concluded that the minimum cost of satisfying basic needs in 1976 prices is \$416 per capita. This definition may be used as the absolute poverty line. It must be noted, however, that the amount does not include the cost of land for housing, any education beyond the fourth grade, nor any human rights or national defense costs. Therefore, while one may suggest that the amount of \$416 is high, it can also be argued that it is extremely low. And it is these subjective considerations that make the definition of even an absolute poverty line an extremely arbitrary and variable operation.

Relative poverty estimates are in a very real sense even more arbitrary. In discussing these estimates, Mr. Thoumi points out that relative poverty is important not because those classified as poor cannot satisfy their basic needs, but because relative poverty generates social tensions, dissatisfaction and violence. It is for these reasons he considers it more useful to define relative poverty in urban and rural terms, instead of as national averages. He argues that it is important when one is identifying the poor in relative terms to, at the same time, identify accurately the group to whom these persons themselves relate when they consider themselves relatively rich or poor. This breakdown by region, however, does not enter into his analysis in this exercise.

Based on these methodological considerations, Mr. Thoumi first calculated the poverty levels in Latin America by five different definitions. These

first calculations (October, 1978) appear in Table IV-I. By mid-December corrected estimates were made and categories collapsed. These appear in Table IV-II. It is on the basis of this second table that, in December, the IDB policy makers will make a decision as to which definition of poverty will be officially adopted by the Bank for their lending operations.

Mr. Thoumi is frank and open in discussing the methodological flaws in these estimates. Aside from the definitional questions which have been discussed is the problem of the accuracy of the data base upon which the estimates are made. The basic information from which these numbers were derived was obtained from a World Bank publication, Size Distribution of Income: A Compilation of Data, by Shail Jain.

The estimates are subject to many errors due to the characteristics of the available income distributions and the lack of information for some countries. In general, the majority of the income distributions are given by household or by employed individuals. This skews the estimates of poverty when poor homes have more persons. At the same time, given that the poor households may also have more employed persons, the estimates may be skewed in the other direction. A priori, there is no way to determine the direction or the magnitude of this skewing. Almost all the distributions of income available are old, generally for 1970-71 and in some cases even older, which also affects the estimates. In some cases where no distributions were available, calculations were estimated from countries considered to have similar characteristics. Therefore, in Trinidad and Tobago the distribution of Jamaica was used; in Paraguay, that of Colombia; in Nicaragua, that of El Salvador; and in Bolivia, that of Peru. In Haiti, a country whose income is \$187 per capita, no calculations were made because using any of the definitions of poverty, 95 percent

of the population would be included.

The distributions of income used were: Argentina 1961, household income; Bahamas 1970, households; Barbados 1969-70, wage earners; Brazil 1970, household Chile 1968, households; Colombia 1970, wage earners; Costa Rica 1971, households Dominican Republic 1969, urban households in Santo Domingo; Ecuador 1968, urban households; El Salvador 1969, total population; Guatemala 1966, home of salaried rurals; Guyana 1955-56, households; Honduras 1967-68, total population; Jamaica 1958, households.

These details of the serious methodological difficulties in arriving at definitions and in encountering accurate data for analysis should speak for themselves when advising extreme caution in wholesale adoption or too confident reliance upon the specific numbers which appear in the tables. Nevertheless, given the methodological limitations, they may be considered approximations or "best guesses."

An analysis of the estimates arrived at by the various definitions in Table IV-I reveals that, in general, the maximum numbers of poor persons are identified by employing a definition of relative poverty which sets the poverty line at 50 percent of per capita income in each country (157.9 million persons). The measure of absolute poverty (\$416) produces the second highest estimate (140.2 million persons). The measure of absolute poverty which sets the poverty line at \$300 per capita and that of relative poverty which identifies the poor as those whose income is less than one-third of average per capita produce similar estimates (110 million persons). When the absolute poverty definition of \$200 is employed, the number of the poor identified drops considerably (63.7 million persons).

In Table IV-II, the category of relative poverty of less than 50 percent

TABLE IV-1

MAGNITUD DE LA POBREZA EN AMERICA LATINA BAJO VARIAS DEFINICIONES DE POBREZA

	INGRESOS MENORES DE \$ 416 PER CAPITA			INGRESOS MENORES DE \$ 300 PER CAPITA			INGRESOS MENORES DE \$ 200 PER CAPITA			INGRESOS MENORES AL 50% DEL PROMEDIO			INGRESOS MENORES AL 33,3% DEL PROMEDIO			
	Ingreso per cápita 1976	Porcentaje de la población	Número de personas (000)	Porcentaje de la población	Número de personas (000)	Porcentaje de la población	Número de personas (000)	Ingreso límite	Porcentaje de la población	Número de personas (000)	Ingreso límite	Porcentaje de la población	Número de personas (000)	Ingreso límite	Porcentaje de la población	Número de personas (000)
Argentina	1.686,5	15	3.908	5	1.303	2	521	843	32	8.338	562	20	5.211			
Bahamas	3.122,0	13	28	12	26	5	11	1.561	40	88	1.040	28	62			
Barbados	1.619,5	10	24	5	12	2	5	810	27	66	540	17	41			
Bolivia	477,7	72	3.447	61	2.921	48	2.298	234	52	2.490	159	42	2.011			
Brazil	1.069,5	43	48.679	32	36.226	21	23.773	535	53	60.000	357	37	41.887			
Chile	1.280,8	23	2.450	13	1.385	7	746	640	46	4.902	427	24	2.557			
Colombia	602,7	62	15.352	49	12.133	33	8.171	301	49	12.133	201	33	8.171			
Costa Rica	1.020,1	30	627	17	355	8	167	510	39	815	340	20	418			
Ecuador	601,6	61	4.323	49	3.473	33	2.339	301	49	3.473	201	33	2.339			
El Salvador	599,7	52	2.213	41	1.745	28	1.191	300	41	1.745	200	28	1.191			
Guatemala	892,6	17	1.049	8	493	5	308	446	19	1.172	297	8	493			
Guyana	507,6	57	470	41	319	27	223	254	35	289	169	20	165			
Haití	187,3	A LO MENOS 95% DE LA POBLACION O 4.511,000					personas son pobres									
Honduras	501,3	70	2.028	59	1.709	45	1.304	250	52	1.504	167	40	1.159			
Jamaica	1.173,4	40	830	30	622	21	436	587	52	1.079	391	18	789			
México	968,5	50	32.232	36	23.185	13	8.372	483	57	36.710	323	40	25.762			
Nicaragua	824,4	41	953	29	674	19	442	412	41	953	275	27	628			
Panamá	1.245,4	19	336	15	266	11	195	622	33	584	415	19	336			
Paraguay	508,5	70	1.969	56	1.575	38	1.069	254	49	1.378	169	33	928			
Perú	872,5	52	8.506	42	6.870	30	4.907	436	53	4.670	290	41	6.707			
República Dominicana	811,4	45	2.240	31	1.543	18	896	406	44	2.190	271	29	1.443			
Trinidad y Tobago	1.262,6	38	432	29	330	20	227	631	52	591	421	39	443			
Uruguay	1.309,4	20	569	15	427	11	313	655	37	1.053	436	22	626			
Venezuela	2.089,3	24	3.057	17	2.185	10	1.274	1.045	56	7.133	696	41	5.222			
TOTAL DE POBRES			140.203		104.287		63.699			157.869			122.420			

TABLE IV-1
(Continuation)

	<u>Ingresos menores al 33,3% del promedio, pero no in- feriores a \$ 300 per cápita</u>		<u>Ingresos menores al 50% del promedio, pero no in- feriores a \$ 416 per cápita</u>	
	<u>% población</u>	<u># personas</u>	<u>% población</u>	<u># personas</u>
Argentina	20	5.211	32	8.338
Bahamas	28	62	40	88
Barbados	17	41	27	66
Bolivia	61	2.921	72	3.447
Brasil	37	41.887	53	60.000
Chile	24	2.557	46	4.902
Colombia	49	12.133	62	15.352
Costa Rica	20	418	39	815
Ecuador	49	3.473	61	4.323
El Salvador	41	1.745	52	2.213
Guatemala	8	493	19	1.172
Guyana	41	338	57	470
Haití	95	4.511	95	4.511
Honduras	59	1.709	70	2.028
Jamaica	38	789	52	1.079
México	40	25.762	57	36.710
Nicaragua	29	674	41	953
Panamá	19	336	33	584
Paraguay	56	1.575	70	1.969
Perú	42	6.870	53	4.670
Rep. Dominicana	31	1.543	45	2.240
Trinidad y Tobago	39	443	52	591
Uruguay	22	626	37	1.053
Venezuela	41	5.222	56	7.133
<u>TOTAL</u>		<u>121.339</u>		<u>164.707</u>

	Ingreso por cápita 1976	Población Total 1977(000)	INGRESOS MENORES DE \$ 416 PER CAPITA		Ingresos menores al 50% del promedio, pero no inferiores a \$ 416 per cápita			Ingresos menores al 33,3% del promedio, pero no inferiores a \$ 416 per cápita		
			Porcentaje de la población	Número de personas (000)	Línea de Pobreza	Porcentaje de la población	Número de personas (000)	Línea de Pobreza	Porcentaje de la población	Número de personas (000)
Argentina	1.686,5	26.056	15	3.908	843	32	8.338	562	20	5.211
Bahamas ^{1/}		220	13	28		40	88		28	62
Barbados	1.619,5	243	10	24	810	27	66	540	17	41
Bolivia	477,7	4.788	72	3.447	416	72	3.447	416	72	3.447
Brasil	1.069,5	113.208	43	48.679	535	53	60.000	416	43	48.679
Chile	1.280,0	10.656	23	2.450	640	46	4.902	427	24	2.557
Colombia	602,7	24.762	62	15.352	416	62	15.352	416	62	15.352
Costa Rica	1.020,1	2.090	30	627	510	39	815	416	30	627
Ecuador	601,6	7.088	61	4.323	416	61	4.323	416	61	4.323
El Salvador	599,7	4.255	52	2.213	416	52	2.213	416	52	2.213
Guatemala	892,6	6.168	38	2.344	446	41	2.529	416	38	2.344
Guyana	507,6	825	57	470	416	57	470	416	57	470
Haití	187,3	4.749	95	4.511	416	95	4.511	416	95	4.511
Honduras	501,3	2.897	70	2.028	416	70	2.028	416	70	2.028
Jamaica	1.173,4	2.075	40	830	587	52	1.079	416	40	830
México	968,5	64.404	50	32.202	483	57	36.710	416	50	32.202
Nicaragua	824,4	2.325	41	953	416	41	953	416	41	953
Panamá	1.245,4	1.771	19	336	622	33	584	416	19	336
Paraguay	508,5	2.813	70	1.969	416	70	1.969	416	70	1.969
Perú	872,5	16.358	52	8.506	436	53	8.592	416	52	8.506
República Dominicana	811,4	4.978	45	2.240	416	45	2.240	416	45	2.240
Trinidad y Tobago	1.262,6	1.137	38	432	631	52	591	421	39	443
Uruguay	1.309,4	2.846	20	569	655	37	1.053	436	22	626
Venezuela	2.089,3	12.737	24	3.057	1.045	56	7.133	696	41	5.222

TOTAL

319.449

42,3

141.498

53,2

169.986

45,5

145.192

^{1/} No es posible estimar con algún grado de certidumbre el ingreso per cápita de las Bahamas debido a la falta de información.

of per capita but not less than \$416 per capita produces the highest estimate of the poor (170 million persons). The measure of less than 33.3 percent of average but not less than \$416 produces the second highest estimate (145.2 million persons). The absolute poverty category of \$416 per capita identifies the lowest number of poor (141.5 million persons).

This comparative exercise very clearly illustrates the subjectivity of the attempts to measure the poor even by the most rigid quantitative methods. It also illustrates that the ultimate choice of method and definition is inherently political. If a policy maker wishes to demonstrate that Latin America has progressed in its struggle toward elimination of poverty, a choice may be made to adopt a measure which identifies the lowest number of poor. If, however, it is in the best interest of a policy maker to demonstrate that much poverty still exists, he may choose another definition which identifies the maximum number of poor. In any case, whichever definition is employed, it is evident that the majority of the poor in Latin America are concentrated in the most populated countries. It can be estimated that between 63.3 percent and 68.9 percent of the poor live in Brazil, Mexico and Colombia, whichever of the specific definitions is being employed. When Haiti and Peru are included, the estimate can rise to almost 80 percent. These concentrations of poverty should be seriously considered by any policy makers attempting to address themselves to the question of elimination of poverty in Latin America.

FOOTNOTES TO SECTION IV

- 1/ New Prospects for Economic Relations Between OECD and Latin America, address by Mr. Antonio Ortiz Mena, President of the Inter-American Development Bank, at the meeting of the Development Assistance Committee of the Organization for Economic Cooperation and Development (Paris, France, October 17, 1978), pp. 5-6.
- 2/ Economic and Social Progress in Latin America, 1977 report, IDB, Foreword.
- 3/ The following discussion of methodology employed is based on a memo by Mr. Thoumi entitled Implicaciones de Diferentes Definiciones de Pobreza sobre el Tamaño y Distribución de la Población, Objetivo de Préstamos del Banco, and on a number of interviews conducted with Mr. Thoumi between October 16 and December 21, 1978.

SECTION V

ECONOMIC COMMISSION FOR LATIN AMERICA (ECLA)

A concern with the study of poverty has been evidenced within ECLA for some time and has arisen within various contexts. From a methodological point of view, it arose as an outgrowth of studies of income distribution. Such studies had indicated that there was an acute problem of skewed income distribution, but there was a lack of longitudinal studies that were capable of answering the question as to whether or not this income distribution was improving or worsening over time. Results of one of the few studies of this sort, done in Costa Rica, clearly indicated that there had been an increase in the middle class, a slight and relative decrease in the upper class (the upper 5 percent which has a concentration of the wealth), and a great increase - both in relative and absolute terms - of those considered to be living in poverty (lower 20 percent). This type of information was not generally available for all countries. So as a complement to the studies done by ECLA during the sixties on income distribution, it was determined to undertake more specific studies of poverty.

The second methodological context in which the concern arose was in the general area of development of "indicators." Beginning in the sixties, there was a great preoccupation with establishing social indicators that would parallel macro-economic indicators. The preoccupation had two facets: one of a general or analytic character, was to determine if it was even possible to develop more qualitative indicators - health, education, etc., that had the same predictive values as economic indicators - investment capacity, savings, etc. In the economic studies of ECLA, only economic indicators were then being used and the interest was to develop and incorporate social indicators in annual regional studies. The question of a measure of poverty arose in this

context to see if, in the same way one could account for fluctuations in national product, foreign commerce, external debt, etc., one would be able to monitor the increase or decrease in rates of poverty.

A third methodological context was in the general area of studies of "marginality." In the sixties ECLA studied various forms of urban marginality, international marginality, relating Latin America to world centers, etc. In this context of larger studies done by Quijano and others, the problem of the poor began to arise in such terms as, "Are all marginals poor? Are all poor marginals?" Empirical studies of marginals in cities such as Quito and Lima began to address the question of poverty with greater clarity.

A fourth consideration was of a more theoretical nature. In the sixties and early seventies there was a great interest in amplifying and enriching the theory of Prebisch. Prebisch had posited an economic interpretation of the peripheral condition of Latin America based on the mechanisms of inequality that are inherent in international commerce. However, this theory lacked an internal mechanism, i.e., an explanation of how inequality is generated in the interior of Latin American structures given that it originally arises from the international situation. Some of the sociologists within ECLA became interested in analyzing the internal structures that generate inequality as a complement to Prebisch's theory and in this context, also, the need for more study of the poverty issue became apparent.

These considerations internal to the organization were coupled with the fact that many Latin American governments began to express a direct interest in having more studies of the poor. Although some of the interest was in terms of social concerns or as an adjunct to studies of the new international economic order, there were also political overtones to the interest. If one

accepts the premise that there are poor, that the poor are growing, and that they represent a potentially revolutionary force or at least a focus of instability, then in practical political terms it is of importance to identify and quantify the poor in order to take some corrective actions. Request for more direct studies of the poor began to be received from the government representatives at the general meetings of the ECLA Secretariat which are held every two years.

This convergence of influences accounts for the fact that in the mid-seventies, the study of poverty has emerged as one of four general topics receiving major research attention within ECLA (the other three are science and technology, population policy, and transnationals).

Prior to undertaking the latest study of Critical Poverty in Latin America, a study of Social and Political Development in Central America was undertaken at the request of the Central American Bank and was published as an official ECLA document in 1976. In 1977 a study of the Social Development of Cuba was published. The ECLA office in Mexico also recently undertook a retrospective study of the evolution of the Central American economy during the period of 1945-1978. This study is due for completion in the spring of 1979. All of these investigations have raised important considerations for the study of poverty. The series of discussion papers by Marshall Wolff, ex-director of the Division of Social Studies, also served as theoretical and methodological background for some of the issues being explored in the current study.^{1/}

The study now underway in ECLA is formally known as the Inter-Institutional Project on Critical Poverty in Latin America. UNDP is collaborating on the project and USAID is funding a Central American project component. The thirty-

month study is projected to have three phases. The first phase of twelve months has been focusing on clarifying the evolution and current status of absolute and critical poverty. The study has been based principally on already existing census and household surveys. A methodology for establishing a poverty line in Central America based on ECLA guidelines but adapted to the specific Central American milieu has been devised. Poverty profiles which contain the main economic, social, geographic and demographic characteristics of families below the poverty line have been prepared. The earliest of these preliminary documents began to have limited circulation for internal discussion as early as April. The majority of the individual country studies were available in October; the latest available for review and comment was just circulated December 12. The preliminary nature of the results and the restricted circulation of the documents have made it difficult to follow the progress of the study to date.

The second phase, which is yet to begin, is expected to provide an interpretive analysis of the relationship between current development patterns and poverty. The intent is then to identify certain lines of action that could make up a strategy for eradication of critical poverty (basic food production and food programs, urban development programs and the delivery of basic services, etc.). A final step would be to make specific policy recommendations to the particular governments on such matters as technology, prices and wages, credit, etc.

The last three months will be dedicated exclusively to Central America. During these months the final documents will also be prepared and consultations will be held with the government officials of the six Central American countries. The study is due for completion in June 1980.2/

One of the already completed products of the project is a 102 page bibliography on poverty which was available in June.^{3/} Of more interest to this report, however, are some of the definitions of poverty being elaborated and some of the preliminary findings being reported.

In a paper entitled Definición, Medición y Análisis de la Pobreza: Aspectos Conceptuales y Metodológicos, (May 1978), Sebastian Piñera outlines the pros and cons of various measurements and definitions that were under consideration for the study and discusses those that were actually adopted. The study explores the concepts of absolute and relative poverty. Relative poverty is considered to be the interdependence between the group defined as poor (persons in the lower 20 or 40 percent of national income) and the rest of the population. In contrast to this, absolute poverty refers to that percentage of the population that cannot achieve levels commonly accepted as minimum in relation to nutrition, housing, clothing, and other basic necessities.

A decision was made to utilize the absolute poverty definition, based on nutritional considerations. The nutritional requirements were calculated for persons in each country in accordance with FAO guidelines. The measures were adopted to take into account age and sex considerations. The requirements are those defined as minimum to maintain a person or family in healthy nutritional conditions.

The next step was deciding upon a food basket that satisfied the calorie and protein requirements. The make-up of this basket required the use of two criteria: one of minimizing costs and the other of not substantially altering the consumption habits of the population. To cost this basket, the prevailing prices in the urban and rural sectors of each country were utilized.

The persons whose incomes were equivalent to or less than the value of the food basket are considered to be living in conditions of "extreme or critical poverty" (also referred to as indigencia or destitution). To determine the households of critical poverty, the number of persons in the household was multiplied by the cost of the food basket, and the result was compared with the total household income. From observations of surveys previously conducted, it was estimated that 20 percent of the poorest households spent approximately 50 percent of their incomes on food. From this a second line of poverty was calculated equivalent to double the income of the first line, i.e., to that of the critical poverty line.

In summary, the households of critical poverty were defined as those which, dedicating their entire incomes to the purchase of food alone, could not afford the food basket which supplied the basic nutritional requirements. Poor households are those which have incomes higher than the value of the food basket but less than double this amount. The assumption being made in this latter case is that poor families, given their combined patterns of food and non-food consumption, do not have sufficient resources to supply their minimum nutritional needs.

