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Escaping the Poverty Trap

UNITED NATIONS

Part Two

Escaping the Poverty Trap

The nature and dynamics of poverty in the least developed countries

A. Introduction

This Part of the Report examines the relationship between poverty and development in the LDCs in the context of increasing global interdependence. The nature and dynamics of poverty in the LDCs have never been analysed in an international comparative perspective. The poverty statistics that are required in order to do this have hitherto been so limited in their coverage that international comparisons amongst the LDCs, and between LDCs and other countries, have been impossible. This chapter outlines the approach that the Report adopts to defining and measuring poverty, and describes the nature and dynamics of poverty in the LDCs. The analysis is founded upon a new data set of poverty estimates for LDCs that has been specially constructed for this Report. These estimates are not only relevant for the LDCs, but also have important implications for the global map of poverty and international commitments to reduce extreme poverty.

The nature of poverty in the LDCs differs from poverty in other countries in various ways. This chapter identifies the most distinct aspect of poverty in the LDCs, which is that poverty is generalized in most LDCs. "Generalized poverty" is defined here as a situation in which a major part of the population lives at or below income levels sufficient to meet their basic needs, and in which the available resources in the economy, even when equally distributed, are barely sufficient to cater for the basic needs of the population on a sustainable basis. The causes of this situation, including the relationship between international trade and poverty, as well as the implications of generalized poverty for economic development and for poverty reduction strategies, are discussed in the subsequent chapters of the Report.

B. The approach of the Report and its rationale

The main features of the way in which this Report defines and measures poverty can be summarized as follows:

- Poverty is defined as the inability to achieve minimally adequate levels of consumption.

- Poverty is measured using the $1-a-day and $2-a-day international poverty lines.

- The poverty estimates are anchored in national accounts estimates of private consumption.

- For countries where there are no data on the distribution of consumption amongst households, poverty is estimated by extrapolating the close relationship that is found to exist between annual average levels of private consumption per capita and both the incidence and depth of poverty.

The most distinct aspect of poverty in the LDCs is that poverty is generalized.

"Generalized poverty" is defined here as a situation in which a major part of the population lives at or below income levels sufficient to meet their basic needs, and in which the available resources in the economy, even when equally distributed, are barely sufficient to cater for the basic needs of the population on a sustainable basis.

The Report's approach is based on three key choices: the focus on consumption poverty; the use of the $1-a-day and $2-a-day poverty lines; and the anchoring of poverty estimates in the national accounts statistics. This section looks more closely at the rationale for each of these choices.[1]

1. THE FOCUS ON CONSUMPTION POVERTY

Poverty is defined in this Report as the inability to attain a minimally adequate standard of living. What is considered "minimally adequate" includes necessities for physical survival (food, water, clothing, shelter, and so on), plus what is required for participation in the everyday life of society. Some argue that the latter element of an adequate standard of living is more relevant in rich countries. But there is absolutely no reason to assume that social participation is less important in poor countries than in rich ones. As Adam Smith (1776: 351–352) famously put it, "necessaries" include "not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even the lowest orders to be without". In these terms, an adequate living standard should encompass not simply access to commodities which ensure the physical ability to survive, but also access to commodities which enable a person to live with dignity in the society to which he or she belongs.

This Report does not reject the multidimensional view. However, it uses a narrower definition of poverty as this enables greater analytical power in addressing the relationship between poverty, development and globalization.

The incidence of poverty and the depth of poverty are identified by the specification of a poverty line. This line represents, in monetary terms, the level of consumption that is regarded as minimally adequate. The monetary value of household consumption includes both purchased goods and the imputed value of consumption from a household's own production. The incidence of poverty is calculated as the proportion of the total population living below the poverty line, i.e. on less than a minimally adequate amount. The depth of poverty is calculated by estimating, in monetary terms, the average level of consumption of the poor, namely those people living below the poverty line.

In recent years, it has been argued that a focus on consumption poverty defined using a monetary metric is too simple. Poverty, according to this view, is multidimensional, constituted by an interlocking web of economic, political, human and sociocultural deprivations, and characterized by insecurity, vulnerability and powerlessness.[2] This Report does not reject the multidimensional view; indeed, this view offers an accurate description of the experience of poverty.[3] However, it uses a narrower definition of poverty as this enables greater analytical power in addressing the relationship between poverty, development and globalization.

Understanding this relationship, which is vital for the formulation of poverty reduction strategies in the LDCs and other developing countries, is not impossible with a multidimensional definition of poverty that includes economic, social and political dimensions of deprivation. But the complexity of the task can overwhelm adequate understanding. It is easy for the multidimensional approach to definition and measurement to lead to a complex but static view of poverty in which the focus of anti-poverty strategy is on targeting symptoms (what people lack) rather than on tackling causes (why they lack these things). In short, increased descriptive fidelity to the human experience of poverty is gained at the expense of the capability to analyse the causes of poverty and develop effective policies to reduce poverty. With a focus on consumption poverty, it is also possible to build on useful insights of past work that have often been forgotten, or put aside as redundant, in the shift to a multidimensional approach (box 3).

Box 3. Learning in the international analysis of poverty

A weak feature of international analysis of poverty is the tendency for fads and fashions, with new approaches being introduced and old ones falling out of favour. One consequence of this for policy analysts in developing countries is that there is a process of de-skilling. With the traditional approach to poverty analysis it is possible to reverse this process of unlearning even though that approach will not provide such a complex description of poverty.
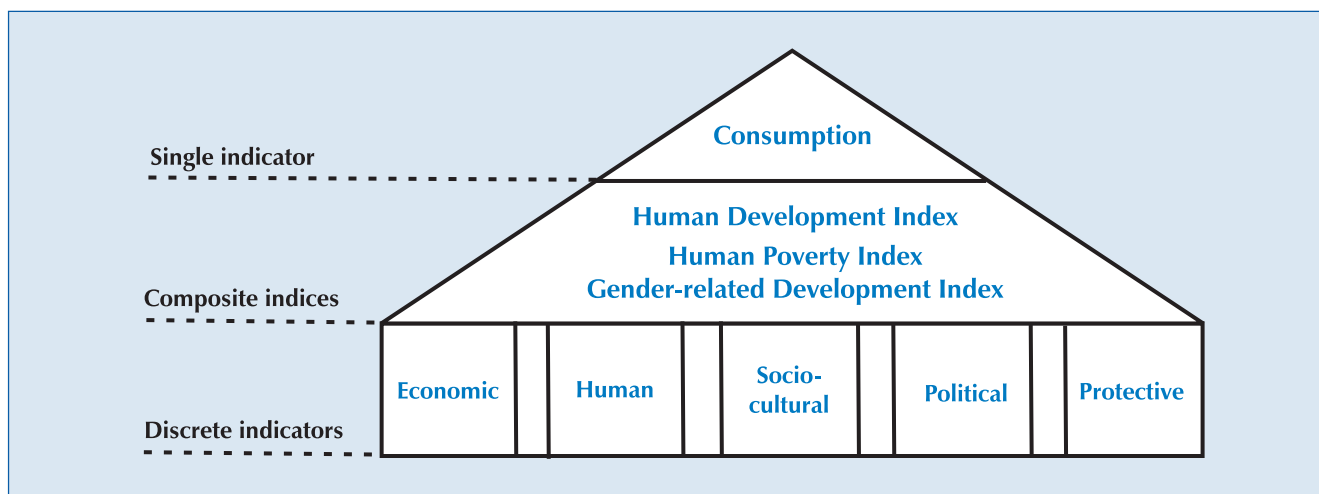
In seeking to link poverty with development and globalization, it is also possible to learn from many insightful past studies. These include *Redistribution with Growth* (Chenery et al., 1974), and also the World Bank's *World Development Report 1990* (World Bank, 1990). The former sought to link poverty trends to national growth–inequality relationships and national processes of capital accumulation, structural transformation and productivity growth, whilst the latter attempted in a pioneering and innovative way to situate the problem of poverty reduction within the context of integration into the global economy, postulating links between efficient resource allocation in open economies and labour-intensive growth.

The approach of each of these studies was flawed in its own way. The former failed to place national poverty analysis in a global context, whilst the latter had a much too simple view of growth processes in developing economies, which ignored structural heterogeneities and dynamics of accumulation, an excessive faith in the beneficial effects of liberalization in all countries at all times, and a benign view of the working of the global economy. But jettisoning the insights of this work, because it uses a definition of poverty which is not multidimensional, entails the loss of important intellectual capital.

A way forward now to improve poverty analysis and develop more effective poverty reduction strategies is to link the insights of the 1970s approach with those of the 1990s approach. That is to say, national poverty trends need to be analysed in relation to processes of capital accumulation, structural transformation, productivity growth and employment generation (as in Chenery et al., 1974), but in a global context (as in World Bank, 1990). This is what the present Report seeks to do.

It must be emphasized, as the OECD/DAC Guidelines on Poverty Reduction helpfully point out, that a money-metric approach to defining and measuring poverty such as that adopted in the present Report is best regarded as complementary to more complex multidimensional approaches (OECD, 2001). The latter may just entail adding the benefits that people receive from freely provided public goods to estimates of private consumption. However, it could also involve the construction of composite indicators of the nature of the lives people lead, such as the UNDP's human development index and the human poverty index, or discrete indicators of specific deprivations, such as food deprivation or housing deprivation (chart 6). Also, it must be stressed that the focus on monetary indicators of poverty does not mean that the causes of poverty can be simply located in the economic sphere. Processes underlying consumption poverty trends are thoroughly multidimensional, as later chapters show.

Chart 6. Alternative indicators for measuring poverty

Source: OECD (2001: figure 2).

2. The choice of $1-a-day and $2-a-day
international poverty lines

The Report uses consumption levels of $1 a day and $2 a day as the standards by which to identify minimally adequate levels of poverty in the LDCs. In line with current practice, each of these poverty lines is estimated using purchasing power parity (PPP) exchange rates, which seek to make comparable the purchasing power of one dollar in different countries at different times.[4] The $1-a-day international poverty line is the focal concern of the International Development Goal and the Millennium Development Goal of reducing the incidence of extreme poverty by half between 1990 and 2015, and is also a primary objective of the Programme of Action for the Least Developed Countries for the Decade 2001–2010. It may be argued, therefore, that it is sufficient to limit analysis to this single standard.

The two poverty lines were chosen following close examination of the rationale for the $1-a-day line. This standard has its origins in pioneering World Bank research on the way in which nationally defined poverty lines vary between countries according to their level of development. This research found that:

- There is a marked tendency for countries with higher GNP per capita and with higher levels of private consumption per capita to define higher national poverty lines.

- A consumption level of $31 per month (measured in 1985 PPP exchange rates), i.e. $1 a day, is a "common poverty line for the dozen or so low-income countries for which poverty lines have been calculated" (Ravallion, Datt and van de Walle, 1991: 27).
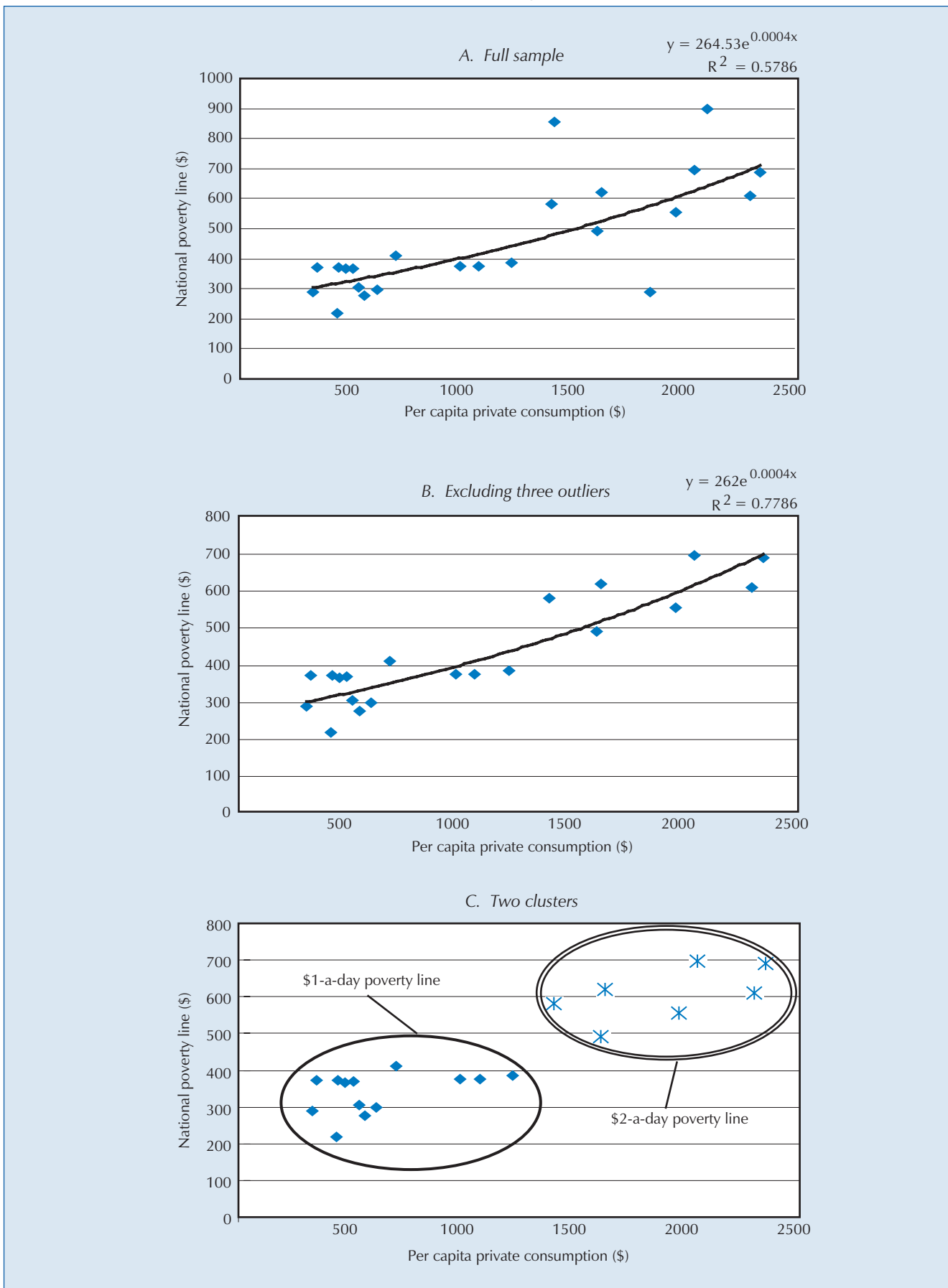
The $1-a-day poverty line was then chosen as the standard for the international comparison of poverty. The minimum adequacy of consumption in all countries was thus equated with the typical standard of minimally adequate consumption in the poorest countries.[5]

