WORKING PAPER : 00/01

U N S F I R
United Nations Support Facility for Indonesian Recovery

Project INS/99/002 – Policy Support for Sustainable Social Economic Recovery

POVERTY, INEQUALITY AND SOCIAL PROTECTION: LESSONS FROM THE INDONESIAN CRISIS

Shafiq Dhanani and Iyanatul Islam

Jakarta, April 2000

The views and findings expressed in this paper are entirely those of the authors and do not necessarily reflect the views of UNSFIR. Iyanatul Islam is currently on leave from the School of International Business, Griffith University, Brisbane, Australia. A preliminary version of this paper was presented at a seminar at the Demographic Institute, University of Indonesia (LDUI) on 17 December 1999. The authors are grateful to Satish Mishra and Marie-Laure Caille, respectively Chief Economist and Economist, UNSFIR, for their valuable comments and suggestions.
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CONTENT

EXECUTIVE SUMMARY

When the financial crisis hit Indonesia in mid-1997, few observers expected it to turn into a full-blown social crisis. Over the course of 1998, a preoccupation with tracking exchange rate fluctuations and stock market gyrations gave way to concerns about the human dimensions of the Indonesian crisis. Unfortunately, the paucity of data, coupled with different methods for estimating poverty incidence, meant that such concerns engendered considerable controversy. The paucity of data that characterized much of 1998 has now been compensated by a plethora of information on the social consequences of the financial crisis thus enabling one to revisit the salient issues pertaining to the interaction between poverty, inequality and the Indonesian crisis.

Several themes emerge from this paper. First, a distinction should be made between capability poverty and poverty based on current consumption. The former focuses on such non-income dimensions as education and health. Measured along such dimensions, around 25% of Indonesians were unable to meet basic needs even before the crisis. This is considerably higher than the 11% incidence of consumption-based poverty that has gained wide currency in discussing the outcomes of the Soeharto regime. The publicity that such a statistic generated conveyed the optimistic implication that the incumbent government managed to 'solve' poverty as a generic problem and that future strategies ought to focus on fighting pockets of poverty – among isolated and remote communities, the handicapped, the old and the infirm etc. The failure to recognize the significant incidence of capability poverty thus belittled the challenges that remained. The current government ought to expand its definition of poverty in Indonesia by measuring both capability poverty as well as consumption-based indicators of deprivation.

The second major theme that emerges is the crucial need to distinguish between transient poverty and its long-term behaviour. Consumption-based indicators of poverty are extremely sensitive to variations in prices. In a high-inflation environment, which characterized the Indonesian crisis, this can lead to a good deal of volatility in the poverty line. This, combined with the fact that a significant component of the Indonesian population is clustered around the poverty line, can lead to large – but transient - shifts in poverty incidence when measured by consumption indicators. Capability poverty, on the other hand, is an underlying structural – and even chronic – phenomenon. It responds gradually to long-term growth and government interventions to provide the community with broad-based access to basic services. Not surprisingly, capability poverty behaved in a much more stable manner even during the crisis than measures of deprivation based on current consumption.

The third key message is the necessity to distinguish between overall poverty and the severity of poverty in fully appreciating the social consequences of the Indonesian crisis. The popular Head Count Ratio merely looks at the overall numbers in poverty but is unable to distinguish between the marginally poor and those who are very poor. Using a number of indicators, the paper demonstrates that the incidence of extreme poverty rose faster than the incidence of overall poverty during the crisis.

Fourth, the paper stresses the close link between the severity of poverty and inequality. When the severity of poverty goes up, it implies that inequality among the poor has gone up – although overall inequality may decline. This partly explains why the initial claim that overall inequality declined during the Indonesian crisis has such dubious welfare implications. In any case, the paper assembled evidence to argue that inequality – after adjusting for the differential impact of inflation on poor and non-poor households – rose in rural areas during

the crisis. Moreover, even nominal indicators of inequality – as recorded at mid-1999 – exhibit an increase, thus reversing the observed decline in nominal inequality during the first year of the crisis.

The key policy message of this paper is that the reversibility of the sharp increase in poverty did not happen by accident. Government interventions had an important role to play. An anti-inflation strategy combined with exchange rate stability managed to bring the 'inflation shock' of 1998 under control. Indeed, for the first nine months of 1999, Indonesia experienced deflation. Given the basic premise that consumption-based indicators of poverty are highly sensitive to inflation, the control of inflation and the subsequent onset of deflation partly helps to explain why the crisis-induced swelling in the ranks of the poor turned out to be transient.

Finally, the paper argues that an anti-inflation strategy within a macroeconomic framework cannot adequately explain why the social consequences of the Indonesian crisis turned out to be less severe than initially anticipated. The point is that poor and non-poor households do not face a uniform inflation rate. The available evidence seems to suggest that the poor faced a higher inflation rate than the non-poor. This is consistent with the fact that food prices rose faster than non-food prices. Since food intake dominates the consumption bundle of the poor, the government sought to offer subsidized rice to poor households. This became a key component of the government's social protection policy. At least four evaluations suggest that it was effective in providing some protection to the poor during the crisis. Another possible success story is the scholarship programme that sought to protect the human capital investments of the poor by seeking to stabilize school enrolment rates. When converted into cash equivalent, the rice subsidy programme and the scholarship programme represented a significant share of a poor household's income. The paper was inspired by these success stories to suggest that a fiscally sustainable social protection policy that is able to reinforce household coping mechanisms and social capital should become part of Indonesia's medium-term strategy for battling poverty.

1. INTRODUCTION

When the financial crisis hit Indonesia in mid-1997, few observers expected it to turn into a full-blown social crisis. Over the course of 1998, a preoccupation with tracking exchange rate fluctuations gave way to concerns about the human dimensions of the Indonesian crisis. Unfortunately, the paucity of data, coupled with different methods for estimating poverty incidence, meant that such concerns ended up in considerable controversy. Views varied from those who regarded a crisis-induced, severe increase in aggregate poverty as a highly plausible scenario to those who argued that the rise in nation-wide poverty was moderate.[1] It is against such a background that the paper attempts to revisit the salient issues in understanding the behaviour of poverty and inequality during the Indonesian crisis. The paucity of data which characterized much of 1998 has now been compensated by a plethora of information on the social consequences of the Indonesian crisis. Indeed, information on various aspects of poverty and inequality is readily available to August 1999.

In addition, the new Indonesian government, ushered in late 1999 in the wake of the country's most serious economic crisis in the past three decades, has put new notions of fairness and growth with equity at the top of its economic agenda. This re-orientation requires a more comprehensive assessment of levels and patterns of poverty incidence, as well as a re-evaluation of the extent of income and expenditure inequality in Indonesia. This paper is intended to contribute to this emerging priority by developing four major themes.

The first one is to demonstrate that, in order to appreciate the debate on the behaviour of poverty during the crisis, it is necessary to go back to the pre-crisis period. The pre-crisis literature on Indonesian poverty was preoccupied with generating consumption-based indicators and paid insufficient attention to what Sen (1999: chapter 4) has called 'poverty as capability deprivation'. The latter pertains to non-income dimensions of poverty and focuses on unmet basic needs in health, housing and education.[2] Poverty, seen as the deprivation of basic capabilities, was – and continues to be – significant in Indonesia and is inadequately captured by consumption-based indicators of deprivation. More importantly, capability poverty is an underlying structural – and even chronic - phenomenon which changes only gradually as a result of sustained economic growth and government interventions targeted at the poor.

In contrast, consumption-based poverty incidence can change rapidly in a period of economic crisis such as that which engulfed Indonesia in the late nineties.[3] This is particularly the case when the crisis is accompanied by rapidly rising food prices. It is thus necessary to distinguish between the transient and long-term behaviour of consumption-based poverty. The paper indicates that the main reason for the rapid rise in poverty incidence as measured by the headcount ratio method is the large number of people living at or in the neighbourhood

[1] A thorough review of the debate can be found in UNSFIR (1999). See also Booth (1999a and 1999b).

[2] The recent poverty assessment literature has increasingly focused its attention on 'participatory poverty assessment' (PPA) techniques. The approach tries to delineate the non-income dimensions of poverty by drawing on discussions with poor men and women and other stakeholders. A major volume has recently been compiled by Narayan *et al.* (1999) which draws on 78 PPA reports ranging across 47 countries, including Indonesia. The authors are struck by the '…commonality of the human experience of poverty across countries' (Narayan *et al.*, 1999: 6) and highlight five dimensions of poverty. These include: lack of access to food; lack of access to basic infrastructure, rural roads, transportation and water; such psychological dimensions as powerlessness, voicelessness, dependency, shame and humiliation; a thirst for literacy; and the need to manage assets (physical, human, social and environmental), rather than merely income, as a way of coping with the vulnerability of poverty. See Narayan *et al.* (1999:7).

[3] Kanbur and Squire (1999:7) observe: 'The distinction between transient and chronic poverty has emerged as an important issue in the context of the East Asian crisis'.

of the poverty line. Small changes in the poverty line can produce relatively large changes in the estimates of people living below this poverty line. The elasticity of the number of people below the poverty line with respect to changes in the poverty line is shown to be quite high.

Second, the paper argues that one should distinguish between overall poverty and the severity of poverty. While the depth and severity of poverty were rarely discussed before the crisis, poverty severity has increased substantially during the crisis. This paper seeks to measure the severity of poverty in two ways. First, it estimates the number of poor falling below 80% and 65% of the poverty line (the latter is referred to as the 'food poverty line') and assesses how they have changed between the pre-crisis period and 1998. Second, it reports the poverty severity index – also known as P2 – created by Foster *et al.* (1984).

Third, the paper shows that inequality is a complex phenomenon, particularly in times of economic shock. While the overall Gini coefficient may have declined during the crisis, the welfare implication of such a change is dubious in a context of sharp increases in the severity of poverty. The assessment of changes in inequality is essential to understanding the impact of the crisis on the population, including the food riots which rocked Indonesia in 1998, and in designing emergency social protection measures to combat transient poverty.

Fourth, the paper undertakes a preliminary assessment of the measures put in place by the government to combat the worst effects of transient poverty. The paper shows that in the absence of the twin measures of macroeconomic interventions to tame inflation and stabilize the exchange rate on one hand, and the direct microeconomic interventions of targeted subsidized rice and scholarships for the poor, transient poverty would almost certainly have worsened. The final section draws conclusions and highlights lessons learned.

2. CAPABILITY VS. CONSUMPTION POVERTY: A PRE-CRISIS PERSPECTIVE

2.1 Estimating Capability Poverty in Indonesia

Underlying capability or structural poverty can be primary revealed by unmet basic needs in the housing and health conditions of households, and the educational characteristics of the population. The following describes the characteristics of the Indonesian population in the above terms, before discussing the human poverty index (HPI) for Indonesia, an overall index which combines some of the most representative characteristics of the population into an aggregate measure of capability poverty.

Housing conditions. Before the crisis, about 40% of Indonesian households lived in a house with an earthen or wooden floor, and 30% did not have access to safe drinking water (table 1). About 50% of the households used shared or public toilet facilities and nearly 70% disposed of their faeces in rivers, ponds, lakes or open spaces. About 25% of all households did not have access to electricity for lighting, and relied on kerosene and other means instead. Assuming that most households would select more attractive alternatives if they had the resources to pay for them, roughly a third of all Indonesian households can be said to be living in sub-standard housing conditions before the crisis.