Tables V-1 and V-2, reproduced from the Piñera study, offer estimates of critical poverty (destitution or indigencia) and poverty lines calculated in national currencies and U.S. dollars.^{4/}

Once the poverty lines are drawn, it is possible to calculate, for each individual country, the percentage of households that are below the poverty line, i.e., the extent of critical poverty. Another calculation which is utilized in the study is the poverty gap, i.e., the discrepancy between the incomes of the group of families below the extreme poverty line and the poverty

TABLE V-1

LINEAS DE INDIGENCIA Y POBREZA

(En términos per cápita, anuales y en moneda nacional de promedios de 1970)

<u>País</u>	LINEA DE INDIGENCIA				LINEA DE POBREZA			
	Nac.	Urban	Rural	Area Metrop.	Nac.	Urban	Rural	Area Metrop.
Argentina	445	471	354	471	874	942	620	942
Brasil	387	445	336	445	732	890	588	890
Colombia	1,413	1,555	1,212	1,613	2,695	3,110	2,121	3,226
Costa Rica	540	631	485	646	1,008	1,262	849	1,292
Chile	1,325	1,420	1,095	1,460	2,566	2,840	1,916	2,920
Ecuador	1,774	2,040	1,584	2,110	3,314	4,080	2,772	4,220
Honduras	153	183	142	190	284	366	249	380
México	1,022	1,117	869	1,157	1,965	2,234	1,521	2,314
Perú	3,022	3,413	2,632	3,508	5,716	6,826	4,606	7,016
Uruguay	26,762	28,492	21,371	28,492	52,225	56,984	37,399	56,984
Venezuela	584	624	485	646	1,136	1,248	849	1,292

TABLE V-2

LINEAS DE INDIGENCIA Y POBREZA

(En términos per cápita anuales y en Dólares de 1970)

<u>País</u>	LINEA DE INDIGENCIA				LINEA DE POBREZA			
	Nac.	Urban	Rural	Area Metrop.	Nac.	Urban	Rural	Area Metrop.
Argentina	117	124	93	124	231	249	164	249
Brasil	85	98	74	98	162	197	130	197
Colombia	77	85	66	88	147	170	116	176
Costa Rica	82	95	73	98	152	190	128	195
Chile	116	125	96	128	225	249	168	256
Ecuador	92	106	83	110	173	213	145	220
Honduras	77	92	71	95	142	183	125	190
México	82	89	70	93	157	179	122	185
Perú	78	88	68	91	148	176	119	181
Uruguay	110	117	88	117	214	234	153	234
Venezuela	130	139	108	144	252	277	189	287

line. This gap can be expressed as a percentage of national income to get an estimate of the resources that must be absorbed by this group of families in order to escape their condition of critical poverty.

Both the estimates of percentage of critical poor and poor and the poverty gap are given for each of the individual countries in papers entitled Evaluación de la Pobreza, which are internal discussion documents dated October 1978. These are available in each of the country reports for Brazil, Colombia, Costa Rica, Chile, Mexico and Peru.^{5/} The composite table for all countries is given in a paper entitled ¿Se Benefician los Pobres del Crecimiento Económico? by Sebastian Piñera (October 1978). These two tables on the extent of poverty and the poverty gap are reproduced here as Tables V-3 and V-4.^{6/}

Another poverty measure which has been produced by the ECLA studies is the profile of poverty. These profiles attempt to identify some characteristics of poor families from the point of view of demography, employment, education, etc. The information available allows for other types of analysis; for example, the disaggregation of total household income into various factors:

- total household income divided by salaries.
- total household income divided by number of salaried persons.
- The total of salaried persons divided by the number of adults.
- The total number of adults divided by the total family members.

These relationships are useful for policy implications and for answering questions such as the following: "To what extent do poor families depend on income from work or transfers, compared with other families? To what extent do they depend on earnings of the head of household or other members' earnings? To what extent is it possible to make a prognosis of poverty

TABLE V-3

PORCENTAJES DE INDIGENTES Y POBRES ^{a/}

País	Año	Población	Porcentaje Indigentes (I _i)	Porcentaje Pobres (I _i)	Porcentaje No pobres (I _n)	I _{pp} ^{b/}	I _{pn} ^{b/}	I _{nn} ^{b/}
Brasil	1960	71,539,000	19.6	51.6	48.4			
	1970	95,204,000	18.4	44.4	55.6	44.4	7.2	48.4
Colombia	1964	17,903,100	45.0	65.6	34.4			
	1974	23,298,700	17.7	43.4	56.6	43.4	22.2	34.4
Costa Rica	1961	1,297,000	5.4	51.2	48.8			
	1971	1,786,000	3.3	20.1	79.9	20.1	31.1	48.8
Chile	1940	5,147,000	33.4	55.5	44.5			
	1954	6,599,000	23.4	45.6	54.4	45.6	9.9	44.5
	1968	9,321,000	4.2	15.0	85.0	15.0	30.6	54.4
México	1950	28,626,900	---	52.2	47.8			
	1963	41,877,830	5.4	36.3	63.7	36.3	15.9	47.8
	1968	47,187,280	3.0	27.0	73.0	27.0	9.3	63.7
Perú	1961	10,456,300	35.2	57.8	42.2			
	1971	13,878,800	33.0	52.0	48.0	52.0	5.8	42.2
Conjunto De 6 Países ^{c/}	1960	142,644,000	19.5	48.7	51.3			
	1970	191,381,000	14.7	38.9	61.1	38.9	9.8	51.3

^{a/} El porcentaje de pobres incluye al de indigentes.

^{b/} I_{pp} representa el porcentaje de la población que era pobre en el período inicial y siguió siéndolo en el período final; I_{pn} representa el porcentaje de la población que escapó a su condición de pobreza durante el período; I_{nn} representa el porcentaje de la población que ya no era pobre en el período inicial.

^{c/} La población del conjunto de seis países es la población efectiva en 1960 y 1970, según CELADE. Los porcentajes de población viviendo en condiciones de indigencia, pobreza y no pobreza fueron calculados mediante un promedio ponderado en que las observaciones para 1960 y 1970 corresponden a las observaciones más cercanas de cada país a esos dos años respectivamente. En el caso de Chile se hizo una excepción obteniendo mediante interpolación lineal entre los años 1954 y 1968 cifras para 1960. El ingreso per cápita del conjunto de seis países en el ingreso per cápita promedio de esos países en 1960 y 1970, según CEPAL.

TABLE V-4

BRECHAS DE POBREZA

(Anuales en dólares de 1970^{a/})

País	Año	BBP Brecha pobreza per cápita	BPT ^{b/} Brecha pobreza absoluta	BPRY Brecha pobreza relativa ing. disp. (%)	BPRY 20% Brecha pobreza rela. ing. 20% más rico (%)	BPRPIB Brecha pobreza relativa al PIB (%)	BPRG Brecha pobreza relativa gasto publ. (%)
Brasil	1960	70.2	2,589.4	12.7	22.8	9.3	47.6
	1970	72.0	3,040.8	8.4	13.6	6.1	24.8
Colombia	1964	153.6	1,804.2	26.0	37.6	20.2	175.3
	1974	105.2	1,063.4	8.8	14.6	6.8	46.5
Costa Rica	1961	60.1	39.9	7.4	12.4	5.6	38.7
	1971	60.1	21.6	2.1	3.9	1.6	8.3
Chile	1940	124.8	356.9	16.1	23.4	11.5 ^{c/}	60.1
	1954	126.5	380.5	9.5	15.0	7.7 ^{c/}	38.8
	1968	75.7	105.8	1.9	3.8	1.3 ^{c/}	4.5
Mexico	1950	44.4	664.0	8.6	14.7	6.4	135.7
	1963	44.0	668.0	4.2	6.9	3.3	46.0
	1968	37.4	466.0	2.0	3.4	1.6	20.8
Peru	1961	102.4	619.0	16.0	22.9	12.6 ^{c/}	79.0
	1971	105.2	759.2	12.2	17.5	9.3 ^{c/}	53.0
Conjunto 6 Países ^{d/}	1960	81.9	5,992.0	10.8	17.7	8.2	69.7
	1970	73.8	5,457.0	5.8	9.5	4.3	23.9

^{a/} Tipo de cambio de paridad.^{b/} En millones de US\$ de 1970.^{c/} Esta cifra es relativa al PNB.^{d/} Promedio ponderado en que las observaciones para 1960 y 1970 son las observaciones de cada país más cercana a esos años, excepto en el caso de Chile en que las observaciones para 1960 se generaron por interpolación

solely on the basis of income derived from work, or on income of the head of household?" A more or less in-depth analysis may be made for each country, depending on the quantity and quality of the survey information available. At the time of the writing of this report, only one poverty profile was available. The profile for urban poverty in 1971 and rural poverty in 1977 in Costa Rica appears in a report entitled Medición, Análisis y Descripción de la Pobreza en Costa Rica by Sebastian Piñera (April 1978).^{7/} These two poverty profiles for Costa Rica are reproduced here as Tables V-5 and V-6.

One other interesting analysis which appears in the ECLA documents does not involve new definitions or concepts, but is a comparison of results of preliminary estimates of the ECLA studies with those estimates made by the ILO and the World Bank. These appear in a paper entitled La Dimensión de la Pobreza en Latin América by Oscar Altamar (September 1978).^{8/}

As can be seen from the table reproduced here (Table V-7), the World Bank used arbitrary lines of \$50 and \$75 (1969 dollars) per person in order to estimate the population in poverty in developing countries. Altamar notes that these lines tend to reflect the subsistence conditions prevailing in the rural areas of Asia and Africa (in which 80 percent of the total population in poverty in the developing world is concentrated) and include a very modest allowance for non-food basic needs.

ILO established for Asia a minimum subsistence of \$50 per capita and a poverty line of \$100. On this basis it estimated for Latin America a critical poverty (indigencia or destitution) line of \$90 per capita and a grave poverty line of \$180 a year per person.

The method by which ECLA arrived at the determination of poverty lines was discussed earlier, and the estimates in 1970 prices were reproduced

TABLE V-5

COSTA RICA: PERFILES DE POBREZA URBANA, 1971

Característica seleccionada	Porcentaje total de hogares	Porcentaje de hogares indigentes	Porcentaje de hogares pobres	Porcentaje de hogares no pobres	Probabilidad de indigencia	Probabilidad de pobreza
1. Sexo						
hombres	79.8	52.8	75.3	81.9	2.7	12.5
Mujeres	20.2	47.2	24.7	18.1	9.4	16.0
2. Educación						
Sin educación o ignorado	3.9	10.2	8.7	2.9	9.0	27.7
Educación primaria (0-3 años)	17.7	33.4	31.6	15.1	6.4	22.0
Educación primaria (4-6 años)	42.5	46.6	48.4	41.6	3.7	14.0
Educación secundaria (0-3 años)	12.3	7.0	7.8	13.2	1.9	7.8
Educación secundaria (4-6 años)	11.6	1.9	2.6	13.3	0.6	2.8
Educación universitaria (0-3 años)	3.3	0.0	0.2	3.9	0.0	0.9
Educación universitaria (4-6 años)	0.8	0.9	0.0	0.9	0.0	0.0
Universitaria (graduado)	7.8	0.0	0.7	9.1	0.0	1.1
3. Edad						
15 - 19 años	0.3	0.0	0.6	0.3	0.0	21.0
20 - 24 años	4.4	2.1	0.9	5.0	2.0	2.7
25 - 29 años	10.8	8.2	8.0	11.3	3.1	9.6
30 - 34 años	13.5	13.5	12.1	13.7	4.0	11.7
35 - 39 años	14.0	14.9	17.3	13.4	4.3	16.2
40 - 44 años	12.9	18.9	15.9	12.1	5.9	16.2
45 - 49 años	11.1	8.6	12.7	11.0	3.1	14.8
50 - 54 años	10.4	11.5	10.5	10.3	4.5	13.2
55 - 59 años	7.5	4.7	4.8	8.0	2.6	8.4
60 - 64 años	6.0	2.6	4.7	6.3	1.7	10.4
65 - 69 años	3.8	5.7	4.4	3.7	6.0	15.0
70 o más	5.4	9.2	8.1	4.8	6.8	19.5
4. Tipo de actividad						
Ocupados	83.5	59.9	75.3	85.9	2.9	11.8
Desocupados	0.3	0.0	0.5	0.2	0.0	0.5
Se ocupa del hogar	10.1	24.3	13.9	8.8	9.7	18.0
Estudiantes	0.2	0.7	0.2	0.2	13.6	12.5
Incapacitados	4.4	10.8	6.9	3.7	9.9	20.5
Otros	1.6	4.4	3.3	1.3	10.7	26.1
5. Intenta buscar trabajo						
Si y busca	4.0	2.2	7.3	3.3	5.6	35.3
No o no busca	96.0	97.8	92.7	96.7	10.1	18.4
6. Categoría del empleo						
Empleados privados	54.5	66.0	56.0	53.9	3.5	12.3
Empleados públicos	23.5	3.5	19.2	24.8	0.4	9.8
Empleadores	8.7	1.1	5.2	9.5	0.4	7.2
Cuenta propia	13.2	29.5	19.7	11.8	6.5	17.9
7. Rama de actividad económica						
Agricultura	4.9	9.5	10.6	4.0	5.5	25.7
Minas y canteras	0.2	1.1	0.6	0.1	17.1	34.1
Industria manufacturera	22.1	18.9	21.8	22.2	2.5	11.8
Electricidad, gas y agua	2.0	0.0	1.4	2.2	0.0	8.2
Construcción	9.7	9.7	14.4	9.0	2.9	17.8
Comercio, restaurantes y hoteles	18.0	15.7	15.7	18.4	2.5	10.4
Transporte	9.2	6.8	8.4	9.4	2.1	10.8
Establecimientos financieros	2.8	0.0	0.8	3.2	0.0	3.2
Servicios	31.1	38.3	26.4	31.5	3.6	10.1

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TABLE V-5
(Continuation)

Característica seleccionada	Porcentaje total de hogares	Porcentaje de hogares indigentes	Porcentaje de hogares pobres	Porcentaje de hogares no pobres	Probabilidad de indigencia	Probabilidad de pobreza
8. Ocupación						
Sin ocupación o ignorado	0.6	4.6	0.8	0.5	20.9	15.9
Profesionales y técnicos	11.4	0.0	1.8	13.1	0.0	1.9
Directores y administradores	6.2	0.0	1.9	7.0	0.0	3.6
Personal administrativo	14.7	1.1	3.1	13.8	0.2	2.5
Trabajadores del comercio	14.7	11.0	12.8	15.1	2.2	10.4
Trabajadores de servicios	11.2	30.9	20.0	9.3	7.9	21.3
Agricultura y afines	4.0	9.5	10.6	2.9	6.8	31.7
Trabajadores manuales	37.1	42.9	48.9	35.2	3.3	15.7
9. Número de horas trabajadas por semana						
0 - 19 horas	19.1	44.4	26.3	16.7	9.4	18.0
20 - 34 horas	2.5	6.5	2.2	2.4	10.3	11.4
35 - 39 horas	2.3	2.0	3.4	2.1	3.5	19.1
40 - 44 horas	9.0	2.2	5.7	9.9	1.0	8.2
45 - 49 horas	41.0	23.3	33.2	43.1	2.3	10.6
50 - 69 horas	22.1	20.8	25.2	21.6	3.8	14.9
70 y más	4.0	0.8	4.0	4.1	0.8	13.2
10. Grupo socioeconómico						
Productores agrícolas	0.3	1.1	0.8	0.1	12.3	33.7
Empleadores no agrícolas	8.0	1.0	4.5	8.8	0.4	6.7
Cuenta propia no agrícola	12.1	27.4	18.0	10.7	6.6	17.8
Asalariado agrícola	4.6	8.3	9.8	3.8	5.2	25.2
Direct. y prof. no agrícolas	15.4	0.0	3.4	17.6	0.0	2.7
Empleados no agrícolas	20.7	3.4	7.3	23.2	0.5	4.2
Obreros no agrícolas	33.5	58.8	55.5	35.4	4.5	17.2
Inactivos	0.4	0.0	0.6	0.4	0.0	16.8
11. Área						
Metropolitana	59.6	42.6	51.5	61.7	2.9	11.3
Resto urbano	40.4	57.4	48.5	38.3	5.7	15.6
12. Tipo de vivienda						
Convencional	93.6	79.8	85.8	95.4	3.4	12.0
Rústica	1.3	1.5	2.5	1.1	4.7	24.5
Improvisada	5.1	18.7	11.5	3.4	14.8	29.3
13. Régimen de tenencia						
Propia o adquiriéndola	46.5	46.5	47.8	46.3	4.0	13.4
Alquilada	47.8	44.9	44.6	48.4	3.8	12.2
Otro	5.8	8.6	7.5	5.3	6.0	17.1
14. Hacinamiento (número de personas por cuarto)						
1 persona	51.5	18.5	20.0	58.0	1.5	5.1
2 personas	35.7	30.4	44.9	34.5	3.4	15.4
3 personas	8.7	28.7	21.5	5.8	13.3	32.1
4 personas	2.3	8.5	8.4	1.0	15.1	48.2
5 o más	1.8	13.8	5.3	0.7	30.9	38.3
15. Tamaño del hogar						
1 persona	3.9	0.0	0.2	4.6	0.0	0.7
2 personas	9.1	2.0	4.4	10.2	0.9	6.3
3 ó 4 personas	30.7	20.1	14.5	33.3	2.6	6.2
5 ó 6 personas	28.4	21.5	26.1	29.1	3.1	12.0
7 u 8 personas	17.2	23.6	29.5	15.0	5.5	22.3
9 ó 10 personas	6.9	19.8	16.3	4.8	11.5	30.7
11 ó más	3.8	13.1	8.9	2.5	13.8	30.5

TABLE V-5
(Continuation)

Característica seleccionada	Porcentaje total de hogares	Porcentaje de hogares indigentes	Porcentaje de hogares pobres	Porcentaje de hogares no pobres	Probabilidad de indigencia	Probabilidad de pobreza
16. Número de ocupados						
1 ocupado	60.5	92.3	75.2	56.6	6.2	16.2
2 ocupados	25.2	6.1	18.0	27.3	1.0	9.3
3 ocupados	10.3	1.6	5.8	11.4	0.6	7.4
4 ocupados	2.7	0.0	1.0	3.1	0.0	3.1
5 o más	1.4	0.0	0.0	1.6	0.0	0.0
17. Categoría del empleo por educación						
- Empleados						
Sin educación o ignorado	2.7	7.4	6.8	2.0	7.9	30.0
Educación primaria (0-3 años)	13.4	30.0	24.0	11.4	6.4	21.4
Educación primaria (4-6 años)	32.7	26.0	38.1	32.2	2.3	13.9
Educación secundaria (0-3 años)	9.8	6.7	6.1	10.4	2.0	7.5
Educación secundaria (4-6 años)	9.9	1.2	1.3	11.4	0.4	1.5
Educación universitaria (0-3 años)	3.1	-	-	3.7	-	-
Educación universitaria (4-6 años)	0.8	-	-	0.9	-	-
Universitaria (graduado)	7.2	-	0.5	8.5	-	0.8
- Trabajadores por cuenta propia						
Sin educación o ignorado	0.4	2.3	0.2	0.4	14.8	6.5
Educación primaria (0-3 años)	2.6	6.8	6.6	1.9	7.4	30.0
Educación primaria (4-6 años)	6.6	18.6	9.6	5.8	8.1	17.4
Educación secundaria (0-3 años)	1.4	-	1.0	1.5	-	8.9
Educación secundaria (4-6 años)	0.9	-	0.6	1.0	-	7.4
Educación universitaria (0-3 años)	-	-	-	-	-	-
Educación universitaria (4-6 años)	-	-	-	-	-	-
Universitaria (graduado)	0.2	-	0.2	0.2	-	13.1
- Empleadores						
Sin educación o ignorado	0.2	1.0	0.3	0.1	15.7	18.3
Educación primaria (0-3 años)	1.2	-	1.8	1.1	-	16.6
Educación primaria (4-6 años)	3.8	-	2.4	4.1	-	7.6
Educación secundaria (0-3 años)	1.1	-	0.3	1.3	-	2.9
Educación secundaria (4-6 años)	1.0	-	-	1.0	-	-
Educación universitaria (0-3 años)	0.2	-	-	0.2	-	-
Educación universitaria (4-6 años)	-	-	-	-	-	-
Universitaria (graduado)	0.7	-	-	0.8	-	-