Re-examination of these data shows that, even amongst the LDCs and low-income countries, there is a tendency for countries with higher national GNP per capita and with higher average annual levels of private consumption per capita to define higher national poverty lines (chart 7). However, focusing on countries whose annual levels of private consumption are in the same range as those of the LDCs makes it is possible to identify two clusters. The first cluster, those countries where levels of per capita consumption are below $1,000 per annum (in 1985 PPP dollars), have defined their own national poverty lines close to the $1-a-day standard. The second cluster, those countries where levels of per capita consumption are above $1,000 per annum (in 1985 PPP dollars), have nationally defined poverty lines close to the $2-a-day standard. Increasingly, the World Bank is using the $2-a-day standard (along with the $1-a-day line) in its international analyses of poverty, arguing that this "upper poverty line" reflects more closely the national poverty lines which are commonly used in "lower-middle-income" countries (World Bank, 2000: 17). Re-examination of the national poverty lines suggests that both these poverty lines are also relevant for the LDCs.

The use of these two poverty lines, nevertheless, requires some clarifications and qualifications.

The Report uses consumption levels of $1 a day and $2 a day as the standards by which to identify minimally adequate levels of poverty in the LDCs.

CHART 7. THE RELATIONSHIP BETWEEN NATIONAL POVERTY LINES AND ANNUAL PER CAPITA PRIVATE CONSUMPTION
(In 1985 PPP $ a year)

A. Full sample

$y = 264.53e^{0.0004x}$
$R^2 = 0.5786$

B. Excluding three outliers

$y = 262e^{0.0004x}$
$R^2 = 0.7786$

C. Two clusters

$1-a-day poverty line

$2-a-day poverty line

Source: Karshenas (2001), based on Ravallion, Datt and van de Walle (1991).

First, both these poverty lines define situations of great austerity. It is widely agreed that the $1-a-day poverty line depicts a situation of "extreme poverty", and that language is retained in this Report. This consensus has focused international and national efforts to eradicate extreme poverty on the $1-a-day poor. However, it may reasonably be asked whether the $2-a-day poverty line could also be said to identify a situation of "extreme poverty" in a global context. Confirming this judgement ideally entails finding out what level of consumption a person can actually achieve given $2 a day (in 1985 PPP terms).[6] But some notion of the austerity of these poverty lines in global terms can be gained by knowing that at current prices and official exchange rates, the $1-a-day poverty line in 1985 international prices translates into 51 cents a day for an average African LDC, and 31 cents a day for the average Asian LDC. The $2 poverty line for the average African and Asian LDCs translates into $1.02 and 61 cents respectively at current prices and official exchange rates.[7]

It is widely agreed that the $1-a-day poverty line depicts a situation of "extreme poverty", and that language is retained in this Report.

Second, the use of the $1-a-day and $2-a-day poverty lines in this Report does not imply that higher standards should be excluded in the international analysis of poverty, particularly in more advanced developing countries. The World Bank research on national poverty lines shows that poverty standards are related to the societies of which individuals are members. There is a clear tendency for the minimally acceptable levels of consumption to rise as societies become richer and average consumption increases.[8] In making international poverty comparisons on the basis of the typical standards of a few countries, there is no logical reason not to use the typical standard of minimally adequate consumption in richer countries rather than the poorest countries. Indeed, as globalization occurs, the consumption standards which people aspire to are defined not simply by national norms, but also by global norms. Thus what people consider to be minimally acceptable is shifting with globalization. But this is not downwards to the standards of living in the poorest countries, but rather upwards to the standards of living, and also the command of consumer goods available, in the richest countries.

The use of the $1-a-day and $2-a-day poverty lines in this Report does not imply that higher standards should be excluded in the international analysis of poverty, particularly in more advanced developing countries.

Third, the Report relies on publicly available purchasing power parity exchange rates to estimate poverty. The PPP exchange rates, which are used to ensure that the purchasing power of a dollar is comparable between countries, can potentially distort poverty estimates. Recently, a number of leading analysts have pointed out that in the revision of PPP estimates in 1993 disconcertingly large changes in the incidence of poverty occurred (Lipton, 1996; Deaton, 2000; Milanovic, 2001). The problem of PPP estimates is exacerbated in the case of the LDCs as there are few LDCs in the database from which PPP estimates are derived. The Report does not tackle this problem.[9] But it is worth noting that, according to available PPP estimates, the cost of living is much higher in African LDCs than in Asian LDCs.[10] The magnitude of the difference is such that if the costs of living which the PPP conversion rates suggest for Asian LDCs were actually closer to those which they suggest for African LDCs, poverty rates in the Asian LDCs would be as much as two thirds higher.

Finally, the use of the $1-a-day and $2-a-day international poverty lines in the present Report does not reduce the relevance of national poverty lines. National authorities should have discretion to define poverty in their own way.[11] One advantage of country-specific poverty lines is that the problems of PPP exchange rates can be avoided. But the use of such poverty lines was not possible in the present Report as its concern is to derive policy insights from international comparative analysis of poverty. It is most likely that the poverty estimates that are presented in this Report using international poverty lines diverge from current national poverty estimates based on country-specific

poverty lines in a number of countries. This should not be a surprise. It should also not be used to argue that the "true" incidence and depth of poverty in any particular country are actually higher or lower than national estimates suggest. Poverty estimates vary depending on where the poverty line is drawn. International and national poverty estimates will necessarily differ if they are based on different poverty lines. But the international estimates in the present Report are valuable for international comparisons as they are derived in a consistent way across countries and also over time.

3. THE USE OF NATIONAL-ACCOUNTS-CONSISTENT POVERTY ESTIMATES

National poverty estimates using the $1-a-day and $2-a-day poverty lines are generally based on surveys that use questionnaires to estimate household income, or household consumption expenditure, for a representative sample of the national population. The poverty estimates used in this Report are different. They are anchored in national accounts data. Almost all countries in the world have national income and product accounts, and these serve as the basis for estimates of gross domestic product (GDP), gross national product (GNP), and so on. They generally include estimates of macroeconomic aggregates such as private and public savings, gross domestic investment and private consumption. It is this last aggregate that is used in calculating the national-accounts-consistent poverty estimates of this Report. The incidence and depth of poverty in each LDC for which there are data are calculated by combining estimates of average private consumption per capita from the national accounts with estimates of the distribution of consumption amongst individuals and households from household survey data. The method of estimating poverty is exactly the same as the purely survey-based approach.[12] But the national-accounts-consistent estimates are based on estimates of the total population's average per capita private consumption of the total population using national accounts data rather than the mean consumption level of the sample derived from the household survey data.

Anchoring poverty estimates in national accounts statistics is not without precedent. National-accounts-consistent poverty estimates of the type used in this Report have been made in India. Moreover, the World Bank, whose national poverty estimates are based on household surveys, uses estimates of the consumption growth rate from national accounts to align its survey-based national poverty estimates (which refer to different years in different countries) to obtain global estimates of poverty in, say, 1990 or 1996 (World Bank, 2000: 23). However, household-survey-based and national-accounts-consistent poverty estimates do not tally well. Amongst the LDCs, in countries such as the United Republic of Tanzania (1991), Ethiopia (1981, 1995) and Mali (1989), average consumption figures according to the household surveys are between two and nearly three times higher than the national accounts estimates (see table 17). On the other hand, in Bangladesh, the survey estimates are much lower than the national accounts consumption data. Similar inconsistencies are apparent in trends over time. According to the household survey data, average private consumption per capita increased by over 17 per cent in Ethiopia between 1981 and 1995. But according to national accounts data, average private consumption per capita fell by over 13 per cent between these two years. In Bangladesh in contrast, household surveys suggest that average private consumption per capita fell by over 13 per cent between 1984 and 1991, whilst the national accounts data indicate a growth in average private consumption per capita of over 13 per cent in the same period.

It is most likely that the poverty estimates that are presented in this Report using international poverty lines diverge from current national poverty estimates based on country-specific poverty lines. This should not be a surprise.

National poverty estimates using the $1-a-day and $2-a-day poverty lines are generally based on household surveys... The poverty estimates used in this Report are different. They are anchored in national accounts data.

TABLE 17. ALTERNATIVE ESTIMATES OF THE INCIDENCE OF POVERTY
AND ANNUAL PRIVATE CONSUMPTION PER HEAD IN LDCs

	Year	Share of population living on less than $1 a day (%)		Share of population living on less than $2 a day (%)		Annual private consumption per head (1985 PPP $)	
		Household-survey-based estimates	National-accounts-consistent estimates	Household-survey-based estimates	National-accounts-consistent estimates	Household-survey-based estimates	National-accounts-consistent estimates
African LDCs							
Burkina Faso	1994	61.2	68.5	85.5	89.5	477.9	401.7
Central African Rep.	1993	66.6	70.3	84.0	86.4	455.3	402.8
Ethiopia	1981	32.7	89.5	82.9	96.8	558.4	231.8
	1995	31.3	89.9	76.4	97.1	657.8	228.8
Gambia	1992	53.7	42.9	84.0	76.6	504.7	623.0
Lesotho	1986	30.9	47.7	55.5	73.2	1132.6	696.0
	1993	43.1	56.4	65.7	76.8	890.7	599.7
Madagascar	1980	49.2	28.9	80.3	62.5	557.1	856.1
	1993	60.2	48.9	88.8	83.3	434.1	528.7
Mali	1989	16.5	55.6	55.4	88.7	852.8	426.6
	1994	72.3	67.2	90.6	92.7	360.8	353.9
Mauritania	1988	40.6	37.6	78.9	76.1	534.4	567.4
	1993	49.4	42.7	81.9	78.1	605.9	680.0
	1995	31.0	32.7	70.8	72.4	661.1	642.3
Mozambique	1996	37.9	37.7	78.4	78.7	588.7	589.9
Niger	1992	41.7	76.1	84.1	95.6	523.0	312.7
	1995	61.4	69.0	85.3	89.6	401.9	331.1
Rwanda	1984	35.7	25.4	84.6	78.5	518.1	592.1
Senegal	1991	45.4	38.1	73.0	66.3	707.8	851.2
	1994	26.3	23.8	67.8	64.0	754.1	801.7
Sierra Leone	1989	56.8	53.2	74.5	69.4	544.1	644.7
Uganda	1989	39.2	55.1	72.9	84.4	639.7	465.8
	1992	36.7	57.7	77.2	85.8	598.4	443.1
United Rep. of Tanzania	1991	48.5	78.2	72.5	91.9	735.8	303.6
	1993	19.9	78.0	59.7	95.2	814.0	291.3
Zambia	1991	58.6	66.7	81.5	87.3	434.3	348.0
	1993	69.2	75.6	89.5	93.0	318.9	269.5
	1996	72.6	80.5	91.7	94.6	345.7	279.0
Asian LDCs							
Bangladesh	1984	26.2	10.4	84.0	61.0	535.1	729.6
	1985	22.0	8.0	79.9	61.1	586.0	753.9
	1988	33.8	10.0	85.4	60.5	518.7	765.8
	1991	35.9	8.9	86.4	55.7	498.7	796.0
	1995	29.1	7.2	77.8	54.3	613.3	885.8
Nepal	1985	40.4	57.4	86.0	92.5	491.9	393.1
	1995	37.7	51.2	82.5	89.2	584.4	489.1

Source: UNCTAD secretariat estimates based on Karshenas (2001).

Note: This table covers LDCs and years in which there are household surveys of consumption expenditure.

