How the scale and nature of urban poverty are under-estimated – the limitations of the US\$ 1 a day poverty line

Diana Mitlin and David Satterthwaite

If the term poverty it taken to mean human needs that are not met, then most of the estimates for the scale of urban poverty in Africa, Asia, Latin America and the Caribbean appear too low. World Bank estimates for 1988 suggested that there were 330 million "poor" people living in urban areas (World Bank 1991) which implied that more than three-quarters of the urban population in low and middle income nations were not "poor" on that date. The 1999/2000 World Development Report (World Bank 1999) suggested that there were 495 million >urban poor= by the year 2000 in low and middle income nations which implies that three quarters of the urban population are >not poor=.

These figures do not fit with the many national and city studies which show that one-third to one-half of a nation's urban population or a city's population have incomes too low to allow them to meet their needs. National studies in many of the poorest African, Asian and Latin American countries suggest that more than half the urban population are below the poverty line (see, for example, Tabatabai with Fouad 1993, Jonsson and Satterthwaite 2001). As discussed below, many studies have shown how, in the 1980s and 1990s, urban poverty increased considerably in many nations experiencing poor economic performance and/or structural adjustment.¹

It is not only international statistics that seem to underestimate the proportion of urban households living in poverty but also many national statistics. When looking at data on absolute >urban= and >rural= poverty, some of the data is hard to believe. For example, is it credible to suggest that less than 2 percent of China=s urban population were below the poverty line in 1996 (as stated in World Bank 1999)?

Among monetary measures of poverty, the standard of a dollar a day has become an important benchmark by which the extent of poverty is assessed within nations and globally. However, it pays little attention to differences in the expenditure patterns of different groups of the poor or of differences in the costs that they face. In particular, by failing to accurately differentiate between rural and urban areas, it fails to recognize the differences in livelihoods and in the prices that have to be paid for necessities and as such fails to provide a benchmark to allow for an accurate representation of the scale and nature of urban poverty. (As elaborated below, it also has the failings of all monetary, quantitative indicators for poverty.)

This paper seeks to demonstrate why the assumptions underlying monetary measures of urban poverty may be wrong. It first considers the importance of urban poverty within global poverty reduction efforts (Section II). It then looks briefly at the use of US \$ 1 a day as a measure of poverty and the problems that such a measure involves (Section III). One of these problems is that many aspects of poverty cannot easily be measured. After briefly considering this issue and recognising that it has some validity, the discussion returns to the major theme, monetary measures of urban poverty (Section IV). Section IV looks first at recent trends in urban poverty and then at the costs faced by the poor.

There is no easy answer that emerges from this review. We discuss some theoretical problems with the single measure and the widespread acknowledgement that it fails to accurately represent differences between urban and rural livelihood possibilities and realities. What is required is a much greater understanding as to how appropriate indices can be

¹ See, for instance, Kanji 1995, Latapí and González de la Rocha 1995, Minujin 1995, Moser, Herbert and Makonnen 1993.

calculated and this theme is considered in the concluding section. To anticipate Section IV which contains the main argument, there are many reasons to suggest that urban dwellers earn more and spend more:

- **Higher prices:** some goods and services that are necessities for avoiding poverty are more expensive in urban areas. There is extensive evidence to suggest that prices are higher in urban areas this may be particularly true of basic foodstuffs secured through local production.
- **Commodification of goods meeting basic needs:** some goods have to be purchased in most urban areas and not in most rural areas (for example, fuel, food, water, access to toilets, clean clothes for work, transport). These goods are often perceived as belonging to "urban lifestyles" such as radios, beer etc. but it is also the case that some goods may have to be purchase simply to maintain the same standard of living because basic goods and services in urban areas are more likely to be commoditised (eg. water supplies and land for shacks or rent paid for accommodation). Many empirical studies have shown the high costs paid by particular urban groups (or those living in particular settlements) for non-food essentials.
- Additional and higher costs: urban dwellers experience some costs that are not incurred by rural dwellers. The case is particularly strong in relation to health risks and vulnerabilities. For example, high densities and large population concentrations in urban areas lacking adequate provision for water, sanitation and drainage increase risks for diarrhoeal diseases, intestinal worms and many other health risks (Hardoy, Mitlin and Satterthwaite 2001). Overcrowding increases the risk of transmission for many airborne diseases and for household accidents (ibid). Low-income groups often settle on land sites with high risks of flooding, damage through mud-slides, and/or high repair bills through using sub-standard materials because safer sites are too expensive.

II. The growing importance of urban poverty

The importance of having a good understanding of urban poverty is emphasised by the growing significance of the world's urban dwellers. Table 1 summarises the present trends.

Region	1950	1970	1990	2000	2010
	2700			2000	(projected)
World – urban population (millions)	751	1,357	2,286	2,862	3,514
World – percentage living in urban	29.8	36.8	43.5	47.2	51.5
areas					
Percentage of world's urban population					
living in					
- World	100	100	100	100	100
- Africa	4.3	6.1	8.6	10.3	12.1
- Asia	32.5	37.0	44.8	48.1	50.8
- Europe	38.3	31.3	22.8	18.7	15.3
- Latin America and the Caribbean	9.3	12.1	13.7	13.7	13.4
- Northern America	14.6	12.6	9.3	8.5	7.8
- Oceania	1.0	1.0	0.8	0.8	0.8

Source: Figures drawn from Satterthwaite 2002, based on data from United Nations (2002), *World Urbanization Prospects: The 2001 revision, data tables and highlights*, Population Division, Department of Economic and Social Affairs, United Nations Secretariat: New York.

Whilst inadequacies in census data mean that such figures should be treated only as indicative, the trend is clear. A growing proportion of the world's population are living in

urban areas, and increasing absolute numbers of global citizens are urban. (See Satterthwaite (2002) for a more detailed discussion of these figures.)