TABLE 1. *Selected Housing and Health Conditions, 1993-1999*
(% of total households)

	Urban					Rural					Urban + Rural				
	Pre-Crisis			Crisis		Pre-Crisis			Crisis		Pre-Crisis			Crisis	
	93	96	97	98	99	93	96	97	98	99	93	96	97	98	99
Earthen or wooden floor	18	16	14	13	13	61	55	51	49	48	47	41	38	35	34
Without safe drinking water	18	12	10	10	10	50	42	38	36	36	40	31	28	26	26
Shared/public toilets	44	35	33	32	31	72	60	56	55	55	63	51	48	46	46
Defecate in rivers/ponds/ open air	46	42	40	41	37	89	85	83	82	80	75	69	67	67	63
No electricity for lighting	10	5	4	3	3	61	41	34	29	25	45	28	23	20	16
Traditional/self-treatment	37	41	34	-	-	42	45	39	-	-	40	44	37	-	-
Traditional/family birth attendant	29	21	19	26	18	74	64	60	60	53	60	50	46	48	40

Source: *Welfare Statistics*, Annual National Socio-economic Survey *Susenas*, February, various years, CBS
Note: '-' not available.

Health conditions. The 1997 national socio-economic survey *Susenas* indicates that nearly 40% of all persons falling ill never sought medical help in a hospital, clinic or primary health care centre, relying on traditional healers and self-treatment instead. Nearly 50% of all households did not have a doctor or midwife present during childbirth. In 1995, life expectancy at birth stood at 63, while the infant mortality rate stood at 45 per thousand. Around a third of all children under the age of five were malnourished (see table 3 below).

Educational attainment, illiteracy and school attendance. The same *Susenas* survey shows that nearly 40% of the population aged 10 and above had either not gone to school or had not completed primary education (table 2). A further 30% had completed primary school, so 70% of the population had an educational attainment of primary school or less. The remaining 30% had gone on to junior secondary school, however only half of these had continued to senior secondary school. As for literacy, over 10% of the population aged 10 and above was illiterate, this proportion being twice as high for females compared with males (15% and 7%), and climbing to nearly 20% for females in rural areas. Finally school attendance rates were 95%, 78% and 49% for school-age children in primary, junior secondary and senior secondary school respectively before the crisis.

TABLE 2. *Educational Attainment, Literacy Levels and School Attendance, 1996-1998 (% of total population aged 10 and above)*

	Urban					Rural					Urban + Rural				
	Pre-Crisis			Crisis		Pre-Crisis			Crisis		Pre-Crisis			Crisis	
	93	96	97	98	99	93	96	97	98	99	93	96	97	98	99
Educational Attainment															
Less than primary school	30	25	23	23	22	54	49	45	45	44	45	40	37	37	35
Primary school	28	28	28	28	27	32	35	36	36	36	31	32	33	33	33
Primary or less	58	53	51	51	50	86	84	81	81	80	76	72	70	70	68
Junior school	17	16	18	18	19	8	9	11	11	11	11	13	14	14	15
Senior school & above	25	31	31	31	31	6	7	8	8	9	13	15	16	16	17
% Illiterate	7	6	6	5	5	18	16	14	14	13	14	13	11	11	10
Male	4	3	3	3	3	12	11	9	9	9	9	8	7	7	6
Female	11	9	8	8	8	24	22	19	19	18	19	17	15	14	14
Still attending school (%)															
Aged 7-12 (primary)	96	97	98	98	96	91	93	94	94	94	93	94	95	95	95
Aged 13-15 (jun. school)	84	87	88	89	88	61	69	72	71	74	69	76	78	77	79
Aged 16-18 (sen. school)	63	66	67	68	69	30	34	36	36	38	43	48	49	49	51

Source: *Welfare Statistics*, Annual National Socio-economic Survey *Susenas*, February, various years, Central Bureau of Statistics.
Note: Still at school: special tabulations of core questionnaire of *Susenas.*

Housing, health and education conditions were considerably poorer in rural areas. Some 50% of rural households lived in a house without a solid floor, while 30% of households used mainly kerosene for lighting. The share of rural households using open spaces for disposing of their faeces was above 80%, while that using traditional or family birth attendants was as high as 60. Nearly half of the rural population had less than primary school education and over 80% with primary education or less. The proportion of illiterate women was more than twice as high in rural areas, 19% compared with 8% in urban areas.

Human poverty index (HPI). So far, individual characteristics of households such as housing, health and education have been described, without any attempt to aggregate some or all of these measures into an overall index of poverty or family welfare. The human poverty index developed by the United Nations Development Programme (UNDP, 1997) attempts to provide such an aggregate measure of capability poverty by combining five indicators, namely life expectancy, adult literacy rate, access to safe drinking water, access to health services and prevalence of malnutrition in children below the age of five. The HPI for Indonesia can be estimated at around 25% before the crisis (table 3).[4]

[4] The Indonesian National Family Planning Board, known by its Indonesian acronym *BKKBN*, has also developed an aggregate measure of family welfare. See Annex 1 for a brief description of this data.

TABLE 3. *Human Poverty Index, 1990 - 1999 (% of Population)*

Indicator	1990	1993	1995	1996	1997	1998	1999
Not expected to survive to age 40 (P_1)	15	(13)	12	(12)	(11)	(11)	(11)
Adult literacy rate (P_2)	18	14	14	13	11	11	10
Without access to safe water[1] (P_{31})	(45)	40	35	31	28	26	26
Without access to health services[2] (P_{32})	(54)	50	41	37	37	(37)	(37)
Undernourished children under five (P_{33})	44	36	36	(35)	(35)	35	30[3]
Human poverty index [4] (HPI)	34	30	27	25	24	23	22

Sources: *Welfare Statistics*, National Socio-economic survey *Susenas*, February, various years, CBS.
CBS/UNDP *Human Development Report 1996 Summary* for indicator P_1

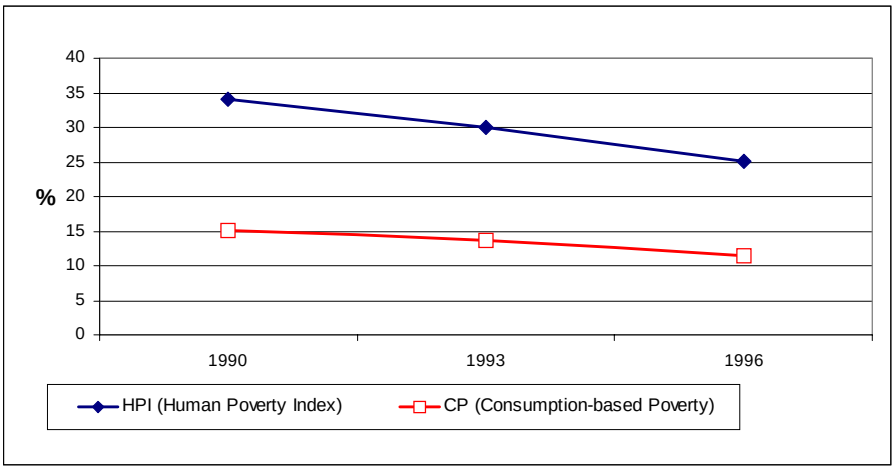
Notes:
Figures in brackets are authors' estimates.
[1] Percent of population without access to water from pipe, pump, protected well or protected spring (*Susenas* table 6.7)
[2] Percent of population using self-treatment or traditional healers, i.e., who do not go to hospital, doctor, medical staff, paramedic or primary health care centre (*Susenas* table 2.11)
[3] The sharp decline in malnutrition is questionable and may be due to non-comparability in methods of collecting data between 1998 and 1999.
[4] HPI calculated using the following formula: $HPI = [(P_1^3+P_2^3+P_3^3)/3]^{1/3}$ where $P_3 = (P_{31}+P_{32}+P_{33})/3$.
The HPI estimates above differ from the ones presented in the UNDP *Human Development Report* due mainly to the significantly higher access rate to health services in the UNDP report.

Summary. There are several features of the estimates of capability poverty that can be summarized at this stage. First, the incidence of capability poverty (as measured by the HPI) in recent years was in the 22%-25% range, while individual indicators of capability poverty were considerably higher in some cases. Second, there has been a notable improvement in capability poverty in the nineties before the crisis. Third, capability poverty has apparently not been adversely affected by the crisis, since all indicators suggest either rough constancy or some progress. This is consistent with the view expressed at the onset of this paper that capability poverty is an underlying structural phenomenon which changes only gradually with the process of economic growth and active government intervention in the provision of basic services to the poor. A subsequent discussion will show that such a relatively stable behaviour of capability poverty stands in sharp contrast to the volatile movement in consumption-based poverty.

2.2 Official CBS Poverty Series as an Inadequate Indicator of Capability Poverty

CBS consumption-based poverty estimates. How do the above measures of capability poverty compare with the more conventional headcount measure of consumption poverty produced by CBS? Based on the national distribution of expenditure of the annual socio-economic survey *Susenas*, CBS estimated that 11% of the Indonesian population were poor in 1996 (10% in urban areas and 12% in rural areas, table 4). Figure 1 highlights the disparity between capability poverty and consumption poverty in the pre-crisis period.

FIGURE 1. *Capability and Consumption Poverty: Pre-crisis Perspective*



The CBS consumption-based poverty estimates are derived from urban and rural poverty lines. The latter consisted of a food component and a non-food component. The food component was obtained by calculating the cost of a standard bundle of 52 most commonly consumed commodities and yielding 2,100 calories per day. Implicit *Susenas* urban and rural prices were used. A similar approach was used for estimating the non-food component of the poverty line, by costing a standard bundle of 27 non-food items in urban areas and 26 items in rural areas. The CBS methodology is presented in detail in CBS/UNDP (1999) and Sutanto *et al.* (1999).

TABLE 4. *Alternative Estimates of Pre-Crisis Consumption Poverty Incidence, 1996 (Head Count Ratio or HCR Method)*

	Poverty Line (Rp./capita/mth)			% Poor	Poor	Total Population	
	Food (2,100 Kcal)	Total (Food + Non-food)	% Food Share		People (million)	(million)	%
CBS 1996 [1]							
Urban	29,681	38,246	78%	9.7%	7.2	74.2	37%
Rural	23,197	27,413	85%	12.3%	15.3	124.4	63%
Total	25,596	31,421	81%	11.3%	22.5	198.6	100%
Authors' Estimates 1996 [2]							
Urban	29,681	45,663	65%	18.0%	13.4	74.2	37%
Rural	26,416	40,640	65%	41.9%	52.1	124.4	63%
Total	31,421	40,916	65%	33.3%	65.5	198.6	100%

Sources:

[1] CBS: Statistical Yearbook 1998 (based on *Susenas* national socio-economic survey 1996).

[2] Author's Estimates: Total poverty line = CBS food poverty line x 1/0.35 to reflect actual expenditure of poor households on non-food items observed in *Susenas 1996* survey (see Annex 2 table A.2).