The discrepancy between household-survey-based and national-accounts-consistent estimates of private consumption has long been known (Pyatt, 2000). But it is only recently, following debate on the effects of economic reform on poverty in India, that much more attention has been given to the issue, its causes and the implications for international comparisons of poverty (Deaton, 2000; Pyatt, 2000; Ravallion, 2000a, 2001; Karshenas, 2001). In this work, it has been argued that for a large sample of countries there is no statistically significant

difference between estimates of average consumption expenditure from national accounts and from household surveys (Ravallion, 2000a, 2001). It has also been argued that the most likely form of any discrepancy is the underestimation of average levels and growth of consumption in household surveys, which is the Indian case. But the argument of "no statistically significant difference" has been shown to be unsound (Karshenas, 2001). Moreover, it is clear from charts 8 and 9 that, for the $1-a-day and $2-a-day poverty lines, the discrepancy is related to how poor a country is (measured in terms of average levels of consumption in international PPP terms). If the national-accounts-consistent poverty estimates are accepted as correct, there is an overestimation of average private consumption per capita levels (and thus underestimation of the incidence of poverty) in household surveys in the very poorest countries, and an underestimation of private consumption per capita levels (and thus overestimation of the incidence of poverty) in household surveys in developing countries that are less poor. The national-accounts-consistent poverty estimates also suggest that poverty in sub-Saharan Africa is also greater than current estimates based on household surveys imply.

If the national-accounts-consistent poverty estimates are correct, the incidence and depth of poverty have been hitherto underestimated in the very poorest countries and in sub-Saharan Africa.

These differences are not only relevant for the LDCs, but also have important implications for the global map of poverty (see box 4). A critical question is: Which estimates provide a more accurate view of the situation on the ground? Ideally, this question should be resolved by looking closely, on a country-by-country basis, at the accuracy of national accounts and household survey data, and reconciling the discrepancies.[13] This requires further investment in statistical capacities for national accounts as well as household surveys, and also in methods, such as the construction of social accounting matrices, which necessarily require that efforts be made to reconcile the statistical discrepancies. However, in the meantime, it is necessary to proceed with poverty analysis and poverty monitoring, and to develop more effective poverty reduction policies.
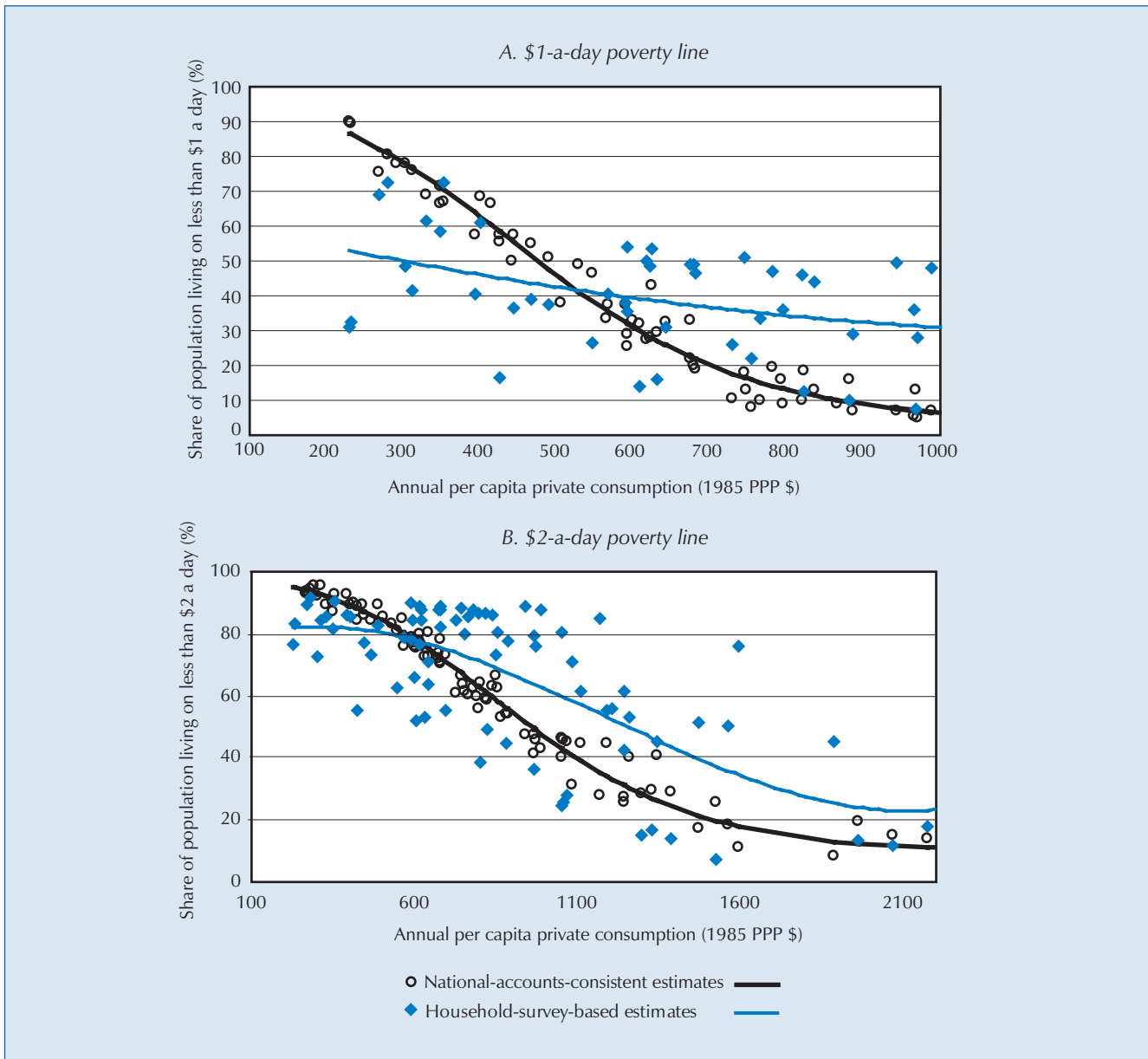
This Report is based on national-accounts-consistent poverty estimates for various reasons. Firstly, they offer as plausible poverty estimates as purely household-survey-based estimates. Both the national accounts data and the household survey data are flawed (see box 5). The approach adopted here combines elements of each type of data in a way that seeks to minimize their disadvantages. It focuses on household surveys of consumption, rather than of income, as it is generally agreed that household consumption data are more accurate than household income data.[14] Moreover, it limits the information derived from the household surveys to information on distribution of consumption among households. This is because the primary purpose of household surveys is not the estimation of average levels of household income or consumption of the population, but rather the estimation of the distribution of income or consumption amongst the population.

Preliminary research shows that the national-accounts-consistent poverty estimates are more highly correlated with some non-monetary indicators of poverty than the purely household-survey-based estimates

The case for using national-accounts-consistent poverty estimates is reinforced as our purpose is the international comparison of poverty. National accounts procedures are likely to be more standardized between countries than household surveys, and this should enable greater international comparability. Preliminary research also shows that the national-accounts-consistent poverty estimates are more highly correlated with some non-monetary indicators of poverty than the purely household-survey-based estimates (Karshenas, 2001). More work of this nature is required. However, these preliminary results suggest that national-accounts-consistent poverty estimates could even be more plausible indicators of material deprivation than the household-survey-based poverty estimates.

CHART 8. DISCREPANCY BETWEEN NATIONAL-ACCOUNTS-CONSISTENT AND HOUSEHOLD-SURVEY-BASED
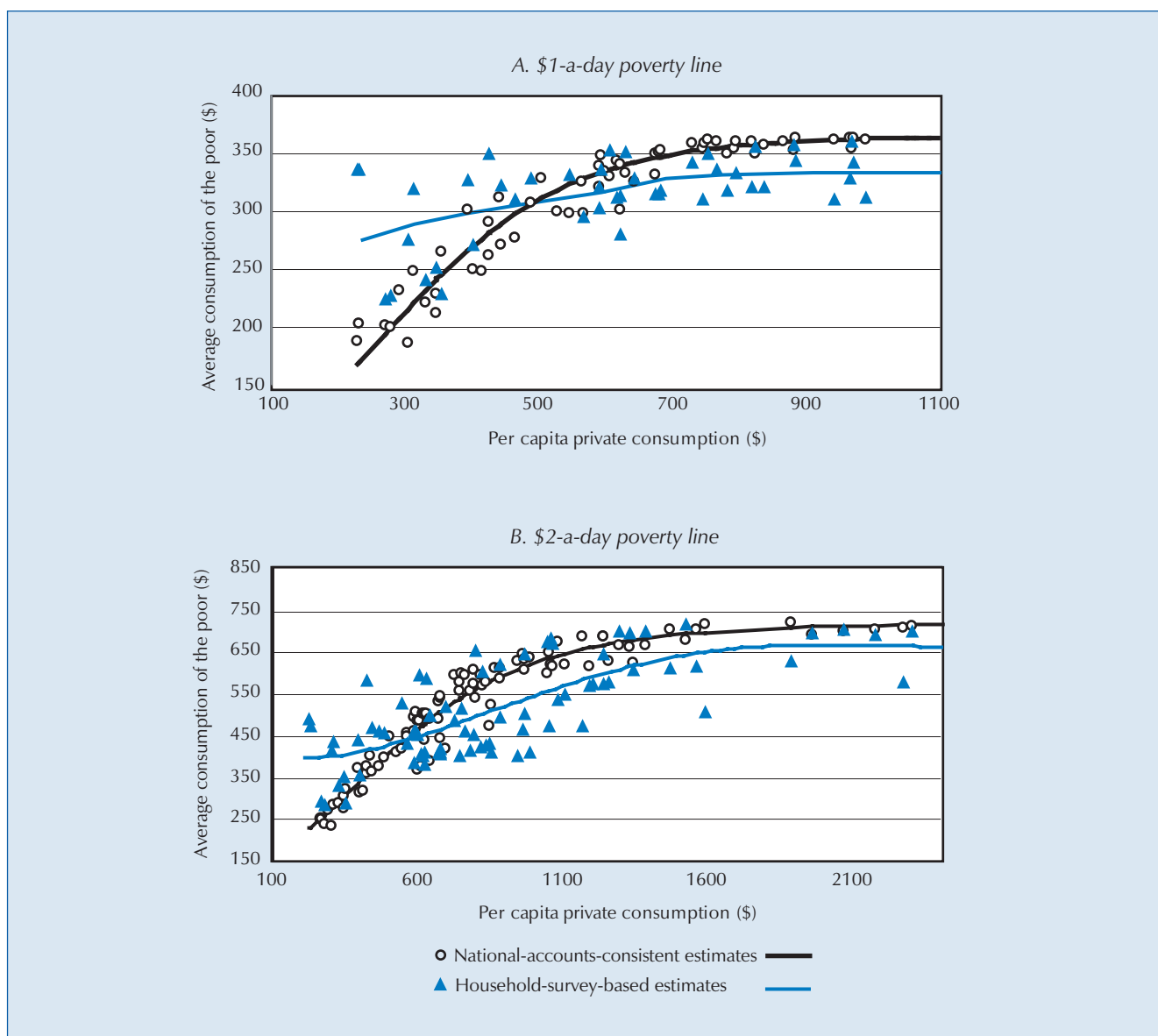ESTIMATES OF THE INCIDENCE OF POVERTY IN THE LDCs AND OTHER DEVELOPING COUNTRIES

A. $1-a-day poverty line

B. $2-a-day poverty line

o National-accounts-consistent estimates ━━━━
◆ Household-survey-based estimates   ━━━━

Source: Karshenas (2001).

A final advantage of the national-accounts-based approach is that it can
provide a way to make poverty estimates for countries and years for which none
currently exist. This possibility exists because there is a very close relationship
between average private consumption per capita (estimated from national
accounts) and the incidence of consumption poverty in those countries for
which household survey data on the distribution of consumption expenditure
are available. The expected incidence of poverty in countries where distribution
data are not available can thus be extrapolated on the basis of the trend lines in
countries where such data are available.[15]

This is of major importance for understanding and tackling poverty in the
LDCs. Without these statistics, the international analysis of poverty in the LDCs
is virtually impossible.[16] Moreover, as this method can be used to estimate
expected levels of poverty in years for which no distribution data exist, it is also
possible to describe the long-term dynamics of poverty change. This is
potentially of major importance for national and international policy formulation
as current data on poverty change in developing countries are limited to the

CHART 9. DISCREPANCY BETWEEN NATIONAL-ACCOUNTS-CONSISTENT AND HOUSEHOLD-SURVEY-BASED
ESTIMATES OF THE DEPTH OF THE POVERTY IN THE LDCS AND OTHER DEVELOPING COUNTRIES
(1985 PPP $ a year)

A. $1-a-day poverty line

B. $2-a-day poverty line

○ National-accounts-consistent estimates ━━━
▲ Household-survey-based estimates ━━━

Source: As for chart 8.

period of time between the years when household surveys were conducted.
With the exception of all but a few developing countries, notably India, these
periods are short. Poverty estimates anchored in national accounts thus make it
possible to understand the analytical links between poverty and economic
growth, macroeconomic change and structural transformation. They enable
examination of the relationship between poverty and development as a policy
issue.

C.   The poverty situation in the LDCs
in the late 1990s

   This Report is based on a new data set of national-accounts-consistent
estimates of poverty. These estimates are used in the rest of this chapter, and
throughout the Report. The details of how the estimates were derived are
summarized in the annex at the end of this chapter (see also Karshenas, 2001).

Box 4. Implications of national-accounts-consistent poverty estimates
for the global map of poverty

The discrepancy between household-survey-based and national accounts estimates of private consumption, and its implications for poverty estimates, have recently become the subject of lively debate in India (Bhalla, 2000; Ravallion, 2000b). According to national-accounts-consistent poverty estimates, economic reforms in that country have been associated with much more rapid poverty reduction than appears when poverty is estimated on the basis of household surveys. A question which must be asked now at the start of any serious international analysis of poverty is whether this is purely an Indian issue, or whether it matters globally. The national-accounts-consistent poverty estimates produced for this Report suggest that the discrepancy has significant effects on the global map of poverty, and also on forecasts about the achievement of Millennium Development Goals and International Development Goals.