At the same time, the diversity of urban form should also be recognised. Urban includes small towns as well as large cities. As shown by Table 2, in 2000, half of the world's urban population lives in cities of under 500,000 residents and this includes a significant proportion living in urban centres with less than 20,000 inhabitants. Eighty countries define their urban populations by settlement size or settlement size plus density or occupational criteria; fortynine of these eighty countries use a population limit **below** 3,000 residents for such definitions, a further 20 use one below 10,000 residents. Hence those living in many small settlements are included within the general definition of urban citizens.

	Percentage	More than	5 million	1 million	500,000	Less
	urban	10 million	to 10	to 5	to 1	than
			million	million	million	500,000
World	47.0	9.2	5.4	24.7	10.5	50.0
Africa	37.9	8.1	1.7	25.3	8.1	56.9
Asia	36.7	11.1	6.3	24.6	11.9	46.1
Europe	74.8	0.0	7.0	20.3	9.7	63.0
Latin	75.3	15.1	4.9	22.7	9.5	47.7
America &						
the						
Caribbean						
Northern	77.2	12.5	2.9	35.2	10.7	38.7
America						
Oceania	70.2	0.0	0.0	55.9	0.0	44.1

Table 2: Percentage distribution of urban population by size of settlement

Source: United Nations (2001), World Urbanization Prospects: The 1999 revision, data tables and highlights. Population Division, Department of Economic and Social Affairs, United Nations Secretariat: New York.

Urbanization, and particularly urban poverty, has long received attention in Latin America (where three quarters of the population live in urban areas) but not in Africa and Asia. This may be changing. In a recent review of poverty in the Cote d'Ivoire, Grimm and Guenard (2002, 1074) conclude that "... it appears that poverty is not longer considered as being "solely" a rural phenomenon, but also more and more an urban problem. Indeed, during the last years, the progression of poverty in urban areas has been more rapid than in the countryside." Fofack, Monga and Tuluy (?, 3) suggest that similar findings were observed in Burkina Faso following a period of economic adjustment. "... the results suggest rising urban poverty accompanied with rapidly rising increasing income inequality..." As noted below, studies in other countries also point to rising levels of urban poverty.

III. Measurement

The ways in which governments and international agencies define poverty obviously influences how many 'poor people' there are and the allocations of poverty reduction expenditures. As summarised by Maxwell (1999, 4-5) there are many different ways in which poverty can be assessed, each with their own merits. The standard of US\$ 1 a day has become a powerful tool to draw attention to global poverty. It is increasing being used to highlight where most poverty is concentrated. There are advantages to the universality of this measure. As suggested by Lipton and Litchfield (2001, 3) such as standard is both widely available and enables international comparison.

However, problems with the use of US 1 a day as a measure of poverty have been considered.² Much of this discussion is related to the concept of the poverty line and is not further discussed. However, some of the issues relate to the construction of urban poverty lines. Deaton (2001, 131) argues against differentiation between urban and rural areas in the case of nutritional standards:

... it is important *not* [original emphasis] to set separate nutritional poverty lines for different regions or sectors within a country. At the same level of per capita total household expenditure, urban people spend less on food, buy more expensive calories, and consume fewer of them. Therefore applying the method to urban and rural areas using the same calorie target will lead to higher poverty lines in urban than rural areas. Across regions with different income levels, the operation of Engel's law has much the same effect, so that poverty lines can move more or less in proportion to average incomes generating effectively relative not absolute lines.... Although relative lines may make a good deal of sense in other contexts, they are not appropriate for world counts that are based on an explicitly absolute standard.³

The reason for quoting at length is that the thinking implied behind this quote is indicative of the problem. Clearly if urban dwellers are choosing more expensive food items because they can afford the choice, then the argument holds, but we do not know this to be the case. The assumption in Deaton's argument is that urban dwellers are choosing to consume different (more expensive) food – and, by implication, the same package of low-cost food available to rural dwellers is also available to them. In practice, that may not be true. As discussed below, in Accra, streets foods are foods associated with low, rather than high, incomes (REF). For example, urban dwellers may purchase street foods because they wish to minimise using expensive fuel. Rural dwellers may need to work extra hours to secure some or all of their fuel without cost. Urban dwellers may needs. In this context, buying more expensive food that can be more quickly prepared (or eaten with no preparation) may be a premium. Tenants may have only limited space to cook or even not be allowed to cook. Hence the options open to rural dwellers may have higher costs for urban dwellers or simply be difficult to secure.

Deaton (2001, 138) also argues:

Local price indexes are used not only for updating over time but also for adjusting poverty lines for urban-rural price differences, as well as for regional differences in prices. In the World Bank's calculations of the number of poor in the world, separate urban and rural indexes are used only for India and China. In other countries, a single index does service for everyone, an expedient that must overstate rural relative to urban poverty.

By the same argument, if using a single index is likely to overstate rural poverty relative to urban poverty, it is likely to understate urban poverty relative to rural poverty. Deaton (2001, 138 and Deaton and Tarozzi 2000, 22) goes on to argue that, in India, prices in urban areas are probably about 16 per cent higher on average than those in rural areas (excluding housing and transport costs).⁴ The detail of the argument is less important to this paper than the

² See, Deaton (2001, 126-8) for a discussion of these problems including their sensitively to the price indices used; for example, changes in PPP (purchasing power parity rates) do appear to result in large changes in estimates of those who are poor. On occasion, the US \$ 1 a day produces absurd results. McCulloch, Baulch and Cherel-Robson (2000, 16) use this poverty line with a PPP exchange rates in the Penn World Tables and the Zambian Consumer Price Index for 1997 only to find that it resulted in a poverty line that was in the top decile of the 1998 consumption expenditure distribution. Boltvinik (?) argues that it can under-estimate poverty as discussed below.