Note: Rural food poverty line = urban food poverty line x 89% to adjust for cheaper rural prices. Using CBS food poverty line would result in rural poverty incidence of 30.6%.

The CBS estimate of consumption poverty amounts to only a third to a fourth of the share of the population considered to have relatively low living standards in terms of unmet basic needs in the areas of housing, health and education. In addition, three other common consumption or monetary measures would suggest a much higher poverty incidence of the population than the 11% officially sanctioned estimate for pre-crisis Indonesia (see Annex 2 for details of household income and expenditure data). First, the food budget share of the average household was nearly 60% in 1996, this proportion rising to nearly 70% for the bottom 50% of population. Another way of looking at Engel's law is to note that nearly 70% of households spent more than 65% of their expenditure on food, the proportion varying from 18% in urban areas to 92% in rural areas. Second, the mean and median per capita expenditure amounted to $0.90 and $0.70 per day only in that year (calculated using the prevailing exchange rate). And third, the mean earnings of wage employees were less than $90 per month, or around $0.70 per capita per day for a family of four members.

As for ownership of basic consumer goods, about a third to a half of households did not own many everyday durable goods, particularly in rural areas. The latest 1995 inter-censal population survey data indicates that just over a half of the households surveyed possessed a kitchen stove, this proportion falling to a third in rural areas. About a third of all households did not own a radio or cassette player, and more than half did not own a television set, this share declining to less than 30% in rural areas. As for means of transport, only half of the households owned a bicycle, and 30% and 10% owned a motorcycle in respectively urban and rural areas. Car ownership was limited to 9% of urban households and just 2% of rural households, or 4% nationally. In sum, the relatively high food budget shares, the low earnings and expenditures levels of the average Indonesian household (in relation to the used $1 per capita per day norm commonly used in international comparisons of living standards), and the relatively restricted ownership of basic durable goods, would suggest a higher incidence of income poverty than officially admitted.

The low official estimate of consumption poverty in Indonesia for 1996 and in previous years is due to two main reasons: a relatively low poverty line in rural areas, and an underestimated consumption of non-food items. First, the official food poverty line in rural areas was just 78% of its urban equivalent, a gap far in excess of expected urban-rural price differentials. This is because the CBS method, while using a standard bundle of food for both urban and rural households, allows them to consume these commodities in different quantities, thus implicitly allowing urban consumers to purchase more expensive food items. The alternative use of an identical food basket for both urban and rural areas, in terms of both type and quantity as proposed by the World Bank (1993), would significantly increase the rural food poverty line (Asra, 1999), by as much as 11% in 1996 (Ikhsan, 1999). A later section will show that poverty estimates are very sensitive to small changes in the poverty line, suggesting that a higher rural food poverty line would substantially raise the estimate of rural poverty.

Second, the value of non-food items in the total official poverty line amounted to just 14%-15% of total household expenditure until 1996. This is quite low relative to the expenditure pattern of households in the neighbourhood and below the poverty line observed in recent *Susenas* surveys, who spent around a third of their total consumption expenditure on non-food items. Yet poverty calculations by CBS and other researchers have allowed for less than 20% of total expenditure on non-food consumption in rural areas. The World Bank for instance, while advising against the use of a bundle of non-food items, proposes a scaling-up method which is believed to significantly underestimate non-food consumption.[5] Its resulting

[5] The World Bank uses the following scaling factor (World Bank 1993, Annex 1.2, page 111):

lower poverty lines yielded national poverty incidence estimates close to those of CBS for the year 1990 (19.6% vs. 15.1%), though its estimates of urban-rural poverty incidence were markedly different. To the extent that expenditure on non-food items is underestimated, the CBS method will yield a low poverty line and a correspondingly lower poverty estimate.

In its *World Development Report 1998/99*, the World Bank estimated the Indonesian poverty incidence at 11.8% in 1995, a figure quite close to the CBS figure noted above. It was obtained using a poverty line of $1 per capita per day, and converted in rupiah using the purchasing power parity (PPP) conversion factor. A subsequent World Bank report, based on the same methodology, revised this estimate to 6.6% for 1997 (Walton and Manuelyan, 1998). In both cases, the rupiah equivalent of the $1 poverty line was substantially less when using the PPP exchange rate as opposed to the market exchange rate.

While a complete discussion of the appropriateness of the PPP exchange rate for poverty calculation is outside the scope of the present paper, the following limitations can be noted. The PPP conversion factors were designed to allow international comparisons of national account aggregates and not for earnings, living standards or poverty. The most recent PPP figure of 0.3 used by the World Bank dates back to 1985, when relative prices were likely to be quite different than in the late 1990s. It suggests that a bundle of goods and services purchased in the United States for $100 would cost only $30 in Indonesia. However, the average Indonesian consumer purchases a very different bundle of goods and services compared with his or her American counterpart. The *Susenas* data show that the average Indonesian consumer spent nearly 60% of his expenditure on food in 1996, which is probably considerably more than the average American household. On the other hand, the price of major commodities consumed by a poor Indonesian household such as rice (alone responsible for providing 70% of the calorie needs of a poor family), maize, wheat, chicken, eggs, cooking oil and sugar, may not be that different between the two countries. So the bundle of commodities consumed by the Indonesian poor may cost far in excess of the average 30% of the cost in the USA. The Indonesian poverty lines calculated using PPP conversion factors, and the resulting poverty incidence estimates, would correspondingly be underestimated. Finally, PPP conversion factors are more useful in countries imposing currency controls, and less so in a country such as Indonesia with a freely convertible domestic currency.

Alternative estimate of consumption-based poverty, 1996. Consumption-based measures of poverty ought to reflect the situation not only of the many households whose most basic needs in terms of housing, health and education remain unfulfilled, but also of the many households who spend more than two thirds of their expenditures on food because of their low earnings in employment or self-employment, amounting to less than $1 per family member per day (at the prevailing exchange rate). The available consumption-based measures, which estimate the overall poverty incidence level of Indonesia before the crisis in the 7%-11% range, do not meet these two criteria. Table 4 presents an alternative estimate of poverty incidence for 1996 which addresses some of the weaknesses of the CBS methodology, and which is more closely aligned with the indicators of capability poverty discussed above.

$z = zf (2-\alpha)$ where z is the total poverty line, zf is the food poverty line and α is the food share.
This is different from the usual Orshansky method of scaling up the food poverty line as follows:
$z= zf/\alpha$
For example, if zf=100 and α=0.65, the World Bank method will produce z = zf (2-0.65) = 135, while the Orshansky method will produce z = zf (0.65) = 154, a total poverty line which is 14% higher than that of the World Bank, and which would correspondingly produce significantly higher estimates of poverty incidence. For details of the Orshansky method, see Booth (1993).

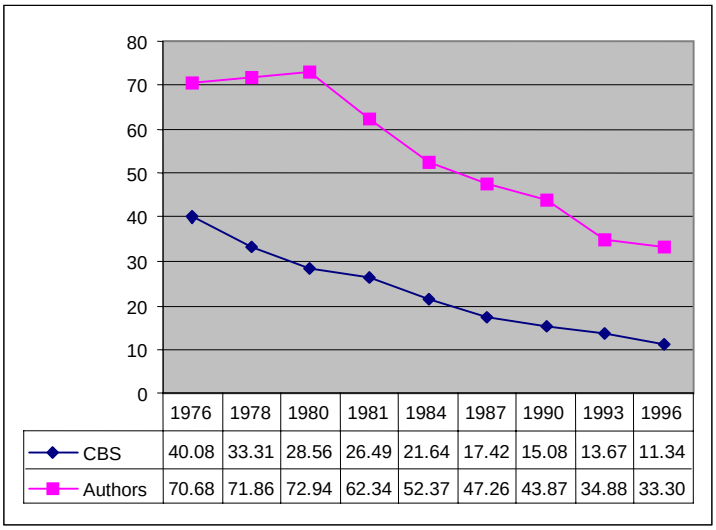
The starting point for this method is the CBS food poverty line. However, instead of using a non-food consumption bundle, it arrives at the total poverty line by using the Orshansky scaling-up factor to allow households at the poverty line to spend 35% of their total expenditure on non-food consumption This is essentially the same scaling-up method as the one used by the World Bank in its country report for 1984 (see Rao, 1983). A second key modification attempts to correct for the substantially lower rural food poverty line relative to its urban counterpart. In the CBS calculations for 1996, this difference was almost 20%, while the difference in the price of basic food commodities between urban and rural areas was of the order of 11% (World Bank 1993, Ikhsan 1999, and CBS/UNDP, 1999). To correct for this, the rural food poverty line was obtained by simply deflating the cost of the standard CBS urban food bundle, considered the national standard bundle of food in terms of types of food and corresponding quantities consumed, by the above price difference between urban and rural areas. Due to the sensitivity of poverty incidence estimates to the level of the poverty line selected, this second adjustment is enough to raise the estimate of rural poverty substantially.

Applying these two modifications to the official CBS method, national poverty incidence in 1996 can be re-estimated at 33% overall, 18% in urban areas and 42% in rural areas. While this alternative national estimate is exactly three times higher than the official estimate of 11% and over four times higher than the 7% international estimates of the World Bank, it is nevertheless of similar magnitude to indicators of capability or structural poverty. In addition, unlike the CBS estimates, the urban-rural poverty incidence gap is significantly higher, at 24% compared with just 2% in the CBS method, and which can explain and justify the rapid rural-urban migration taking place before the crisis.

Decline in absolute and relative poverty, 1976-1996. Absolute poverty measures the incidence in terms of a poverty line built from a constant bundle of food and non-food items. Relative poverty on the other hand allows the concept of basic needs to change over time to reflect higher per capita expenditures, and the decision on the part of households to consume more and better food, clothing, housing, education and other goods and services. There is a large literature on the concept of absolute and relative poverty which argues for the need to keep track of both measures. In estimating poverty incidence over the years, CBS has used the latter concept of relative poverty. In addition, CBS has introduced changes in its method from time to time, which cautions against direct comparisons of poverty incidence from one year to the next (see Annex 3 for a brief description of some of these changes).

In order to produce estimates of absolute poverty over time, the basket of needs constituting the poverty line should be kept fixed, particularly during a period of economic crisis characterized by rapid changes in relative prices. For the pre-crisis period 1976-1996, an approximate way of keeping the basket of needs constant is to simply adjust the 1996 poverty lines in table 4 for the overall rate of inflation in previous years. While the implicit assumption of fixed relative prices in this method, both between food items and between food and non-food items, is admittedly a simplification of reality over such a long period of time, figure 2 nevertheless indicates that absolute poverty, by the consumption standards of 1996, was close to 70% in the late 1970s, and declined to around 30% in the mid-1990s.

FIGURE 2. *Decline in Absolute and Relative Poverty Incidence, 1976 – 1996*



	1976	1978	1980	1981	1984	1987	1990	1993	1996
CBS	40.08	33.31	28.56	26.49	21.64	17.42	15.08	13.67	11.34
Authors	70.68	71.86	72.94	62.34	52.37	47.26	43.87	34.88	33.30

Source: Absolute poverty: Authors' estimates. Relative poverty: CBS.
(See Annex 3, table A.4).