The poverty estimates produced for this Report reveal systematic deviations between household-survey-based poverty estimates and national-accounts-consistent poverty estimates. If one accepts the national-accounts-consistent poverty estimates as the correct estimates:

• Current international poverty statistics, which are calculated on the basis of household sample survey data, underestimate both the incidence and depth of $1-a-day poverty in the very poorest countries, and also in sub-Saharan Africa.

• Current international poverty statistics equally underestimate the major opportunity for the rapid reduction of extreme poverty in the poorest countries if higher rates of economic growth can be attained and sustained.

Poverty is underestimated in the poorest countries according to national-account-consistent poverty estimates as there is an overestimation of average private consumption levels in household surveys in the very poorest countries. Equally, there is an underestimation of consumption levels (and thus overestimation of the incidence of poverty) in household surveys in less poor developing countries. The opportunity for poverty reduction associated with sustained economic growth is underestimated as household-survey-based poverty estimates lead to a much less close relationship between the incidence of poverty and average levels of private consumption per capita, and also, generally, to a lower rate of poverty change consequent upon the growth of average levels of consumption.

It is difficult to say exactly why these systematic biases arise. Two major possible sources of bias leading to the overestimation of average consumption (and the underestimation of the incidence of poverty) in the poorest countries are the under-representation of the poorest in the surveys, and over-inflation of the value of home-produced consumption. As chart 8A shows, there is a tendency for household-survey-based estimates of $1-a-day poverty to lie within the range 25–55 per cent, no matter what the average level of consumption of the population. It is, however, very surprising to find that two countries, one with an average per capita GDP of close to $1 per day (in 1985 PPP dollars) and the other with an average per capita GDP of above $3 per day, both have about 40 per cent of their population living below an international poverty line of $1 per day.

Close examination of the poverty curves which describe the relationship between average levels of private consumption per capita and national-accounts-consistent estimates of the incidence of $1-a-day and $2-a-day poverty also has important implications for forecasts of future poverty. Such forecasts are generally made by assuming a single aggregate estimate of the change in poverty that occurs together with a change in consumption (or GDP), which is assumed to pertain in a heterogeneous group of developing countries (see, for example, Collier and Dollar, 2001; Naschold, 2001). But although there is certainly a very close relationship between the growth of consumption and the incidence of poverty, the relationship is non-linear, and for any given country, the growth–poverty relationship depends on where the poverty line is set. The important implication of this is that if one accepts the national-accounts-consistent estimates as the correct ones:

• Current international forecasts of the map of poverty in the year 2015, which are based on household survey data, need to be revisited.

It is difficult to say whether current forecasts are over-optimistic or too conservative. As noted above, the national-accounts-consistent poverty estimates suggest that the incidence and depth of poverty in the very poorest countries are underestimated. But the new poverty estimates may actually provide a more optimistic view about reaching the international target of reducing $1-a-day poverty by 2015, because poverty can fall faster with rising levels of average private consumption per capita.

Moreover — and this is the final important implication of the national-accounts-consistent poverty estimates for the international map of poverty — if one accepts these estimates as accurate:

• The set of countries to which the $1-a-day international poverty line is most relevant is limited to the LDCs and other low-income countries.

Box 4 (contd.)

By implication, the geographical domain to which the international commitment to reduce the incidence of extreme poverty (measured using the $1-a-day poverty line) by 2015 is relevant is the LDCs and other low-income countries.

The domain to which the $1-a-day poverty line is relevant can be seen precisely from the position of the poverty curve. As average consumption levels rise, $1-a-day poverty becomes much more of a residual phenomenon, affecting a very small proportion of the population. In fact, according to the poverty curve, this occurs at annual private consumption levels of about $1,000 per capita in 1985 PPP, or $500 per capita in current dollars at current exchange rates. With the national-accounts-consistent poverty estimates, the upper limit of average private consumption per capita at which the $1-a-day poverty line generates a significant incidence of poverty is $3 a day (in 1985 PPP dollars). This corresponds to an annual per capita private consumption of $451 at current prices and exchanges rates, which is roughly equivalent to an annual per capita GDP of $550 to $600.

When the position of the $1-a-day and $2-a-day poverty curves is compared, it is also apparent that the national-accounts-consistent poverty estimates suggest that as the average consumption per capita becomes even higher, the share of the population living on less than $2 a day also becomes very small. This is likely to be part of the reason why one observes that nationally defined poverty lines tend to rise with increasing income.

These four findings are of immense importance for the international analysis of poverty and for international action for poverty reduction. Given the commitment of the international community to poverty reduction, further research to examine the international dimensions of the discrepancy between national-accounts-consistent and household-survey-based poverty estimates, and to explore how it may be resolved, should be a high priority.[1]

[1] This call for research is also evident in Pyatt (2000), World Bank (2000: box 1.8) and Deaton (2000).

BOX 5. SOME PROBLEMS WITH NATIONAL-ACCOUNTS-CONSISTENT AND
HOUSEHOLD-SURVEY-BASED POVERTY ESTIMATES

National accounts estimates of private consumption are not conceptually exactly the same as those of household consumption, as they implicitly include spending by non-profit organizations (NGOs, charities, religious organizations, and even political parties). Private consumption is also calculated within the national accounts as a residual from estimates of other macroeconomic aggregates, that is after calculation of aggregate output, imports, purchases by firms and government, inventory changes, and so on. It is thus far from an error-free number.

However, household surveys are also not error-free.[1] Best-practice consumption measures use very long lists of specific items to estimate household consumption, while widely used short-cut methods lead to underestimation of consumption. Imputing the monetary value of consumption based on self-provisioning rather than market purchases is always complex. Bias also arises in sample selection, in which there is generally an under-representation of the poor, and in response patterns, with a tendency towards underestimation of non-wage income and a higher non-response tendency in the higher-income strata. A major problem is to ensure consistency between surveys in different countries. Indeed, the ways in which poverty estimates derived from surveys vary from year to year indicate that, even within the same country, it is difficult to ensure comparability from year to year. For example, according to household-survey-based estimates, 16.5 per cent of the population of Mali was living in poverty in 1989 and 72.3 per cent in 1994, and 48.5 per cent of the population of the United Republic of Tanzania was living in poverty in 1991 and 19.9 per cent in 1993.[2]

A final important aspect of household surveys of living standards is that the primary purpose of these surveys is not the estimation of average levels of household income or consumption for the population, but rather the estimation of the distribution of income or household expenditure amongst the population. Deaton and Grosh (forthcoming, p. 5) state that "LSMS surveys [Living Standard Measurement Surveys] are rarely the instrument of choice for estimating mean income or mean consumption". However, they also note the problems of national-accounts estimates of consumption, and argue that it is wrong to assume that discrepancies between national accounts and household surveys derive solely from the latter.

[1] For a full discussion of methods of measuring consumption in living standard surveys, see Deaton and Grosh (forthcoming). This can be
    downloaded from http://www.wws.princeton.edu/~rpds/deatongrosh.pdf
[2] These data are from www.worldbank.org/research/povmonitor/index.htm

1. Average levels of poverty in LDCs in a comparative perspective

An overview of the state of poverty in the LDCs using these new poverty estimates is provided in table 18, which shows average per capita income and private consumption in current dollars and in 1985 PPP dollars, as well as indicators of the incidence and depth of poverty for African and Asian LDCs in the latter half of the 1990s.[17] The table also shows per capita income and consumption for selected high-income OECD countries for comparative purposes.

During 1995–1999: 81 per cent of the population in the LDCs for which we have data lived on less than $2 a day; 50 per cent of the population in the LDCs lived in extreme poverty, that is on less than $1 a day.

The data cover 91 per cent of the total population in the LDCs. Focusing on the average incidence and depth of poverty, weighted by population, table 18 shows that during 1995–1999:

- 81 per cent of the population in the LDCs for which we have data lived on less than $2 a day.

- 50 per cent of the population in the LDCs lived in extreme poverty, that is on less than $1 a day.

- The average private consumption per capita of the 50 per cent of the LDC population that live below the $1 poverty line is 64 cents a day (in 1985 PPP dollars).

- The average private consumption per capita of the 81 per cent of the LDC population living below the $2 poverty line is only $1.03 a day (in 1985 PPP dollars).

When most of the population in a country live below the international poverty line, poverty assumes a totally new dimension as compared with the conventional conception of poverty, where the main interest is in the relatively

TABLE 18. Average income, private consumption and the incidence and depth of poverty in African and Asian LDCs and selected OECD countries, 1995–1999

	GDP per capita per day		Per capita private consumption per day								Percentage share of population living on less than:	
			Total population		Poor (living below $1 a day)		Poor (living below $2 a day)					
	Current $	1985 PPP $	Current $	1985 PPP $	Current $	1985 PPP $	Current $	1985 PPP $			$1 a day	$2 a day
Weighted averages												
LDCs[a]	0.72	2.50	0.57	1.39	0.29	0.64	0.44	1.03			50.1	80.7
African LDCs	0.65	1.51	0.52	1.01	0.30	0.59	0.44	0.86			64.9	87.5
Asian LDCs	0.88	4.59	0.69	2.21	0.28	0.90	0.45	1.42			23.0	68.2
Selected OECD countries[b]					*Poorest 10%*		*Poorest 20%*					
United States	90.1	57.9	58.2	41.4	10.5	7.5	15.1	10.8			..	..
Switzerland	99.3	44.6	61.9	28.2	16.1	7.3	21.4	9.7			..	..
Sweden	73.8	43.7	37.3	23.5	13.8	8.3	17.9	10.8			..	..
Japan	94.1	43.4	50.5	24.2	24.2	11.6	26.7	12.8			..	..
France	66.9	41.9	36.7	25.4	10.3	7.0	13.2	9.0			..	..
United Kingdom	66.4	41.6	43.7	29.9	11.4	7.4	14.4	9.4			..	..

Source: UNCTAD secretariat estimates based on World Bank, *World Development Indicators 2001,* CD-ROM, and Karshenas (2001).

a   Thirty-nine countries, including 4 island LDCs. For exhaustive country list, see table 19.
b   Data on individual OECD countries refer to 1998. The share of the bottom deciles in OECD countries is calculated by applying per capita consumption averages to decile income distribution.

small share of the population in the bottom "tail" of the income distribution. As the proportion of the total population living in poverty increases beyond 50 per cent, the economy is in a situation of generalized poverty. Most LDCs are characterized by a situation in which poverty is generalized. A major part of the population lives at or below income levels sufficient to supply their basic needs, and the available resources in the economy, even when equally distributed, are barely sufficient to cater for the basic needs of the population on a sustainable basis.

In order to better understand the extent and the implications of generalized poverty in various LDCs, it would be helpful to further explore the intensity of poverty in those countries by examining the standards of living of those who fall below the poverty line. A polar extreme that can help bring the picture into sharp relief is provided by the comparison with the standards of living in the high-income OECD countries. As shown in table 18, per capita GDP in high-income OECD countries in current dollars and in official exchange rate is on average more than 100 times higher than in the African and Asian LDCs. At PPP exchange rates, however, as expected, the differences between the LDCs and the high-income countries are less pronounced. Nevertheless, per capita income in the high-income OECD countries is still on average about 30 times higher than in the average African LDCs and close to 10 times higher than in the Asian LDCs at 1985 PPP exchange rates. Similar ratios apply to the differences between the average per capita consumption of the LDCs and the high-income OECD countries.

The average consumption of the poor in the LDCs is of course well below the overall average consumption in those countries. As mentioned above, for example, close to 80 per cent of the population in the LDCs — those living below the $2-a-day poverty line — have an average consumption of $1.03 a day. This implies that even if the income of the bottom 80 per cent of population in the LDCs is equally distributed amongst them, they still barely manage a per capita consumption level above the international extreme poverty line. This average consumption level also compares with the average per capita private consumption of $7 to $10 a day for the poorest 10 to 20 per cent of the population in high-income OECD countries at 1985 international prices (table 18).

Although these per capita consumption figures are in real purchasing power terms — that is, they take into account cross-country variations in consumer price levels — one should not conclude that the extremely poor and the poor in the high-income countries, who can be roughly defined as the bottom 10 and 20 per cent consumption groups respectively, are exactly 7 or 10 times better off than the poor in the LDCs. The PPP exchange rates are intended to ensure that in comparing living standards between countries a dollar in one country commands the same basket of goods and services as in another country. However, the same basket of goods and services may mean different degrees of hardship in different countries and over time owing to differences in institutions, social norms and practices, and differences in available goods and services.[18] Nevertheless, the comparison of the levels of consumption of the poor in the high-income countries and the LDCs does put the nature of generalized poverty in the LDCs into a broader perspective.

The current dollar estimates of average per capita income and consumption in the table are also of significant interest. These are not measures of living standards, but they indicate the purchasing power of nations or the poor within the nations in terms of current international prices. As various LDCs over the

The average private consumption per capita of the 81 per cent of the LDC population living below the $2 poverty line is only $1.03 a day (in 1985 PPP dollars).

past two decades have eased current account trade and exchange restrictions, the current dollar figures may have become more relevant to people's lives. As can be seen from the table, in terms of current prices and official exchange rates during 1995–1999:

- The average per capita income in the LDCs for which we have data is about 72 cents a day, and the average per capita private consumption is 57 cents a day.