³ Engel curves relate per capita expenditure on food to per capita expenditure on total household goods.

⁴ Deaton and Tarozzi (2000, 21) suggest that prices in urban areas were 15.6 per cent higher than in rural areas. They go on "...For all India, the "official" urban prices are higher than rural prices by 40.8

general principle. If prices are higher in urban areas, then a single index will understate urban poverty relative to rural poverty. Srinivasan (2001, 161) emphasises the importance of recognising that the "...the choice of price index matters" in computing poverty estimates. As noted above and elaborated below, a single price index is one kind of misleading assumption that results in the under-estimation of urban poverty through the use of a universal monetary measure.

There is relatively little work at the international level disaggregating urban and rural living costs and living standards. Deaton and Tarozzi (2000, 6) complete a detailed study of poverty lines in India including an analysis of price differences between urban and rural areas. They suggest that the fact that urban households purchase 40 items whilst rural households purchase 30 items means that urban households have "...access to a wider range of goods and are typically better off than rural households" (Deaton and Tarozzi (2000, 6). However, as argued below, it is not clear that this would stand up to a detailed examination; urban households may have to purchase more goods (including basic subsistence foods) because more essential goods are marketed and may face additional costs through poor environmental conditions reducing health. Maxwell, Levin, Armar-Klemesu, Ruel, Morris and Ahiadeke (2000, 2), report that for the lowest expenditure quintile in Accra, 40 per cent goes on buying food. (The equivalent figure in the higher income bracket was 25 per cent.) They suggest: "These figures indicated that the urban poor reply on street foods both as a coping strategy and as a part of normal consumption, with street foods contributing significantly to the intake of staple foods" (Maxwell, Levin, Armar-Klemesu, Ruel, Morris and Ahiadeke 2000, 2). These families are, undoubtedly, very poor. "In terms of current calorific intake, roughly roughly 40 per cent of households in Accra could be classified as food insecure" (Maxwell, Levin, Armar-Klemesu, Ruel, Morris and Ahiadeke 2000, 2).

Even if the US \$1 a day is replaced by national poverty lines, many nations have a single income-based poverty line that is used in rural and urban areas, or one for urban and one for rural (Boltinik ? 3). This implies that the income needed to avoid poverty is the same everywhere (whether in large cities, smaller urban centres or rural areas). But we know that the cost of living (or of many basic needs) is much higher in large cities and other urban centres in which many essential goods have become commodities. The price index in Cebu, a major secondary city in the Philippines, is estimated to be 89 per cent of that of Metro Manila (World Bank 2001b, 91-2). World Bank (2001b, 91-2) estimates that, if the cost of living index for Metro Manila is 100 (food and non-food items), then four (of 85) regions have a cost of living higher than Metro Manila, and four have a cost of living less than 60 per cent of Metro Manila. A total of 50 regions have a cost of living less than 75 per cent of that of Metro Manila.⁵ Glewwe and McKay (quoted in Jonsson and Satterthwaite 2000, 28) suggest that the prices are between 16 and 30 per cent lower in cities other than Abidjan in the Cote d'Ivoire. Kironde (1995, 83) notes that in 1991 the income required for 2000 calories a day was 19.7 per cent higher than rural areas in towns outside of Dar es Salaam and 98.2 per cent higher in Dar es Salaam. What then should be the right estimate to use in generalised urban poverty assessment?

In addition to the prices of many goods being higher in urban areas, it appears to be accepted by many that urban dwellers spend a smaller proportion of their income on food. Looked at differently, this could mean that they have more essential non-food costs than rural dwellers. Dhanani and Islam (2002, 1218) quote a Central Bureau of Statistics survey in 1996 in

per cent... and the official urban premium varies across states from a high of 65.2 per cent in Andhra Pradesh to lows of only 15.3 per cent in West Bengal and is actually negative in Assam."

⁵ Detailed poverty line (income based) measures for 80 regions enable plots of poverty line measures against life expectancy. The plots suggest that the correlation is weak. Whilst it might be argued that different areas might face a different kind of relationship, the poor correlation suggests that poverty line based measures may be poor indicators.

Indonesia that showed: "...urban households in the neighbourhood of the poverty line spent 37 per cent of their total consumption on nonfood items, while the corresponding figure for rural households was 31 per cent." Dhanani and Islam (2002, 1217) themselves estimate that rural non-food costs are 81 per cent of urban non-food costs. In India, food expenditure is reported to account for 67.6 per cent in the 43rd round (1987/8) falling to 63.4 per cent in the 50th round (1993/4) whilst rural food expenditures were 74.6 and 70.7 respectively, this is "... again to be expected if urban areas are somewhat better off, and because of the relatively greater importance for urban consumers of items such as housing and transportation" (Deaton and Tarozzi 2000, 19). These figures suggest that urban households spend about 7-8 per cent more on housing and transportation if expenditures on non-food and transportation are similar. It is not clear that this is the case. Deaton and Tarozzi (2000, 22-3) go on to suggest "... our [price] estimates exclude between a quarter and a third of the budget, including important items like housing and transportation so that a fuller account of the budget would presumably raise the relative cost of living in urban areas." Government of Mozambique (1998) suggests that expenditures are very slightly higher in each category when urban is compared to rural. Hence poor rural dwellers spend 30 per cent of their income on non-food items whilst for urban dwellers this increases to 38 per cent however the additional expenditure is in no one single category: housing, energy, transportation, household items, education, health care, personal items and transport are each about one per cent higher.

It should be added at this stage that we are not arguing that the cost of living is always higher in urban rather than rural areas. We are arguing that the assumptions implicit in highly aggregated statistics (for instance for national populations or for all 'urban areas') can be wrong and are likely to under-state the scale and depth of urban poverty for the three reasons identified above.