3. CRISIS-INDUCED TRANSIENT POVERTY, 1996 - 1999

3.1 Revisiting the Poverty Debate

As noted, the initial phase of the discourse on the impact of the crisis on poverty was mired in controversy. With the benefit of hindsight, it is now clear that two key issues were either missing or insufficiently emphasized in the early phase of the Indonesian poverty debate. First, there was a general lack of appreciation of the need to highlight the phenomenon of transient poverty. This is particularly important in the case of the Indonesian crisis which was characterized by a deep recession as well as an inflation shock. It is the latter, as will be argued, that holds the key to understanding transient poverty in Indonesia – that is, people moving in and out of poverty in a relatively short period of time.

Second, the early phase of the poverty debate in the context of the Indonesian crisis paid insufficient attention to the need to distinguish between the overall incidence of poverty and the severity of poverty. As Sen (1976) showed more than two decades ago, the two may not behave in an identical fashion. The overall incidence of poverty is best captured by the headcount ratio, but the latter is unable to distinguish between those who are hovering just under the poverty line and those who are located well below it. It is now customary in the poverty measurement literature to capture the severity of poverty by estimating whether inequality among the poor has worsened. If the latter occurs, then this implies that the very poor have become worse off vis-à-vis the marginally poor. This section reports a poverty severity index compiled by CBS, but adds an intuitive dimension to the findings by assessing changes in the number of the poor below 80% and 65% of the poverty line, the latter commonly referred to as the food poverty line.

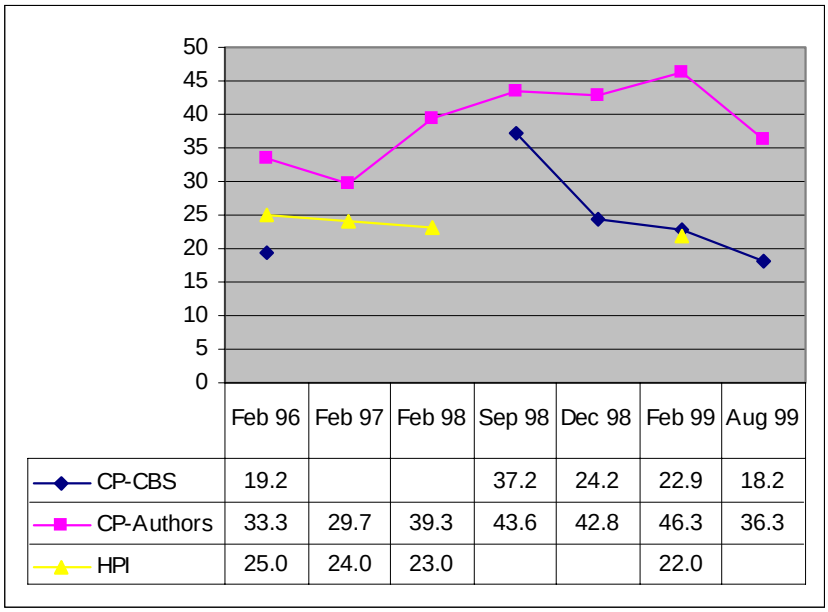
3.2 The Evidence

Headcount poverty. Estimates prepared by three different sources confirm that headcount poverty increased substantially in the first year of the crisis. It now appears that this increase was transient in nature. The reasons underpinning this trend and the policy implications that follow from this are highlighted at a subsequent stage.

According to estimates prepared by the authors, the headcount poverty incidence increased from an estimated 30% in February 1997 to just under 45% in September 1998 (figure 3). Poverty incidence stabilized at around this level until February 1999. Food prices began to decline thereafter, leading to a rapid improvement in transient poverty, which stood at 36% in August 1999. Nevertheless, the headcount poverty incidence was still some 6% higher than before the crisis. Data compiled by CBS also indicate a rapid rise in poverty incidence during the crisis, from 19% to 27% between February 1996 and February 1999, peaking at 37% in September 1998 (or double the February 1996 rate) when food prices were at their highest level, and declining to their pre-crisis level by August 1999.[6] Finally, the analysis of matched households in the periodic 100 Village Survey funded by UNICEF and conducted by CBS found that poverty incidence in rural areas doubled from 12% to 24% from May 1997 to August 1998 (Skoufias *et al.*, 1999).

[6] The September 1998 figure is based on the nominal expenditure distribution of the *Mini-Susenas* survey December 1998. It has not been adjusted for possible substitution effects due to relative prices and higher imputed consumption of own products caused by higher food prices (CBS/UNDP, 1999:58). Neither has it been adjusted for possible changes in nominal incomes and expenditures in the intervening period. The net effect of these two changes therefore remains unknown.

FIGURE 3. *Transient Poverty Trends, 1996 – 99 (% Population)*



	Feb 96	Feb 97	Feb 98	Sep 98	Dec 98	Feb 99	Aug 99
CP-CBS	19.2			37.2	24.2	22.9	18.2
CP-Authors	33.3	29.7	39.3	43.6	42.8	46.3	36.3
HPI	25.0	24.0	23.0			22.0	

Source: Annex table A.3.
Note: CBS poverty incidence using new higher 1989/99 poverty lines. CBS revised poverty incidence for February 1996 upwards from 11.3% in Figure 2 to 19.2% in Figure 3.

Another feature of the evidence worth emphasizing is the contrast between the stability of capability poverty and the volatility of consumption poverty during the crisis. This is clearly depicted in figure 3.

Transient poverty increased in both urban and rural areas according to both CBS and the authors, however this increase was more marked in urban areas, where poverty incidence doubled from 16% to 33%, while rural poverty incidence rose by 45 percentage points from 38% to 55% between February 1997 and February 1999 (Annex 3, table A.3). Both the magnitude of change in overall poverty and its severity in urban areas are consistent with the significant increase in the share of household incomes devoted to purchasing food. The household food budget share rose from 50% to 56% in urban areas, and 67% to 73% in rural areas (Annex 2, table A.2). In fact, the percentage of the population spending more than 65% of its total expenditure on food more than doubled from 18% to 39% in urban areas, and rose from 92% to 96% in rural areas in this period.

Increased severity of poverty. The economic crisis not only increased the number of people falling below the poverty line substantially, but also increased extreme poverty. The number of people falling below 65% of the total poverty line, or below the food poverty line, and the number of people falling below 80% of the total poverty line both increased faster than the overall number of poor people between February 1996 and February 1999. The first one increased by over 70% while the second one increased by over 60%, compared with less than 50% for the population below the total poverty line (table 5). While extreme poverty rose more rapidly in urban areas, due to the low number of poor before the crisis, the number of people below the food poverty line rose by 8 million in rural areas, or twice as many as the corresponding increase of 4 million people in urban areas. The CBS poverty line yields similar results for the population falling below the food poverty line.

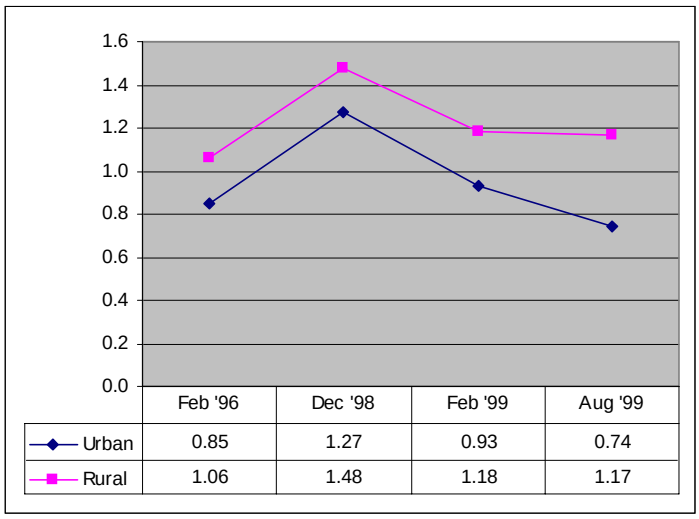
TABLE 5. *Population below Selected Poverty Lines, 1996 – 1999*
(Millions of People, Headcount ratio method)

	CBS Poverty Line				Authors' Poverty Line			
	Feb 96	Feb 99	Change million	%	Feb 96	Feb 99	Change million	%
Below 65% of poverty line	5.63	9.36	3.73	66	16.81	29.03	12.22	73
Urban	1.80	3.11	1.31	73	2.05	6.28	4.23	107
Rural	3.83	6.25	2.42	63	14.76	22.76	7.99	54
Below 80% of poverty line	17.86	26.33	8.47	47	34.86	56.95	22.08	63
Urban	5.06	8.98	3.92	78	5.97	14.72	8.75	147
Rural	12.80	17.35	4.55	36	28.89	42.23	13.33	46
Below total poverty line	37.66	55.78	18.12	48	65.12	94.86	29.74	46
Urban	11.09	19.12	8.04	73	12.67	26.62	13.95	110
Rural	26.57	36.65	10.08	38	52.44	68.24	15.79	30

Source: Annex 3, table A.4.

A second way of illustrating the severity of poverty is to use a measure called P_2 developed by Foster, Greer and Thorbecke (1984).[7] CBS estimates that P_2 increased during the crisis, and more rapidly so in rural areas. It rose from 0.8 to 0.9 in urban areas, and from just over 1.0 to around 1.5 in rural areas between February 1997 and February 1999 (figure 4). In both cases, the index rose sharply in the intervening period (December 1998). More recent data for August 1999 indicate a decline in the urban severity index back to pre-crisis level, but the index remained above the pre-crisis level for rural areas. The evidence thus seems to contradict the notion that the rural economy has borne the brunt of the economic crisis better than urban areas.

FIGURE 4. *Trends in Poverty Severity Index (P2), 1996 – 1999*



Source: CBS/UNDP (1999) and Irawan and Romdiati (1999).

[7] P_2 is in essence the square of the coefficient of variation of expenditure distribution below the poverty line.