- In African LDCs, the average per capita income is 65 cents a day, and the average per capita private consumption is 52 cents a day. In Asian LDCs, the average per capita income is 88 cents a day and the average per capita private consumption is 69 cents a day.

- The average per capita private consumption of those living in LDCs below the $2-a-day international poverty line is 44 cents a day. The average per capita consumption of those living in LDCs below the $1-a-day international poverty line is 29 cents a day.

- The poorest 10 per cent of the population in the industrialized countries have an average private consumption per head of about $13 a day.

These extremely low levels of per capita income and consumption at official exchange rates and in current dollars are indicative of the very low levels of labour productivity and the meagre resource availability in the LDCs, with far-reaching implications for the nature of required poverty reduction policies and strategies in those countries (see chapter 5). This also provides one of the important underlying reasons for the persistence of generalized poverty over time, which is a central feature of the trends in poverty discussed in section D of this chapter.
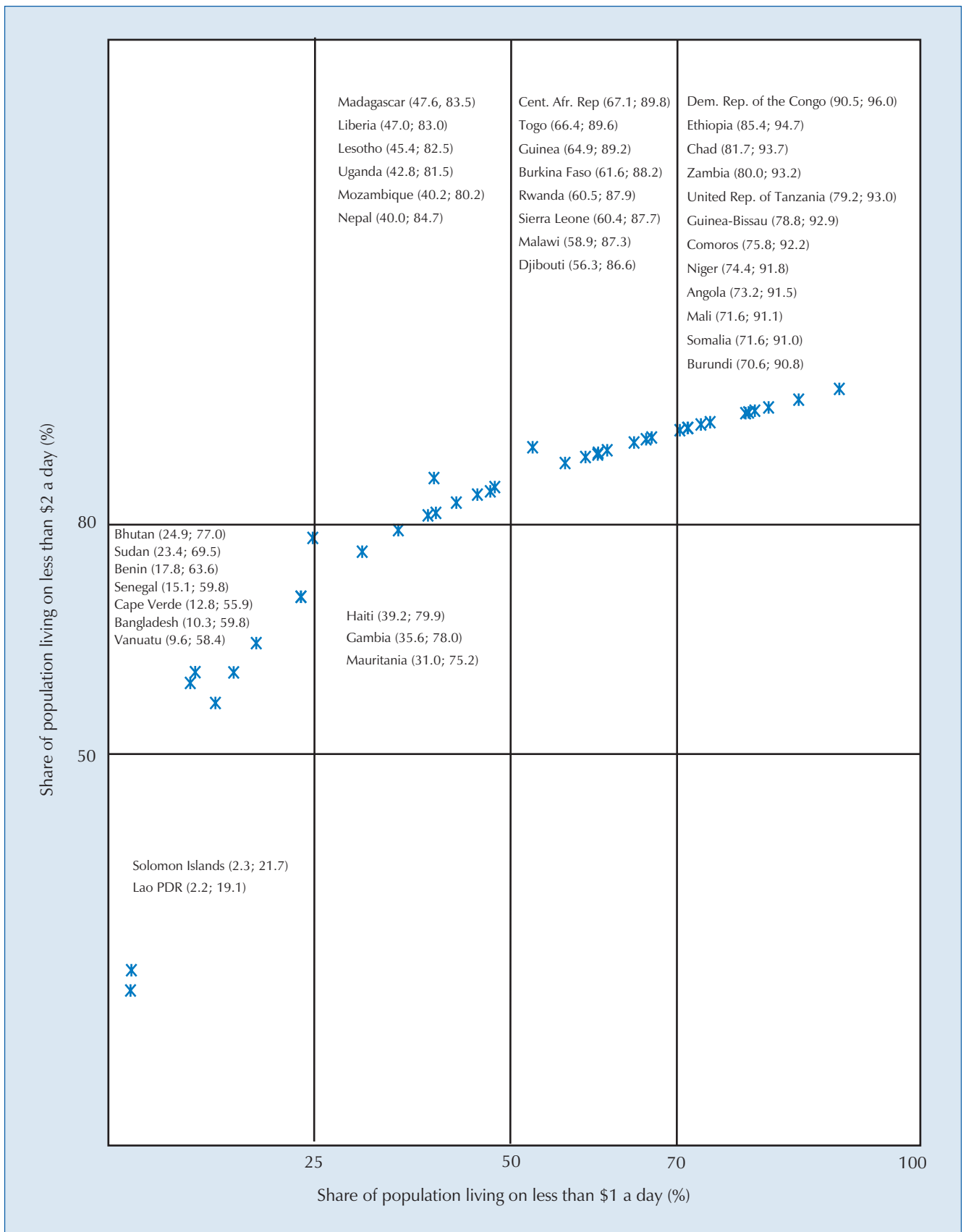
2. A POVERTY MAP FOR THE LDCs IN 1995–1999

There are of course variations between the LDCs. On the basis of estimates of the incidence of poverty at the internationally defined $1-a-day and $2-a-day poverty lines, one can sketch a poverty map for the LDCs (chart 10). The horizontal axis of the map shows the incidence of poverty for the $1 international poverty line and the vertical axis shows the incidence of poverty for the $2 line. The closer a country is to the north-east corner on the poverty map the worse the poverty situation in that country is, and the closer a country is to the south-west corner the lower the incidence of poverty.

The poverty estimates shown in chart 10 are sensitive to the errors in national accounts estimates of consumption as well as errors in PPP exchange rates. However, even if we allow for a 20 to 30 per cent margin of error, the chart suggests an alarming poverty profile for the LDC countries.

- In three-quarters of the LDCs, including most of those located in sub-Saharan Africa, over 80 per cent of the population live on less than $2 a day.

- In all African LDCs, and all Asian LDCs with the exception of one, the share of the population living on less than $2 a day was close to and often well over 60 per cent in the late 1990s.

- In 30 LDCs, more than 25 per cent of the population live below the $1-a-day poverty line and in 20 countries the share of the population living in extreme poverty is above 50 per cent.

In terms of current prices and official exchange rates during 1995–1999, the average per capita private consumption of those living in LDCs below the $2-a-day international poverty line is 44 cents a day. The poorest 10 per cent of the population in the industrialized countries have an average private consumption per head of about $13 a day.

CHART 10. A POVERTY MAP FOR LDCs, 1995–1999[a]

Madagascar (47.6, 83.5)
Liberia (47.0; 83.0)
Lesotho (45.4; 82.5)
Uganda (42.8; 81.5)
Mozambique (40.2; 80.2)
Nepal (40.0; 84.7)

Cent. Afr. Rep (67.1; 89.8)
Togo (66.4; 89.6)
Guinea (64.9; 89.2)
Burkina Faso (61.6; 88.2)
Rwanda (60.5; 87.9)
Sierra Leone (60.4; 87.7)
Malawi (58.9; 87.3)
Djibouti (56.3; 86.6)

Dem. Rep. of the Congo (90.5; 96.0)
Ethiopia (85.4; 94.7)
Chad (81.7; 93.7)
Zambia (80.0; 93.2)
United Rep. of Tanzania (79.2; 93.0)
Guinea-Bissau (78.8; 92.9)
Comoros (75.8; 92.2)
Niger (74.4; 91.8)
Angola (73.2; 91.5)
Mali (71.6; 91.1)
Somalia (71.6; 91.0)
Burundi (70.6; 90.8)

Bhutan (24.9; 77.0)
Sudan (23.4; 69.5)
Benin (17.8; 63.6)
Senegal (15.1; 59.8)
Cape Verde (12.8; 55.9)
Bangladesh (10.3; 59.8)
Vanuatu (9.6; 58.4)

Haiti (39.2; 79.9)
Gambia (35.6; 78.0)
Mauritania (31.0; 75.2)

Solomon Islands (2.3; 21.7)
Lao PDR (2.2; 19.1)

Share of population living on less than $2 a day (%)

80

50

25   50   70   100

Share of population living on less than $1 a day (%)

Source: UNCTAD secretariat estimates based on Karshenas (2001).

Note: The numbers in parentheses indicate the share of the population living on less than $1 a day and $2 a day, respectively
during the period 1995–1999.

a   Based on international poverty line in 1985 PPP dollars. These estimates do not conform to estimates based on a national
poverty line.

Individual country data during 1995–1999 for those LDCs where data are available are presented in table 19. It shows national-accounts-consistent estimates of the incidence of poverty, the number of poor and their average consumption, based on international poverty lines of $1 a day and $2 a day in constant 1985 PPP dollars. The total number of people living on less than $1 a day in the LDCs as a whole in the later 1990s is estimated to be 307 million, and the total number of people living on less than $2 a day is estimated to be 495 million.

D. The dynamics of poverty in the LDCs

Average poverty trends in the LDCs, and 22 other developing countries for which we have data during the past four decades, are shown in tables 20 and 21 and chart 11.[19] The key pattern which the tables and chart reveal is that poverty in the LDCs as a group, in contrast to the other developing countries, appears to be persistent and even growing over time.

The incidence of poverty for the LDC group is estimated to have increased from about 48 per cent during 1965–1969 to over 50 per cent during 1995–1999 for the $1 poverty line. For the $2 poverty line, the incidence of poverty for the LDC group as a whole seems to have been fluctuating at around 80 per cent over the past few decades. These figures are in sharp contrast to the trends in the sample of other developing countries, which are driven by trends in large low-income Asian countries, particularly China, India and Indonesia. In the group of other developing countries, the incidence of poverty using a $1-a-day poverty line is estimated to have declined from about 45 per cent during 1965–1969 to just over 8 per cent during 1995–1999. Using a $2-a-day poverty line, it is estimated to have declined from about 83 per cent to nearly 35 per cent over the same period. Similar contrasting trends are shown with regard to the average consumption of the poor.

On the basis of these figures, it is apparent that the LDCs have become the primary locus for extreme poverty in the global economy.[20] Of course, there are wide variations in the performance of different LDCs as there are variations amongst the other developing countries. Asian LDCs seem to have performed much better than African LDCs with regard to poverty trends over time. The average incidence of poverty in the Asian LDCs for the $1-a-day poverty line fell from 35.5 per cent in the late 1960s to about 23 per cent in the late 1990s, and the same indicator for the $2-a-day poverty line declined from about 79 per cent to 68 per cent in those countries. These trends are not as impressive as for other developing countries, but are still considerable improvements relative to trends in the African LDCs. In the African LDCs in fact, the incidence of poverty appears to have been increasing over time during the past few decades. The proportion of the population living below $1 a day is estimated to have increased from about 56 per cent during 1965–1969 to about 65 per cent during 1995–1999 in the African LDCs as a group. Over the same period, the incidence of poverty with regard to the $2-a-day poverty line appears to have increased from 82 per cent to over 87 per cent for African LDCs as a whole.

Similar trends are observable with regard to depth of poverty in the African and Asian LDCs relative to the other developing countries. In African LDCs, after an initial improvement, the depth of poverty seems to have been increasing since the mid-1970s. The average consumption of those living on less than $1 a day in those countries declined from an average of $0.66 a day to $0.59 a day between 1975–1979 and 1995–1999. The average consumption of the poor

The total number of people living on less than $1 a day in the LDCs as a whole in the later 1990s is estimated to be 307 million, and the total number of people living on less than $2 a day is estimated to be 495 million.

On the basis of these figures, it is apparent that the LDCs have become the primary locus for extreme poverty in the global economy.

TABLE 19. THE INCIDENCE AND DEPTH OF POVERTY IN THE LDCS, 1995–1999

	Population living on less than $1 a day[a]			Population living on less than $2 a day[a]		
	Incidence of poverty (%)	Number of poor ('000)	Average consumption of poor (1985 PPP $ a day)	Incidence of poverty (%)	Number of poor ('000)	Average consumption of poor (1985 PPP $ a day)
African LDCs[b]	**64.9**	**233 454.1**	**0.59**	**87.5**	**315 060.1**	**0.86**
Angola	73.2	8 535.1	0.63	91.5	10 668.0	0.81
Benin	17.8	1 029.1	0.96	63.6	3 674.9	1.45
Burkina Faso	61.6	6 446.3	0.73	88.2	9 244.5	0.94
Burundi	70.6	4 531.3	0.65	90.8	5 824.6	0.84
Central African Republic	67.1	2 294.9	0.69	89.8	3 068.8	0.88
Chad	81.7	5 791.8	0.53	93.7	6 643.0	0.70
Dem. Rep. of the Congo	90.5	42 340.6	0.38	96.0	44 915.4	0.55
Djibouti	56.3	351.8	0.77	86.6	540.5	0.99
Ethiopia	85.4	51 011.1	0.47	94.7	56 523.7	0.65
Gambia	35.6	420.3	0.89	78.0	921.3	1.21
Guinea	64.9	4 491.5	0.70	89.2	6 173.5	0.90
Guinea-Bissau	78.8	896.8	0.56	92.9	1 056.3	0.74
Lesotho	45.4	912.0	0.84	82.5	1 661.2	1.11
Liberia	47.0	1 365.6	0.82	83.0	2 397.3	1.09
Madagascar	47.6	6 731.6	0.82	83.4	11 821.4	1.08
Malawi	58.9	6 031.0	0.75	87.3	8 966.4	0.97
Mali	71.6	7 229.2	0.64	91.1	9 192.6	0.83
Mauritania	31.0	762.6	0.91	75.2	1 851.5	1.27
Mozambique	40.2	6 649.6	0.86	80.2	13 292.7	1.16
Niger	74.4	7 301.3	0.62	91.8	9 007.7	0.80
Rwanda	60.5	4 507.4	0.74	87.9	6 573.8	0.95
Senegal	15.1	1 320.5	0.97	59.8	5 256.2	1.50
Sierra Leone	60.4	2 874.2	0.73	87.7	4 157.9	0.95
Somalia	71.6	6 307.2	0.64	91.0	8 002.0	0.83
Sudan	23.4	6 486.5	0.94	69.5	19 275.5	1.36
Togo	66.4	2 878.3	0.69	89.6	3 889.0	0.89
Uganda	42.8	8 681.3	0.85	81.5	16 556.6	1.13
United Rep. of Tanzania	79.2	24 785.3	0.56	93.0	29 121.2	0.74
Zambia	80.0	7 546.6	0.55	93.2	8 799.1	0.73
Haiti	39.2	2 943.6	0.87	79.9	5 983.6	1.17
Asian LDCs	**23.0**	**44 843.7**	**0.90**	**68.2**	**133 295.8**	**1.42**
Bangladesh	10.3	12 681.5	0.99	59.8	73 996.7	1.6
Bhutan	24.9	183.1	0.95	77.0	567.5	1.4
Lao PDR	2.2	105.9	1.00	19.1	924.8	1.9
Myanmar	52.3	22 957.2	0.86	88.6	38 912.8	1.1
Nepal	40.0	8 915.9	0.91	84.7	18 894.0	1.2
Island LDCs	**31.3**	**470.7**	**0.66**	**59.5**	**896.1**	**1.18**
Cape Verde	12.8	51.4	0.98	55.9	225.5	1.5
Comoros	75.8	392.7	0.60	92.2	477.3	0.8
Solomon Islands	2.3	9.3	1.00	21.7	88.1	1.9
Vanuatu	9.6	17.4	0.99	58.5	105.2	1.6
39 LDCs[c]	**50.1**	**278 768.5**	**0.64**	**80.7**	**449 252.0**	**1.03**
All LDCs[d]	**50.1**	**306 937.5**	**0.64**	**80.7**	**494 625.7**	**1.03**