Equally, it should be emphasised that we are not arguing that a poverty line on monetary values is necessarily the best measure of poverty. There is a large literature on the inappropriateness of income-based poverty lines - both generally and specifically for urban areas (see for instance Moser 1993, Chambers 1995, Environment and Urbanization 1995a and 1995b, Rakodi 1995, Wratten 1995, Satterthwaite 1996). Among the issues raised are:

- Intra-household differentials often exist in consumption and in control of assets. As argued by Moser (1993) and Wratten (1995), individual members of a household do not have equal command over resources, and those with low entitlement to consume resources due for example to age, gender or social status may be hidden within relatively prosperous households.
- Non-monetary assets and liabilities are not included. (Also, as pointed out by Wratten (1995), income-defined poverty lines do not measure accurately the capacity to achieve access. This may be influenced by other factors such as education, information, legal rights, illness, threatened domestic violence or insecurity.)
- The impact of short-term stresses, such as sudden illness, is not incorporated, so that no distinction is made between temporary and persistent poverty.
- Income levels also indicate symptoms of poverty and offer no indication of underlying causes, including discrimination and exploitation.

Boltvinik (?, 7) suggests that the World Bank itself recognises the "superiority of integrated poverty measurement" (ie. income plus other basic needs measures) but does not follow this route because of the problems of comparability.⁶ Deaton (2001, 145) also suggests that a

⁶ In a more detailed critique of the World Bank poverty line for Latin America, Boltvinik (? 12) suggests"... *the World Bank poverty line could be interpreted as a measure of malnutrition or physical survival*... [original emphasis]... below such an income level, with almost no possibility of finding cheaper food, a reduction in food consumption would mean malnutrition in terms of calories.... It goes without saying that the World Bank extreme poverty line has no meaning. From what we have already

more broadly based measure of deprivation has much to recommend it. Boltvinik (?, 4) critiques a monetary measure arguing that implicit in the poverty line approach is the assumption that if a group meets its nutritional requirements (above the poverty line for food) then it is above the minimum standards for other basic needs. He argues that in numerous Latin American countries this has been seen not to be the case. Many households that are not defined as poor using official poverty lines are poor in respect of unsatisfied basic needs. Boltvinik (?,19) and Minujin (1995, 5) argue in favour of a measure of poverty that combines a monetary poverty line with unsatisfied basic needs. The resultant measure of poverty would include both those households whose per capita income is below the per capita poverty line and/or have one or more unsatisfied basic need.

Grimm, Guenard and Mesple-Somps (2002, 1074) also emphasise that finance is only one measure of poverty and that there are significant indicators related to basic needs. In a study comparing measures of poverty, they suggest that urban poverty in the Cote d'Ivoire increased by both measures during 1985-93 but by more in monetary terms than in respect of basic needs (subsistence conditions). They conclude: "... this study highlights the fact that poverty measured by subsistence conditions can have a different dynamic than monetary poverty" (page 1088). However, they also emphasis the coincidence between the two measures: particularly the power of measures such as education and the nature of employment (formal, public being associated with less poverty).

And in an example from Asia, following a study of poverty in two very low-income communities in Mumbai, Swaminathan (1995, 142) suggests: "...income poverty lines are inadequate measures of the deprivation of homeless households and households living in city's slums. A feature of the environmental deprivations identified here is that they are characterised by large externalities, for example, the health hazards of open defecation. A rise in private incomes, unless so large as to allow the individual to move to another environment, is not sufficient to eliminate these deprivations."

Satterthwaite (1997, 2001) argues in favour of an even broader interpretation of poverty that includes not only measures of income, assets and access to adequate housing, infrastructure and services but also the extent of protection for poorer groups' civil and political rights, the rule of law and "voice" within political systems and bureaucratic structures. Whilst indicators such as political voice may be considered to be hard to measure, indicative figures can be estimated through monetary indicators. World Bank (2002, 28) reports that one study in Delhi found that, "...on average, 27 per cent of ordinary household who complained about a particularly government service won redress with an average number of four required visits. In contrast, only 6 per cent of slum dwellers were able to get their problems solved, and on average slum dwellers has to make six visits in order to do so. ... In Delhi, for example, the average bribe paid by ordinary households as Rs 254; the average bribe paid in the slums was Rs 337."

Hence non-monetary, basic needs and social exclusion criteria can all be assessed and considered in defining and measuring poverty.⁷ Whilst monetary measures provide a limited indicator of poverty, they have advantages in assessments over large areas or periods of time. Hence, there may be a value in using the more simplified monetary values providing that they are reasonably accurate. Section IV elaborates why, in the context of urban livelihoods, US \$1 day simplifies the measure of poverty beyond any sensible meaning.

seen, people with this level of income would be technically dead." He notes that it is lower than the extreme poverty line as calculated by ECLAC –UNDP (Boltvinik ? 11)

⁷ See Jonsson and Satterthwaite (2000, 11-13) for a more comprehensive critique of the use of monetary based poverty lines.

Perceptions of urban poverty

Prior to moving on to consider the costs faced by urban residents, and better to understand urban poverty, it is also relevant to consider participatory assessments.

The higher cost of living in urban areas and the problems of making a living are emerging in some literature. Okali, Okpara and Olawoye (2001, 21), in a study in Nigeria, find that rural dwellers views' are that city life includes: high crime rate, lack of caring community, high accident rate, environmental pollution, immoral living, high taxation rates and high cost of living. Respondents believe that opportunities in urban areas are better, but higher costs are acknowledged (Okali, Okpara and Olawoye 2001, 21-23). Baker (1995, 125) found a more negative view in Tanzania: "...for the overwhelming majority of village households, urban life was not attractive as it was too expensive..." Only 4.7 per cent of villagers interviewed would have preferred to life in the nearby town (Baker 1995, 125).