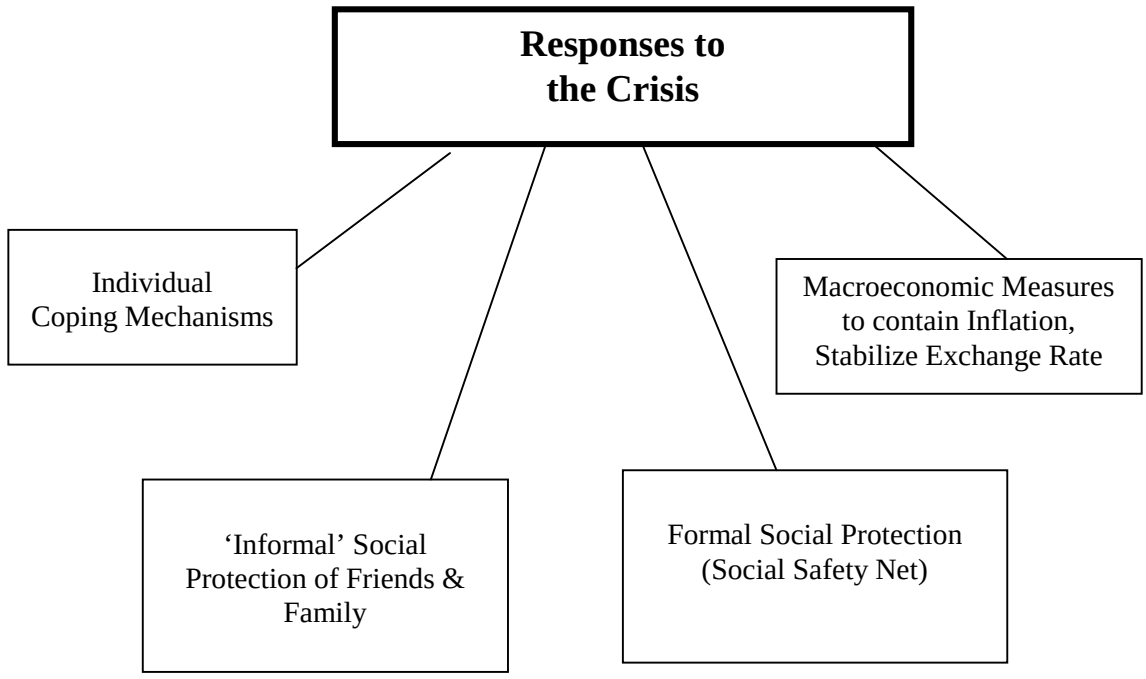
The rise in extreme poverty during the crisis is consistent with deteriorating health and nutritional standards of the very poor reported by other studies. According to one such study, the prevalence of micro-nutrient deficiencies and wasting increased markedly in rural Central Java between 1995-96 and early 1999, while the prevalence of wasting among children was very high in early 1999 in the urban slums of Jakarta, Surabaya and Makassar, a situation usually only detected in emergency or disaster situations indicating a severe shortage of food (Helen Keller International, 1999). The prevalence of anaemia and night-blindness among children and mothers in both rural Central Java and the city slums also increased during the crisis, and continued to do so in the first half of 1999.

An analysis of weight-for-age data contained in the national socio-economic survey *Susenas* indicates that, while there was little change in children below the age of five between 1995 and 1998, the prevalence of underweight children aged 6-17 months in both urban and rural areas, and of 6-23 months in rural areas increased in this period (Jahari *et al.*, 1999). The same study notes an increase in reported cases of severe malnutrition to the crisis centre of the Ministry of Health, to nutrition clinics and in the media, including cases of kwashiorkor and marasmus unheard of since the early 1980s, and an increased prevalence of underweight children under five between 1997 and 1998 in a study conducted by the University of Indonesia.

3.3 Explaining the Evidence

The major thrust of the evidence is that the worst is over and that the incidence of nation-wide poverty is apparently moving back towards pre-crisis levels. Thus, a social recovery seems to be in progress. Is it supported by alternative evidence such as improvements in income levels of the poor? Furthermore, can the volatile incidence of poverty during the crisis be explained? Figure 5 provides a framework for explaining the responses to the crisis.

FIGURE 5. *Response to the Crisis*



Spiralling inflation and volatility of real wages. Support for the view that a tenuous social recovery is in progress comes from real wage data. While nominal earnings increased by less than 20% in the first year of the crisis, inflation of the order of 100% in the same period eroded the purchasing power of the nominal wage to just 60% of its pre-crisis value (Appendix table A.1). Nominal wage increases were unable to keep pace with the rising cost of food and other essential commodities between mid-1997 and early 1999 following the collapse of the rupiah. In addition, the employment situation worsened. The manufacturing and construction sectors, but also virtually all other non-agricultural sectors, shed many jobs following the beginning of the economic crisis in mid-1997. This in turn had a multiplier effect on informal sector employment and incomes. The crisis was further compounded by the drought affecting mainly Eastern Indonesia in the second half of 1997 and also some parts of Java and Sumatra, as well as forest fires raging in Sumatra, Kalimantan and Eastern Indonesia in the same period, both leading to loss of agricultural incomes (ILO/UNDP, 1998 and ILO, 1999).

While real wages continued to decline until early 1999, data for the first quarter of 1999 show that real wages of farm workers rose again, albeit at a moderate pace (Papanek, 1999). More recent data suggest that real wages of farm workers may have increased by up to 25% between February 1999 and October 1999, due to a 12% rise in nominal wages and deflation in the rural consumer price index of 10% (*Buletin Ringkas* December 1999, CBS). Real wages were nevertheless still about 30% lower than before the crisis.

Volatility of poverty incidence. The key feature of the evidence presented so far is the volatility of poverty statistics. Perhaps the best way to understand this phenomenon is to highlight the following points. The Indonesian crisis was characterized not just by a deep recession, but also by an 'inflation shock' in 1998. Nevertheless, the inflation rate fell equally sharply. For the first nine months of 1999, Indonesia experienced virtually zero inflation. The behaviour of the inflation rate is reflected in the behaviour of the poverty line. The poverty line for urban and rural areas rose sharply between 1996 and December 1998, achieved a plateau in the early part of 1999 and then declined by August 1999.

When the impact of inflation on the poverty line is combined with the fact that a significant component of the population is clustered around the poverty line, even moderate movements in the poverty line can trigger significant changes in the incidence of poverty. Thus, in the short run, inflation is the key determinant of rapid changes in observed poverty. Hence, the hypothesis of transient poverty. One could argue that the fall in prices between 1998 and 1999 was the natural outcome of an economy in recession, and that the fall in consumer demand and the rise in excess capacity put downward pressure on prices. However, the inflation shock did not subside by accident, nor was the protection of the poor from the ravages of inflation an unplanned phenomenon. In both cases government intervention, combining anti-inflation strategies with social protection measures, played an important role in mitigating the incidence of transient poverty. This point will be taken up in greater detail at a subsequent stage.

The volatility in poverty estimates in Indonesia is due to the well-known observation that the degree of inequality in household consumption expenditures reported in the annual national socio-economic survey *Susenas* is rather low, and that a large number of households live in the neighbourhood of the poverty line (Booth, 1997:6). In rural areas in particular, the shape of the frequency distribution curve of the population is relatively narrow, with a small standard deviation about the mean. With so many people clustered around the poverty line, a small change in it can produce relatively large changes in the number of people living below this poverty line using the headcount measure. The sensitivity of the headcount measure of

poverty to small changes in the poverty line can be illustrated by calculating the elasticity of people below the poverty line with respect to changes in the CBS poverty line as follows:

$$\rho_{pl} = \frac{\%\ \text{Change in poor people}}{\%\ \text{Change in poverty line}}$$

Where ρ_{pl} is the elasticity of poverty with respect to the poverty line.

For February 1999, the elasticity can be calculated as 2.7. In other words, a 1% change in the CBS poverty line leads to a 2.7% change in the number of people living below this poverty line. When poverty incidence is estimated at around 27% of the total population by CBS, this corresponds to a change in the percentage of people living below the poverty line of around 0.75%. Other things being equal, a 10% increase in the cost of living of the people living in the neighbourhood of the poverty line will result in nearly 7.5% more people being counted as newly poor by the headcount measure.

Implementation of social safety net programmes. An anti-inflation strategy pursued within a macroeconomic framework cannot on its own fully protect the poor from the ravages of inflation. The point is that not all socio-economic groups face a uniform inflation rate or suffer to the same extent from a surge in prices. As is well known, food prices rose faster than the overall inflation rate throughout 1998. More importantly there was a substantial rise in the price of rice by 180% while non-food items rose by 80% between February 1996 and February 1999, according to the *Susenas* survey data (World Bank, 2000). Given that the poor – both in rural and urban areas – are net buyers of food, the wedge between the food and non-food inflation rate goes some way towards explaining why the poor bore the brunt of the crisis. Net sellers of food in the rural economy and producers of export-oriented cash crops, who are likely to be located above the poverty line, would have benefited from rising food prices and the currency devaluation at the expense of more vulnerable groups such as landless rural workers, whose real wages collapsed. There is now evidence that those in extreme poverty actually faced a higher inflation rate vis-à-vis others. One study, on the basis of regular *Susenas* data, estimated that the bottom 10 % of households actually experienced a higher inflation rate than the top 10% of households during the crisis period, particularly in urban areas (Levinsohn *et al.*, 1999).

This suggests that a two-track policy – one focusing on aggregate price stability and the other on subsidizing the price of key goods and services consumed by the poor – may be more effective in mitigating the effects of the inflation shock on the poor. This in turn leads one to social protection policy, or Social Safety Net (SSN) as it is widely known in Indonesia. One such programme consisted of providing cheap rice to poor households. It was mounted in mid-1998 in the wake of food riots and surging food prices. Other programmes, with the financial assistance of the World Bank, the ADB and some bilateral donors, included interventions in education, health, nutrition and employment.

The targeted rice subsidy programme known as the Special Market Operation (*Operasi Pasar Khusus* or *OPK*) aimed to provide food-insecure households with some 20 kg of rice per month at substantially subsidized prices. The *OPK* programme reached 44.2 million people in 1998 and peaked at approximately 50 million people in early 1999, almost equivalent to the entire population recorded as poor in December 1998. A comprehensive assessment of the *OPK* programme, based partly on independent fieldwork commissioned by the Ministry of Food and Horticulture and conducted by universities and NGOs (Rachman *et al.*, 1999), arrived at the following conclusions. The programme was highly cost-effective; in its absence, the poor would have suffered an 11% income reduction and the very poor a 22%

decline in income; the poor would have reduced their calorie consumption by about 8% and protein consumption by about 15%; the *OPK* programme had made an important contribution to price stability; and, since the introduction of the *OPK* programme, there had been a pronounced absence of food riots. The study concluded that the *OPK* programme should be part of Indonesia's long-term tool-kit of social protection measures (Tabor and Sawit, 1999).

A December 1998 field study of 21 urban areas and 19 rural areas in five provinces conducted by the Social Monitoring and Early Response Unit (SMERU), a World Bank project, concluded that '…OPK programme is reaching needy people, but not all needy people received OPK', and that '… no information was uncovered concerning wastage, re-sale, corruption or malfeasance' (Sri Kusumastuti *et al.*, 1998). A more recent SMERU survey of around 450 households in Northern Java found that 'There is no doubt that the *OPK* rice programme has assisted the poorer members of the community in hamlets where 10 kg of rice was provided three or four times' (Hardjono, 1999:28). While both these studies have pointed out that coverage has been insufficient or inadequate due to remoteness and presumably limited resources, they do agree that whatever *OPK* rice was available had gone to those who needed it, lessening their poverty burden.

The scholarship programme consisted of providing scholarships to some 4 million school children (6% of primary school children, 17% of junior secondary school students and 10% of senior secondary school students). The 1998 and 1999 *Susenas* survey data indicate that school attendance rates at all three levels were maintained during the crisis (table 2 above). This suggests that this programme may have prevented large numbers of poor students from dropping out of school. The Northern Java survey cited above observes that '… the children who were granted scholarships very largely come from genuinely poor households; unlike most government programmes, the scholarship programme received almost universal praise from respondents, with only two complaining that their child was passed over in favour of better-off neighbours', and it also notes that 'The scholarship programme… displays a positive bias towards poor households and at the same time has given very tangible assistance to a relatively large number of beneficiaries' (Hardjono, 1999:31 and 32).