Source: UNCTAD secretariat estimates based on Karshenas (2001).

a   Based on international poverty line in 1985 PPP dollars. These estimates do not conform to estimates based on a national poverty line.

b   Including Haiti.

c   Refers to LDCs listed in the table.

d   Estimated on the assumption that the incidence and depth of poverty in the LDCs for which we have no data are the same as for the 39 LDCs.

with regard to the $2-a-day poverty line declined from $0.96 a day to $0.86 a day over the same period. The Asian LDCs, on the other hand, have shown a continuous improvement, with the average consumption of those living below the $1-a-day poverty line increasing from about $0.84 a day during 1965–1969 to $0.90 a day during 1995–1999. The average consumption of those living below the $2-a-day poverty line in Asian LDCs increased from $1.27 a day to $1.42 a day during the same period. Other developing countries have, on the other hand, exhibited a much sharper increase as regards the average consumption of the poor relative to the Asian LDCs and particularly relative to the LDC average as a whole (tables 20 and 21).

An important difference between the LDCs and other developing countries which is worth highlighting is the difference in the depth of poverty between the two, as indicated by the average level of consumption of the poor. During 1965–1969, the average private consumption of the population living on less than $1 a day is estimated to have been at about $0.70 a day in the LDCs, compared with $0.86 a day for other developing countries. By 1995–1999, the gap between the two had increased to $0.64 a day and $0.93 a day respectively. With regard to the $2-a-day poverty line, the average private consumption per capita of the poor declined in the LDCs from $1.07 a day to $1.03 a day between 1965–1969 and 1995–1999, whilst in other developing countries it rose from $1.17 and $1.65 a day.

The situation in the Asian LDCs, though lagging behind that of the other developing countries, was relatively better. The African LDCs, however, substantially lag behind other developing countries with respect to the depth of poverty. The average consumption of the poor in the African LDCs is estimated at $0.59 for the $1-a-day poverty line and only $0.86 for the $2-a-day poverty line during 1995–1999, which contrasts with $0.93 and $1.65 for the other developing countries. According to these figures, more than 87 per cent of the population of the African LDCs living below $2 a day have an average consumption that is even lower than the average consumption of those living below $1 a day in other developing countries and indeed other LDCs. The extremely adverse initial conditions in the LDCs, particularly the African LDCs, with respect to the depth of poverty are an important handicap which needs to be taken into account in any realistic poverty reduction strategies.

The regional poverty trends of course hide individual country variations. In order to examine the trends in poverty for various individual LDCs, the trends in the incidence of $1-a-day poverty for individual countries for the decade of the 1980s and the decade of the 1990s are plotted in chart 12. The change in the incidence of poverty during the 1980s is depicted on the horizontal axis of the chart, and the change for the 1990s is shown on the vertical axis. The line AB divides the LDCs into two broad groupings. Countries that have shown an overall increase in headcount poverty during the two decades as a whole are located above AB, and those where the overall headcount poverty has declined are located below this line. As can be seen, 23 out of the 37 LDCs for which poverty estimates are available over the two decades show an increase in poverty over the period as a whole.

The chart can be used to make a further classification of the LDCs in relation to poverty trends. The countries in the north-east quadrant of the chart are countries where the poverty situation was deteriorating during both the 1980s and the 1990s. Twelve countries are in this quadrant, showing persistent deterioration throughout the two decades. Eleven of these countries are African LDCs. At the other extreme, in the south-west quadrant there are nine countries

The extremely adverse initial conditions in the LDCs, particularly the African LDCs, with respect to the depth of poverty are an important handicap which needs to be taken into account in any realistic poverty reduction strategies.

TABLE 20. POVERTY TRENDS IN LDCS AND OTHER DEVELOPING COUNTRIES, 1965–1999[a]

(1985 PPP $1-a-day international poverty line)

	1965–1969	1975–1979	1985–1989	1995–1999
Population living on less than $1 a day *(%)*				
39 LDCs[b]	48.0	48.5	49.0	50.1
African LDCs	55.8	56.4	61.9	64.9
Asian LDCs	35.5	35.9	27.6	23.0
22 other developing countries[c]	44.8	32.5	15.0	7.5
Number of people living on less than $1 a day *(millions)*				
39 LDCs[b]	125.4	164.0	216.0	278.8
African LDCs	89.6	117.4	170.5	233.5
Asian LDCs	35.6	46.5	45.2	44.8
22 other developing countries[c]	760.0	697.0	389.3	229.2
Average daily consumption of those living below $1 a day *(1985 PPP $)*				
39 LDCs[b]	0.70	0.71	0.69	0.64
African LDCs	0.64	0.66	0.64	0.59
Asian LDCs	0.84	0.85	0.89	0.90
22 other developing countries[c]	0.86	0.91	0.96	0.93

Source: UNCTAD secretariat estimates based on World Bank, *World Development Indicators 2001* CD-ROM, and Karshenas (2001).

a Country group averages are weighted averages.
b For LDCs sample composition see LDCs listed in table 19.
c Other developing countries are: Algeria, Cameroon, China, Congo, Côte d'Ivoire, Dominican Republic, Egypt, Ghana, India, Indonesia, Jamaica, Kenya, Morocco, Namibia, Nigeria, Pakistan, Philippines, Sri Lanka, Thailand, Tunisia, Turkey and Zimbabwe.

TABLE 21. POVERTY TRENDS IN LDCS AND OTHER DEVELOPING COUNTRIES, 1965–1999[a]

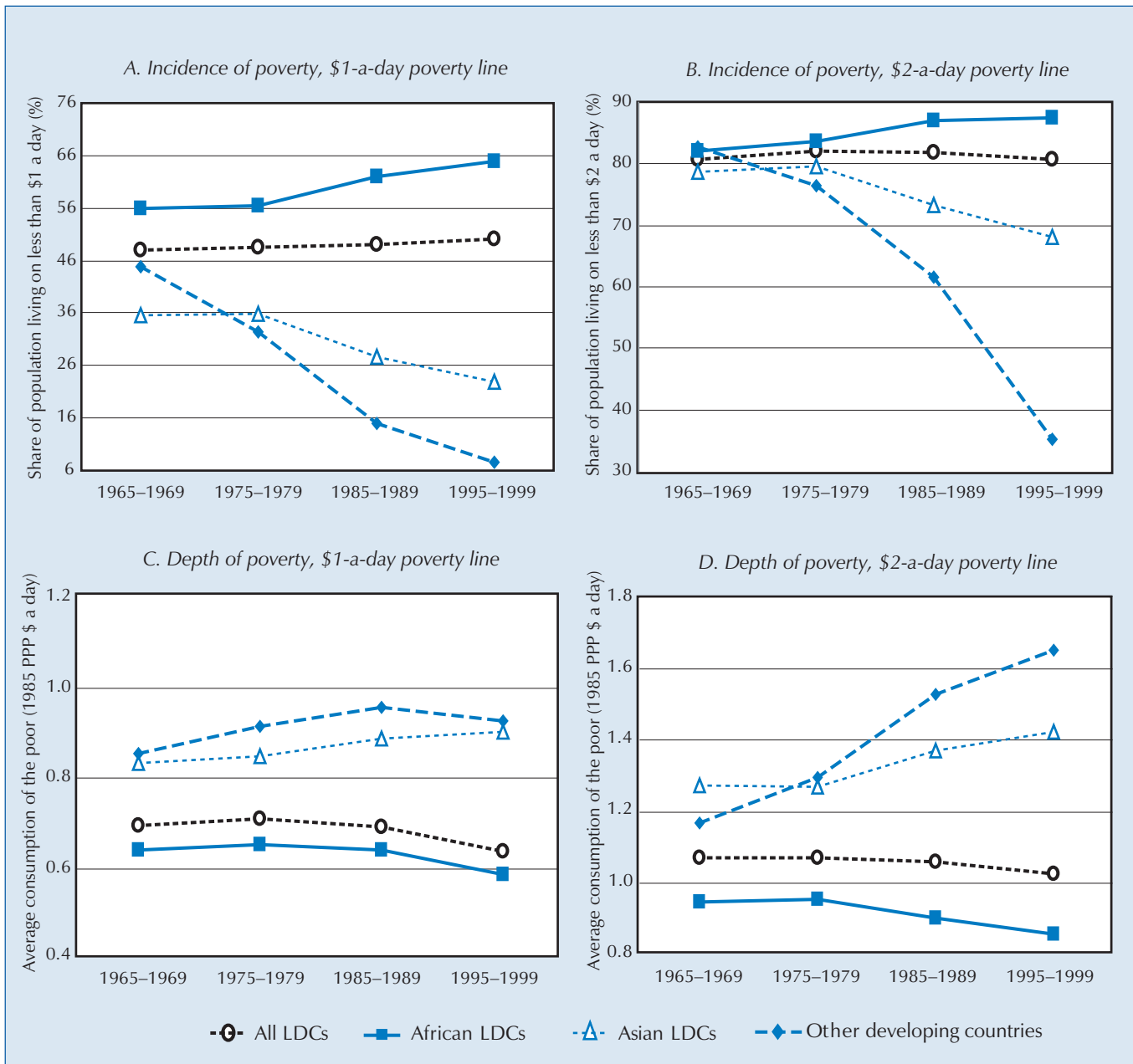*(1985 PPP $2-a-day international poverty line)*

	1965–1969	1975–1979	1985–1989	1995–1999
Population living on less than $2 a day *(%)*				
39 LDCs[b]	80.8	82.1	81.9	80.7
African LDCs	82.0	83.7	87.0	87.5
Asian LDCs	78.8	79.6	73.4	68.2
22 other developing countries[c]	82.8	76.5	61.6	35.3
Number of people living on less than $2 a day *(millions)*				
39 LDCs[b]	211.1	277.5	360.5	449.3
African LDCs	131.7	174.4	239.5	315.1
Asian LDCs	79.1	102.9	120.3	133.3
22 other developing countries[c]	1 405.0	1 639.7	1 599.0	1 084.2
Average daily consumption of those living below $2 a day *(1985 PPP $)*				
39 LDCs[b]	1.07	1.07	1.06	1.03
African LDCs	0.95	0.96	0.90	0.86
Asian LDCs	1.27	1.27	1.37	1.42
22 other developing countries[c]	1.17	1.30	1.53	1.65

Source: Same as for table 20.