In an example from the Philippines, the poor themselves assess urban poverty to be higher than the World Bank and official estimates (World Bank 2001a, 3). World Bank estimates of urban poverty are lower than the official ones that are lower than self rated poverty assessments. Self-rated assessments suggest that poverty in urban areas (whilst still less than in rural areas) is higher than objective statistics. The World Bank (2001a, 3) explains these perceptions thus: "...urban residents in general have higher aspirations for themselves than do rural residents because they are more exposed to 'how others live'...." Non-income dimensions of poverty are put forward as a further explanation; "... information available for some health indicators, for example, suggests that controlling for incomes, urban residents are experiencing higher rates of infant and under five mortality. Similarly, sub-standard housing may be more of an urban than a rural problem" (World Bank 2001a, 3).

Such perceptions are reinforced by other professional perspectives. For example, Henderson (2002, 93) suggests that "…residents of bigger cities are burdened with higher costs of living – for housing, food, utilities, commuting and so on."

IV. Urban poverty and urban livelihoods

This section considers what is known about urban poverty. There are a number of indicators to suggest that urban poverty has increased using existing income-based measures, although it generally remains below levels of rural poverty. (However, the gap between the proportion of rural and urban populations with below poverty line incomes has lessened considerably in many countries).

The section is divided into two sub-sections. The first sub-section considers evidence of rising levels of urban poverty and the second explores the costs faced by the urban poor in more detail.

The rise in urban poverty

Explaining the relatively high fall in urban consumption relative to rural consumption in Zimbabwe between 1990-5, Alwang, Mills and Taruvinga (2002, 19) suggest that there are three reasons. First, a switch to informal rather than formal employment, second, low returns to informal sector employment and third, falling remuneration in the formal sector. McCulloch, Baulch and Cherel-Robson (2000, 1) also find increasing urban poverty in Zambia during a similar period. They emphasise that increasing urban poverty is related to rising prices (particularly the removal of subsidies on basic food stuffs) in addition to changes in the labour market. They estimate that between 1991 and 1996, expenditure by urban residents fell by over 20 per cent. Even under the economic recovery, the urban poor did not manage to increase their consumption. Between 1996-8, national mean per adult equivalent consumption expenditure increased by over a third but in urban areas there was no statistically significant change (McCulloch, Baulch and Cherel-Robson 2000, 16).

There are comparable experiences in other countries. Grimm, Guenard and Mesple-Somps, (2002, 1077-1080) use a number of indicators for Cote d'Ivoire to reach the conclusion that urban poverty increased at the end of the 1980s and the beginning of the 1990s, perhaps declining more recently. They distinguish between the situation in Abidjan and other cities. In a detailed study, Grimm, Guenard and Mesple-Somps (2002, 1087) suggest that expenditure in urban areas in Cote d'Ivoire fell considerably as a result of measures related to structural adjustment. "More precisely, mean expenditures per urban household were divided by two over 1985-98." Factors of particular importance are the decline in real wages for those in public and private sectors. For the public sector, real wages fell by 44 per cent in Abidjan and by 56 per cent in other urban centres between 1985-85; similar figures for private sector wage earners are 52 per cent and 64 per cent during the same period. "Thus we can state a drastic reduction in urban/rural living standard differential due to the dramatic drop of urban incomes and the rise of rural incomes since 1994."

Maxwell, Levin, Arma-Klemesu, Ruel, Morris and Ahiadeke (2000) in a study of Accra also noted an increase in poverty with the percentage of the urban poor increasing from 9 per cent in 1987 to 23 per cent in 1993. They too identify the problems as being related to a lack of job opportunities and the need to purchase basic essentials: "Copious research on the rural poor cannot be applied to urban dwellers because many of the problems they face are different. The urban poor live in a cash economy and purchase processed foods rather than growing their own. Livelihood opportunities are limited."

Gragnolati (2001, 10) agrees on the significance of urban poverty when discussing the impact of the financial crisis in Asia; "... much of the increase in unemployment has been concentrated in cities and urban areas – although some traditional poor areas have also experienced increases." In Indonesia, in particular, urban dwellers faced a particularly difficult adjustment period (Gragnolati 2001, 14).

When understanding reasons for the increase in urban poverty, we need to consider both changes in the labour market and changes in the real value of wages. Wages depend not only on the amount paid but also on effective purchasing power and hence inflation. Fallon and Lucas (2002, 32) suggest that real wages fell considerably during the crises in Asia. Fofack, Monga and Tuluy (?, 4) draw the same conclusions for Burkina Faso. They also argue that poverty assessments can be "... very sensitive to the inflation measure adopted" (Fallon and Lucas 2002, 36). Inflation has a severe impact on the poor who spend a high proportion of their earnings. In addition, Dhanani and Islam (2002, 1223) note that one estimate of factors leading to poverty in the recent financial crisis in Indonesia suggests that "...the bottom 10 per cent of households actually experienced a higher inflation rate that the top 10 per cent of households during the crisis period, particularly in urban areas."

Amis (1997, 96-7) in a study of poverty in India suggests that "...gender differences within the incidence of poverty are more intense than those of rural areas....Women are significantly over-represented in any definition of poverty." Whilst this may not be the case always, it raises a further important issue.

What emerges from this analysis is that urban households are closely linked into the fortunes of the macro-economy. Most urban citizens are dependent on the labour market for their incomes and the commodity market for food and so they are vulnerable to both the general economy and government economic management. The vulnerability of urban residents also emerges from more specific studies. Glewwe and Hall (1995, 6-8) suggest that a rural residency may be associated with reduced vulnerability. Gamanou and Morduch (2002, 1) in a study of vulnerability in the Cote d'Ivoire, conclude that existing measures have failed to identify the significant vulnerabilities in secondary and smaller cities (Gamanou and Morduch 2002, 17).