While other social safety net programmes such as the labour-intensive programme and the provision of free medical assistance through the health card programme may have had limited success to date (Hardjono, 1999), the direct income transfer due to the subsidized rice programme and the scholarship programme may have made a difference of up to 15% in the total income of a poor household. A family able to purchase 20 kg of subsidized rice per month at Rp.1,000 per kg, compared with the prevailing market price of Rp.2,500 per kg in 1998, could save Rp.30,000 per month. Add to this the value of a primary school scholarship of Rp.20,000 per month, and a family of four members living in the neighbourhood of the CBS rural poverty line of Rp.76,000 per capita or Rp.304,000 per household per month in early 1999, could have increased its income by 16% if registered in both these programmes. The subsidized rice programme alone could have added around 10% to the income of a poor rural household (see also a comparable estimate of 9% by Tabor and Sawit, 1999). Depending on their participation in either or both programmes, this is equivalent to preventing 7%-12% of households from falling below the poverty line, using the poverty elasticity estimate with respect to the poverty line calculated earlier.

The evidence presented so far suggests that some social protection measures taken by the government to combat the crisis have been relatively effective. However it is necessary to take on board the views of those who have criticised the SSN programmes for their poor design and for being a source of waste and corruption. One such evaluation found that their effectiveness has been very uneven and varied enormously from location to location and from

programme to programme (Suryahadi *et al.*, 1999). With respect to *OPK* however, the findings of this evaluation must be interpreted with caution. First, the study relied on a supplementary questionnaire to the periodic 100 Village Survey. This questionnaire did not specifically identify the *OPK* programme by name at a time when many institutions such as the army, political parties, NGOs, religious organizations, companies and wealthy individuals provided food parcels to the needy. Second, it arbitrarily set the first quintile of the sample as poor. However, this survey was designed before the crisis specifically to capture the poor. Hence, designating the first quintile of the sample households as poor is contrary to the spirit and design of the survey. Moreover, it allows one to reach the specious conclusion that the non-poor in this sample received subsidized rice. And third, it failed to note that the low programme coverage in some districts affected poor and non-poor households alike, due to rice availability and distribution problems rather than deficient targeting.

The discussion of the efficacy of government intervention in protecting the poor will be incomplete unless the relative significance of other explanatory variables in understanding the transient nature of the crisis-induced increase in poverty is considered. It is possible to argue that the reason why the social impact of the crisis was muted, and apparently short-lived, is rooted in the coping mechanisms of households. Certainly, both the 'old' poor (those who were poor pre-crisis) and the 'new' poor (those who descended into poverty as a result of the crisis) have tried to cope with the pressures of a recession-cum-inflation shock in 1998 in a number of ways. Thus they sold assets, reduced consumption of micronutrient-rich food, cut down on 'non-essential expenditure', sought refuge in the agricultural sector and the informal sector and migrated overseas. Thus agricultural employment rose from 41% to 45% between 1997 and 1998 (ILO 1999:36), non-wage or informal employment increased from 65% to 68% (ILO 1999:37), legal migration increased from 235,000 to 412,000 between 1997/98 and 1998/99 (ILO 1999:347), figures which are likely to be considerably higher if one allows for illegal migration.

These adjustments also enable one to understand why there was a relatively moderate rise in open unemployment from 4.7% to 5.4% between 1997 and 1998 (ILO 1999:26). They also imply that the labour market adjustment due to the crisis-induced recession was not through open unemployment but through a fall in real wages. Ultimately, the coping mechanisms reflected a combination of individual determination to survive and the resilience of social capital as assistance flowed to the victims of the crisis through the informal network of friends and family. At least one study claims that the average value of assistance received from informal sources was significantly higher than the average value of such assistance from formal sources (Frankenberg *et al.*, 1998).

Clearly consumption smoothing at the household level in a context of well-developed social capital is an important part of the story in understanding the dynamics of the social impact of the Indonesian crisis. It is, however, difficult to believe that such processes alone can explain why poverty has stabilized and that the worst may be over, in the absence of an anti-inflation strategy and *OPK*-type interventions as well as the scholarship programme. Had inflation continued unabated at the rate seen in 1998, and had social safety net interventions been absent, household-level coping mechanisms and the informal network of support forged together by friends and family in the crisis period would have been overwhelmed. Ominous scenarios of an uncontrollable social crisis would have become a stark reality. Hence, the need to combine macroeconomic stability with a long-term, fiscally sustainable social protection policy which was able to reinforce existing social capital.[8]

[8] This also seems to be the key message of the growing literature on the role of social protection policies in developing countries. See, for example, Morduch (1999) and Subbarao *et al.* (1998). There is also an extensive

4. INEQUALITY

4.1 Inequality before the crisis

The discussion so far has focused on understanding how the crisis-induced increase in poverty, while sharp and severe, turned out to be transient to a large extent. The discussion now shifts to an explicit examination of issues in inequality in the pre-crisis period and the way it was shaped by the Indonesian crisis. It should be emphasized that the discussion focuses on expenditure inequality and not on other dimensions of inequality, such as disparities in income and asset ownership.[9] The full extent of inequality cannot be adequately measured by the expenditure component of national socio-economic surveys such as *Susenas* because expenditure is generally not as unequally distributed as income and assets, and because this survey focuses on the consumption of basic necessities at the expense of expenditures on the purchase of land, property, vehicles and other durable consumption goods, and on luxury items such as foreign travel. Unfortunately the income component of the survey is not published by CBS, while data on asset distribution is just about non-existent.

As is well known, shifts in aggregate poverty are sensitive to changes in both average living standards, as measured by per capita expenditure, and in inequality in the distribution of expenditure. For any given change in per capita expenditure, poverty will move in tandem with movements in inequality. The available evidence suggests that inequality increased in Indonesia in the 1990s.[10] The Gini ratio, for example, went up from 0.33 in 1990 to 0.36 in 1996 – quite a discernible jump. It is necessary to establish the trend in inequality until 1998 and its likely behaviour beyond that. The presumption seems to be that inequality improved in 1998 because of large relative price shifts favouring the rural economy vis-à-vis the modern, formal economy.

4.2 Inequality and the Indonesian crisis

First, consider the popular view that inequality fell during the crisis. As Frankenberg *et al.* (1998:9) observe: 'There has been a significant decline in the level of inequality as measured by the logarithm of (per capita expenditure)…'. The World Bank reinforces this finding by noting: 'There is no necessary link between crises and rising inequality; in past Latin American crises inequality often rose; in Indonesia inequality appears to have actually fallen with a collapse in incomes of the top half of the distribution'. [11]

TABLE 6. *Change in Inequality between the Pre- and Post-Crisis periods, 1996 - 1999*

	Urban			Rural			Urban + Rural		
	1996	1998	1999	1996	1998	1999	1996	1998	1999
Theil index	0.26	0.22	0.23	0.15	0.13	0.14	0.26	0.20	0.23
L-index	0.22	0.18	0.20	0.13	0.11	0.13	0.22	0.17	0.19
Gini ratio	0.36	0.33	0.34	0.27	0.26	0.26	0.36	0.32	0.33
Source:	Irawan and Romdiati (1999 table 10).								
Note:	The various measures and their properties are discussed in detail in Hughes and Islam (1981).								

literature on social capital and its role in economic development. See, for example, Evans (1996), Collier (1998) and Woolcock (1998).

[9] For a brief discussion of land ownership patterns, see Annex 4 of this report.

[10] See ILO/UNDP (1998), Akita and Szeto (1998) and Akita and Lukman (1998).

[11] This is a website-based document of the World Bank entitled 'Trends in Poverty' downloaded on May 20, 1999 (www.worldbank.org/poverty/data/newtrends.pdf). The quote is from page 7 of the document.

Analysis of the distribution of expenditure generated by the *mini-Susenas* of December 1998 also reveals a similar trend. As can be seen from Table 6, inequality fell in terms of a series of robust indices (the Gini ratio, the Theil index and the L-index), particularly in urban areas. There are two interpretations of the observed trends in inequality; one is positive, while the other is tinged with scepticism. First, one could argue that the fall in inequality mitigated the rise in poverty. Second, contrary to this optimistic notion, some observers do not see much value in such evidence. While a decline in inequality in a growing economy can be seen to be welfare improving, the interpretation is rather pessimistic in a deep recession. Commenting on the shift in inequality derived by Frankenberg *et al.* (1998), Daimon and Thorbecke (1999:5) note:

> These results would be inconsistent with the worsening of poverty incidence unless (1) there was a significant increase in the variance of the income distributions of the lowest…quartiles following the crisis, or (2) there was a severe measurement problem. In general, measuring welfare based on expenditure data may not be a good predictor, when these data are subject to large fluctuations due to hyperinflation during the crisis…(L)ower income households may have to increase their expenditure for basic needs such as nutrition when prices have risen, even if they make some adjustment through 'consumption smoothing by, for instance, selling assets… Once these assets are sold… the poor have exhausted whatever safety valve they had and further 'consumption smoothing' becomes impossible. In other words, the impact of the crisis might have been attenuated in 1998 by these distress sales and might hit much more severely in 1999 and subsequently.

More recent evidence suggests that the finding of a decline in inequality during the crisis fails to distinguish between nominal inequality and changes in the distribution of income adjusted for the differential impact of inflation on poor and non-poor households. Drawing on the work of Skoufias *et al.* (1999), the World Bank – in an update on the Indonesian economy issued on September 20, 1999 - now concedes that inflation-adjusted inequality went up in rural areas. It observes: [12]

> …(T)he nominal Gini coefficient …does not take account of the effect of relative price changes on inequality. The latter is important because the poor have faced higher inflation than the rich…and net producers have faced more favourable relative price changes than net consumers… Applying the Gini coefficient to household incomes deflated to reflect actual consumption patterns, urban inequality has decreased from 0.299 to 0.289, whilst rural inequality has increased from .265 to .289… The rise in rural inequality is found to be due to increasing inequality in the bottom tail of the distribution (the poorest)… This is consistent with trends in the severity of poverty which increased substantially for rural households between 1997 and 1998.

These observations are significant because they contradict prevailing convictions – to which the World Bank publicly subscribed in previous publications – that the rural economy fared better than the urban economy in bearing the brunt of the Indonesian crisis.[13]

In sum, the conventional view that inequality declined during the crisis is highly questionable. While it may have done so in nominal terms, the evidence is quite different for rural areas when judged in inflation-adjusted terms and is consistent with increases in the severity of poverty discussed in the previous section. In any case, the most recent data for mid-1999 show that the decline in inequality during the crisis has apparently been reversed (table 5).

[12] This is also a website-based document of the World Bank entitled 'Indonesia'. It can be downloaded from www.worldbank.org. The quote is taken – and adapted from – pages 10-11 of the document.
[13] See, for example, World Bank (1999a: 2).