TABLE V-6

COSTA RICA: PERFILES DE POBREZA RURAL, 1977

Característica seleccionada	Porcentaje total de hogares	Porcentaje de hogares indigentes	Porcentaje de hogares pobres	Porcentaje de hogares no pobres	Probabilidad de indigencia	Probabilidad de pobreza
1. Sexo						
Hombre	90.3	65.4	90.5	91.2	8.3	24.1
Mujer	9.7	16.6	9.5	8.8	15.5	23.6
2. Educación						
Sin educación o ignorado	21.7	27.3	28.5	18.5	11.2	31.7
Educación primaria (0-3 años)	43.6	49.2	48.1	41.3	10.1	26.6
Educación primaria (4-6 años)	28.8	22.9	22.9	31.7	7.1	19.2
Educación secundaria (0-3 años)	2.5	0.7	0.5	3.5	2.3	4.4
Educación secundaria (4-6 años)	1.4	-	-	2.1	-	-
Educación universitaria (0-3 años)	0.6	-	-	0.9	-	-
Educación universitaria (4-6 años)	-	-	-	-	-	-
Universitaria (graduado)	1.4	-	-	2.1	-	-
3. Edad						
15 - 19 años	1.0	0.3	-	1.5	2.8	-
20 - 24 años	8.2	3.6	4.6	10.2	3.9	13.4
25 - 29 años	13.8	9.6	13.7	14.4	6.3	23.9
30 - 34 años	15.9	18.2	20.6	13.9	10.3	31.2
35 - 39 años	13.7	19.7	18.5	11.2	13.0	32.5
40 - 44 años	11.8	15.4	15.5	10.0	11.8	31.4
45 - 49 años	10.2	12.5	9.1	10.3	11.1	21.6
50 - 54 años	8.4	5.6	7.1	9.2	6.0	20.3
55 - 59 años	6.4	3.9	4.1	7.6	5.5	15.4
60 - 64 años	4.7	3.0	2.9	5.6	5.7	14.8
65 - 69 años	2.5	3.0	1.7	2.7	10.9	15.8
70 o más	3.3	5.2	2.3	3.5	14.2	16.4
4. Tipo de actividad						
Ocupados	89.5	80.5	89.3	90.7	8.1	24.0
Desocupados	1.8	1.7	2.5	1.6	8.5	33.1
Se ocupa del hogar	5.7	10.2	5.8	5.0	16.3	24.5
Estudiantes	-	-	-	-	-	-
Incapacitados	2.4	6.4	1.7	2.2	23.9	16.7
Otros	0.6	1.2	0.7	0.5	17.3	29.6
5. Intenta buscar trabajo						
Si y busca	10.7	21.5	10.1	8.0	32.8	23.5
No y no busca	89.3	78.5	89.9	92.0	14.4	25.1
6. Categoría del empleo						
Empleados privados	78.8	80.1	85.9	76.1	8.5	26.2
Empleados públicos	10.1	3.6	5.3	12.5	3.0	12.8
Empleadores	3.3	2.0	1.2	4.1	5.1	8.9
Cuenta propia	7.7	14.0	7.4	7.1	15.2	22.9
7. Rama de actividad económica						
Agricultura	60.0	73.7	73.2	53.7	10.0	29.2
Minas y canteras	1.0	2.8	1.0	0.8	22.6	23.4
Industria manufacturera	9.7	4.6	5.7	11.7	3.8	14.2
Electricidad, gas y agua	1.4	0.3	0.1	1.9	1.9	1.9
Construcción	5.9	1.8	4.7	6.9	2.5	19.0
Comercio, restaurantes y hoteles	7.7	7.2	5.4	8.5	7.7	16.7
Transporte	3.7	2.0	2.5	4.3	4.4	16.3
Establecimientos financieros	0.1	-	-	0.1	-	-

TABLE V-6
(Continuation)

Característica seleccionada	Porcentaje total de hogares	Porcentaje de hogares indigentes	Porcentaje de hogares pobres	Porcentaje de hogares no pobres	Probabilidad de indigencia	Probabilidad de pobreza
8. Ocupación						
Sin ocupación o ignorado	0.8	0.7	0.9	0.8	7.1	25.1
Profesionales y técnicos	7.7	-	0.3	3.9	-	3.0
Directores y administradores	1.7	0.7	0.6	2.3	3.3	7.3
Personal administrativo	2.3	0.3	0.7	3.1	1.2	7.5
Trabajadores del comercio	7.1	5.2	4.4	8.3	5.9	14.7
Trabajadores de servicios	5.9	5.9	5.3	6.1	8.1	21.5
Agricultura y afines	59.5	78.8	73.8	52.1	10.8	29.7
Trabajadores manuales	19.9	8.4	14.0	23.3	3.4	16.8
9. Número de horas trabajadas por semana						
0 - 19 horas	15.5	27.0	15.4	13.9	15.8	24.0
20 - 34 horas	7.3	11.9	13.0	4.6	14.8	43.1
35 - 39 horas	17.4	23.2	24.3	14.2	12.0	33.6
40 - 44 horas	11.4	7.0	10.6	12.3	5.6	22.3
45 - 49 horas	27.4	19.7	22.2	30.3	6.5	19.5
50 - 69 horas	14.1	8.8	10.6	16.0	5.7	18.1
70 o más	6.9	2.3	3.8	8.7	3.0	13.2
10. Grupo socio-económico						
Productores agrícolas	0.6	1.3	0.7	0.5	17.3	28.2
Empleadores no agrícolas	3.0	1.6	1.3	3.8	4.4	10.0
Cuenta propia no agrícola	7.3	12.9	7.1	6.8	14.2	23.1
Asalariado agrícola	59.0	72.0	71.7	52.9	9.9	29.2
Direct. y prof. no agrícolas	3.9	0.7	0.8	5.4	1.4	4.9
Empleados no agrícolas	3.6	1.8	1.2	4.7	4.0	8.3
Obreros no agrícolas	21.8	8.9	16.3	25.3	3.3	17.9
Inactivos	0.7	0.7	0.9	0.7	8.2	29.1
11. Area						
Metropolitana						
Resto urbano						
12. Tipo de vivienda						
Convencional	87.9	79.0	81.2	91.6	8.1	22.2
Rústica	11.4	20.4	17.6	8.0	16.1	37.0
Improvisada	0.6	0.7	1.3	0.4	9.4	47.5
13. Régimen de tenencia						
Propia o adquiriéndola	54.7	66.5	58.3	51.8	11.0	25.7
Alquilada	10.9	6.8	8.5	12.4	5.6	18.7
Otro	34.3	26.7	33.1	35.8	7.0	23.2
14. Hacinamiento (número de personas por cuarto)						
1 persona	29.9	7.0	8.3	40.8	2.1	6.7
2 personas	38.6	35.0	37.3	39.5	8.2	23.2
3 personas	19.8	29.9	31.3	14.3	13.6	38.0
4 personas	6.8	15.4	13.8	3.1	20.5	48.9
5 o más	4.9	12.7	9.3	2.3	23.4	45.7
15. Tamaño del hogar						
1 persona	4.5	-	-	6.7	-	-
2 personas	8.6	-	1.8	12.2	-	5.0
3 ó 4 personas	21.9	12.1	13.7	26.1	5.0	15.1
5 ó 6 personas	25.4	14.9	29.5	25.3	5.3	28.0
7 u 8 personas	18.3	31.6	24.7	14.2	15.6	32.6
9 ó 10 personas	11.6	25.1	16.8	7.9	19.6	34.9

TABLE V-6
(Continuation)

Característica seleccionada	Porcentaje total de hogares	Porcentaje de hogares indigentes	Porcentaje de hogares pobres	Porcentaje de hogares no pobres	Probabilidad de indigencia	Probabilidad de pobreza
16. Número de ocupados						
1 ocupado	61.9	82.8	72.2	55.4	12.1	28.1
2 ocupados	22.3	14.8	18.7	24.5	6.0	20.2
3 ocupados	9.0	1.5	6.3	11.0	1.5	16.9
4 ocupados	3.9	0.3	1.8	5.2	0.7	11.1
5 o más	2.9	0.6	1.0	3.9	1.7	8.2
17. Categoría del empleo por educación						
- Empleados						
Sin educación o ignorado	19.8	22.2	27.4	16.8	9.1	33.1
Educación primaria (0-3 años)	39.4	43.7	45.0	36.8	9.0	27.4
Educación primaria (4-6 años)	24.6	17.1	18.9	27.5	5.7	18.4
Educación secundaria (0-3 años)	2.2	0.7	0.3	3.0	2.8	2.8
Educación secundaria (4-6 años)	1.4	-	-	2.0	-	-
Educación universitaria (0-3 años)	0.6	-	-	0.9	-	-
Educación universitaria (4-6 años)	-	-	-	-	-	-
Universitaria (graduado)	1.4	-	-	2.1	-	-
- Trabajadores por cuenta propia						
Sin educación o ignorado	1.4	3.5	1.0	1.3	19.9	16.8
Educación primaria (0-3 años)	3.2	6.1	3.2	2.9	15.4	23.6
Educación primaria (4-6 años)	2.6	4.3	3.0	2.2	13.7	27.6
Educación secundaria (0-3 años)	0.2	-	-	0.3	-	-
Educación secundaria (4-6 años)	0.1	-	-	0.1	-	-
Educación universitaria (0-3 años)	-	-	-	-	-	-
Educación universitaria (4-6 años)	-	-	-	-	-	-
Universitaria (graduado)	0.9	-	-	1.3	-	-
- Empleadores						
Sin educación o ignorado	0.3	-	0.1	0.4	-	11.2
Educación primaria (0-3 años)	1.0	0.6	0.1	1.3	5.4	2.9
Educación primaria (4-6 años)	1.6	1.3	0.8	2.0	6.6	11.9
Educación secundaria (0-3 años)	0.2	-	0.1	0.3	-	11.1
Educación secundaria (4-6 años)	-	-	-	-	-	-
Educación universitaria (0-3 años)	-	-	-	-	-	-
Educación universitaria (4-6 años)	-	-	-	-	-	-
Universitaria (graduado)	-	-	-	-	-	-

TABLE V-7

ESTIMATES OF TOTAL POPULATION IN POVERTY IN THE DEVELOPING WORLD, Ca. 1970

	<u>Total Population</u>				<u>Rural Population</u>			
	Total Developing Countries	Asia	Africa	Latin America	Total Developing Countries	Asia	Africa	Latin America
<u>I. World Bank (1969)</u>								
Poverty lines (US\$ per capita)	75	75	75	75	75	75	75	75
Population (mill. of inhabitants)	835	620	165	50	695	525	140	30
Incidence of poverty (%)	49	57	46	19	55	61	50	25
<u>II. ILO (1972)</u>								
Poverty lines (US\$ per capita)		100	115	180				
Population (mill. of inhabitants)	210	853	239	118				
Incidence of poverty (%)	67	71	69	43				
<u>III. ECLA (1970)</u>								
Poverty lines (US\$ per capita)				165				133
Population (mill. of inhabitants)				108				68
Incidence of poverty (%)				41				61

from a table in Piñera's study (Table V-2). Here it may be seen that the minimum food budget estimates made by ECLA vary between \$75 and \$130 yearly per person, depending on the country. The corresponding poverty lines vary between \$150 and \$250 (1970 dollars) of annual household consumption per person. These levels are somewhat higher than those used by the World Bank or ILO in order to obtain regional estimates. Altimar attributes this difference to the fact that the poverty lines estimated by ECLA are explicitly normative and are more region-specific.

As was noted at the beginning of this review, a decision was made to utilize measures of absolute poverty rather than relative poverty as the general definition of poverty throughout the investigations of the ECLA Inter-Institutional Project on Critical Poverty in Latin America. However, merely for comparative purposes, Altimar in his paper La Dimensión de la Pobreza en Latin América has calculated a measure of relative poverty. He states that the comparison between the two measures provides hints about how much inequality is embedded in absolute poverty; how far away the normative assessment of absolute poverty is from the average availability of resources in the country; and to what extent existing inequalities may give rise to situations of relative deprivation beyond the absolute minimum.

His relative poverty lines were drawn by defining relative deprivation as below half the average household income per capita. As may be seen by comparing these estimates with absolute poverty estimates provided earlier, in most countries relative poverty so defined affects a significantly higher proportion of households than absolute poverty. Even in the countries with higher absolute poverty, the adoption of a relative norm would make an

additional 5 to 10 percent of households fall within the poverty category. And in those countries in which the incidence of absolute poverty is less severe, more than a third of the population would still live in relative poverty. Urban relative poverty would run as high as 50 percent in Brazil and Colombia; 40 percent in Mexico; and around 25 percent in Argentina and Uruguay. Altamar's estimates of relative poverty are reproduced here as Table V-8.

TABLE V-8

ALTERNATIVE ESTIMATES OF RELATIVE POVERTY IN LATIN AMERICAN COUNTRIES, Ca. 1970

Countries	Percentage of households below the relative poverty line ^{a/}	
	Urban	National
Argentina	27	28
Brasil	52	54
Colombia	48	48
Costa Rica	34	36
Chile	33	35
Honduras	40	58
Mexico	42	52
Peru	34	48
Uruguay	25	...
Venezuela	38	38

^{a/} Defined as one half of the average household income.

FOOTNOTES TO SECTION V

- 1/ Information on the involvement of ECLA in poverty studies prior to the current study were furnished in interviews with Dr. Joseph Hodara, former chief of the section of Social Studies for Mexico, Central America, Panama and Cuba.
- 2/ For more details see Propuesta Para Realizar Una Investigación Sobre Pobreza Crítica en los Países del Istmo Centroamericano, ECLA, August 1978.
- 3/ Bibliografía Sobre Pobreza, ECLA, June 1978.
- 4/ Definición, Medición y Análisis de la Pobreza: Aspectos Conceptuales y Metodológicos, Sebastian Piñera, May 1978, p. 16.
- 5/ The estimates of poverty appear as Table 3 of each report and the poverty gap as Table 7. See Evaluación de la Pobreza by Sebastian Piñera. For each of the six countries indicated. ECLA, October 1978.
- 6/ ¿Se Benefician los Pobres del Crecimiento Económico? Sebastian Piñera, October 1978, pps. 27 and 34.
- 7/ Medición, Análisis y Descripción de la Pobreza en Costa Rica, Sebastian Piñera, April 1978, Tables 2 and 3.
- 8/ La Dimensión de la Pobreza en Latin América, Oscar Altamar, September 1978, Table 3.

SECTION VI

THE INTER-AMERICAN FOUNDATION

The Inter-American Foundation was created by Congress as an admitted experiment in foreign assistance. By the mid-1960s, disenchantment with the U.S. Foreign Assistance Program in Latin America and with the Alliance for Progress was widespread. The 1969 Report of the Subcommittee on Inter-American Affairs of the House Foreign Affairs Committee reaffirmed the goals of the Alliance for Progress: transformation of Latin American society, economic growth, elimination of illiteracy and disease, achievement of better income distribution, extension of social benefits, and development of free democratic institutions. But the report argued that American assistance programs had failed to achieve these objectives. It was this Subcommittee which sponsored the legislation to create the Inter-American Foundation.

Title IV of the Foreign Assistance Act of 1969 established the "Inter American Social Development Institution," which became "The Inter-American Foundation" in 1971. Four broad purposes were laid out for the new organization:

1. To strengthen the bonds of friendship and understanding among the people of the hemisphere.
2. To support self-help efforts intended to enlarge the opportunities for individual development.
3. To stimulate and assist effective and even wider participation of the people in the development process.
4. To encourage the establishment and growth of democratic institutions, private and governmental, appropriate to the requirements of the individual sovereign nations of the hemisphere.

These goals were to be sought mainly through expansion of educational opportunity, increased food production, development of agriculture, and

improvement of environmental conditions relating to health, maternal and child care, family planning, housing, free trade union development, and other social and economic needs.

The three fundamentals of Foundation operation were established very clearly by the legislation:

1. The Foundation would coordinate its activities with U.S. agencies and international organizations, but would be separate from the regular policy machinery and existing bureaucracy.

2. The program would be carried out mainly through private and international organizations, avoiding bilateral agreements with other governments - in effect a "people to people" program.

3. The agency would not develop country or sector programs but would respond to the "forces of social change" wherever and in whatever form they appeared.

Activities began in March 1971, with general oversight of management and policy vested in an unpaid Board of Directors appointed by the President of the United States. Four of the members are from the private sector and three from government. The Board appointed a full-time president, supported by 60 to 70 staff members. With an original \$50 million multi-year appropriation and additional utilization of \$79 million in reflows to the Social Progress Trust Fund (set up by the U.S. in 1961 and administered by IDB), the Foundations's annual budget in 1977 was \$23 million. To date more than \$65 million in grants have been provided to more than 590 projects in 27 countries. Currently the Foundation has projects in every country in Latin America and the Caribbean with the exception of those Caribbean islands controlled by the United Kingdom and Cuba.1/

The Foundation is divided into three regional divisions: Central, West Andean, and Eastern. Each region has five or six field representatives. The Foundation sets funding priorities by analyzing and selecting from proposals initiated by organizations indigenous to Latin America and the Caribbean. Preferences are given to private groups rather than governmental; to action programs with commitments of local resources and some form of beneficiary participation. In the words of the Foundation President, William M. Dyal, Jr.:

"At the heart of the Foundation's experience as an experiment in development assistance is its commitment to respond to, not guide, Latin and Caribbean people's initiatives to change their own lives. All of the lessons we are learning stem from this basic concept of responsiveness, this conviction that the people whose lives will be directly affected by development efforts know best what they need and want and how to do it... our experience indicates that the poor are doing things to help themselves; they already know what to do; and given non-directive assistance, they do the 'right things' - that is, projects that are feasible and appropriate in their context. The Foundation, then, limits its role to filling those resources gaps which the people themselves identify. It also seeks out groups that are too new, too small or too controversial to be likely candidates for traditional foreign assistance."2/

Of all the organizations reviewed in this report, the Inter-American Foundation is the most admittedly and unashamedly qualitative in its approach to identifying and defining the poor which it is intended to serve. It has no formal definition of poverty and is making no attempt to elaborate one. One official who was interviewed stated, "We believe that all our projects directly serve the poor, but we have no explicit guidelines for identifying who are the poor. We are not in a competitive position with other donor agencies and to date we have not been called upon to prove or justify our projects in terms of a formal definition of poverty." A field representative pointed out, "I can tell if a project is serving the poor just

by looking at the people that I deal with in the field. In one project, for example, we are funding a waste disposal processing plant. Twenty-six families support themselves by working in the garbage dumps. When you see people live that way, you don't have to question any further if they are poor or not."

In a formal report on the first five years of Foundation activities, the beneficiaries of projects are described in the following manner:

"A discussion concerning beneficiaries might be expected to emphasize a per capita type of analysis. It is important, however, to remember that the Foundation's focus has always been on people as people, and not as per capita statistics. They always are the intended beneficiaries, through a wide variety of means such as communities, organizations, academic, and businesses. The absolute numbers then become quite difficult to calculate with any degree of accuracy... Indeed the list of dilemmas in any such accounting procedure is endless, making 'hard number counts' highly doubtful. Thus the following analysis concentrates on types of beneficiaries, rather than a numbers game of people."3/

The report then goes on to state that "the primary beneficiaries of the projects to which the Foundation contributes are the rural poor," but not further attempt is made to define "the poor." Types of beneficiaries are identified by using categories such as "campesinos," "urban workers and poor," "communities," "women," "youth," etc. The main types of project beneficiaries by frequency, total project costs, and average size are given below.4/

TABLE VI-1
MAIN TYPES OF PROJECT BENEFICIARIES BY FREQUENCY,
TOTAL PROJECT COSTS, AND AVERAGE SIZE

Type	Frequency of Occurrence	Total of Project Costs Thousands U.S. \$	Average Size of Projects Thousands U.S. \$
Campeſinos	89	\$34,537	\$ 388
Urban Workers and poor	36	9,950	268
Developmental organizations	37	6,816	184
Communities	35	13,686	388
Individuals	24	2,597	108
Indians	16	768	48
Women	14	2,939	210
Youth	12	1,455	121
Academics	12	923	76
Business	6	7,343	1,224
Total and Average	281	\$81,014	\$ 289

Although not elaborating a definition of poverty by which to set target groups or identify beneficiaries, the Foundation has developed something akin to a "measure of progress" by which it classifies its projects. These are called "social gains," in order to distinguish them from traditional economic or other standard of living gains. "Social gains are self-defined and self-achieved incremental changes - real and perceived - in the beneficiaries' relative standing within their social, economic, and political ambience." The analysis of social gains for 94 projects has been made according to the following categories:

Access - Greater opportunities to obtain on favorable terms whatever resources (credit, education, etc.) beneficiaries seek.