The costs of non-food essentials for the urban poor

Rising levels of urban poverty reflect the urban poor's dependence on both labour and commodity markets with the informalization of the labour market, falling wages and rising prices. We have established that there are reasonable grounds for believing the price levels for many commodities are higher in urban areas and that non-food costs appear to be greater. Further to this generalized analysis, the discussion below considers costs paid by urban dwellers in particular areas in order to offer further insights into urban livelihoods and expenditures. In the case of housing and health, the discussion also considers costs that urban dwellers might have to pay because living in urban areas increases some needs and associated expenditure.

Housing. Urban dwellers almost universally have to pay for accommodation either through rent or, if living in a self-built house, because access to a land site for the house and for building materials is expensive. A study in Zambia comparing urban to rural expenditures showed that considerably more was spent on housing (10 per cent rather than 4 per cent of income) (Central Statistics Office (Zambia) 1997). In another, community-level study, Wratten (1995, 25) argues that rising costs had increased the problems of affordable housing; in one low-income settlement Chawama in Lusaka (Zambia), homeownership fell from 60 to 37 per cent between 1978 and 1992.

Many tenant-households spend more than a quarter of their income on rent, even though they live in very poor quality, overcrowded housing (Richmond 1997; UNCHS and World Bank 1993; UNCHS 1993; UNDP 1998; Rakodi and Withers 1995). In South Korea, it is not unusual for poor households to pay a quarter of their monthly income on rent (ACHR 1989; Lee 1998). In a study of tenants in Goiania (Brazil), a typical household had one to four people and earned between US \$ 116-350 (one to three times the minimum wage), and paid between US \$ 80 and 150 for their accommodation (Barbosa, Cabannes and Moraes 1997).

Low-income households that do not rent are likely to live in self-built homes in illegal and informal subdivisions. They often have to pay particularly high prices for water and other services (see for instance Rakodi and Withers (1995) for Harare). They often have particular difficulties getting their entitlements – for instance, their children into schools and access to subsidized food because they lack a legal address. Many low-income households that live in 'informal settlements' also have to purchase the land site or pay a rent for it (Hardoy and Satterthwaite 1989; UNCHS 1996). Yapi-Diahou (1995, 24) describes the situation for half a million residents on Abidjan that live in informal settlements. Fifteen per cent invaded the land and 85 per cent acquired land through gifts, purchase, lease or inheritance. Despite the term "gift", they amounts involved can be substantial Yapi-Diahou (1995, 25) nots that "...tips have been ten to 20 more expensive over the last 15 years." He continues "...in this way, access to land is not free, evening in the informal housing sector, so that many city dwellers are excluded."

There is good reason to believe that housing costs are particularly high in major cities. In larger villages and smaller towns, there is likely to be much less pressure on land with dwellers more able to find uncontested spaces on which to squat where they may be allowed to stay with no charge or charged nominal amounts or they may be able to work in return for being allowed to stay.

Hardoy, Mitlin and Satterthwaite (2001, 75-6) discuss the direct and indirect costs facing the poor because of hazardous locations. Sinha and Lipton (1999, 26) also note that a number of low-income urban populations are at particular risk because they cannot afford safe sites. The poor may settle of land prone to land slides or flooding. Lack of income combined with the need for jobs may encourage them to settle of dangerous (and therefore vacant) land that is

well-located. They may face costs if they have to regularly rebuild their houses and replace lost possessions, or through death or injury.

Access to water - and in some instances to sanitation and garbage collection. For many urban households, the payments made to water vendors represents a major item of household expenditure - often 10 percent and sometimes 20 or more percent of household income (see, for instance, Cairncross 1990; also Devas and Korboe 2000, Ghosh, Ahmad and Maitra 1994, Aegisson 2001 and Moser 1996). Many urban households also have to pay for garbage collection and for access to latrines. There is a growing literature showing the extent to which large sections of the population in many cities have no toilet in their home - and public or communal provision is so poor or so expensive that they resort to defecation outside or what is termed in the Philippines as >wrap and throw= (this literature is reviewed in Hardoy, Mitlin and Satterthwaite 2001). Where pay-as-you-use public latrines have developed, using these can take up a significant proportion of total income for low-income households (see for instance the case of Kumasi described in Devas and Korboe 2000). Swaminathan (1995) describes how pavement dwellers in Mumbai with monthly per capita incomes of Rps. 145 in 1990 or less faced a Rps. 1 charge for municipal toilets.

In Huruma, a low-income settlement in Nairobi, average monthly household income is KSh 5,000. Shacks are packed tightly together and there are no toilet facilities except for a few managed on a commercial basis. The charge for the use of a toilet is KSh 2. If a family of 5 each use the toilet twice a day, it would take up 12 per cent of monthly income (Pamoja Trust quoted in UN-Habitat 2003).

Whilst important not to exaggerate its significance, Lerise et al. (2001, 17) note a difference in water provision between rural villages and the urban poor district of Nachingwea in the small town of Lindi (Tanzania). They conclude that: "Lindi district has been the intervention area of an on-going, internationally funded integrated rural development programme, which plays a major role in the provision of basic services. Whilst this is clearly beneficial for the rural populations, low-income urban neighbourhoods seem to have been somewhat marginalized."