a Country group averages are weighted averages.
b For LDCs sample composition see LDCs listed in table 19.
c Other developing countries are: Algeria, Cameroon, China, Congo, Côte d'Ivoire, Dominican Republic, Egypt, Ghana, India, Indonesia, Jamaica, Kenya, Morocco, Namibia, Nigeria, Pakistan, Philippines, Sri Lanka, Thailand, Tunisia, Turkey and Zimbabwe.
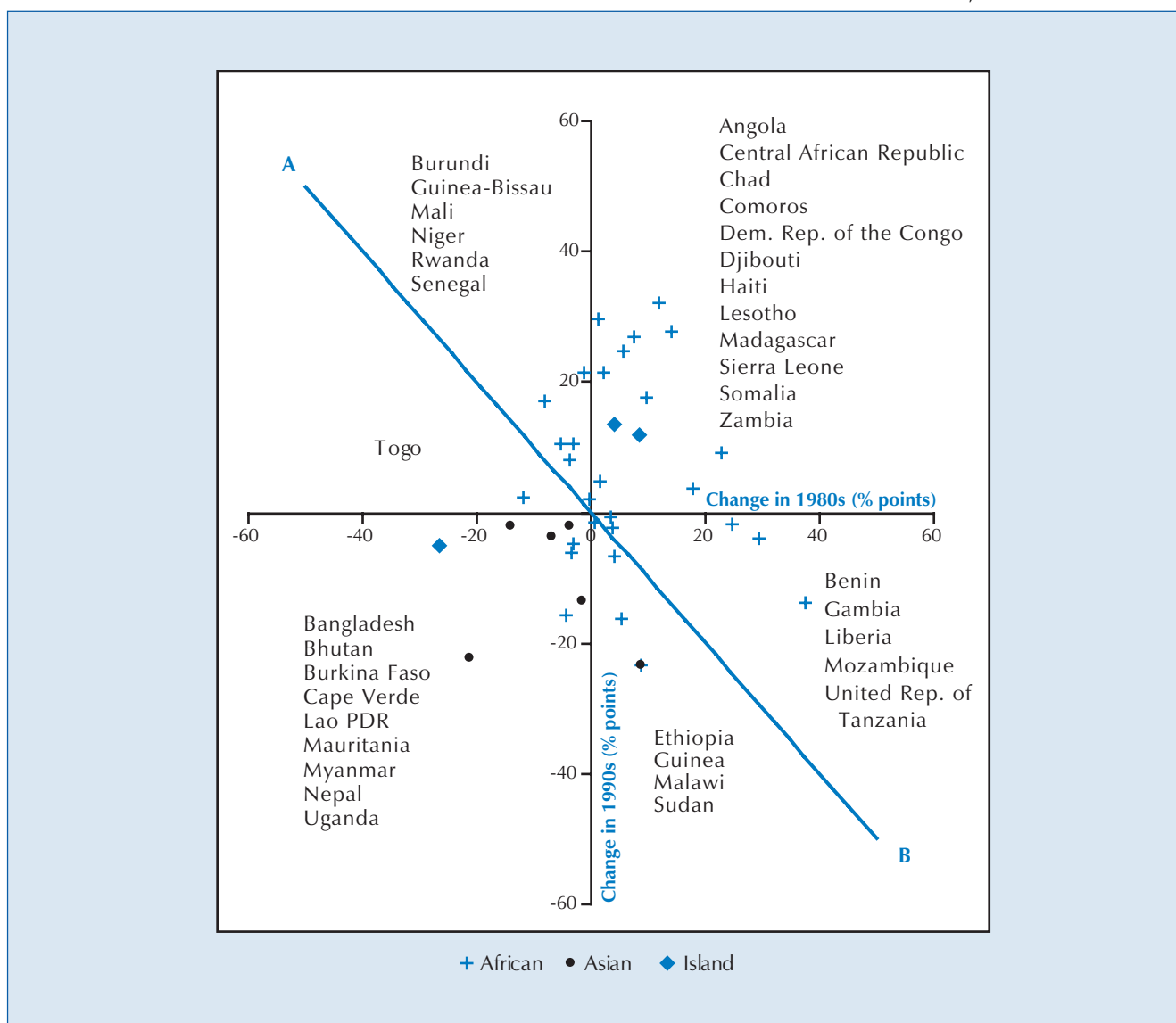
CHART 11. POVERTY TRENDS IN LDCS, BY REGION, AND IN OTHER DEVELOPING COUNTRIES, 1965–1999[a]

A. Incidence of poverty, $1-a-day poverty line

B. Incidence of poverty, $2-a-day poverty line

C. Depth of poverty, $1-a-day poverty line

D. Depth of poverty, $2-a-day poverty line

-O- All LDCs   -■- African LDCs   -△- Asian LDCs   -◆- Other developing countries

Source: UNCTAD secretariat estimates based on Karshenas (2001).

   a Based on 39 LDCs and 22 other developing countries. See table 19 for list of LDCs, and table 20, note *c*, for list of developing countries.

that showed persistent poverty reduction during both the 1980s and the 1990s. With the exception of one island (Cape Verde) and three African LDCs (Burkina Faso, Mauritania and Uganda), all these countries are Asian LDCs. In fact, all Asian LDCs for which data are available are in this quadrant. A third group of countries in the south-east quadrant are those that had increased poverty during the 1980s, but showed improvement over the 1990s. The nine countries listed in that quadrant can be further classified into two groups, namely those falling above the AB line and those falling below. Five African countries (Benin, Gambia, Liberia, Mozambique and United Republic of Tanzania) in the former group are those where the reduction in poverty during the 1990s was not sufficient to neutralize the deterioration that occurred during the decade of the 1980s, and hence show an overall deteriorating trend. On the other hand, four countries in the south-east quadrant (Ethiopia, Guinea, Malawi and Sudan)

CHART 12. CHANGE IN PERCENTAGE OF POPULATION LIVING ON LESS THAN $1 A DAY IN THE LDCS, 1980S AND 1990Sᵃ

A

Burundi
Guinea-Bissau
Mali
Niger
Rwanda
Senegal

Angola
Central African Republic
Chad
Comoros
Dem. Rep. of the Congo
Djibouti
Haiti
Lesotho
Madagascar
Sierra Leone
Somalia
Zambia

Togo

Change in 1980s (% points)

Bangladesh
Bhutan
Burkina Faso
Cape Verde
Lao PDR
Mauritania
Myanmar
Nepal
Uganda

Benin
Gambia
Liberia
Mozambique
United Rep. of
   Tanzania

Ethiopia
Guinea
Malawi
Sudan

Change in 1990s (% points)

B

+ African   • Asian   ◆ Island

Source: UNCTAD secretariat estimates based on Karshenas (2001).

   a   Change in the 1980s refers to the difference in the share of the population living on less than $1 a day between 1975–1979 and 1985–1989, in percentage points (horizontal axis). Change in 1990s refers to the same difference between 1985–1989 and 1995–1999 (vertical axis). Solomon Islands and Vanuatu are not included owing to lack of data during the 1980s.

managed to compensate for the increasing poverty trends during the 1980s by relatively larger improvements during the 1990s. Seven LDCs (Burundi, Guinea-Bissau, Mali, Niger, Rwanda, Senegal and Togo) witnessed improvements in the 1980s but worsening poverty in the 1990s. All of these countries are African LDCs. Amongst all of them except Togo, the deterioration during the 1990s reversed all the poverty reduction gains achieved during the 1980s.

   It is significant that only three LDCs managed to reduce the incidence of poverty with respect to the $1 poverty line by more than 20 per cent during the 1980s and the 1990s. Of these three countries, only two (namely, Cape Verde and the Lao People's Democratic Republic) had a consistent reduction in poverty during those two decades. The third country (Sudan) achieved this by a spurt in the rate of poverty reduction in the 1990s, which reversed the 1980s deterioration. In the majority of the LDCs, therefore, poverty is not only generalized. It is also persistent.

Only three LDCs managed to reduce the incidence of poverty with respect to the $1 poverty line by more than 20 per cent during the 1980s and the 1990s.

Annex to Chapter 1

METHODOLOGY OF POVERTY MEASUREMENT USED IN THIS REPORT

This Report describes and analyses poverty in the LDCs on the basis of a new data set of poverty estimates for 39 LDCs and 22 other developing countries (Karshenas, 2001). The data set covers all LDCs and developing countries for which, given the methodology used, it was possible to obtain estimates of the incidence and depth of poverty using $1-a-day and $2-a-day poverty lines. The LDCs for which poverty estimates have been made cover 91 per cent of the total population of the LDCs in the year 2000.

The poverty estimates are national-accounts-consistent estimates of poverty in the sense that they are anchored in national macroeconomic estimates of aggregate private consumption. The incidence and the depth of poverty are calculated using the normal procedures of poverty estimation. But instead of relying on household survey data for estimating both the mean and the distribution of private consumption, the new measures combine the average per capita private consumption of the population as reported in national accounts data with estimates of the distribution of consumption across households from the sample surveys of living standards.

The poverty data created by Karshenas are not only anchored in national accounts, but also consist of statistical estimates of "expected poverty". It is possible to make these estimates because there is a regular relationship between average levels of private consumption per capita and the incidence and depth of poverty among countries. This relationship has been established by focusing on those LDCs and other developing countries that have survey data available for directly estimating the distribution of consumption across households, and examining how the national-accounts-consistent estimates of the incidence and depth of $1-a-day and $2-a-day poverty vary with the average level of private consumption per capita in each country. The results cover 92 observations for 32 countries over three decades. The sample is confined to African and Asian developing countries as Latin American household surveys focus on income rather than consumption expenditure.

In the present Report, the poverty estimates for LDCs are derived using regression analysis. This is done by fitting "poverty curves" which specify the regular relationship between average levels of private consumption per capita and poverty in the sample of countries for which we have data. Various functional forms were applied to find the best fit between average private consumption per capita and the incidence and depth of poverty. In all cases the logistic (s-shaped) curve was preferred, with consumption per capita accounting for 95 per cent of the variation in the incidence of $1-a-day poverty in the sample, and 96 per cent of the variation in the incidence of $2-a-day poverty. A time dummy variable (distinguishing observations in the 1990s from the other decades) and a regional dummy variable (distinguishing African from non-African observations) were also introduced to determine whether they might further reduce the standard error of the fitted curve. The time dummy variable had no impact on the results, whilst the regional dummy slightly improved the predictive power of the regression model for $1-a-day poverty and was incorporated into the final estimates. Other variables related to the structure of the economy could have been included, but were not included since the predictive power of the model was already high.

Annex table 1 below shows the regression results for estimating the incidence of poverty using the $1-a-day and $2-a-day international poverty lines. Regression equation II in the top panel of the table corresponds to the fitted line in chart 8A, and regression equation IV was used in estimating the expected incidence of poverty in the LDCs and other developing countries for the $1-a-day poverty line. Regression equation II in the bottom panel of the table corresponds to the fitted line in chart 8B, and was also used in estimating the expected incidence of poverty for the $2-a-day poverty line.

The close fit of the model implies that one may be confident, in statistical terms, that the estimates of expected poverty made without household survey distribution data are very close to actual (national-accounts-consistent) poverty estimates made with household distribution data. Indeed, in all cases there is a 95 per cent probability that the expected incidence of poverty is within one percentage point of the actual incidence of poverty for countries where household survey data enable such actual estimates to be made. Annex chart 1 shows, for countries where there are data on the distribution of consumption, the difference between actual national-accounts-consistent poverty estimates and the estimates of expected poverty which are derived from the regression model.

ANNEX TABLE 1. ESTIMATED STATISTICAL RELATIONSHIP BETWEEN INCIDENCE OF POVERTY
AND AVERAGE PRIVATE CONSUMPTION PER CAPITA AND OTHER VARIABLES

	Dependent variable: logistic transformation of proportion of population below $1 a day											
	(I)			(II)			(III)			(IV)		
Variable	Coeff.	S.E.	t-Statistic	Coeff.	S.E.	t-Statistic	Coeff.	S.E.	t-Statistic	Coeff.	S.E.	t-Statistic
Constant	2.9376	0.14	21.29379	3.93	0.31	12.71	3.63	0.31	11.61	3.66	0.29	12.71
C (consumption)[a]	-0.006	0.00	-24.30974	-0.009743	0.00	-8.48	-0.0084	0.00	-7.83	-0.0087	0.00	-8.70
C^2 (consumption sq.)				3.09E-06	0.00	3.19	2.47E-06	0.00	2.90	2.68E-06	0.00	3.41
Region[b]							-0.388	0.09	-4.29	-0.435	0.08	-5.39
D90[c]							-0.138	0.08	-1.69			
No. of observations	58			58			58			58		
R-squared	0.934			0.946			0.967			0.965		
Adjusted R-squared	0.933			0.944			0.964			0.963		
SE of regression[d]	0.342			0.315			0.250			0.256		
Mean dependent var.	-0.665			-0.665			-0.66459			-0.66459		
SD dependent var.	1.326			1.326			1.326024			1.326024		

	Dependent variable: logistic transformation of proportion of population below $2 a day											
	(I)			(II)			(III)			(IV)		
Variable	Coeff.	S.E.	t-Statistic	Coeff.	S.E.	t-Statistic	Coeff.	S.E.	t-Statistic	Coeff.	S.E.	t-Statistic
Constant	2.7362	0.13	20.26838	4.07	0.15	27.31	4.05	0.15	26.31	4.05	0.15	26.42
C (consumption)[a]	-0.003	0.00	-15.1782	-0.005372	0.00	-16.68	-0.00529	0.00	-15.63	-0.00529	0.00	-15.77
C^2 (consumption sq.)				1.17E-06	0.00	8.07	1.15E-06	0.00	7.72	1.15E-06	0.00	7.79
Region[b]							-0.062	0.05	-1.17	-0.060	0.05	-1.16
D90[c]							0.010	0.05	0.19			
No. of observations	90			90			90			90		
R-squared	0.878			0.962			0.962			0.962		
Adjusted R-squared	0.877			0.961			0.960			0.961		
SE of regression[d]	0.466			0.262			0.264			0.263		
Mean dependent var.	0.533			0.533			0.533			0.533		
SD dependent var.	1.328			1.328			1.328			1.328		

Source: Karshenas (2001).