Leverage - Collective bargaining strength to obtain resources from a system which has traditionally ignored beneficiaries.

Choices - The ability to make decisions between attainable options.

Status - An improved self-image, increased esteem.

Critical Reflection Capacity - Using experience to assess the potential merit of competing problem-solving options.

Legitimation - Beneficiaries' cause is recognized as valid and their demands as just and reasonable.

Discipline - Accept and complete individual and collective work.

Creative Perceptions - A more positive and innovative view of the beneficiaries' relationship to their milieu.^{5/}

The Foundation justifies this use of social gains rather than more traditional economic measures or satisfaction of basic needs in the following terms:

"An event such as getting a job, a better house or basic education can happen through the influence and benevolence of someone acting for the beneficiaries. The standard of living gain will fulfill a basic need, at least for the short run, but as an event, rather than a process deriving its momentum from the beneficiaries. The ability of the participants to continue to resolve their own problems will not be enhanced. The Foundation's legislative mandate referred to development as a process, not an event. It referred to self-help efforts, not welfare. The social gains, then, are indicators of a development process in which the beneficiaries participate and through which they not only are able to achieve concrete improvements in their standard of living but are able to change their economic, social and political relationships to their society."^{6/}

Since the publication of They Know How in 1977, the concept of "social gains" and the empirical base required for the validation of social indicators have been questioned by persons in the Latin American and U.S. development communities. The Foundation has, therefore, initiated a process of analysis and field validation of the qualitative indicators managed by individuals external to the organization. When the results of this final validation are tabulated and analyzed, the revised version of the qualitative instrument will become part of the Foundation project monitoring and evaluation system. The specifics of the methodology being employed in this current validation

of the social indicators appear in Appendix II.

At the time of this writing, there is also a new book on Foundation activities which is in galley form and is presently being circulated within the Foundation for internal review. The book, In Partnership with People: An Alternative Strategy for Development, was written by Eugene Meehan, Charles Wylie, and Thomas Ramey. The first half of the book is an evaluation of the Foundation work to date. The second half is a summary description and analysis of 28 projects. Twenty-one of the projects are rural; seven are urban. Six are national level, twelve regional, and ten are local projects. Again, in this book there will be no attempt to define poverty or the poor. Three categories of beneficiaries will be identified:

1. The disengaged, economically defined as landless; culturally defined as ethnic or other marginated groups.
2. Rural peasants, not the poorest group; landowners, but well below the per capita GNP of their countries.
3. Urban poor; examples of projects include the garbage workers (previously mentioned), cooperatives of wives of industrial workers, etc.7/

The book is due for publication in the Spring of 1979.

FOOTNOTES TO SECTION VI

- 1/ For more details on the history and policies of the Foundation see Annual Report, Inter-American Foundation 1977, January 1978, and An Experiment in Foreign Assistance, the Inter-American Foundation: 1969-1977, Eugene J. Meehan (mimeo), February 1978.
- 2/ They Know How, Inter-American Foundation, 1977, Introduction, pp. IX-X.
- 3/ Ibid., p. 37.
- 4/ Ibid., p. 38
- 5/ Ibid., pp. 75 and 76.
- 6/ Ibid., p. 82.
- 7/ Information based on interviews with Charles Wylie.

A P P E N D I X
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APPENDIX I*

III. Problems with Measuring Progress. This section provides a brief overview of social indicator data; the apparent demand for data as evinced in proposed additional legislation and two AID projects; poverty-measurement efforts, and consideration of some problems common to social indicators to be used for policy purposes.

A. What is available? In the developed countries, social indicators has recently become a growth industry. The National Science Foundation in the United States devotes a significant program to that topic.⁵ Two US government publications, Social Indicators 1973 and StatUS, the latter a monthly prepared by the Census Bureau for the Office of Management and Budget, have greatly increased the sophistication and range of data generally available, i.e., outside academic circles, on the social condition.⁶ The Social Indicators Newsletter, published about three times a year, includes information on methodological advances, research projects underway and recent publications, all of considerable

⁵Social Indicators Newsletter (November 1975) includes a description of more than twenty-five projects currently being supported by NSF -- none of them providing data for developing countries. The social indicators program was warmly applauded in the "Simon Report," Social and Behavioral Science Programs in the National Science Foundation, National Academy of Sciences, Washington DC 1976 (see below Footnote 52).

⁶US Office of Management and Budget published Social Indicators 1973 in 1974; it is currently out of print and no succeeding volume has been produced. StatUS, A Monthly Chartbook of Social and Economic Trends, is compiled by the Federal Statistical System, and has appeared three times (July, August and September 1976).

* This is one section of the report entitled Measuring Development Performance by William P. McGreevey. Financial support was provided under AID Grant OTR/G/1516 to the Asia Society.

use to the scholarly community.⁷ The American Sociological Review has published several articles analyzing quality of life.⁸ An international journal published in Canada has issued two volumes of research papers;⁹ of particular interest are those on the quality of life and the "Easterlin" effect of rising income and constant happiness.¹⁰ The National Bureau for Economic Research publishes a highly technical journal on measurement; one issue was devoted to Latin America.¹¹ There are many other publications and research programs dealing with social indicators in the United States and other industrial and postindustrial countries; Social Indicators Newsletter may be consulted for specifics.

⁷ Social Science Research Council, Center for Coordination of Research on Social Indicators, publishes the newsletter. SSRC has also been responsible for many publications in this field, particularly because of the research interests of Dr. Eleanor Bernert Sheldon, President of SSRC and Mr. Robert Parke, Director of the Center for Coordination of Research on Social Indicators. Examples are Kenneth Land and Seymour Spilerman, ed., Social Indicator Models New York, Russell Sage Foundation 1975; Roxann A. Van Dusen and Nicholas Zill, ed., Basic Background Items for U.S. Household Surveys New York, Social Science Research Council 1975; Robert F. Boruch and Henry W. Riecken, ed., Experimental Testing of Public Policy, Westview Press and SSRC, Boulder, 1975, 145 p.

⁸ James G. Anderson, "Causal Models and Social Indicators: Toward the Development of Social Systems Models," American Sociological Review 38, 3, June 1973, 285-301; Elihu M. Gerson, "On 'Quality of Life,'" ASR 41, 5, October 1976, 793-806.

⁹ Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement, ed., Alex C. Michalos (Dept. of Philosophy, University of Guelph, Guelph Ontario, Canada), published by D. Reidel Publishing Co., Dordrecht - Holland.

¹⁰ Willard L. Rodgers and Philip R. Converse, "Measures of the perceived overall quality of life," Social Indicators Research 2, 2 September 1975, pp. 127-52; and Otis Dudley Duncan, "Does money buy satisfaction?" Social Indicators Research 2, 3, December 1975, pp. 267-74.

¹¹ Annals of Economic and Social Measurement: Journal of Computers, Information Retrieval and Research Methodology (NBER, New York). Volume 5, No. 2, ed. by David Kendrick was devoted to applications of control theory to macro-economics.

The Gallup Organization recently published preliminary results of a worldwide assessment of satisfaction with the quality of life. The percentage of those interviewed who were highly satisfied was greatest for North America, almost as high for Western Europe, somewhat lower for Latin America, and dramatically lower for Africa and the Far East (presumably excluding Japan) on almost all of 10 questions asked.¹² These ratings appear roughly consistent with levels of per capita product and recent growth-rates as given in the World Bank's World Tables 1976 (p. 392). Such attitude data, given their subjective nature, are difficult to interpret and to relate to more objective indicators.

Only two instances among the developing countries were found of reasonably comprehensive publication of an avowed set of national social indicators: Malaysia¹³ and the Philippines.¹⁴ Data are probably available which would permit such publications for many countries: Until governments have a clear purpose and use for such works, however,

¹² George Gallup, "Americans Rate Life Quality Highest," The Washington Post, 7 November 1976, p. A-8.

¹³ Government of Malaysia, Department of Statistics, Socioeconomic Indicators and National Policy: Malaysia. Working Paper - 1. Kuala Lumpur, October 1974, 41 p. Data presented pertain to eradication of poverty; equalization of opportunity among Malaysia's major ethnic groups, and unification or integration of Malaysian society. Includes data from 1967 and 1970 censuses and changes of variables between censuses. Prepared with advice from Dr. Amos Hawley, Ford Foundation. (This information taken from Social Indicators Newsletter.)

¹⁴ Development Academy of the Philippines, Measuring the Quality of Life: Philippine Social Indicators, Manila 1975, 28 p. The work was directed by Professor Mahar Mangahas, UP School of Economics, who reports in an interview that a larger publication will appear, giving details of data provided in summary form in this brief and excellent publication.

they probably would do well not to spend their money. In the meantime, United Nations agencies, including the International Labor Office,¹⁵ the Research Institute for Social Development,¹⁶ and the Secretariat¹⁷ have provided international comparative data and summaries of general utility. An ILO official published a thoughtful review of the uses of social data for planning.¹⁸ World Tables 1976 has just been published by the World Bank, and the data therein is also available to analysts on computer tape.¹⁹

The international agencies have absorbed much of the costly burden of data generation for the developing countries because the donor community requires such information to guide development assistance policy. There does not as yet appear to be an equally active interest in having social data among planners and policymakers in LDCs.

¹⁵ILO, Household Income and Expenditure Statistics, 1960-72: Africa, Asia, Latin America (available in US at ILO offices, Suite 330E, 1750 New York Avenue, NW, Wash DC 20006, 202/634-6335).

¹⁶Donald V. McGranahan (Director), C. Richard-Proust, N. V. Sovani and M. Subramanian, Contents and Measurement of Socioeconomic Development (An Institute Staff Study of the Research Institute for Social Development, United Nations, Geneva), Praeger Publishers, New York 1972.

¹⁷United Nations Department of Economic and Social Affairs, Statistical Office, Toward a System of Social and Demographic Statistics, New York 1975; prepared by Professor Richard Stone; United Nations Economic and Social Council, Social Indicators: Current National and International Activities in the Field of Social Indicators and Social Reporting: Report of the Secretary General, New York, January 1975; United Nations Statistical Commission, "The Feasibility of Welfare-Oriented Measures to Complement the National Accounts and Balances," (E/CN.3/477), prepared February 1975 by Christopher T. Saunders, University of Sussex, for 19th Sess., 75 p.

¹⁸R. V. Horn, "Social indicators for development, planning and analysis," International Labour Review 111, 6, June 1975, pp. 483-506.

¹⁹Published for the World Bank by Johns Hopkins University Press, Baltimore and London 1976, 552 p. Data included cover the period 1950-73. Section IV presents the social indicator data.

D. Some General Problems Common to All Indicators. Indicators may be judged, with respect to their potential utility, on the dimensions of accuracy, pertinence, timeliness, costliness, sensitivity and specificity to policy needs.

1. Accuracy. From some points of view, wide tolerance of error of estimates of indicators is acceptable. Whether infant mortality rates are 200 or 250 per thousand live births may not matter much if the policy objective at initiation of a health and nutrition program is simply to lower the rate quickly and substantially. But eventually policy must also cope with whether feeding programs, preventive health care, curative services or potable water supplies is having the greatest effect on infant mortality (or whether a particularly judicious combination is most effective). More advanced programs require that small changes in infant mortality be measured accurately along with the program inputs which alter it.

A group at the University of North Carolina recently reviewed findings on mortality from several well-designed demographic measurement projects in developing countries and found that "reporting of deaths by retrospective questioning could be as deficient as fifty percent."³¹ Retrospective questioning in small surveys is among the best methods

³¹Arjun Adlakha, Joan W. Lingner and James R. Abernathy, "Methods of measuring mortality for developing countries," APHA Meetings 17-21 Oct 1976, Miami Beach (mimeo., International Program of Laboratories for Population Statistics, Department of Biostatistics, School of Public Health, University of North Carolina, Chapel Hill), p. 9.

currently available in developing countries for determining mortality and fertility. Other estimating techniques, such as the Brass-Sullivan method, dual record systems and randomized response technique for questioning, are able to reduce inaccuracy but are very costly. Moreover, the reduction of error by these methods is apparently not complete, nor is there an easy formula for estimating the remaining error. Since development programs are committed to changing mortality, there must be attention to measurement of both levels and trends, the latter being particularly difficult to interpret if the methods of measurement are changing or improving. The enormous underestimates of mortality found among these best research programs leave too much room for the occurrence of real improvements in mortality conditions over several years that could go unrecorded because improved statistical procedures over the same period capture more mortality events despite the fact that real mortality is falling. Some of the special problems associated with infant mortality, an important component of general mortality, are discussed below.

2. Pertinence. Social indicator data may appear to be more than they really are: Elements left out of measurement can move in directions opposite to elements measured so that real changes are quite different from those reflected in statistics. This has been called the horse-rabbit stew problem: The rabbit contribution to the soup can be accurately measured, but it is the unmeasurable horse that dominates the flavor. Two examples may be given.

A recent World Bank study of the incidence of malnutrition examined how higher income affects nutritional status. The purpose was to forecast nutritional improvements with and without specific nutritional programs but with general improvements in the standard of living measured by per capita income.

An analysis of a comprehensive nutrition survey of low income families in Calcutta shows that the nutrition of all age groups improves with rising incomes. Although the nutrient-income elasticities for young infants are higher than for adults, this does not mean that infant undernutrition is resolved with improvement in income. In fact, the opposite can be true if it is assumed that higher incomes are achieved partly through the mother obtaining employment, with the consequent partial sacrifice of breast feeding. . . . Calculations about the loss of breastfeeding and the cost of replacing the equivalent nutrients suggest that about 50 percent of the mother's earnings would need to be spent on the infant for the sheer maintenance of its nutritional health. Clearly, higher per capita income not only may fail to reduce but, on the contrary, may increase infant undernutrition.³²

Since most family budget studies leave breastfeeding out of account, and because in the instance of infant feeding the increase in income and consumption itself causes a decline in breastfeeding, the measured improvement is not really pertinent to a fundamental issue of malnutrition.

There are complex and poorly-understood relationships between unemployment as measured by developed-country definitions (Are you looking for work and unable to find it?), unpaid family labor and the allocation of time and resources in the LDC household. A study based

³²Shlomo Reutlinger and Marcelo Selowsky, "Malnutrition and Poverty," World Bank Staff Occasional Papers 23, Johns Hopkins Press, Baltimore 1976.

on US data found that the contribution of unpaid household work was equal to over 40 percent of GNP in both 1948 and 1969, and was about 10 percent in Japan where women's wages and labor force participation rates are lower than in the US.³³ Growing awareness that time is not sharply divided between work and leisure -- and perhaps less so in LDCs than in developed countries -- leads to a questioning of the pertinence of employment data, no matter how accurately measured, when applied to rural and urban informal sectors. Elder children, although unemployed and staying at home, may be using their time productively by investing in the mental growth of younger siblings, may free parents for more time in market work and may even improve their skills by work at home in an apprenticeship provided by parents.³⁴

Homogeneity of work experience -- when most people engage in agriculture and petty trade -- reduces the pertinence of employment, mobility and occupational indicators. Critical features of the system are those that its members already identify by sanctifying them with ritual -- birth, passage to adulthood, identification of a work role, marriage,

³³UN Statistical Commission, Economic Statistics, System of National Accounts and Balances: The Feasibility of Welfare-Oriented Measures to Complement the National Accounts and Balances, 19th Sess., New Delhi, 8-19 Nov 76 (E/CN.3/477, 17 Feb 76), pp. 18-19.

³⁴The greater sibling-training experience of the early-born children in families has been offered as part of the explanation for observed differences by parity of performance on IQ, SAT and other intelligence tests. See R. B. Zajonc, "Family Configuration and Intelligence," Science 192, 16 April 76, pp. 227-36, for a review of the evidence from developed countries.

birth of one's own children and death. Following the lead of these societies themselves in deciding what to measure may prove as sure a guide to pertinence as the development of complex modeling efforts. The Physical Quality of Life Index (PQLI) developed by Morris D. Morris follows this spirit.³⁵

3. Timeliness. Few data can be generated through procedures sufficiently accurate to command respect within the time limits imposed on policymakers. John Hunter in his book on Colombia told the story of a Minister of Agriculture who called the statistical office in his Ministry asking for the quantity of potatoes produced annually in Colombia. Two days later the office sent him a plan for conducting a sample survey which would produce the desired information within six to twelve months. Whereupon the Minister canceled his request for the data and called his wife asking how many pounds of potatoes she bought the previous week; after judicious multiplications, he produced the ministry's estimate of potato consumption (and production) in less than half an hour. The biases in such a procedure obviously vitiate the result -- even if by some chance it were correct. Some data are not worth having, no matter how easy they are to get.

There are data which are available in a timely fashion and which can be used to assess conditions among the poor. Foremost among these are

³⁵ Morris David Morris (Overseas Development Council), "A Quality of Life Index," mimeo. Washington DC, December 1976. A publication by ODC on the PQLI, an unweighted index of infant mortality, life expectancy and literacy, is anticipated. There may be other, superior ways of developing indicators directly responsive to the culturally determined important sites and phases in the rhythm of life.

information on prices and the cost of living on the one hand, and money wages among unskilled workers on the other. These separate data sources can be brought together to assess trends in real wages. Wages are the major source of income among the urban poor employed in the modern sector. Trends in real wages among wage earners may also be indicative of income movements for those in urban services and petty trade. Even the economic status of the unemployed may be governed to some extent by movements in the cost of living indices. Thus these data, when properly interpreted, offer timely information on real income, employment issues and income distribution.³⁶

Schuh and Thompson suggest that the timely ways to measure government commitment to agricultural productivity improvement must include attention to expenditures on agricultural research, funds budgeted to agricultural credit and other support to the sector, and the presence or absence of policies such as food price controls, import and export embargoes on food and discrimination for or against the farm sector.³⁷ There is so long a lag between government commitment and visible change that some means of measuring commitment directly must be devised for the timely assessment of government action. For example, a five to seven

³⁶ Miguel Urrutia and Albert Berry, La Distribucion del Ingreso en Colombia, La Carreta, Medellin 1975, pp. 107-48, use real wage data to assess trends in distribution.

³⁷ G. Edward Schuh and Robert L. Thompson, "Assessing Progress in Rural Income and Agricultural Productivity," mimeo., Department of Agricultural Economics, Purdue University, November 1976.

year delay comes between increased expenditures on agricultural research and increases in agricultural output due to those expenditures.³⁸

4. Costliness. There has been no aggregate assessment of the cost of improving the quality of data on a minimum number of development indicators needed for policy guidance. However, several projects are underway or being considered which tell something of the costliness of such an enterprise. For example, a cooperative project between the Philippine Government and AID would spend \$4 million over a three-year period. A multi-purpose household survey in El Salvador designed to develop similar information would cost \$2 million. The Economic Commission for Africa budgeted about \$0.44 million annually for an average-sized survey organization in each of the Sub-Saharan countries.³⁹ These examples indicate that the cost of generating useful information is not trivial. Much less easy to determine is the cost-effectiveness of such expenditures as measured by their utility as guides to policy. One multipurpose household survey undertaken for research purposes in Africa was evaluated from the perspective of its possible replication in additional countries. The financing agency decided that the cost of repeating the survey was too great for it to support, despite the considerable value placed on the information which could be gained.⁴⁰ The Government of Pakistan is

³⁸See James K. Boyce and Robert E. Evenson, Agricultural Research and Extension Programs, Agricultural Development Council, New York 1975.

³⁹United Nations Statistical Commission, "African Household Survey Capability Programme, Report of the Secretary-General," 19th Sess., New Delhi, 8-19 Nov 76, Annex, p. 3.