5. CONCLUSIONS AND LESSONS LEARNED

Several themes emerge from this paper. First, a distinction should be made between capability poverty and poverty based on current consumption. The former focuses on such non-income dimensions as education and health. Measured along such dimensions, around 25% of Indonesians were unable to meet basic needs even before the crisis. This is considerably higher than the 11% incidence of consumption-based poverty that has gained wide currency in discussing the outcomes of the Soeharto regime. The publicity that such a statistic generated conveyed the optimistic implication that the incumbent government managed to 'solve' poverty as a generic problem and that future strategies ought to focus on fighting pockets of poverty – among isolated and remote communities, the handicapped, the old and the infirm etc. The failure to recognize the significant incidence of capability poverty thus belittled the challenges that remained. The current government ought to redirect the debate on fighting poverty in Indonesia by focusing on capability poverty rather than consumption-based indicators of deprivation. At least, CBS ought to be encouraged to eschew its focus on consumption-based indicators of poverty by aligning them with indicators of capability poverty.

The second major theme that emerges is the crucial need to distinguish between transient poverty and its long-term behaviour. Consumption-based indicators of poverty are extremely sensitive to variations in prices. In a high-inflation environment, which characterized the Indonesian crisis, this can lead to a good deal of volatility in the poverty line. This, combined with the fact that a significant component of the Indonesian population is clustered around the poverty line, can lead to large – but transient - shifts in poverty incidence when measured by consumption indicators. Capability poverty, on the other hand, is an underlying structural – and even chronic – phenomenon. It responds gradually to long-term growth and government interventions to provide the community with broad-based access to basic services. Not surprisingly, capability poverty behaved in a much more stable manner even during the crisis than measures of deprivation based on current consumption.

The third key message is the necessity to distinguish between overall poverty and the severity of poverty in fully appreciating the social consequences of the Indonesian crisis. The popular Headcount ratio merely looks at the overall numbers in poverty but is unable to distinguish between the marginally poor and those who are very poor. Using a number of indicators, the paper was able to demonstrate that the incidence of extreme poverty rose faster than the incidence of overall poverty.

Fourth, the paper stresses the close link between the severity of poverty and inequality. When the severity of poverty goes up, it implies that inequality among the poor has gone up – although overall inequality may decline. This partly explains why initial claims that overall inequality declined during the Indonesian crisis has such dubious welfare implications. In any case, the paper assembled evidence to argue that inequality – after adjusting for the differential impact of inflation on poor and non-poor households – rose in rural areas during the crisis. Moreover, even nominal indicators of inequality – as recorded at mid-1999 – exhibit an increase, thus reversing the observed decline in nominal inequality during the crisis.

The key policy message of this paper is that the reversibility of the sharp increase in poverty did not happen by accident. Government interventions had an important role to play. An anti-inflation strategy combined with exchange rate stability managed to bring the 'inflation shock' of 1998 under control. Indeed, for the first nine months of 1999, Indonesia experienced deflation. Given the basic premise that consumption-based indicators of poverty

are highly sensitive to inflation, the control of inflation and the subsequent onset of deflation partly helps to explain why the crisis-induced swelling in the ranks of the poor turned out to be transient.

Fifth, the paper argues that an anti-inflation strategy within a macroeconomic framework cannot adequately explain why the social consequences of the Indonesian crisis turned out to be less severe than initially anticipated. The point is that poor and non-poor households do not face a uniform inflation rate. The available evidence seems to suggest that the poor faced a higher inflation rate than the non-poor. This is consistent with the fact that food prices rose faster than non-food prices. Since food intake dominates the consumption bundle of the poor, the government sensibly sought to offer subsidized rice to poor households. This became a key component of the government's social protection policy. At least four evaluations suggest that it was effective in providing some protection to the poor during the crisis. Another possible success story is the scholarship programme which sought to protect the human capital investments of the poor by seeking to stabilize school enrolment rates. When converted into cash equivalent, the rice subsidy programme and the scholarship programme represented a significant share of a poor household's income. The paper was inspired by these success stories to suggest that a fiscally sustainable social protection policy that is able to reinforce household coping mechanisms and social capital should become part of Indonesia's medium-term strategy for battling poverty.

Finally, it is necessary to conclude with a caveat. If one agrees that inflation in the Indonesian context was a primary determinant of short-run movements in poverty (and inequality), it also follows that controlling inflation cannot be a fitting instrument for reducing poverty in the long term. Similarly, social safety net programmes primarily focus on transient poverty engendered by adverse shocks and/or focus on groups with special needs. After all, the crisis was characterized by a historically deep recession leading to loss of durable employment opportunities. Such opportunities can only be created through the renewal of labour-intensive, employment-friendly growth. As a study notes (ILO, 1999), the economy will have to grow over 5% per annum simply to absorb new entrants into the labour market and to clear the current stock of the unemployed and underemployed. How soon such growth will return is still an open question. Assuming that the high pre-crisis rates of economic growth are unlikely to be repeated in the near future, there may well be a case for more interventionist poverty reduction programmes such as the well-known guaranteed employment scheme implemented in Maharashtra, India, and the non-collateral rural credit scheme pioneered by the Grameen Bank in Bangladesh.

Employability of the poor also depends on the continued commitment of the government to the provision of public goods in the realm of basic health and education. Such provisions increase the returns to labour services by making the poor more productive. The major issue here is the government's capacity to maintain its pro-poor commitment towards basic health and education, given that it will progressively face a fiscal squeeze. Early indications are that efforts to maintain health and education expenditures in real terms have not been successful between 1996/97 and 1997/98. This is a legacy of the huge resources that are tied up in recapitalizing and reforming the banking sector and in servicing external indebtedness. It is also a legacy of the 1998 recession which has eroded tax revenues. How to maintain essential social expenditures which can make a dent on capability poverty in an environment of fiscal austerity is a key challenge that will occupy the energy and attention of the government.

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ANNEX 1: FAMILY WELL-BEING, THE BKKBN APPROACH

As part of its expanded mandate to raise the awareness of healthy living among the general population and to raise the living standards of the Indonesian population, the National Family Planning Board (*Badan Koordinasi Keluarga Berencana Nasional* or BKKBN) has also constructed an aggregate measure by collecting detailed information on individual families on an annual basis, and classifying them into five mutually exclusive socio-economic categories. Starting in 1994, BKKBN has undertaken an annual nation-wide enumeration exercise involving door to door visits to over 95% of families between January and March every year, and collecting information on some 90 socio-economic characteristics.

Five of these characteristics, including eating at least two meals a day, owning two sets of clothes and living in a house with a solid floor, are considered so basic that a family is classified as belonging to the pre-wellbeing category if it does not fulfil one of these five conditions. At the next level, a family not able to fulfil anyone of six additional characteristics, such as not eating meat, fish or eggs at least once a week, purchasing one set of clothes in the previous year or all members above 10 and below 65 being literate, are considered to belong to the wellbeing category stage I. Families fulfilling the first five conditions and the next six characteristics are considered to have reached stage II. Finally, nine more characteristics are necessary for a family to graduate to stage III, and a further two additional ones to reach the final stage III plus.

TABLE A.1. *Trends in Family Well-being, 1996 – 1999 (% of Families)*

Family Well-being	Any Reason				Economic Reason			
Category	1996	1997	1998	1999	1996	1997	1998	1999
1. Pre-wellbeing	23.4	19.4	16.4	23.3	14.0	10.9	9.0	15.3
2. Wellbeing stage I	24.8	22.6	21.7	25.6	9.8	8.5	8.3	12.9
Sub-total	48.2	42.0	38.1	48.9	23.8	19.4	17.3	28.2
3. Wellbeing stage II	27.3	29.6	30.1	26.4				
4. Wellbeing stage III	19.8	22.7	25.7	20.0		Not applicable		
5. Wellbeing stage III +	4.7	5.7	6.1	4.7				
Sub-total	51.8	58.0	61.9	51.1	76.2	80.6	82.7	71.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: *Laporan Hasil Pendataan Keluarga 1999* [report of family enumeration 1999], National Family Planning Board BKKBN, Jakarta, Sep 1998 (table 19) and Sep 1999 (graph 3).

Notes:

1. Pre-wellbeing: One or more characteristics of families in stage I not fulfilled.
2. Wellbeing stage I: 1. At least 2 meals a day. 2. At least 2 sets of clothes. 3. Solid or wooden floor (not earthen). 4. Sick children taken to health worker and given modern medicine. 5. Members worship according to their religion.
3. Wellbeing stage II: 1. Meat, fish or eggs at least once a week. 2. One set of clothes purchased last year. 3. 8 m^2 of floor space per member. 4. Healthy in previous 3 months. 5. One regular income per family. 6. All above age 10 and below 60 literate in Latin script. 7. Members regularly worship according to their religion.

The primary purpose of the BKKBN data collection exercise is to identify those families which are unable to fulfil certain basic conditions considered necessary for physically and mentally healthy living, and to allow BKKBN officials to target such families both in motivating them to change for a healthier living, as well as in directing programme resources to them. Their aim is not to estimate poverty incidence or to evaluate the success or otherwise of development programmes. The identification of the potential target beneficiaries for intervention is the novelty and strength of this data collection effort compared with the more conventional socio-economic surveys undertaken by CBS. The latter can describe more objectively, and in a statistically more rigorous manner, the socio-economic characteristics of the population. However, since it uses a sample survey, it cannot identify which families should receive assistance. The BKKBN data does however provide aggregate measures and trends in family welfare, which can be described as follows.

In early 1998, before the full impact of the economic crisis began to be felt, nearly 40% of all families belonged to the first two categories, pre-wellbeing and wellbeing stage I, consisting of respectively 16% and 22% of all families. The proportion of families falling into these two categories for economic reasons was significantly lower at 17% of the total. However, the questions subjected to this test were limited to food, clothing, floor space and type of flooring, and medical treatment, and not to other characteristics such as literacy and regular income or otherwise. It can therefore be assumed that many respondents were reluctant to admit to not being able to fulfil basic food and health conditions due to lack of money.

ANNEX 2: HOUSEHOLD INCOME AND EXPENDITURE

Earnings. The 1997 national labour force survey *Sakernas* fielded just before the onset of the crisis in August, indicates that the average earnings of employees amounted to Rp.240,000 per month, equivalent to US$100 per month ($3 per day) at the prevailing exchange rate of Rp.2,403 to the US dollar (table A.2). Despite rapid urbanization, Indonesia remained a predominantly rural country with two thirds of its workforce residing in rural areas and only a third in urban areas before the crisis. Not surprisingly, agriculture accounted for nearly half of total employment, while industry accounted for just one sixth. Wage rates in agriculture amounted to just 60% of the average wage rate. Self-employment and family work dominated employment, while wage employment accounted for just one third of the total. Since the latter includes traditional agricultural employment of landless labourers and casual construction workers, modern sector employment accounted for a much smaller share than suggested by these figures, perhaps only one sixth of total employment. Thus the employment structure of Indonesia remained quite traditional, with average wages weighed down by a substantial share of the work force engaged in low productivity agriculture, household industry and personal services.