Note: The total sample is: Algeria (1988, 1995), Bangladesh (1984,1985, 1988, 1991, 1995), Burkina Faso (1994), Ethiopia (1981, 1995), Egypt (1991), Gambia (1992), Ghana (1987, 1989, 1992), Guinea-Bissau (1991), India (1965, 1970, 1983, 1986, 1987, 1988, 1989, 1990, 1992, 1995, 1996, 1997), Indonesia (1976, 1984, 1987, 1990, 1993, 1996, 1998), Côte d'Ivoire (1985, 1986, 1987, 1988, 1993, 1995), Kenya (1992, 1994), Lesotho (1986, 1993), Madagascar (1980, 1993), Mali (1989, 1994), Mauritania (1988, 1993, 1995), Morocco (1985, 1990), Mozambique (1996), Nepal (1985, 1995), Niger (1992, 1995), Nigeria (1986, 1992, 1993, 1996), Pakistan (1969, 1979, 1987, 1990, 1993, 1996), Philippines (1985, 1988, 1991, 1994, 1997), Rwanda (1984), Senegal (1991, 1994), Sri Lanka (1985, 1995), Thailand (1992, 1998), Tunisia (1985, 1990), Turkey (1987, 1994), Uganda (1989, 1992), United Republic of Tanzania (1991, 1993) and Zambia (1991, 1993, 1996).

   a   Consumption (C) is per capita private consumption expenditure in 1985 PPP dollars.
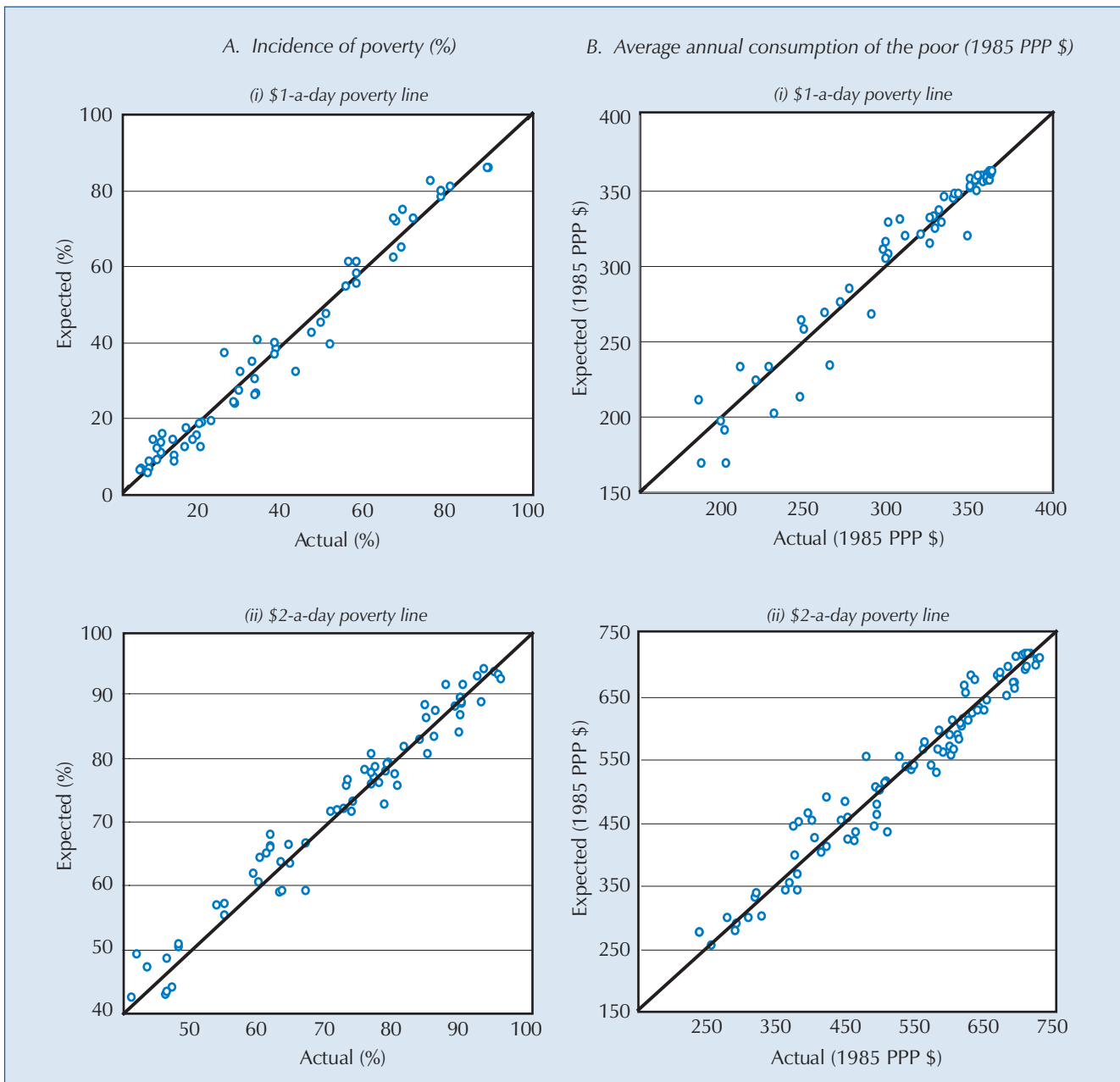   *b*   Region is an Africa(0)/non-Africa(1) dummy variable.
   c   D90 is dummy variable for the 1990 decade.
   d   Standard errors are White heteroskedasticity-consistent standard errors.

The $1-a-day and $2-a-day poverty lines, and also estimates of average private consumption per capita of the total population and of the poor in each country, are calculated in constant 1985 PPP dollars using publicly available PPP exchange rates to convert consumption in local currency units into an internationally comparable money-metric. This is how global poverty estimates were originally made, but the World Bank has recently changed the base year from 1985 to 1993. The two international poverty lines in World Bank statistics have correspondingly changed to $1.08 and $2.15 in 1993 prices. They are, nevertheless, still referred to as the $1-a-day and $2-a-day poverty lines respectively. Since the change of the base year, if correctly done, should not make any difference to the poverty estimates, this Report continues to use the 1985 base year and sets the poverty lines at exactly one and two dollars.

ANNEX CHART 1. NATIONAL-ACCOUNTS-CONSISTENT POVERTY ESTIMATES IN LDCS AND OTHER DEVELOPING COUNTRIES,
ACTUAL VS. EXPECTED ESTIMATES OF THE INCIDENCE OF POVERTY AND AVERAGE CONSUMPTION OF THE POOR

Source: Karshenas (2001).

The 1985 base year is preferred since the final year of the Summers and Heston data set, which is the source of PPP exchange rate estimates, is 1992, and hence it is difficult to check the consistency of the new World Bank poverty lines with the old ones. It appears that in addition to the change in the base year, the World Bank 1993 PPP rates have re-estimated some of the earlier measures in Penn World Tables version 5.6 (see, e.g., Chen and Ravallion, 2000). Since there is no official documentation on this and the data are not also available publicly, this Report has used PPP exchange rates from the latest Penn World Tables (version 5.6) with a 1985 base year.

The last date for the Summers and Heston estimates of private consumption in 1985 PPP dollars is 1992. Values of private consumption per capita in PPP terms in the 1990s have been estimated by applying the growth rates of real private consumption per capita to the 1992 figures. In a few cases and years where data on the growth rate of real consumption were not available, the growth rate of real GDP per capita has been used to extend the latest estimates of consumption.[21] This assumes that the share of private consumption in GDP remains constant.

Full details of the methods used in constructing the data set are available in Karshenas (2001).

Notes

1. It should be noted that in setting the poverty lines as a fixed real amount (either $1 a day or $2 a day in 1985 PPP $) this Report focuses on absolute poverty rather than relative poverty. With the latter notion of poverty, the part of the population that is poor is identified in relation to the average income of the total population. For example, the poor may be identified as those who have 50 per cent or less of the mean income in the country. The term "absolute poverty" is not used in the main text in order to avoid excessive terminology. In line with current international conventions, the term "extreme poverty" is defined throughout the Report on the basis of the $1-a-day international poverty line.

2. There are different approaches to the multidimensionality of poverty. See World Bank (2000), UNDP (1997), and Rodgers, Gore and Figueiredo (1995).

3. For a vivid description of the multidimensionality of poverty, see Narayan et al. (2000).

4. At the PPP exchange rate, one international dollar has the same purchasing power over domestic GNP that the United States dollar has over United States GNP.

5. For discussion of some of the problems of international comparisons of poverty, see Atkinson (1991), Chen, Datt and Ravallion (1994), and Chen and Ravallion (2000), and for an alternative approach to international poverty comparison, see Townsend (1993). Vandemoortele (2001) also provides an insightful discussion of some limits of the $1-a-day poverty line.

6. Work of this nature in Latin America, which empirically examined the relationship between the $1-a- day and $2-a-day poverty lines and the costs of differently defined minimally acceptable baskets of goods and services, shows that in that context the $2-a-day poverty line can be interpreted as a measure of malnutrition or physical survival. The research also suggests that the $1-a-day poverty line in that context "has no meaning" since, given the costs of securing the bare prerequisites for physical survival, "people with this level of income would be technically dead" (Boltvinik, 1996: 254).

7. These are weighted averages. It should be noted that estimates of the levels of consumption are not simply market purchases, but include goods produced and consumed by the household itself.

8. Historical research also shows the same phenomenon. In the United States, the minimum subsistence budget rose by about 0.75 per cent for every 1 per cent increase in disposable per capita income of the general population over the period 1905–1960 (Fisher, 1997, cited in Vandemoortele, 2001). This reflects amongst other things the fact that certain goods and services which made it possible to live on less in the earlier period were no longer available later on.

9. However, the Report specifies the international poverty lines using 1985 as a base year; see the annex to this chapter. For some suggestions on how to deal with the PPP problem, as well as a major critique of the way in which PPP conversion rates are used in the World Bank's global poverty estimates, see Reddy and Pogge (2002).

10. The difference in price levels between average African and average Asian LDCs is likely to be due to the relatively lower wage rates and hence price levels (particularly of non-tradable goods and services) in the densely populated Asian LDCs. Furthermore, the imported component of consumption expenditure is likely to be greater in African LDCs than in large Asian LDCs such as Bangladesh. Some of the African LDCs are also landlocked economies with sparse populations spread over large expanses of land, and this adds to both the internal and the external cost of transportation as compared with the densely populated Asian LDCs. See Karshenas (2001) for further discussion of this issue.

11. It is pertinent in this regard that in the current guidelines for Poverty Reduction Strategy Papers (PRSPs) it is recognized that appropriate indicators and specific targets will vary between countries, even though the inclusion of indicators related to the International Development Goals is considered to be desirable.

12. The estimates were made using the World Bank's very useful POVCAL programme. See Datt, Chen and Ravallion (1994).

13. This entails the type of analysis that has been undertaken in India — see World Bank (2000: box 1.8) — and also in Latin America (Altimir, 1987).

14. The World Bank also argues that consumption is the preferred indicator, "for practical reasons of reliability and because consumption is thought to better capture long-run welfare levels than current income" (World Bank, 2000: 17). However, in making its global poverty estimates the World Bank uses both consumption and income data collected through household surveys. Where survey data are available on incomes but not on consumption, consumption is "estimated by multiplying all incomes by the share of aggregate private consumption in national income based on national accounts data", a procedure which "scales back income but leaves the distribution unchanged" (ibid.: 17). This type of adjustment was not undertaken in the present analysis.

15. See Karshenas (2001), and the annex to this chapter, for more details. Confidence intervals and validation tests for estimated poverty measures indicate that the error involved in this estimation procedure is relatively low. No estimates are made for Latin American countries owing to the lack of household survey data on the distribution of consumption.

16. The term "international analysis of poverty" is used here to refer to an approach to poverty analysis that identifies differences in the nature and dynamics of poverty between countries, and which includes the effects of both domestic factors and international relationships in the analysis of poverty within countries.

17. National accounts consumption data for most island LDCs are not available at 1985 PPP exchange rates. Poverty estimates for a few island LDCs that have available data are reported in table 19.

18. Also, the private consumption figures do not take into account the much greater magnitude and quality of public services that the poor in high-income OECD countries benefit from.

19. The sample of other developing countries excludes Latin American countries and upper-middle-income countries. It also excludes developing countries with private consumption of more than $2,400 a year (in 1985 PPP dollars) as this is the upper limit at which it is possible to make estimates of the incidence and depth of poverty for the $2-a-day poverty line. Other developing countries for which there are data on average private consumption per capita (in 1985 PPP dollars) from the 1960s to the 1990s are included. The 22 other developing countries are listed in table 20.

20. The upper limit of private consumption per capita beyond which $1-a-day poverty becomes a residual phenomenon is about $1,000 (in 1985 PPP dollars). Apart from the developing countries included in table 20, the only other developing countries with annual private consumption per capita below $1,200 (in 1985 PPP dollars) in the late 1990s for which data are available are: Guyana, Honduras, Nicaragua and Papua New Guinea. No data on private consumption per capita (in 1985 PPP dollars) are available for the following economies classified as low- and lower-middle-income in the World Bank statistics: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Cuba, Democratic People's Republic of Korea, Georgia, Kyrgyzstan, Latvia, Lithuania, Marshall Islands, Micronesia (Federated States of), Moldova, Tajikistan, The Former Yugoslav Republic of Macedonia, Turkmenistan, Ukraine, Uzbekistan, West Bank and Gaza, and Yugoslavia (Serbia and Montenegro).

21. The countries and years in which this was done are: Bhutan (1986–1999), Democratic Republic of the Congo (1998–1999), Djibouti (1988–1999), Lao People's Democratic Republic (1992–1999), Liberia (1987–1999), Solomon Islands (1989–1999), Somalia (1990–1999), Sudan (1993–1999) and Vanuatu (1991–1999).

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