⁴⁰Based on interview with Mr. Robert McPheeters, World Bank, Sept. 1976.

currently considering several sample survey approaches for gathering nutrition, fertility, mortality and labor-force participation data. Cost and information quality are being taken into account in reaching a decision. The alternatives which might be weighed in deciding how to generate information are rarely conceived as tradeoffs between cost and accuracy, timeliness and completeness, and the other choices which face those who design data systems. The United Nations System for Social and Demographic Statistics (SSDS) offers an excellent format for a complex data set. No estimates of the cost of putting the data together have been made public, but one imagines that SSDS would cost a lot of money. Those who allocate funds to data generation and must choose between better data and more funds for action programs must decide how much is too much. The decision of the US Congress to commit up to one percent of program funds to evaluation for several departments of the US government has resulted in large expenditures:

In the United States, by the beginning of the 1970's, there were about 300 new [evaluation] studies begun each year with direct Federal support and with average budgets of about \$100,000 each. By now, the number of evaluations started each year has probably doubled, and dollar costs have risen markedly. While not usual, studies may have budgets as great as 10 to 20 million dollars, as in the case of ongoing evaluations of compensatory education in the US. Evaluations in other countries also have increased dramatically in number and cost. The aggregated assessments of family planning programs in Asian countries, supported by both national governments and international groups, represent one of the most expensive and extensive set of evaluation efforts ever undertaken. Evaluation research in Latin America on the relations between

nutrition and cognitive development also is in the multi-million dollar category.⁴¹

Although the amounts of money are large, if they save money that would otherwise be committed to ineffective programs, evaluation and performance assessment can more than pay for themselves.

5. Sensitivity to Policy Needs. Aggregate indicators paint the national picture in broad brush strokes and are hence applicable only to broad national policies -- the family planning program, cheap food, an incomes policy, price controls on key wage goods to hold down the cost of living of the poor majority. A good deal of theorizing is needed to tease out the long and tenuous connecting threads between general policies and the resulting socioeconomic conditions.

Perhaps better results can be anticipated with the study of natural experiments: Operating programs for fertility control, productivity improvement, income redistribution, mortality reduction and employment creation can be studied with experimental and quasi-experimental designs to see what impact they have had -- intentionally and unintentionally -- on the progress criteria discussed

⁴¹ Howard E. Freeman, "The Present Status of Evaluation Research," mimeo, UNESCO, Paris, August 1976, p. 4, notes deleted. This paper and the Rossi and Wright paper cited below were prepared for a September 1976 UNESCO conference on evaluation. A further evaluation conference to take place in Central America in 1977 under sponsorship of INCAP (Institute for Nutrition for Central America and Panama) is in the planning stages with Professor Freeman playing a major role.

⁴² here. In applying evaluation techniques to specific projects the gain in specificity may be purchased at the price of irrelevance to other projects and settings. Perhaps for that reason there is an irresistible urge to limit the expense of studies of natural experiments to some small fraction of the project cost -- even though a study which determined the reasons for success or failure might lead to considerable savings on future projects. Among the significant projects that have been evaluated are the educational impact of Sesame Street on Mexican children.⁴³

6. Specificity to Policy Needs. In a recent review of National Science Foundation support of research in the social sciences, a committee found that applied research rarely achieves its policy-impact objectives.⁴⁴ At issue was how research does impact on policy. The sponsoring-agency staff seemed to believe that identifiable policymakers had to be reached with specific new information which would then form the basis for new decisions.

⁴²On experimental design see Riecken and Boruch, ed. (1974) esp Ch. on quasi-experiments and with special applications to AID, Boruch and Riecken 1974, "Applications of randomized experiments to planning and evaluating AID programs" (AID/cm/ta-c-1055). For a comprehensive listing and analysis of population programs see Roberto Cuca and Catherine S. Pierce, "Experimentation in Family Planning Delivery Systems," Aug. 1976.

⁴³See Peter H. Rossi and Sonia R. Wright, "Evaluation Research: An Assessment of Current Theory, Practice and Politics," mimeo., UNESCO Division for Socio-Economic Analysis, Sector of Social Sciences and Their Applications, Paris, September 1976, for comments on this and other evaluation studies.

⁴⁴National Research Council, Committee on the Social Sciences in the National Science Foundation (Herbert A. Simon, Chairman), Social and Behavioral Science Programs in the National Science Foundation, National Academy of Sciences, Washington DC 1976.

The review committee, headed by Professor Herbert A. Simon, asserted an alternative information-diffusion model of policy impact. Investigators attack a problem and generate new information about it and new ways of analyzing it. The new information and perspective then diffuses through informed public opinion until the policymakers join the public in looking at the world differently. (The 'publics' involved may of course be quite small -- being interested persons on such matters as the population problem, the energy crisis, the environment, the inflation-employment tradeoff, etc.) With this latter model of information transmission, there is less need to specify policy research needs in terms of requests of policymakers narrowly concerned with an issue. General information on indicators of progress may inform the public about a problem (high fertility, inequality, unemployment). Basic research, conducted under conditions determined by independent investigators, can lead to a gradual specification of real and difficult policy choices which, if to be enacted, must be understood and supported by interested members of the public.

This knowledge-diffusion model guided studies by Caplan and Rich on the uses of social science research in the US government. They found that "knowledge produces effects, not a single effect; and policy is not made, it accumulates."⁴⁵ Eighty-two percent of policymakers they interviewed said that social science research had influenced policy;

⁴⁵ Robert F. Rich and Nathan Caplan, "Policy Uses of Social Science Knowledge and Perspectives: Means/Ends Matching versus Understanding," mimeo., OECD Conference on Dissemination of Economic and Social Development Results, Universidad de los Andes, Bogota, June 1976, p. 2.

among 350 examples of policies influenced were the decision not to build the SST, selection of particular diseases for intensive research funding and the Environmental Protection Act of 1969. "However, the information inputs did not serve to guide specific actions; instead the importance of this knowledge to the policymaker lies in its ultimate integration into his entire perspective on a problem."⁴⁶ Thus to influence policy, information on progress criteria need not respond specifically to any one policymaker's needs; it must rather contribute to the general stock of knowledge about pertinent policy issues. General indicators contribute to the ecosystem of ideas and hence influence indirectly the course of policy decisions. Caplan and Rich found strong interest among Department of State policymakers in having social indicators on the quality of life in the US and other nations.⁴⁷

IV. Problems with Five Progress Criteria. As there are problems common to all indicators of the well-being of the poor in developing countries, so there are some problems peculiar to measurement of agricultural productivity, infant mortality, population growth, unemployment and income distribution. No list of indicators can be perfect: The competing advantages of comprehensiveness and simplicity make perfection

⁴⁶ Ibid., p. 8.

⁴⁷ Ibid., pp. 15-16. Other works by these authors include Nathan Caplan, et. al., The Use of Social Science Knowledge in Policy Decisions at the National Level, Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, University of Michigan, Ann Arbor 1975; and Robert F. Rich, "Uses of Social Science Information by Federal Bureaucrats: Knowledge for Action versus Knowledge for Understanding," mimeo., Midwest Political Science Association Meeting 1976, Chicago.

a logical impossibility. Although these five indicators are reasonably satisfactory, one might wish to add such criteria as nutritional status, schooling and educational attainment to a more complete list of indicators of well-being.⁴⁸ Some would argue that attention to income, particularly the income of the poorest strata should take precedence over any specific indicator since income can be used to purchase preferred combinations of good health, calories and numbers of children born to the family.

From some points of view, analysis of the interactions between the five progress criteria to be reviewed below is an important exercise in understanding the process of economic development. The links between income distribution and employment on one hand, and mortality and fertility on another are particularly rich causal connections for careful study. In this section, some of those links will be explored, but the principal focus is on the problems and prospects of measurement for each of the five criteria.

A. Agricultural productivity. In the Congressional legislation, agricultural productivity is linked to a specific mode of goal achievement "through small-farm labor-intensive agriculture." Moreover, it is not

⁴⁸Mr. S. Chakravarty, Planning Commission, Government of India, presents a strong argument for inclusion of educational data in a system of social and demographic statistics for developing countries. His work appears as a contribution to the United Nations Statistical Commission 19th Sess. at New Delhi, "A Draft Framework for the Integration of Social and Demographic Statistics for Developing Countries," (E/CN.3/490, 2 April 1976), pp. 20-24.

labor productivity or the productivity of capital that is to be promoted but "productivity per unit of land." Most economists would be concerned with improving total productivity, i.e., the productivity of all inputs taken together. That is the position adopted by Schuh and Thompson in their review of progress assessment in agricultural productivity.⁴⁹

Among very small owner-occupied production units (dwarf holdings, as they are sometimes called), increasing the productivity of land may not be a bad objective. Nonetheless, "Given the objective of raising per capita income, labor productivity in agriculture is a more meaningful indicator of agricultural progress than yield per hectare."⁵⁰

In a comprehensive review of rural productivity in developing countries, Berry and Sabot⁵¹ conclude that the observed higher productivity of labor on small farms is a result of a dual labor market. Workers on their own small farms produce more (per land unit) because they are willing to work harder and longer -- not because small farms are naturally more productive.

Differential productivity between small and larger farms is intimately linked to the use of time by the household. Recent investigations

⁴⁹ Schuh and Thompson, "Assessing progress in rural income and agricultural productivity," argue that "among productivity indices as indicators of agricultural progress, only [total factor productivity] is meaningful" (pp. 20-21).

⁵⁰ Schuh and Thompson, op. cit., p. 18.

⁵¹ Albert Berry and R. H. Sabot, "Labor market performance in developing countries: A survey," World Bank Development Economics Department, June 1976, pp. 94-95.

of rural household behavior in the Philippines⁵² have divided the temporal resources of the household into time devoted to market work, time spent on household work and residual time (leisure).⁵³ Analysis of this three-way choice has focused on women's labor market participation (as a potential second-income earner) or unpaid family laborer. Surveys reveal interesting variations in men's use of time as well. For example, Oscar Lewis found in his classic, Life in a Mexican Village, that hoe culture on inferior communal lands took much more time than plow culture on privately-held plots. Workers on the communal lands "generally rise at 4:00 a.m., travel about two to three hours to reach their fields, and return home a few hours later than plow culture farmers."⁵⁴ Not only is hoe culture unproductive, "one of the most striking differences between the two systems is the much greater amount of time necessary in hoe culture."⁵⁵ The variations in time use in the Tepoztlan of 1947 is but

⁵² Among the several works on this topic, all of which draw on the Laguna Survey data, see the works by Elizabeth King, "Time allocation in rural Philippine households," Discussion Paper 76-12, 1976, and Barry Popkin (1976). Several other studies are available in draft or are in preparation (see below footnote 48).

⁵³ This trichotomy is explored in a recent paper by Reuben Gronau, "Leisure, home production and work -- the theory of the allocation of time revisited," NBER Working Paper Series No. 137, Stanford CA, May 1976. A lighter but thought-provoking treatment (Why do modern business men have so little time for the traditional cinq a sept affairs?) is offered in the excellent short book by Staffan B. Linder, The Harried Leisure Class, New York, Columbia University Press 1970.

⁵⁴ Oscar Lewis, Life in a Mexican Village: Tepoztlan Restudied, University of Illinois Press, Urbana 1963, p. 132.

⁵⁵ Ibid., p. 155.

one example of the interaction of time, technology, and poverty. Variations in agricultural productivity, farm size, and choice of technology must take full account of the allocation of time within the rural household if warranted conclusions for policy are to be reached. The fragmentation of dwarf holdings in many countries into widely separated tiny strips of land helps the small farmer spread out his risk at the expense of spending much time walking from one plot to another. Walking time is then an important production cost. On-farm variation of time inputs appears sufficiently important to deserve careful attention since temporal resources are the major input into small-farm agriculture.⁵⁶

To date, however, very few rural household surveys have been conducted which would yield a clear picture of time use. Some earlier studies summarized by Alexander Szalai and associates concentrate on urban areas and more developed countries.⁵⁷ In July of 1976, the Agricultural Development Council held a meeting at which some time-use studies currently in progress were discussed, including the Laguna Survey in the Philippines; the Botswana multi-round household survey; INCAP studies in Guatemala, and the Malaysian household survey. An earlier,

⁵⁶ In his paper for the UN Statistical Commission, Professor Chakravarty maintains that time-use data while useful, should have low priority in developing social and demographic statistics for developing countries.

⁵⁷ Alexander Szalai, ed., The Use of Time, The Hague, Mouton Co. 1972, includes comparative chapters on fifteen studies in twelve countries, only one of which (Peru) is among the LDCs. None of the studies cited dealt with rural time use.

The United Nations SSDS project places considerable emphasis on collection and analysis of time-use data.

planned study along similar lines in Northeast Brazil produced a small body of pilot-survey data but further field work has been postponed. Time-use studies in rural areas of LDCs, mostly by anthropologists, are few and incomplete when compared to the importance of such data for policy formulation.

A recent study by the ESCAP Committee on Population reviews some of the possible relations between agricultural productivity and population growth:

The growth of population will alter the supply of land in a number of ways: The pressure of population may induce migration to remote areas and the placing of new lands under cultivation. On the other hand, under pressure of population, new housing, roads and other facilities will subtract from the already insufficient amount of land now under cultivation. Furthermore, exploitive practices of forestry and land management in response to population pressures will result in continued loss of fertile top soil through erosion.

.....

In 1970 a study of selected ESCAP countries indicated that irrigation requirements would amount to 11.5 per cent of mean annual runoff. By 1990 this requirement will have nearly doubled to 20.4 per cent of mean annual runoff.⁵⁸

The interrelationships discussed here are exceedingly complex, particularly the specific role to be accorded to alternative rates of population growth in the steady but, in some respects, immutable running down to the sea of ecological systems in which man claims an ever larger niche. The productivity issues for agriculture should be linked to larger features of

⁵⁸ United Nations Economic and Social Commission for Asia and the Pacific, Committee on Population, "Interrelationship of population change and environment, with special reference to the rural sector" (Item 4 of the provisional agenda), Interrelationship of Population Change and Economic and Social Development (E/ESCAP/POP/1/L.1, 7 May 1976), pp. 14-15.

national and (as with the delicate matters of the waters of the Ganges river system) international ecosystems. These issues are particularly pressing in South and Southeast Asia because of high current levels of population density and the persistent knocking at the door of environmental decay which that density implies.⁵⁹

Agricultural productivity is closely linked to the problem of malnutrition in developing countries. A recent World Bank study has restudied the malnutrition problem and reexamined data developed several years ago by the United Nations Food and Agricultural Organization on food deficits and malnutrition. The new Bank study estimates

that 56 per cent of the population in developing countries (some 840 million people) had calorie-deficient diets in excess of 250 calories per day. Another 19 per cent (some 290 million people) had deficits of less than 250 calories per day.⁶⁰

The earlier FAO estimates of malnutrition (269 to 314 billion calories deficit) were predicated on estimated deficits by countries or regions of the world. This method of estimating aggregated together both rich and poor in each country and region. The World Bank study analyzes food intake by income groups within countries and finds that the very poor will be undernourished even if assumed nutritional requirements were set as much as ten percent below FAO levels. The estimated aggregate food

⁵⁹For analysis of an East African case see Barbara Knapp Herz, Demographic Pressure and Economic Change: The Case of Kenyan Land Reforms, AID/PPC/PDA, Washington, December 1974. Investment in the Swynnerton land reform paid off, but continuing population growth seems to be on the way to placing rural Kenya in a low-level equilibrium trap.

⁶⁰Reutlinger and Selowsky, "Malnutrition and Poverty: Magnitude and Policy Options," World Bank Staff Occasional Papers 23, Washington DC 1976, p. 2.

deficit is much larger by these calculations, i.e., between 350 and 488 billion calories per day. The new mid-figure estimate is equivalent to annual production of 38 million tons of food grain -- a figure equal to 4 percent of the world production of cereals in the mid-1960s. Interestingly, the deficits are not distributed the same by regions with the two calculations; for example, the FAO estimate showed Latin America to have no or a small food deficit (and hence no problem of malnutrition) whereas the new estimates place the deficit among the Latin American poor at 32 to 74 billion calories per diem.⁶¹

The large differences of food-deficit estimates by regions between FAO and World Bank analysts dramatically affect the geography of poverty: Is none of the world's hunger problem in Latin America? Or is as much as 15 percent ($74 \div 488 = 0.151$) of it there? If foreign assistance is governed by alleviation of poverty and malnutrition, the policy question is essential to answer.

Paradoxically, a solution to the world's aggregate food production problem would by no means solve the problem of malnutrition. The shortfall of supply relative to demand may only be on the order of four percent of aggregate demand. Further significant increments in food output might not in any case get to the malnourished without specific nutrition programs for designated target groups.

Severe undernutrition mainly strikes small children, who need about twice as much protein and energy in relation to overall body weight as adults require. Pregnant and

⁶¹ Reutlinger and Selowsky, op. cit., Table 9, pp. 3, 25.

nursing mothers, who also need extra food, form a second nutritionally vulnerable group. Unfortunately, in many cultures a tradition of discriminating against small children and females of all ages in the allocation of family food supplies makes these two groups all the more vulnerable.⁶²

Given the specific nutritional problems of children, prenatal and lactating mothers, it is surprising that no systematic survey data have probed below the household level to determine the distribution of consumption within the family unit. If heads of households are consuming their fill and more in poor countries, then the nutritional status of children and mothers may be much worse than even these latest figures on undernutrition would indicate. Concern with the status of women and children argues for careful studies of the intra-household allocation of consumption and work. Small-farm productivity may be purchased by a crushing burden of work on wife and children, a demand for many children (especially sons) and hence frequent childbirth imposed by men who gain in self-employed independence for themselves, despite the loss for children's schooling and possibly even higher family income. Again it must be emphasized that no systematic data bearing on this possibility has come to hand because data are gathered on households rather than individuals.

B. Infant mortality. Infant mortality is usually expressed as a ratio of infant deaths in a given time period to the number of live births in the same period. For many developing countries the rates have

⁶²Erik Eckholm and Frank Record, "The Two Faces of Malnutrition," Worldwatch Paper 9, Worldwatch Institute, Washington DC 1976, pp. 10-11.

declined significantly in the past. Few developing countries were considered by a UN group to have reliable enough data over several decades to warrant publication of statistics.⁶³ The substantial changes which can occur in this measure make it useful as an indicator of progress in development; however, problems with measurement are so severe that the infant mortality rate must be used with caution.

Infant mortality is almost universally under-reported in developing countries. In Roman Catholic countries where parents usually have infants baptized several weeks after birth, parish records will fail to record all infant deaths that occur prior to baptism. In other countries, limited recall is often blamed for respondents' failure to mention infant births and deaths in the case of children who die soon after birth. Ingenious statistical techniques have been devised to estimate response failure; these techniques, particularly the Brass-Sullivan method, have been used in Africa to improve infant mortality estimates, i.e., bring the estimates closer into line with what investigators believe to be the 'true' rates. All such techniques have deficiencies, however, which are argued vigorously among professional demographers.⁶⁴ Some interesting

⁶³See United Nations, Determinants and Consequences of Population Trends, New York 1973, p. 125, which lists ten countries with their infant mortality rates and percentage declines between the late 1930s and early 1960s.

⁶⁴For a recent review of the latest data see Arjun Adlakha, Joan W. Lingner and James R. Abernathy, "Methods of Measuring Mortality for Developing Countries," mimeo., APHA Meetings, Miami Beach 1976 (International Program of Laboratories for Population Statistics, Department of Bio-Statistics, School of Public Health, University of North Carolina, Chapel Hill), pp. 1-14.

techniques require assumptions about the stability of vital rates for the application of stable-population theory. Where rates are changing rapidly these assumptions do not hold and hence the methods cannot yield reliable estimates of infant mortality rates.

Whatever individual scholarly views may be, one could probably get general agreement to the proposition that small changes in infant mortality from one year to another cannot be measured with any substantial degree of accuracy by small-sample household surveys. An adequate vital statistics registration system is probably essential to get periodic measures of infant mortality. Decennial censuses, which do offer a large enough sample to generate a statistically significant infant mortality statistic, often contain questions too general to elicit sufficient recall to get accurate reporting of infant deaths by their surviving mothers. (Left out of account, by the way, may be infant deaths accompanied by maternal death, in which case neither event might be recorded by periodic census or survey.)⁶⁵ The Pan American Health Organization published the results of studies of childhood mortality in several Latin American cities; the mortality rates discovered in that study by Puffer and Serrano were in several countries at variance with official data.⁶⁶

⁶⁵ For a review of 160 published items, see Robert Buchanan, Effects of childbearing on maternal health, Population Reports Series J, 8, November 1975, George Washington University Medical Center, 2001 S Street NW, Washington DC 20009, pp. J125-J140.

⁶⁶ Ruth Rice Puffer and Carlos V. Serrano, Patterns of Mortality in Childhood, Pan American Health Organization, Washington DC 1973, pp. 65-71.