Health-care: The tendency for health care providers to seek ways to increase the income available to urban health services by charging users or the reliance of the urban poor on private health services (because of no public ones) may mean that low-income groups face high costs. Or the cost may be in the inability to afford health care so it does not appear in expenditure surveys but manifests as a health burden with serious economic implications. For instance, a study in a 'slum' area in Khulna (Bangladesh), highlighted the very large economic burden caused by poor health associated with poor quality housing - and how the economic cost in terms of income lost from days off work and from medical expenses was greater than the cost of improving the infrastructure to eliminate the health problems (Pryer 1993). A study in Kampala in 1990 highlighted the high proportion of total household income spent on education and health care (Bigsten and Kayizzi-Mugerwa 1992). Ghosh, Ahmad and Maitra (1994) found that more than ten percent of the income of "slum" households in two of the four cities they looked at went on health care. One study in low-income settlements in Dhaka reported that: "[F]or the majority of households some kind of expenditure on health care each month is the norm ... and healthcare was found to be the largest expenditure in most households after food and house rent" (Kabir, Rahman, Salway and Pryer 2000, 711). They attribute living conditions to be one of the factors responsible for poor health and related expenditures "... poor sanitation, cramped housing, absence of waste removal, and inadequate ventilation are reflected in high levels of diarrhoeal and respiratory infections." Dinye (1995) noted that 15 percent of household expenditure among a sample of households in a lowincome settlement in Kumasi (Ghana) was allocated to health. (Moreover, the expenditures on health care by low-income groups are a poor indicator of the income they need for health care as they cannot afford to seek treatment or purchase the most appropriate medicines.)

The relationship between health care and costs associated with illness and injury illustrates all the complexities of urban poverty reduction. Whilst urban living is often associated with good health care, such a relationship may be more connected to good health care for higher income earners, rather than for urban dwellers *per se*. Hence, in Uttar Pradesh (World Bank 2002, vii) "Out of every 100 rupees spent in the public sector on curative health services in UP, the poorest 20 per cent of the population receive 10 rupees in health services whilst the richest 20 per cent receive 41 rupees." Many low-income settlements in the larger cities are a considerable distance from expensive health facilities and their inhabitants may not be permitted to use them. As argued above, many other urban dwellers live outside of large cities.

There is evidence to suggest that in some urban areas, health costs are higher than in rural areas. Sinha and Lipton (1999, 42) suggest that infant mortality in urban areas may be as high as rural areas because of the consequences of environmental conditions. Hardoy, Mitlin and Satterthwaite (2001) highlight how high infant and child mortality rates can be in tenement districts and informal settlements in cities.

With livelihoods dependent on wage labour, the consequences for families of sickness can be considerable. Sinha and Lipton (1999, 44) quote the National Institute for Urban Affairs (1989) in Bangladesh to illustrate such dependencies: 53 per cent of households are dependent on a single worker and are therefore vulnerable to illness and injury. One further study provides indicative figures for the incidence of ill-health and the implications for incomes. Kabir, Rahman, Salway and Pryer (2000, 711) summarise the results of a study of 1000 households in Dhaka. 52.2 per cent of men had been ill in the previous 14 days and 66.2 per cent of women. However, less than half of these had lost work through sickness.

Working conditions may also be very poor. There has been relatively little work done on the workplace hazards faced by the urban poor. Hardoy, Mitlin and Satterthwaite (2001, 73-4) discuss the many occupational dangers facing the workforce in the South. They conclude: "…various studies show how a high proportion of the workers in particular industries or industrial plants have serious health problems from workplace exposures." They also note the increasing number of studies documenting serious health problems arising from small workshops.

Energy: including fuel for cooking and heating water and, where needed, space heating and electricity. The lowest income households in Dhaka were found to be spending 10 percent of their income on fuel (Islam and others 1997). Other studies showing the costs of energy being a significant proportion of expenditures for low-income groups include Government of Mozambique et al (1998), Grootaert (1996) and Ghosh, Ahmad and Maitra (1994).

Public transport: for getting to and from work and essential services. Various studies of urban poor communities show public transport costs representing a significant part of total household expenditure (see, for instance, Grootaert 1996; Urban Resource Centre 2001). A study in Zambia comparing urban to rural expenditures showed that considerable more was spent on transport (12 per cent rather than 7 per cent) (Central Statistics Office 1997). Expenditures are likely to be particular high for poorer groups living on city peripheries because only here could they find land sites on which they could build housing. Other studies have shown the high proportion of low income urban dwellers who walk to work (see for instance Huq, Zahurul and Uddin (1996) for various cities in Bangladesh, and Barter (1999) for central Bombay/Mumbai and Jakarta). In Bombay/Mumbai, one of the key reasons why there are so many people living in shacks constructed on pavements is that this allows them to walk to the places where they can earn their income. In most cities, there are central districts with high levels of overcrowding (for instance in tenements or cheap boarding houses) which arise because their inhabitants have incomes that are too low to allow them to afford the

transport costs if they lived further away in less overcrowded dwellings (Hardoy and Satterthwaite 1989).

Recent city studies provide information about expenditures related to transport for those living in a range of low-income settlements. In Karachi, 51 per cent of households living in 8 low-income settlements spent 10 per cent or more of their income on transport (Urban Resource Centre 2001, 226). The figures are not untypical of other low-income settlements. In Colombo (Sri Lanka), household drawn from six low-income settlements spent a similar proportion of their income. For those with households incomes below Rps. 5000, the average expenditure on transport is 8.9 per cent, for households with monthly incomes between Rps. 5001 to 8000, expenditure is 8.8 per cent and for those with incomes between Rps. 8001 – 11,000, expenditure on transport is 8.1 per cent (Sevanatha 2002). In Dar es Salaam, surveys in three low-income communities suggest that in the two peri-urban communities the poorest household are spending at least 15 per cent of their income on transport. In a further low-income settlement within walking distance of the centre, this figure falls dramatically to between 1-6 per cent (University College of Lands and Architecture 2001).