1. Policies affecting infant mortality. Several factors within reach of public policy have an impact on infant mortality; these include prenatal care programs, nutritional status of infants, their access to potable water and sanitary environments, and public provision of preventive and curative health services and family planning.⁶⁷ Low birth weight greatly increases the probability of infant mortality. Environmental factors may also have substantial impact on general mortality, morbidity, and life expectancy and hence produce desirable outcomes for elements of the population in addition to infants. Paqueo attempted to evaluate the impact of specific health personnel (doctors, nurses and midwives) on infant survival probabilities for Philippine provinces. He found a significant positive correlation between the presence of midwives in provinces and infant survival and, as expected, no significant relationship with the presence of doctors.⁶⁸ Findings on health status and health personnel in the United States similarly show that such factors as diet, exercise, etc., are more important determinants of mortality than medical services.⁶⁹

⁶⁷ Determinants of infant mortality were the subject of an unpublished study of PAHO data by Louise Russell and Carol S. Burke, "Determinants of Infant and Child Mortality: An Econometric Analysis of Survey Data for San Juan, Argentina," National Planning Association, Washington DC 1975.

⁶⁸ Vincente B. Paqueo, "Family decisions and fertility behavior: The impact of public education and health expenditures," mimeo., Seventh Summer Seminar in Population, East-West Center, Honolulu, 16 June 1976. The author suggests that "government could have reduced in 1975 the mortality rate from 7 to 1.5 percent, which is about the level in developed countries, by hiring 33,161 more midwives that would cost about P 119.4 million" (p. 14).

⁶⁹ Victor R. Fuchs, Who Shall Live? Health, Economics and Social Choice, Basic Books, New York 1974.

No government would be wise to judge the impact of health investments only on the health of infants, particularly because factors endogenous to the family which govern infant breastfeeding are probably much more important determinants of infant health than any external government program.⁷⁰ Infant feeding practices in developing countries may be a growing cause of the erosion of infant health despite improvements in ecological conditions (provision of potable water and preventive health care, for example) that may be tending to reduce infant mortality.

At the beginning of the twentieth century, the first programs to chlorinate urban water supplies in the United States helped reduce infant morbidity caused by gastroenteritis. Water-borne bacteria, which caused harmless disease levels of poliomyelitis and hepatitis in infancy and helped children maintain immunity in their post-infantile years, were no longer a threat to infant health. However, with early immunity lost because of the environmental improvements, children and adults were subject to much more virulent attacks of the diseases later in life when their bodily defenses were inadequate.⁷¹ These cases of offsetting effects suggest caution in any attempt to assess the health-improvement benefits of specific programs. Development causes women to work more and limit breastfeeding; better water supplies reduce natural

⁷⁰ For studies on this phenomenon in the Philippines see Barry M. Popkin, "The role of the rural Filipino mother in the production of child care time," Discussion Paper No. 76-12, University of the Philippines Inst. of Economic Development and Research, School of Economics, July 1976, and the bibliography of works cited.

⁷¹ Based on interview with Dr. R. T. Ravenholt, Director, Office of Population, AID.

immunities; irrigation systems produce water for agriculture, electricity and shistosomiasis. Efficient policies will not be centered on but one of the progress criteria under discussion here. Instead, further investigation of interactions should provide the basis for coordinated food/nutrition/mortality policies.

2. The Infant Mortality/Fertility Link. Families which have many children will tend to bear a greater numerical burden of infant mortality. Late-parity children, i.e., those with siblings already born, are least likely to survive. In Monterrey, Mexico, for example, the infant mortality rate for first-born children was 40.5 per thousand live births whereas that for fifth and higher birth-order children was 90.⁷² Similar results were found in Candelaria, Colombia.⁷³

In contrast to agreement about the mortality implications of high fertility, there remains controversy about whether lowering infant mortality can cause fertility to fall. The argumentation on both sides of the infant mortality/fertility controversy has become increasingly sophisticated; each advance in understanding of the possible relationships -- broadly divided into biological and behavioral ones -- has required more detailed micro-data. For example, a study of four

⁷²Puffer and Serrano, Patterns of Mortality in Childhood, p. 250.

⁷³Joe D. Wray and A. Aguirre, "Protein-calorie Malnutrition in Candelaria, Colombia," Journal of Tropical Paediatrics 15, 1969, p. 92; and Joe D. Wray, "Population Pressure on Families: Family Size and Child Spacing," in Rapid Population Growth, National Academy of Sciences, Johns Hopkins University Press, Baltimore 1971, pp. 403-61.

Guatemalan villages in which mortality has fallen dramatically found some bunching of births for women in their 20s but no evidence of an overall decline in fertility that might have been attributed to mortality decline.⁷⁴ The authors suggest more careful study of the post-lactation birth interval for a means of distinguishing a behavioral from a biological response to infant death, but more data are needed to pursue that hypothesis. Within a committee of the National Academy of Sciences, the controversy is being addressed in such manner as to indicate which data could resolve the competition between alternative hypotheses. Guidance on future data needs in this area should come from the committee's deliberations.⁷⁵ Recent works on the topic have provided useful new analyses of freshly available data but have not resolved the controversy.⁷⁶ Observed correlations between fertility and mortality may be the result, not of interactions of these variables, but of the impact of others (urbanization, industrialization, social mobility, etc.) not

⁷⁴ Charles Teller, et. al., "Effect of Declines in Infant and Child Mortality on Fertility and Birthspacing: Preliminary Results from Retrospective and Prospective Data in Four Guatemalan Villages," CICRED Seminar on Infant Mortality in Relation to the Level of Fertility, Bangkok 1975, pp. 338-43.

⁷⁵ Interview with Professor T. Paul Schultz, Economic Growth Center, Yale University. Chairman of the NAS Committee is Professor Henry Moseley, Director, Population Center, School of Medicine, Johns Hopkins University, Baltimore, MD.

⁷⁶ T. Paul Schultz, "Interrelationships of fertility and mortality," in Ronald Ridker, ed., Population and Development: The Search for Selective Interventions, Baltimore, Johns Hopkins University Press 1976; CICRED, Seminar on Infant Mortality in Relation to the Level of Fertility (6-12 May 1975), Bangkok, Thailand, 367 p.

included. Thus future analyses are bound to be more exacting in their data requirements than are simple explorations for 'the facts.'⁷⁷ One project which might have resolved some issues has been terminated.⁷⁸

C. Population Growth. Reducing population growth comes down essentially to reducing birth rates.⁷⁹ Data on birth rates in developing countries have become, unfortunately, a matter of controversy.⁸⁰ Some of the controversy may be resolved by the proximate release of data from the World Fertility Survey. However, important issues will remain because WFS surveys are generally based on small samples:

Let us consider an illustrative example of the effect of sample size on the uncertainty introduced into sample estimates of fertility. Estimates of the crude birth rate based on samples of from 1,000 to 100,000 persons selected from a population with a birth rate of 40 per 1,000 will usually (in about 19 out of 20 samples) fall within the intervals shown in the [right-hand] column of Table 2.

⁷⁷Kazumasa Kobayashi, "Regional summary of demographic changes and socioeconomic correlates in East Asia -- Hong Kong, Japan, Korea and Taiwan," mimeo., The Center for Southeast Asian Studies, Kyoto University, Kyoto Japan, m.d.; presented at Seventh Summer Seminar, East-West Center, Honolulu, June 1976, p. 25.

⁷⁸Reference is to the Narangwal experiment: See Cuca and Pierce (1976), p. 51, which cites Rural Health Research Center, Narangwal, Punjab, India, The Narangwal Population Study: Integrated Health and Family Planning Services, mimeo., 1975.

⁷⁹This section draws in considerable measure on a recent paper by Nancy Birdsall, "Population-development links: Research for policy," mimeo., Population and Human Resources Division, Development Economics Department, World Bank, August 1976, 81 p.

⁸⁰Data on birth rates are generally produced from censuses and surveys conducted by each country's national government. Controversy arises from the analyses and interpretations of that data prepared by independent investigators.

Table 2

Illustrative Examples of the Sampling Errors Associated
with Estimates of the Crude Birth Rate, By Size of Sample

(Sampling errors shown as the two-sigma (2σ) confidence intervals
around an assumed crude birth rate [CBR] of 40 per 1,000 population.)

Size of Sample (Persons) ^a	CBR \pm 2σ ^b
1,000	28-52
3,000	33-47
5,000	35-45
10,000	36-44
50,000	38-42
100,000	39-41

^aAssuming a simple random sample of persons from a very large population in which births are considered to follow a binomial distribution.

^bInterval expressed in terms of a rate per 1,000 population.

Source: William Seltzer, Demographic Data Collection: A Summary of Experience, New York, Population Council 1973; reproduced in Warren C. Robinson, ed., Population and Development Planning, along with the quotation in the text, New York, Population Council, 1975, p. 239.

These intervals reflect only the variability due to sampling and thus ignore the possible impact of measurement errors although, as already indicated, measurement error tends to be smallest where sampling error is largest. . . . [E]ven moderate-sized samples can provide only very approximate estimates of the level of the crude birth (or death) rate using data obtained for a 12-month period.⁸¹

Most of the current controversy about birth rates rages within the two-standard-deviation range that small samples produce around the sample mean. And of course even small samples (three thousand urban and three thousand rural households were included in the Pakistan Fertility survey) can still have large measurement-error problems. One may therefore wonder how many questions will in fact be resolved by WFS data.

In an overview of the world population growth situation, Brackett and Ravenholt maintain that the world birth rate declined from 34.4 in 1965 to 30.6 in 1975.⁸² Most of that decline they attribute to the developed countries, the Peoples Republic of China and India, although there has been some decline in a number of LDCs. For most of the developing countries which receive external assistance for population programs, there are no data immediately at hand to permit analysis of recent fertility change, i.e., for 1974 or later. For only 7 of 52

⁸¹ William Seltzer, Demographic Data Collection: A Summary of Experience, New York, The Population Council, 1973; reproduced in Warren C. Robinson, ed., Population and Development Planning, New York, The Population Council, 1975, pp. 238-239.

⁸² James W. Brackett and R. T. Ravenholt, "World Fertility, 1976: An Analysis of Data Sources and Trends," Population Reports Series J 12 November 1976, p. J-212.

countries receiving US bilateral assistance can population growth be measured for 1974 or 1975.⁸³ All the more difficult therefore is the measurement of impact of recent population program efforts on further recent declines in birth rates. The lagged response of fertility change to the introduction of family planning programs and other features of socioeconomic change further complicate and delay the effort to assess impact.

1. Demographic Transition. Few countries have crude birth rates in the intermediate range between 25 and 35 per thousand population: Only 29 of 200 countries were in that ten-point range in the Brackett-Ravenholt compilation, whereas 44 were in the next-lower ten-point grouping, and 54 in the next higher.⁸⁴ The reason for this appears to be that once a movement from high to low fertility rates begins, it occurs very rapidly.⁸⁵ At any moment few countries will appear to be 'in transition.' The very quickness of the transition makes it all the more difficult to

⁸³ US Bureau of Census, International Statistical Programs Center, "The Feasibility of Measuring Progress in Reducing Population Growth for 52 Selected Developing Countries," mimeo, Washington DC 1976, p. 14; based on US Bureau of Census, World Population: 1975, Washington DC 1976

⁸⁴ James W. Brackett, R. T. Ravenholt, "World Fertility, 1976: An Analysis of Data Sources and Trends," p. J-207.

⁸⁵ Frank William Oeschli and Dudley Kirk, "Modernization and demographic transition in Latin America and the Caribbean," Economic Development and Cultural Change, 23, 3, April 1975, pp. 391-420. See also Dudley Kirk, "A New Demographic Transition?," in Rapid Population Growth, National Academy of Sciences and the Johns Hopkins University Press, Baltimore, 1971.

predict and to study. The Oescli-Kirk analysis based on Latin American data fits reasonably well the finding of transition thresholds suggested in earlier work at the United Nations and in empirical studies in the Philippines by Encarnacion.⁸⁶

Can a government initiate a demographic transition or must it be generated internally within a society? Studies of the impact of family planning programs in Korea and Taiwan show that the programs came into existence after fertility had already begun to decline.⁸⁷ The programs do appear to have accelerated the observed decline in fertility. Professor Han's analysis leads him to conclude that investments in the Korean program yielded a highly favorable benefit-to-cost ratio.⁸⁸ In other countries, however, including very large ones such as Pakistan and Bangladesh, family planning program activity has not been accompanied by

⁸⁶Jose Encarnacion, "Fertility and labor force participation: Philippines 1968," Population and Employment Working Paper No. 2, Geneva, International Labor Office, World Employment Program, 1974, and Agustin Kintanar, ed., Studies in Philippine Economic-Demographic Relationships, Manila, University of the Philippines, 1974. United Nations, Determinants and Consequences of Population Trends, 1973, pp. 58-60, reviews the earlier literature.

⁸⁷Studies published in 1974 or before are reviewed in McGreevey and Birdsall, The policy relevance of recent social research on fertility, ICP Staff Monograph No. 2, Smithsonian Institution, Washington DC 1974, pp. 43-59; more recent papers include Albert I. Hermalin, "Spatial analysis of family planning program effects in Taiwan;" Kee Chun Han, "Cost-benefit analysis of family planning programs in Korea;" and Naohiro Ogawa and Robert D. Retherford, "Decomposition of the change in the total fertility rate in the Republic of Korea, 1966-70," Seventh Summer Seminar in Population, East-West Population Institute, Honolulu, June 1976.

⁸⁸Kee Chun Han, "Cost-benefit analysis of family planning programs in Korea," pp. 39-41.

a downturn in fertility.⁸⁹ Some would argue that lack of commitment and administrative capacity are responsible for the failure of family planning to work more effectively in those countries. Ravenholt and Gillespie, discussing the Pakistan Contraceptive Inundation Scheme, write as follows:

The sluggishness of the rise in oral contraceptive sales is believed due to the rather long-lived mind set of Pakistan family planning personnel against oral contraceptive use. This negative attitude is further aggravated by frequent alarmist articles emanating from US and British sources which are reprinted in the Pakistan press.⁹⁰

Administrative hangups and an adverse press are real problems in many countries. If, however, a significant degree of motivation in the populace at large is essential to the success of a family planning program (as demonstrated, for example, by an extant downward trend in fertility), it would be unwise to condition external assistance on observable fertility-reduction achievements. The sudden, precipitate and unpredictable nature of fertility decline once it begins all argue against withdrawal of support because such support may be critical at the moment that the demographic transition begins in a country. As Oeschli and Kirk conclude,⁹¹

⁸⁹ World Fertility Survey, Pakistan Fertility Survey, First Report, Population Planning Council of Pakistan, Islamabad, October 1976, p. 78, Table 3.8, shows a higher fertility rate in Pakistan for 1974-75 than had prevailed in the 1960s. However, the more complete collection of data in the recent interview may be giving a spurious result. Nonetheless, fertility decline does not appear to have begun.

⁹⁰ Reimert T. Ravenholt and Duff Gillespie, "Maximizing Availability of Contraceptives Through Household Distribution," Village and Household Availability of Contraceptives: Southeast Asia, 1976, Batteile Memorial Institute, Seattle Washington 1976, p. 9.

⁹¹ Oeschli and Kirk, op. cit., pp. 416-417.

the effect of a concerted family-planning campaign logically ought to be a function of the level of development of the country in which it is begun. This proposition remains to be tested with adequate evidence, but one can guess that the introduction of such a program tends to have the greatest impact at medium stages of development; at lower stages the motivation for smaller families, which is a consequence of development, is not great, and at later stages the natality decline will take place regardless of the program. In the middle ranges an active family planning program diffuses birth control more rapidly than otherwise would be the case.

That is not to say that no attention need be given to assuring program efficiency and administrative effectiveness in the poorest countries (these -- South Asia and Subsaharan Africa -- are after all the bulk of the population problem in the world); rather, the expectations of program success must perforce be more modest because other conditions are far from ideal for virtually any program -- including population planning -- designed to improve the quality of life.

There is a substantial lag between the application of family planning methods and an observed effect on the birth rate.⁹² About two years pass between a woman's decision and a measured change of fertility -- at a minimum. This long lag could lead to the anomalous situation of a program's funding being cut for failure at the very moment it is beginning to succeed!

Approaches to data gathering must seek early-warning mechanisms to map out the temporal relationships between family decisions and their

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Cf. Roberto Cuca and Catherine Pierce, "Experimentation in family planning delivery systems," mimeo., Development Economics Department, World Bank, August 1976, pp. v-vi.

revelation in micro-survey and aggregate data. A recent AID publication on family planning services shows what pills, condoms, etc., were provided through 1975.⁹³ The impact of these services would probably not show up in fertility rates until 1976 or later. Some consideration might be given to linking the timing of past family planning inputs to lagged responses of fertility change as a means of predicting the future impact of current actions. This technique faces the problem of sudden thresholds and transitions which make prediction difficult. Moreover, important factors other than family planning services (e.g., marital customs) can have a significant impact on fertility.⁹⁴

2. Population Impact Analysis. A recent flurry of interest in population impact analysis -- the study of how unintended consequences of development programs may affect population growth -- has led to suggestions that as projects are assessed for their environmental impact so too should they be assessed for their population impact.⁹⁵ Policies

⁹³ US Agency for International Development, Family Planning Service Statistics Annual Report 1975, Washington DC.

⁹⁴ The long-term decline in nuptiality was shown by Fernando to be a significant cause of fertility decline in Sri Lanka: Percent married of age cohort 15-19 was 51.9 in 1901 and 10.5 in 1971; for the age cohort 20-24 the decline over the same years was from 79.0 to 46.9 percent. Dallas F. S. Fernando, "Changing nuptiality patterns in Sri Lanka, 1901-1971," Population Studies 29, 2, July 1975, pp. 179-190.

⁹⁵ William Paul McGreevey and Nancy Birdsall, "The policy relevance of recent social research on fertility," ICP Occasional Monograph 2, The Smithsonian Institution, Washington DC 1974, pp. 74-75.

and programs affecting nutrition and mortality; women's status, schooling and employment; the intra-household sharing of decisions and authority may indirectly affect age at marriage, desired family size and eventual fertility. As Berelson has remarked,

there is agreement on a few broad propositions: the effect of general development/modernization/industrialization in lowering fertility, and the similar impact of education and age at marriage/proportion married, and perhaps infant/child mortality. But the picture is unclear with regard to income/income distribution, urban residence, female employment and family structure, and also with regard to the validity of nontrivial amounts of 'unwanted' fertility.⁹⁶

Knowledge about relationships is too vague to permit accurate assessment of, e.g., how much schooling can cause how much fertility change. Population impact analysis successfully pursued will require reasonable models of causal links and better information about how specific programs affect fertility while realizing primary objectives of rural development, maternal and child health, provision of satisfactorily remunerative work and equitable distribution of income.

Should population impact analysis follow a course similar to that of environmental impact statements in the United States, this area of endeavor will be impressive indeed:

In a typical year, 30,000 Federal agency actions are scrutinized for possible environmental impact. Out of the process have come, since 1970, 7,500 statements. . . .

The process has had profound, if often invisible, effects on the face of the nation. The Corps of Engineers, the Department of Transportation, Interior and some 30 other

⁹⁶ Bernard Berelson, "Social Science Research on Population: A Review," Population and Development Review 2, 2, June 1976, p. 230.

agencies and bureaus, have dropped or modified hundreds of projects as a result of environmental-impact scrutiny. Real estate development in the Florida Keys, nuclear power and radioactive waste disposal plans, pesticide applications, offshore oil leases, and even the location of the Kennedy Memorial Library in Cambridge, Mass., all have been altered because of environmental considerations. The Alaska pipeline was held up for several years for thorough environmental assessment -- a delay the builders now acknowledge averted dire construction mistakes.⁹⁷

Despite the current shortcomings of theory and data and the scarcity of efforts to apply population impact analysis to development policy planning, this area of action research could have significant benefit to future efforts to assess the progress and commitment of donors and governments to the objectives of alleviating poverty.⁹⁸

D. Income Distribution. The latest surge of interest in income distribution issues was fed by a controversy over data, as well as a realization of the inadequacy of the growth process to serve the objective of alleviating the indignities of extreme poverty. The Brazilian 'miracle' of rapid economic growth rates since 1964 was assisted in substantial measure by World Bank and other international financing. Bank reports, drawing on data prepared by the Brazilian government, reflected an assumption that the distribution of the benefits of growth was such that the poorest were, at the least, no worse off at the end of the 1960s than they had been before the miracle boom began. Independent data analysis showed that considerable numbers of Brazilians were not

⁹⁷ Gladwin Hill, "Environmental Impact Statements, Practically a Revolution," The New York Times, 5 December 1976, p. 5E.

⁹⁸ William Paul McGreevey and David N. Holmes, "Population Impact of the Development Perspective, 1975-80," mimeo., Washington DC 1975, on Pakistan.

benefiting from growth.⁹⁹ That analysis, along with an increasing flow of papers, theoretical as well as referring to other countries, contributed to wider awareness of the income distribution issue. It was against such a background that Robert McNamara in 1972 made income distribution a central theme of his annual address at the Bank/Fund joint meeting. Intellectual engagement, thus reinforced by practical concern, led to continued concentration in the development community on issues in the size distribution of income and policy approaches to achieving greater equity. A first-stage culmination came with publication of Redistribution with Growth, a semi-official World Bank policy statement.¹⁰⁰ As its title suggests, that book offers a strategy for assuring that gains from further economic development reach the poor. Much of the work of the Bank's Development Research Center has been directed to charting the condition of the poor in developing countries, to devising specific policies targeted to alleviation of poverty, and to planning a rationale for shaping Bank lending to achieve objectives of equity as well as of aggregate growth. As a consequence of this interest, the World Bank's Development Policy Staff is probably doing more to understand the size distribution of income in

⁹⁹ Albert Fishlow, "Brazilian size distribution of income," The American Economic Review 62, May 1972, pp. 391-402. See among later works on this topic, Carlos G. Langoni, Distribuição da renda e desenvolvimento econômico do Brasil, Rio de Janeiro, Editora Expressão e Cultura 1973, and Gary S. Fields, "Assessing progress toward greater equality of income distribution," mimeo., Yale University, November 1976, pp. 47-52.

¹⁰⁰ Hollis Chenery, Montek Ahluwalia, et. al., Redistribution with Growth, 1974. Chenery is a World Bank vice president in charge of the Development Policy Staff; many of the other authors are members of that staff.

developing countries, its causes and consequences, than all other groups and individuals combined. It is perhaps worthwhile to remember that it was an issue of measurement of progress criteria that gave such a remarkable impetus to Bank research and action.¹⁰¹

1. Measurement and objective. John Rawls, A Theory of Justice (1971, pp. 258-332), reviews the arguments for equality, leading toward what some have called a maximin principle (maximize the minimum incomes among individuals) but emphasizing along the way the principle of equality of opportunity. The latter is a more limited objective than equality of outcome. Equal opportunity has virtually been built into the rhetoric of postindustrial societies, perhaps because of a belief that much of the inequality of observed incomes is justified by differences in natural endowments, effort, age, household structure, and non-economic compensation that is distributed differently from observed income. Elites in the United States do not favor equality of result although they overwhelmingly do favor equality of opportunity.¹⁰² If social policy is not

¹⁰¹ The World Bank is engaged in joint projects with the Economic Commission for Latin America (ECLA) and the Economic and Social Commission for Asia and the Pacific (ESCAP) on measurement and analysis of income distribution in Uruguay, Colombia, Panama, Chile, Venezuela, and Brazil (with ECLA), and Pakistan, Iran, India, Nepal, Thailand, Hong Kong, Sri Lanka, Malaysia and Taiwan (ESCAP).

¹⁰² Nine elite groups were asked about their choice between equality of opportunity and equality of results: "All the leadership groups overwhelmingly chose equality of opportunity. Feminist leaders and young people rejected equality of results by margins of 12 to 1; businessmen, farm leaders and the media by 90 to 1, the other groups by margins between those extremes" (Barry Sussman, "Elites in America: A Washington Post - Harvard Survey," The Washington Post, 26 Sep 76, p. A8).

in fact directed at equality of income, then measurement of gini coefficients may be quite irrelevant as data sources for policy purposes. Yet these coefficients have been the bread and butter of statistical analysis on income distribution over the past few years. One way such measures may mislead was demonstrated in a recent paper by Morton Paglin.¹⁰³ In the United States, age and household size account for a third or more of observed inequality of annual income. In the period 1947-72, aggregate income distribution appears not to have improved; however, if age and household size are taken into account, one may conclude that inequality lessened during the period.

Inequality of opportunity is a problem on which most observers would agree there is plenty of room for improvement.¹⁰⁴ Research might then temporize on measurement of income disparities to concentrate on measurement of opportunity disparities. . .and their elimination. This approach would lead to a search for different data.

¹⁰³Morton Paglin, "The Measurement and Trend of Inequality: A Basic Revision," The American Economic Review 65, 4, September 1975, pp. 598-609.

¹⁰⁴The opportunity vs. result argument in the United States has centered on the role of schooling. Jencks and Associates, Inequality, A Reassessment of the Effect of Family and Schooling in America (New York, Basic Books 1972) present arguments that inequality of income distribution cannot be eliminated by equality of opportunity for schooling. Various authors published in The Public Interest over the past several years, particularly Daniel Bell, have outlined the intellectual basis for a 'new conservatism' and a justification for continuing inequality. This debate may help to clarify attainable and desirable policy objectives in developing countries as well as in the United States since the motives of 'justice as fairness,' to use Rawls' term, are apparently shared by people on both sides of the debate. See also Daniel Bell, The Coming of Post-Industrial Society, A Venture in Social Forecasting, New York, Basic Books, pp. 408-56, and on the other side of the issue, Samuel Bowles and Herbert Gintis, Schooling in Capitalist America, 1976.

2. The constancy of poverty. Cross section income distribution data by definition show the bottom fractile of persons or households with the lowest share of income. A second cross section snapshot of income distribution taken some years later may or may not reveal a change in that fractile's income share. Virtually all long-term analyses of patterns of the size distribution of income examine just such data; an example is Gabriel Kolko's Wealth and Power in America: An Analysis of Social Class and Income Distribution (Praeger, New York 1962), which presents such data over the years 1910-59. Such data do not, however, specify whether the same people (or their offspring) always remain at the bottom (top) of the scale. Without knowing whether there is a change in many people's position on the income ladder, one cannot be sure whether observed income difference is largely tautological (the lowest at the bottom, highest at the top, by definition, despite mobility), or whether there is a condition of poverty in which the poorest always "seem to be in infernal destitution:"¹⁰⁵

Until recently, the observed income inequalities were compatible with two strikingly different dynamic interpretations: Shirtsleeves to shirtsleeves in three generations, and the poor ye shall always have with you. But longitudinal data on earnings of US social security-covered workers goes some distance toward demonstrating how much change there is over time in the composition of the poor (and other income groups) in the

¹⁰⁵ B. S. Minhas, "Rural poverty, land redistribution and development strategy," Indian Economic Review 5, 1, April 1970; cited in Robert Cassen, "Welfare and population. . .," Population and Development Review 1, 1, September 1975, p. 37.

United States.¹⁰⁶ It goes without saying that there seem to be no longitudinal data of similar nature for any developing countries.

Data from the Social Security Administration for the two years 1957 and 1971, produced a sample of 74,227 male workers age 30-34 who earned at least \$1,000 in 1957 and were still working in 1971.¹⁰⁷ This data source permits analysis of what percentage of all workers in a given cohort changed their relative position from the time they were 30 to 34 years of age to the time they were 44 to 48 years of age. These workers were placed in ventiles (20 equal groupings) at the two dates. As a rule of thumb, Schiller calls a worker mobile if between the two dates he moved at least two ventiles up or down the earnings distribution. "By this criterion, 71 percent of all the workers were in fact mobile, suggesting a tremendous amount of fluidity in the socioeconomic structure" (Schiller 1976, p. 115). In addition to a high percentage of workers experiencing mobility (as so defined), the extent of many individual's earnings mobility was substantial:

Indeed, the average move is 4.22 ventiles (21 percentiles) up or down the earnings distribution, or over one fifth of the way from one end of the distribution to the other. Hence mobility of relative status not only is a common experience, but also involves very large movements (Schiller 1976, p. 115).

¹⁰⁶ There are serious methodological problems associated with longitudinal analysis. The Social Science Research Council (New York) has convened three meetings in 1976 to discuss these issues. Economists James Heckman, Robert Willis and Jacob Mincer, all of whom are working on such data, attended some of the meetings. For details, see Items published by SSRC, 30, 3, September 1976, p. 49.

¹⁰⁷ Bradley R. Schiller, "Equality, opportunity and the 'good job,'" The Public Interest 43, Spring 1976, pp. 111-20.

Thus these data seem to support a shirtsleeves-to-shirtsleeves version of observed, cross-sectional income inequality. Using the same data, however, another analyst, concentrating on year-to-year fluctuations in earnings rank over roughly the same period, emphasized income disparities between blacks and whites and the greater tendency of the former to get stuck at the bottom of the income distribution.¹⁰⁸ Certainly such data sources will not resolve all arguments about trends in income distribution over time; at the moment, however, there is not even the possibility of formulating data-related, rejectable hypotheses on this aspect of inequality and poverty in the developing countries.

3. Policies for Opportunity. Once the income distribution is viewed from an opportunity perspective, one can concentrate on instances of inequality of opportunity and consider measures to eliminate them. Rawls expresses the view in A Theory of Justice that the family as an institution is a major source of unjust or unfair inequality; the manifestation of unfairness among the very poor is in the extreme protein-calorie malnutrition of infants, particularly in very large families.¹⁰⁹

¹⁰⁸ John J. McCall, Income Mobility, Racial Discrimination and Economic Growth, Lexington Books, New York, A Rand Corporation Study, 1973, 212 p. "Sustained economic growth is not sufficient for the elimination of low earnings. Alternative programs are needed -- either an income maintenance program or one that invests in human capital (such as health and training programs);" p. 51.

¹⁰⁹ Elizabeth B. Connell, "Health implications of family planning: Documentation and data," Foreign Assistance Authorization, GPO, Washington DC 1975, pp. 664-708, contains a wealth of data on family size, welfare and nutrition.

The earliest, and still virtually unmatched, studies of infant malnutrition in a developing country were done by Joe D. Wray and associates; they demonstrate the serious losses and unequal start that blocks poor children who grow up in very large families from equal chances with the more advantaged.¹¹⁰ More recently, a few far-sighted economists, approaching nutrition from a human-capital perspective, have pointed out the extent of the losses from not eliminating malnutrition. "The most practical remedy for infant malnutrition is a redistribution of income toward the infant and his family; the cost of not undertaking this redistribution now is massive disinvestment in early human capital formation and, perhaps, greatly increased distributional problems with a low-income, low-productivity segment of the population in the future."¹¹¹ Redistributing income in aggregate would probably be a much more costly program, and less likely to achieve an equality goal at some future specified date, than would programs targets specifically to malnourished infants.¹¹²

¹¹⁰ Joe D. Wray, "Population pressure on families: Family size and child spacing," Rapid Population Growth, National Academy of Sciences, Johns Hopkins University Press, 1971, pp. 403-61; and Joe D. Wray and A. Aguirre, "Protein-calorie malnutrition in Candelaria, Colombia," Journal of Tropical Paediatrics 15, 1969, p. 92.

¹¹¹ Marcelo Selowsky and Lance Taylor, "The economics of malnourished children: An example of disinvestment in human capital," Economic Development and Cultural Change 22, 1, October 1973, p. 30; see also Selowsky, "A note on preschool-age investment in human capital in developing countries," ED&CC 24, 4, July 1976, pp. 707-20.

¹¹² Reutlinger and Selowsky, "Malnutrition and poverty," op. cit., pp. 5-7, 49-52.

One approach to the solution of malnourishment among infants is to tax their parents to provide sufficient infant food. This principle is already embodied in maternal and child care programs, efforts to reverse the growing tendency of mothers to give up breastfeeding and provision of special weaning foods. The existence of such programs demonstrates awareness that general welfare is improved by programs targeted to family members who are relatively weak competitors for family resources. Because the family tends to redistribute intia familia, one of the few means of reaching the infant is with special foods.

S. Chakravarty, a member of the Planning Commission of the Government of India observes that,

As in the case of health and education, failure to ensure diffusion of family planning benefits can lead at least in the medium run to increased inequalities in the distribution of incomes.¹¹³

Later in his paper for the United Nations Statistical Commission he remarks on the need for data on household size and income distribution. "These data will also make explicit whether poorer families are characterized by higher dependency ratios, an assumption often made and which, if true, would have very significant implications in devising egalitarian economic policies."¹¹⁴ The provision of family planning services could in his view have important beneficial effects on the distribution of

¹¹³United Nations Statistical Commission, "A draft framework for the integration of social and demographic statistics for developing countries," 19th Sess., New Delhi, November 1976 (E/CN.3/490), p. 9.

¹¹⁴Ibid., pp. 30-31. For a recent international cross-sectional study see A. K. Bhattacharyya, "Income inequality and fertility: A comparative view," Population Studies 29, 1, March 1975, pp. 5-20.

income if those services are extended to the poor. If, however, high fertility and large family size remain endemic among identifiable poor strata, then a permanent poverty group locked in a vicious circle of malnutrition, infant deaths, no schooling and culturally-determined repetition of the cycle in each new generation may be the legacy of the failure to extend low-fertility norms throughout a society.

Differential access to education is another source of inequality -- one so costly that correcting it is beyond the resources of most governments in developing countries. The same may be said for other publicly-supplied services: Access by the poor and the rural is more limited than for the well-to-do and urban. Studies of public utilities services (water, electricity, sewerage) in Colombia and Malaysia bear out this generalization.¹¹⁵ Given so much inequality of opportunity, policy decisions must be made as to which sources of inequality should receive priority attention.

4. Does Money Buy Happiness? This question informed an investigation by Richard Easterlin of whether persons and societies experienced greater real welfare as a result of increases in income.¹¹⁶ He finds that

¹¹⁵Marcelo Selowsky, "The distribution of public services by income groups, a case study of Colombia," mimeo., World Bank, 17 August 1976; and Jacob Meerman, "The distribution of public services in Malaysia: education and health services are broadly available in Malaysia."

¹¹⁶The fuller statement of his results appears in "Does economic growth improve the human lot? Some empirical evidence," Paul David and Melvin Reder, ed., Nations and Households in Economic Growth, Academic Press, New York 1974, pp. 89-125. A popular summary is R. A. Easterlin, "Does money buy happiness?" The Public Interest 30, 1973, pp. 3-10. Some corroborating evidence to the Easterlin hypothesis of relative incomes appears in Otis Dudley Duncan, "Does money buy satisfaction?" Social Indicators Research 2, 3, December 1975, pp. 267-74.

those of higher status and income are, across nations, happier (or more exactly, fewer of them answer that they are not very happy) than those of low status and income. Easterlin poses the question,

Why do national comparisons among countries and over time show an association between income and happiness which is so much weaker than, if not inconsistent with, that shown by within-country comparisons? (Easterlin 1974, p. 111)

The answer, of course, turns on relative income. The better-offness people feel is partly a phenomenon of absolute well-being (as measured by adequate food, housing, leisure time, satisfactory work, etc.) and partly related to how well off one is with respect to others. Measurement of income distribution must take this phenomenon into account. Duncan found in a study of Michigan residents over time that "increasing the standard of living in 'real' terms does not lead to a subjective increase in the standard of living for the population as a whole" (Duncan 1975, p. 270). This observation, one should immediately note, is based on an ultra-high-income group within the total global population; however, relative-income effects may be important at low income levels as well. If real aggregate satisfaction is to be increased, a development model will have to be devised in which satisfaction is derived from absolute improvements in welfare rather than from getting ahead of one's reference group.

E. Unemployment and Underemployment. Just as human capital theory produced a 'new home economics' it has apparently produced a 'new labor economics.'¹¹⁷ The two principal changes wrought by the new labor economics in the understanding of development issues might be described as follows: (1) Disguised underemployment in LDC agriculture, if it exists at all, had been vastly overstated prior to the publication of T. W. Schultz's Transforming Traditional Agriculture (1964); (2) unemployment can be effectively analyzed as a form of leisure and hence a use of time that the more advantaged rather than the less advantaged residents of poor countries can be found to be 'consuming.' There are many other findings of the new labor economics that, if not outrageous, are at the least unexpected if one approaches employment issues from the perspective of conventional wisdom founded on observations of cyclical problems of high capitalistic development.¹¹⁸

In a recent comprehensive review of labor markets in developing countries, Berry and Sabot reported a number of findings, some of which

¹¹⁷ A recent review of labor economics by Glen G. Cain, "The challenge of segmented labor market theories to orthodox theory: A survey," Journal of Economic Literature 14, 4, December 1976, pp. 1215-57, examines poverty, inequality of labor incomes and other issues in the US economy which are relevant in some respects to LDC problems.

¹¹⁸ A very different perspective on unemployment was introduced recently by A. K. Sen, Employment, Technology and Development, Clarendon Press, Oxford, 1975, by recognizing income, production and 'recognition' aspects of unemployment. He offered estimates for India in Dimensions of Unemployment in India, Calcutta 1973, which shows high rates of underemployment. These data are reviewed along with many other studies by Robert Cassen, "Welfare and population: Notes on rural India since 1960," Population and Development Review 1, 1, September 1975, pp. 33-70.

may be stated here briefly, without the details of their sources or
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 analysis:

- a) In Asian and Latin American countries where calculations have been effected, the [rural-urban] income differentials are more or less in line with those observed in developed countries (p. 26);
- b) Open unemployment is relatively unimportant in the poorest societies, where self-employment predominates; in developing countries as a group, the rate of unemployment has been increasing together with national income (p. 33);
- c) Higher unemployment rates among educated than uneducated workers are found throughout the developing world. School-leavers are faced with the choice of 'queuing' for a job in the preferred occupation or of accepting a less-preferred (lower wage) job. For some workers expected income will be higher in unemployment than in relatively low wage employment (p. 52);
- d) Resource costs of maintaining a pool of openly unemployed are not likely to be very high: The output that would result from their employment is unlikely to add more than one or two percent to national income (p. 57);
- e) Being without work is a luxury that only a small proportion of labor

119 A. Berry and R. H. Sabot, "Labor market performance in developing countries: A survey," mimeo., Employment and Rural Development Division, Development Economics Department, World Bank, June 1976. Subsequent references are to page numbers in this draft which is currently being revised.

force members can afford for longer than several months at a time (p. 62);

- f) Loss associated with imperfect labor allocation could range between 5 and 12 percent of national income; such output gains correspond to a few years normal growth of per capita income (p. 117).

A general conclusion is that labor markets work reasonably well in developing countries.¹²⁰ Policies designed to make them work better require data at once more detailed than and different from those usually encountered in wage and employment surveys.

1. Female Labor Force Participation. The participation of women in the labor force is a more variable statistic than that of male participation. For example, the Philippines female labor force participation rate, measured twice each year in labor force sample surveys, has varied between 30 and 50 percent over the last two decades.¹²¹ In international comparisons, the Philippines has the highest rate of female labor force

¹²⁰ Employment and income distribution issues are explored in the CAMS seminar papers, Jose Encarnacion, ed., Income Distribution, Employment and Economic Development in Southeast and South Asia, The Japan Economic Research Center, Tokyo, and Council for Asian Manpower Studies, Manila, July 1975.

For another recent review of this topic see Gary Fields, "Rural-urban migration, urban unemployment and underemployment and job-search activity in LDCs," Journal of Development Economics, 1975, pp. 165-87.

¹²¹ Mahar Mangahas and Teresa Jayme-Ilo, "Income and labor force participation rates of women in the Philippines," Discussion Paper No. 76-3, University of the Philippines School of Economics, Institute of Economic Development and Research, January 1976, p. 69.

participation in one compilation,¹²² with women constituting 43.9 percent of the nonagricultural labor force.

Female labor force participation, as noted above in discussions of nutrition and infant mortality, interacts with those variables to produce a number of implications for the achievement of development objectives. Concentration only on working women, as is typical of employment surveys, misses the possibility for study of alternative uses of household time and their implications for production of aggregate well-being.¹²³ The entry of a woman into the labor force may raise family income now but depress it later -- via lower nutritional status of infants and poorer feeding habits of older children. Only a comprehensive study of time use could capture the implications of these alternative effects.¹²⁴

High unemployment rates among men have been cited as reasons why public-sector programs cannot be directed to providing work opportunities for women in developing countries. If, however, observed high

¹²² A. Berry and R. H. Sabot, "Labor market performance in developing countries" (1976), p. 10. At the bottom of the Berry-Sabot list is Algeria where women account for but 7.7 percent of the nonagricultural labor force.