Schools: Expenditure on schools includes school fees and associated costs such as getting to and from school. Even where entry to schools are free, there may be other costs such as the cost of uniforms, school meals or exam fees which make it expensive for poor urban households to keep their children at school (see Kanji (1995) discussing this for a settlement in Harare as an example). Kwon (1998) and Lee (1998) note the high proportion of income spent by many low income households in South Korea on education. Ghosh, Ahmad and Maitra (1994) found a high proportion of the expenditure of low-income households in three out of the four Indian cities surveyed going on education. Bigsten and Kayizzi-Mugerwa (1992) found that a high proportion of the income of the poorest quintiles in Kampala was spent on education services. Low-income groups may also have to bear the cost of sending their children to 'private' schools because they cannot get places in government schools. The Pakistan NGO, Orangi Pilot Project, found that in Orangi, Karachi's largest informal settlement (with more than a million inhabitants), a high proportion of the population sent their children to private schools because there were so few government schools (Orangi Pilot Project 1995).

Other costs. Many low-income urban households have other costs that go unrecognised by those who define income-based poverty lines. Drawing on a study of India, Harriss-White (2002, 5) argues "... the occupations of destitute people are criminalized – not simply sexwork, couriering and peddling drugs but even mobile trading and squatter trading. An unregistered trading site and the erection of shelter are prosecutable under planning laws, pedestrians' rights and in terms of public nuisance and trespass." As a consequence of such illegality, fines can be high. The cost of funerals can be particularly onerous in areas where there is high child mortality or high adult mortality (for instance in areas where the incidence of AIDS is particularly high). Various studies have also shown how many urban poor groups are paying a significant proportion of their income on debt repayments (see, for instance, CARE/Bangladesh 1998; Amis and Kumar 2000; Kwon 1998).

The problems faced by the hawkers are illustrated by a study of vending in Nairobi (Mitullah 1991, 19). Hawkers make between US \$40 and US \$35 a month depending on business. A typical hawker may spend up to US \$14 a month on transport and US \$10 on stock purchase. Only 11 per cent had licenses and the remainder faced harassment. Mitullah (1991, 20) explains: "The nature of such harassment included goods being snatched (75 per cent), conviction (10 per cent), demand for bribe (8 per cent) and demolition of shelter (3 per cent)." Whilst costs are not estimated, it is evident that they can be considerable.

Other costs include the need to dress appropriately for work (even as cleaners and domestics), high interest costs associated with emergency loans, and payments to community leaders.

It is not possible to generalize about which of the above items is likely to be among the most significant costs for low-income urban groups since each individual or household makes trade-offs in regard to the best location for access to income-earning opportunities, housing size and quality, degree of security of tenure and access to basic infrastructure and services to keep total expenditures on housing, infrastructure and services to within what can be afforded (Hardoy and Satterthwaite 1989).

Particular groups in need

The poorest are the most vulnerable. For example, it is generally the poor who disproportionately lack access to piped water and have to make payments to water vendors or kiosks with water prices being 2-50 times that of piped supplies (Hardoy, Mitlin and Satterthwaite 2001). Families evicted from central locations and relocated far outside the city face high transport costs or the additional cost renting a bed in the centre to carry on essential livelihood activities. See, for example, the report from Phnom Penh in *HiFi News No. 10*; this describes how households have struggled to cope with relocation to settlements many kilometres from their old locations in the city centre.

Within that broad categorization, there are a number of groups in particular need such as old people. Lloyd-Sherlock (2000, 2161) illustrates their problems:

In Buenos Aires, (at that time) ... one of the most expensive cities in the world, the value of the basic pension (received by other 90 per cent of pensioners) was only US\$ 200 a month in mid-1999. As a result, many pensioners obtained the bulk of their living from other sources. A study of older people living in the slum districts of Buenos Aires found that although the majority received some form of state assistance, over three-quarters of these had at least one other significant source of support: 14% of pensioners in the study relied on weekly food handouts from local churches, and 5% resorted to scavenging and begging.

Lloyd-Sherlock (2002, 2162) notes that many in the South that do not receive pensions, whilst those in rural areas may find work in family units, those in urban and rural informal labour markets may face particular problems as they grow old. As has long been recognised, the family is an important source of support for the old, in some cases, social and economic change has broken down such mechanisms (Lloyd-Sherlock 2002, 2162-3).

Conclusion

Most income-based poverty lines, including the World Bank's international poverty line of US\$ 1 per person per day are inappropriate and misleading, because they assume that poverty is essentially caused by inability to afford sufficient food. The many studies noted above show the high costs to low-income dwellers of non-food essentials in particular cities or the high proportion of their incomes that have to be spent on them. The US\$ 1 a day poverty line implies that the income needed to avoid poverty is the same in all locations within a country and the same across countries (when adjusted for purchasing power parity). Its use is likely to significantly under-estimate the scale and depth of urban poverty. In some cities, US\$ 1 a day would be unlikely to cover the cost that many low income-earners face going to and from work; for some low income communities, it would hardly cover the cost of getting minimum volumes of water that has to be purchased from water vendors (and it would never cover the cost of getting sufficient water for health).

Future research priorities are to:

- Examine existing methodologies to see their specific weaknesses and identify best practice
- Look in detail at expenditure patterns of the urban poor in a number of diverse locations around the world and seek to establish what income-levels are sufficient to allow individuals or households to adequately meet basic needs. This will require a

combination of household expenditure surveys and focus group discussions in selected cities to allow a comparison between the income levels that different households need to avoid poverty and what official poverty lines say they need, and to gauge urban poor groups' own perceptions and priorities regarding the definition of urban poverty. Care needs to be taken to draw on the views of men and women and to involve diverse groups from within the 'urban poor';

- From these examinations, consider a methodology for developing poverty lines that more accurately reflect the different levels of expenditure required to secure basic needs;
- Test the methodology in number of other urban centres; and
- Engage with national statistical offices and other institutions that influence the criteria used to define poverty about what criteria would be appropriate for urban areas.

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