¹²³ See James L. McCabe and Mark R. Rosenzweig, "Female labor-force participation, occupational choice, and fertility in developing countries," Journal of Development Economics 3, 1976, pp. 141-160.

¹²⁴ Popkin found poorer nutritional status among children of working mothers, despite the somewhat higher family income that the mother's work produced. In part this effect grew out of parental failure to enforce good diet: Children of working mothers did not eat their vegetables and hence had somewhat greater incidence of Vitamin A deficiencies leading to limited acuity of vision.

unemployment is based on male queuing for specific jobs rather than an absolute dearth of employment opportunities, that argument against female employment evaporates.¹²⁵

The utility of employment surveys would be enhanced if they were conceived to include the use of time in market work, work at home and leisure. As Mangahas and Jayme-Ho remark in their review of female labor force participation in the Philippines, "The data gathering institutions, primarily governmental, appear to have been guided by an implicit analytical framework which has failed, among other things, to take proper account of women's economic contributions within the home."¹²⁶

2. The Labor Utilization Approach. It is the aggregate temporal resources of individuals and households, along with the accumulated human and physical capital they have, which are put to work to earn income. For the poor, time is their most important asset. To

¹²⁵Nothing is said here about the fertility effects of female employment because of a growing uncertainty among analysts about the causal links that run between the two variables. "Women's employment per se only depresses fertility under very special circumstances -- for women in the urban sector, modern labor force. . . . Policies to promote women's employment are interesting theoretically as a depressant to fertility but not widely applicable. Job creation is not nearly so manipulatable a variable as policymakers wishing to reduce fertility had hoped" (Nancy Birdsall, "Women and population studies," Signs, Journal of Women in Culture and Society 1, 3, Spring 1976, p. 707).

¹²⁶Mangahas and Jayme-Ho, op. cit., p. 148.

analyze employment and unemployment problems among the poor, the question, "Are you looking for work but unable to find it?" must give way to, "How did you spend your time?" That question might then be followed with the more tentative, "How would you like to have spent your time?" A valuable source of information on households is contained in answers from school children in a recent ECIEL study which inquires as to the use of out-of-school time, distinguishing study time, leisure and work.¹²⁷ Time use may be an important practical guide to investments which individuals are making in their own human capital. Past surveys have picked out only a piece of 'market' time and ignored the rest: Developments in human capital theory and the potential applications to policy are now such that a change in data gathering is a propos.¹²⁸

An alternative approach for Southeast Asian countries was proposed by Dr. Mitsuo Ono after a period of close collaboration with NCSO in Manila; he called his alternative the 'labor utilization' or 'Manila' approach.¹²⁹ The alternative approach was necessary because of the

¹²⁷ECIEL Education and Development Project, CEDE, Universidad de los Andes, Bogota. Details on the survey questionnaire from Rodrigo Parra and Jose Alzate.

¹²⁸For a recent review see Mark Blaug, "The empirical status of human capital theory: A slightly jaundiced survey," The Journal of Economic Literature, 14, 3, September 1976, pp. 827-55.

¹²⁹Mitsuo Ono, "A feasible method for collecting labor utilization, earnings and other social and economic data in Southeast Asian countries," mimeo. unpub. report to AID/PPC, July 1973; "Followup report on developing a feasible method for collecting labor utilization, earnings and other social and economic data in Southeast Asian countries," mimeo. unpub. report to AID/PPC, November 1975, and "A proposal for a quarterly multi-purpose household sample survey in Pakistan," mimeo. unpub. report to AID/PPC, July 1975.

prevalence of data-gathering techniques inapplicable to Southeast Asian country settings:

. . . All agencies visited used the labor force approach in compiling employment, underemployment and unemployment statistics. Because of the overlapping and irregular work patterns typically found in these countries, it became apparent that the use of the labor force approach designed for application primarily in the more developed countries produced data which did not reflect realistically the complex labor utilization situation in LDCs (Ono 1973, p. 3).

The Manila approach focuses on measuring the weighted volume of labor input (e.g., hours worked multiplied by prospective earnings rates) in the production process; it uses a flow accounting concept as opposed to the stock accounting concept used under the labor force approach (Ono 1973, pp. 11-12). Labor agents are then classified by the manner in which their stream of labor energy is utilized as inputs into different work or nonwork activities; consequently, there must be a more detailed time disposition questionnaire schedule. Ono discusses this aspect of the questionnaire in some detail but cautions that its specific application and experience with it are needed before its utility can be properly judged. Nonetheless, he argues,

As opposed to the labor force approach, the Manila approach has a distinct theoretical orientation in the compilation of labor utilization data, that is, to measure the weighted volume of labor energy utilized in different activities in terms of time, end-use of activity and prospective and actual remunerations received. . . . [It] sharpens the compilation of household activity information used in making policies on employment creation and labor utilization, income distribution, and growth of GNP. Another advantage is that it provides a better orientation on compiling data on human capital formation (Ono 1973, p. 23).

In his follow-up report (1975), Ono writes that in the Philippines, "The statistical office is making a strong effort toward developing a national system of quarterly multi-purpose household sample surveys. In this endeavor, they will be formulating and using questions on labor utilization supplementing their regular questions on labor force status" (Ono, Nov 1975, p. 35). Two years passed between the first field visit (ending in March 1973) and the follow-up (June 1975) with little progress in data gathering. The host government and sources of external technical assistance should perhaps exert greater energy to implement what appear to be extraordinarily useful recommendations. Perhaps the lack of follow-up on one of Dr. Ono's four key recommendations was responsible for much of the delay:

Statistical personnel contacted by this writer were knowledgeable and experienced in household survey operations and technology. Many of them expressed needs to exchange ideas and to discuss mutual problems on planning and conducting multipurpose household surveys including ways to find new methods to collect more meaningful information for use by analysts and planners (Ono 1973, p. 4).

His follow-up report returns to that problem but with an emphasis on the demand for information among planners and policymakers.

V. What Can Be Done? This section reviews options in information gathering about the poor and what can be done for them through development assistance. There has been no special effort to assign priorities

A. Assembly of existing secondary data. World Tables 1976 includes many data series pertinent to the five progress criteria discussed here. It may prove worthwhile to schedule a seminar to discuss the social indicator series in World Tables 1976. It could be modeled on the seminar held by the SSRC Center for Coordination of Social Indicator Research after publication of the US OMB Social Indicators 1973. One objective would be to encourage local institutions in the developing countries to supplement the World Bank publication with greater detail as appropriate for each country within a format that would extend the possibilities of international comparative study.

B. Coordination of existing micro-data. The many household, labor force, fertility, morbidity, income and expenditure, farm and multi-purpose surveys which have been conducted in developing countries probably could not be brought together for comparability in the same way as aggregate, country-wide indicators. Many questions raised in this paper could be answered with ready access to existing micro-data. In fact, however, such data are often treated as private rather than public property; are unknown with respect to details of questionnaires, response, and sampling error; and are rarely exploited fully for their analytical potential. An exception is the 1968 National Demographic

Survey carried out in the Philippines: Many analysts have had access to the data and have published important empirical analyses of fertility behavior; there are no indications that anyone has been harmed by the openness with which the data have been treated. Expanded data-bank facilities for micro-data would contribute to aggregate understanding of poverty and development.

C. Longitudinal Micro-data. Many analyses of development depend on cross sections in a slice of time and consequent assumptions about behavior through time. The understanding (or misunderstanding) of behavior over time of fertility, income and its distribution, and occupational experience draws heavily on assumptions of structural regularities between components of cross sections. Yet in fact there may be so much oscillation and variability over time of some of these social characteristics that findings based on cross sections will be entirely misleading. The experience of individuals and families over time would yield a vital new perspective on many of the issues surrounding the progress criteria discussed here.

Poor families make near-heroic responses to relative deprivation -- working children, work by the mother, extra adults in the household, etc. These behavioral patterns can only be investigated empirically through longitudinal studies of real family situations. Many fertility surveys ask retrospective questions that can be used to construct fertility or pregnancy histories which substitute in part for longitudinal data. However, births ten years back can only be related to

occupation, income, residence and other characteristics that pertain now since questionnaires normally ask only about current income and occupation. Full retrospective data would probably be impossible to construct in interview situations.

It could prove worthwhile to institute an informal search through the developing world for existing longitudinal micro-data. Yale University's Human Relations Area File records immense amounts of anthropological data, some of which cover significant time periods and are relevant to the five progress criteria discussed here. Some anthropologists have been collecting information on specific villages for decades and make little use of those data outside brief publications. Such sources could prove enormously informative. Village micro-data would be particularly useful in those areas in which significant external assistance projects have been instituted. Such data, if they cover the before-and-after conditions of the village, would contribute to assessment of project impact.

Some survey data from LDCs may permit longitudinal treatment. The Additional Rural Income Study carried out by the National Center for Applied Economic Research in India has data on a sample of Indian households which includes farm input-output data, time use and demographic data over several years.¹³⁰ Panel data are available in a

¹³⁰ Collection of these data was inspired by Dr. Ronald Ridker who at the time of initiation of the project was working with US AID in New Delhi.

series of studies of rural communities and urban barrios in Colombian cities between 1963 and 1975. Staff of the University of Wisconsin Land Tenure Center have published some results, although the possibilities are far from having been exploited.¹³¹

There are probably some national surveys taken over time with repeated households in some of the developing countries. Whether such materials could be examined depends much on the confidentiality provisions which surround data gathering.

D. New Data from Multipurpose Surveys. For some purposes, the specific surveys of labor force, fertility, morbidity, nutritional status, income and expenditures could successfully be replaced with a centralized system of multipurpose surveys. Dr. Ono wrote in 1973:

Observations of multipurpose household sample survey operations conducted in Sri Lanka, Malaysia, and in the Philippines clearly indicated that the extension of such surveys not only reduces the costs of duplicative and expensive ad-hoc household sample surveys but also produces more accurate and relevant information for use by policymakers. This also calls for more research on formulating theories of household production behavior in LDCs so that various types of household data can be integrated into an analytical framework (Ono 1973, p. 4).

When he returned to Southeast Asia two years later, Dr. Ono was able to specify his recommendations somewhat better since he became aware not only of the prospects for better data systems but also of the need to

¹³¹A. Eugene Havens and William Flinn, Internal Colonialism and Structural Change in Colombia (Praeger, New York 1968). Professor Flinn, now at Ohio State University, Columbus, continues to work on those data.

generate interest in and use of the data collected. Thus he developed three criteria for the decision whether or not to include a given question in a multipurpose household survey: "Additional information to be collected on a topic depends upon (1) its economic impact or weight; (2) the variability in the characteristics under study, and (3) costs of collecting additional information."¹³² He also expressed the view that "developing the demand side, especially with respect to its administrative considerations, was more important and of higher priority than augmenting the supply side" (Ono 1975, p. 4). Decisions on data collections can involve substantial sums of money over which policymakers maintain control. Thus any proposed changes in data collection procedures must be defended to those who will pay for them.¹³³ Despite the problems and the costs, however, survey research seems to be a relatively low-cost and effective means of learning more about the poor and the way in which policy and programs may affect them.

A potentially useful innovation in social research would be to combine the product of multipurpose household surveys with the results of participant observation, a method developed and used successfully by anthropologists. The combination would add depth to the survey data and

¹³² Mitsuo Ono, "Follow-up report on developing a feasible method for collecting labor utilization, earnings, and other social and economic data in Southeastern Asian countries," mimeo, National Center for Social Statistics, US HEW, November 1975, p. 4.

¹³³ For a listing of sample survey projects carried out in the ESCAP region reported to that international organization see UN ESCAP, Sample Surveys in the ESCAP Region, Twelfth Report (Jan-Dec 1974), Bangkok, July 1975, 176 p. This report does not appear to be complete.

breadth to the participant-observer data. Some advance on this front was made by the Laguna rural survey project in which observers clocked the daily activities minute by minute of all members of a dozen rural households. These data could then be used as estimators of other, similar households in the larger sample of 571 households.¹³⁴ This technique could be extended to other sample surveys.

Any consideration of data gathering in the future must give careful thought to this administrative dilemma: Program administrators are closest to the data and the operational problems and thus know what information is needed; but they are at the same time the group most likely to have a stake in altering the truth when it seems necessary to do so 'for the good of the program.' Perhaps a workable arrangement might be to have program managers feed questions into multi-purpose household surveys over which the managers would have no control, either as to sampling procedure or the disposition of the results of interviews.

E. Non-Quantitative Aspects of Welfare. The pioneering effort to apply quantitative measurement to factors affecting welfare often not counted in national income and product data is that of two Yale economists, Nordhaus and Tobin.¹³⁵ Now that the study of progress

¹³⁴ See Elizabeth King, "Time allocation in Philippine rural households," Discussion Paper No. 76-20, University of the Philippines Institute of Economic Development and Research, School of Economics, August 1976.

¹³⁵ William Nordhaus and James Tobin, "Is growth obsolete?" Fiftieth Anniversary Colloquium V and Milton Moss, ed., The Measurement of Economic and Social Performance, National Bureau of Economic Research, New York 1972 and 1973.

criteria for alleviating poverty has passed so far from debt-service/export ratios and two-gap models, analysts should confront those welfare issues in which the assumption of correspondence between measured material improvement and 'happiness' or welfare is not likely to be valid.¹³⁶ A key finding of research on poverty in developing countries has been that increased earnings from market work, the component of income that is the most important share of the measured income of the poor, do not necessarily bring about improvements in other measurable indicators of well-being. Data on income are useful for estimating the impact of development efforts on the quality of life of the poor, but income data alone are not sufficient.

Often, the divergence between measured improvement and perceptions of stagnation arise from the fact that the costs of economic progress go unmeasured. For example, the higher agricultural productivity of Green Revolution hybrid seeds is achieved at the riskiness of crop destruction because of the narrow genetic range of those seeds. Infant mortality can be reduced substantially by increasing use of potable water; but unless piped water access is extended, lower infant risk is bought at the cost of long walks to pure sources of water. Extension of irrigation systems which raise incomes often brings schistosomiasis along and thus worsens health conditions. These are cases, in the economist's lexicon, of technological external diseconomies. The costs of progress ought to be in the back of some minds while benefits are being measured.

¹³⁶Richard Sennett and Jonathan Cobb, The Hidden Injuries of Class, New York 1972, analyze the psychic costs of social and occupational mobility.

APPENDIX II*

A. VALIDATION OF INTER-AMERICAN FOUNDATION'S SOCIAL INDICATORS

Through the publication of the monograph, They Know How, the Inter-American Foundation made public for the first time some of the value premises that underlie its activities. In doing so it has become the first non-religious funder of development activities to openly confront the question of psycho-social quality of life gains as a separate entity from linear economic development. This concept has been separated into several components including access to a set standard of living and leverage to maneuver the opportunity structure. These gains serve as the counterpart to economic growth and provide an exciting new dimension to a theory of development. Evaluation of more subjective outcomes for development projects also requires a consideration of who is responsible for these gains in what structural contexts and through what processes. While this series of concepts is intended to be a "consciously subjective and intuitive vocabulary for perceiving and articulating the beneficiaries sense of gains and losses in quality of life," the concepts derived and the empirical base required for their validation were questioned by many in the Latin American and U.S. development community. In response, and reacting to the need to institutionalize the learning process and clarify the genesis of these ideas, the IAF began to reexamine the development of terms and their subsequent reporting.

Several observations are appropriate on the data presented on the 94 projects reviewed in They Know How. First, the source of project review comes purely from within the Foundation. Qualitative questionnaires were filled out by Foundation representatives and represent their own unique perspective. Literature on evaluation tells us that when one asks representatives of a

* This appears as Appendix D in the Inter-American Foundation report to the Committee on Appropriations, U.S. House of Representatives, February 1978.

granting agency to review such items as accomplishment or lack of same on project objectives, one expects a somewhat biased response. To a certain extent, this critique is applicable to all of the information reported from the first study.

The Foundation, however, has accepted the challenge to further its concepts and ideology. As a first step, the indicators or questions related to each of the concepts were reduced to a minimally logically consistent and easily communicated set. A Foundation learning group and outside consultants first, coded and accessed project data on computers to facilitate analysis. This team then developed a strategy to reduce the total number of questions or pieces of information addressing each of the concepts in this new vocabulary, using statistical technique which researched for the minimum cluster of questions that would explain the greatest variance in project activity. If seven or ten questions were measuring the same phenomena, then the one or two most important to project activities were selected. This technique is a principal component analysis of riddit scores, developed for similar situations by scientists for the United Nations. Each section of the qualitative questionnaire applied to the 94 different projects was subjected to the riddit analysis. In each of the five different sections, approximately one-third of the questions were considered on the basis of this analysis to be repetitive and not appropriate to the Foundation's needs.

The resulting new set of questions has been redesigned into a different format and developed for further testing in a current project effort of the Foundation. It represents a need to continue the institutional accountability of the Foundation with respect to its legislative charge and to its grantees in Latin America.

The short-term strategy consists of two parts. The first phase involves a further analysis of the data currently in the files on the 94 projects in order to look at variation in concepts by regions, by the type of project, and by size of project. The second step concurrently involves the field validation of the new terms such that outside individuals, not associated with the Foundation or with the specific project, can take the reporting form into the field and in a reasonable short period of time assess the progress of a project in terms that are understandable to Foundation personnel. This requires a systemization of the conceptual framework so that communication is possible between Foundation personnel and individuals in the field who are both capable and interested in assessing the development process.

B. FINAL SELECTION OF THE QUALITATIVE INDICATORS THROUGH FIELD VALIDATION

A second version of the original qualitative instrument has been developed based on the statistical analysis and a later partial field validation in Colombia and Chile. The results of this preliminary effort indicate that for the series of questions isolated as predictors in the early analysis, a communicable meaning did exist. A third version of the qualitative instrument is being generated by the Foundation staff in order to produce a simplified questionnaire for field use. The new questionnaire will undergo extensive field test as part of the validation procedure for the entire evaluation system.

A Chilean grantee of the Foundation conducted the first pre-test. When reviewing the questionnaire under project conditions, the individual involved commented that while the broad concepts seemed appropriate and relative to Foundation goals, the format of the questions was too complex and had a tendency to guide the respondents toward the "right" answers. A second field test carried out by a well qualified Latin American social scientist, concentrated

on a more complete application of the questionnaire to several projects in Colombia. Results from this indicate that the extremely detailed nature of the questionnaire seemed to detract from free and open response. While the respondents in this second test again validated the ideas behind the concepts used, there was confusion with regards to order and operationalization of these terms. And again the questionnaire clearly was too directive in its application. However, the conclusions from this first stage of the pre-testing and validation procedure are encouraging in that they:

1. Establish component concept of Vital Signs and Social Gains as replicable indicators with the capacity to predict variation among projects;
2. Illustrate the consistency and communicability of these concepts among Foundation staff;
3. Illustrate in the first phases of the field validation study the communicability and replicability of the concepts to outside observers unassociated with the Foundation.

C. THE PLAN FOR FURTHER VALIDATION OF THE INSTRUMENT

In order to establish the final value of the qualitative concepts developed, a further testing of the questionnaire is currently in progress, managed by individuals external to the Foundation. Representative projects have been sampled from each of the regions and outside local social scientists are being sent to contact key project personnel and administer the third version of the qualitative instrument. When the results of this final validation are tabulated and analyzed the final version of the qualitative instrument will become part of the Foundation project monitoring and evaluation system. This system involves a computerized data base which stores all fiscal, process, qualitative, vital signs, and standard of living gains derived on all current funded projects. As the qualitative components become firmer and more specific in operational terms they will be used as short-term outcomes against

which vital signs can be correlated. Ultimately this strategy should lead to a longitudinal design whereby over large numbers of projects the success measured by independently validated social and standard of living gains can be correlated with vital sign, management style, and major independent variables. This procedure will take the basic assumptions and hypotheses behind the Foundation's mandate and provide sound evaluation information consonant with the earlier stated assumptions. The system is currently in the test and validation phase; however, full operation is expected by September 7, 1978.

The monitoring and evaluation system has as its strengths the following points:

1. It is consistent with Foundation philosophy, hypotheses, and assumptions;
2. It provides immediate fiscal and report information for project monitoring;
3. Social indicators, qualitative and quantitative, are subjected to rigorous testing and validation procedures;
4. Impact and evaluation measures are collected by non-Foundation personnel in an objective and verifiable manner;
5. Over time, causal links can be established among all segments of the system.