TABLE A.2. *Wage Income and Household Expenditures, 1996-1999 (Rp. 000/month)*

	Urban				Rural				Urban + Rural			
	96	97	98	99	96	97	98	99	96	97	98	99
Average earnings												
Current prices	248	288	328	407	162	187	227	281	207	241	282	350
August 1997 prices	264	288	168	200	172	187	112	132	220	241	141	167
Expenditure												
Current prices												
- Mean	90	88	106	170	46	48	60	98	62	63	77	126
- Median	68	69	85	119	39	43	53	87	47	50	61	95
February 1997 prices												
- Mean	93	88	77	76	47	48	43	42	64	63	55	55
- Median	70	69	62	53	40	43	38	37	48	50	44	41
Food budget share (%)												
- Mean	50	52	54	56	67	67	69	73	58	59	62	64
- Median	58	59	59	66	71	70	73	76	67	68	70	74
% Population spending												
more than 65% on food	18	14	26	39	92	92	92	96	68	65	70	81
Deflator (1997=100)												
February-February	97	100	138	224	97	100	141	236	97	100	140	231
August-August	94	100	195	205	94	100	203	213	94	100	200	210

Sources:
Sakernas national labour force survey, situation of employees and labourers, August, CBS (1999 preliminary unpublished data).
Susenas national socio-economic survey (special tabulations of annual core questionnaire), Feb., various years, CBS
Note:
In 1996, average nominal expenditure levels in *Susenas* consumption module were about 12% higher than in *Susenas* core questionnaire.

Household expenditures. The average per capita expenditure of Indonesian households amounted to Rp. 63,000 per month in 1997, while the median expenditure was 20% lower at Rp. 53,000 per month (respectively $0.90 and $0.70 per person per day). While the divergence between the mean and median value indicates significant expenditure inequality in Indonesian households, the average earnings and expenditure levels above indicate the general poverty of the average Indonesian household in relation to the commonly used $1 per capita per day norm commonly used in international comparisons of poverty levels.

ANNEX 3: TRENDS IN ABSOLUTE AND RELATIVE POVERTY

Absolute and relative poverty

In discussing poverty trends over time, it is necessary to distinguish between the concepts of absolute and relative poverty. The first concept measures poverty incidence essentially in terms of a constant bundle of food and non-food consumption items. In contrast, relative poverty allows the concept of basic needs to change over time to reflect higher per capita expenditures, and the decision on the part of households to consume more and better food, clothing, housing, education and other goods and services. In estimating poverty incidence over the years, CBS has used the latter concept of relative poverty. In addition, CBS has introduced changes in its method from time to time, which cautions against direct comparisons of poverty incidence from one year to the next.

CBS Method for estimating relative poverty

The method used by CBS to calculate the urban and rural poverty lines has evolved in the twenty-year period between 1976 and 1996, making direct comparisons of poverty incidence over time difficult without appropriate adjustments. In the late seventies and early eighties, the food poverty lines were obtained through the cost-of-calories method which calculated the unit cost of calories for the poorest households. Starting in 1984, the food poverty lines obtained using this method were adjusted for the understatement of calories contained in food consumed outside the home (Booth, 1993). This adjustment varied from year to year but was especially pronounced in 1987 and 1990 (Dhanani, 1994).

In addition, for a number of years, CBS has discarded from the sample those households reporting a total food consumption of less than 1,000 kilocalories per capita per day. CBS argues that this 'cleaning' process is necessary because these households had under-reported their consumption, since no household could survive for long periods on such low energy consumption. However, some households could have consumed less than 1,000 kilocalories per capita per day during the enumeration week because they were facing a particularly acute food shortage, and were likely to be severely impoverished. This data cleaning process is likely to underestimate poverty incidence, and more so in a period of crisis triggered by a drought or the rapid escalation of food prices.

The cost-of-calories method suffered from additional weaknesses, including underestimating the calories contained in ready-made food consumed at home, and the inclusion of tobacco and betel nut in food expenditure (*Susenas* 1990: introduction). In 1993, the cost-of-calories method was replaced by the food bundle method, or a basket of 52 food items representative of the consumption patterns (type and quantities) of households of a reference expenditure group just above the poverty line. In 1996 and in subsequent years, the quantities of different foods in this bundle were adjusted to allow for *dynamic* changes in consumption patterns due primarily to general improvements in household incomes, and their observed higher consumption of preferred staples and meat and fish. The above discussion makes it clear that official poverty estimates are not directly comparable over time because the living standards against which they are measured have not been kept constant.

Absolute poverty decline, 1976-1996

In order to produce estimates of absolute poverty over time, the basket of needs constituting the poverty line should be kept fixed. For the pre-crisis period 1976-1996, an approximate way of keeping the basket of needs constant is to adjust the 1996 poverty lines in table 6 for the overall rate of inflation in previous years. While the implicit assumption of fixed relative prices in this method, both between food items and between food and non-food items, is admittedly a simplification of reality over such a long period of time, table A.4 nevertheless indicates that absolute poverty, by the consumption standards of 1996, was nearer 70% in the late 1970s, and declined to 35% in 1993. Rapid economic growth and substantial improvement in agriculture, particularly in the earlier years, characterized this period. In the subsequent three years, poverty incidence continued to decline further to 33% but not as rapidly as in previous periods.

As discussed earlier, the large difference in the level of poverty incidence between the official and the alternative estimates is due to two adjustments. The first consisted of raising the allowance for non-food expenditure in both urban and rural areas using the Orshansky method, while the second consisted of using a common consumption pattern between urban and rural areas, thus raising the food poverty line and poverty incidence in rural areas. When incomes improve and households consume more expensive calories, thus raising the food poverty line, the Orshansky method will automatically inflate the estimated consumption of non-food items. However, this known weakness is not likely to affect the *backcast* presented above, because the simplifying assumption of equal inflation in food and non-food items has kept their quantities implicitly constant over the 1976-96 period.

Transient poverty, 1996 - 1999

Table A.3 presents two series of poverty incidence during the period 1996 to 1999. The first series is the CBS consistent poverty estimates, while the second series is that prepared by the authors based on poverty lines shown in table A.4.

Table A.3. *Transient Poverty, 1996 – 1999 (% of population)*

	1996 Feb	1997 Feb	1998 Feb	1998 Sep	1998 Dec	1999 Feb	1999 Aug
CBS [1]							
Urban	15.6	-	-	32.4	21.9	20.0	15.1
Rural	21.3	-	-	40.2	25.3	24.7	20.2
Urban + Rural	19.2			37.2	24.2	22.9	18.2
Author's Estimates							
Urban	18.0	16.2	23.6	30.2	29.8	33.0	25.6
Rural	41.9	37.6	48.6	52.2	51.1	55.0	43.3
Urban + Rural	33.3	29.7	39.3	43.6	42.8	46.3	36.3

Sources and Notes:
CBS:
Feb 1996 and Feb 1999: based on *Susenas* national survey. See Irawan and Romdiati (1999) table 1.
Sep 1998 and Dec 1998: based on *mini-Susenas* survey. See CBS/UNDP (1999) table 3.10.
Aug 1999: based on *mini-Susenas* survey. See Irawan and Romdiati (1999) table 1.
Figures for Feb 1999 preliminary and unofficial.
Authors' estimates: See table A.4 below.
[1] Feb 1996 estimate different from table 4 and figure 1 due to the use of consistent poverty line for 1996 to 1999 based on 1998/99 standards.
" - " Not available.

TABLE A.4. *Estimates of Poverty Lines and Headcount Poverty Ratio, 1976 - 1999*

	Total Poverty Line					Headcount Poverty Ratio (%)		Percent below Poverty Line			
	Rupiah/capita/month							65%		80%	
	Poverty Line		Household Expenditure								
	CBS	Authors	Mean	Median	%	CBS	Authors	CBS	Authors	CBS	Authors
Urban											
1976	4,522	5,715				38.79	54.79				
1978	4,969	7,109				30.84	52.74				
1980	6,831	11,089				29.04	58.45				
1981	9,777	12,076				28.06	41.49				
1984	13,731	15,757				23.14	31.10				
1987	17,381	19,819				20.14	27.73				
1990	20,614	25,861				16.75	29.74				
1993	27,905	32,192				13.45	20.04				
1996 [1]	43,731	45,663	100,538	76,066	76%	15.63	17.99	2.55	2.91	7.18	8.47
1997 [2]	n.a.	41,721	89,021	69,109	78%	n.a.	16.19		3.11		7.49
1998 Feb [2]	n.a.	57,658	106,268	84,600	80%	n.a.	23.61		5.19		12.44
1998 Sep [3]	113,195	108,069	172,950	139,622	81%	33.60	30.17		6.44		15.88
1998 Dec [4]	96,959	109,320	180,028	143,112	79%	21.92	29.78		6.62		15.85
1999 Feb	98,274	112,080	177,845	140,918	79%	19.99	32.97	3.85	7.77	11.12	18.22
1999 Aug [5]	89,845	104,885	195,630	149,995	77%	15.09	25.57		3.67		13.15
Rural											
1976	2,849	4,723				40.37	74.17				
1978	2,981	5,875				33.38	76.23				
1980	4,449	9,165				28.42	77.18				
1981	5,877	9,980				26.49	68.48				
1984	7,746	13,022				21.18	58.89				
1987	10,294	16,379				16.14	54.28				
1990	13,295	21,372				14.33	50.00				
1993	18,244	26,605				13.79	42.25				
1996 [1]	31,721	40,640	52,794	44,743	85%	21.27	41.93	3.06	11.80	10.24	23.10
1997 [2]	n.a.	37,148	49,228	42,900	87%		37.61		9.31		18.56
1998 Feb [2]	n.a.	52,453	61,123	53,169	87%		48.63		14.58		28.63
1998 Sep [3]	85,818	96,199	109,329	93,709	86%	41.91	52.24		15.72		31.64
1998 Dec [4]	72,780	97,295	113,803	95,988	84%	25.72	51.13		15.80		31.41
1999 Feb	75,613	99,751	112,833	90,000	80%	24.71	55.01	5.04	18.35	13.99	34.05
1999 Aug [5]	69,420	92,081	124,117	89,739	72%	20.22	43.35		12.16		24.96
Urban + Rural 6/											
1976	3,151	4,902				40.08	70.68				
1978	3,351	6,105				33.31	71.86				
1980	4,989	9,601				28.56	72.94				
1981	6,765	10,457				26.85	62.34				
1984	9,152	13,665				21.64	52.37				
1987	12,166	17,288				17.42	47.26				
1990	15,512	22,732				15.08	43.87				
1993	21,450	28,459				13.67	34.88				
1996 [1]	36,165	42,499	69,994	52,432	75%	19.23	33.30	2.88	8.60	9.13	17.83
1997 [2]	n.a.	38,840	63,929	50,467	79%		29.69		7.02		14.47
1998 Feb [2]	n.a.	54,379	77,884	60,750	78%		39.34		11.10		22.62
1998 Sep [3]	96,495	100,829	134,297	107,851	80%	38.65	43.58		12.08		25.46
1998 Dec [4]	82,210	101,985	139,793	110,819	79%	24.23	42.75		12.20		25.30
1999 Feb	84,451	104,559	138,467	108,934	79%	22.86	46.32	4.57	14.18	12.86	27.81
1999 Aug [5]	77,386	97,074	152,313	116,346	76%	18.17	36.34		8.81		20.31

Sources:

CBS: Statistical Yearbook 1998, CBS and CBS/UNDP (1999) for 1976-1998 data.
Irawan & Romdiati (1999) for 1996-99 data using new 1989/99 poverty line standard.

Authors: Authors' calculations (see text for estimation methodology).

Notes:

[1] Starting in 1996, CBS has revised poverty lines using (higher) 1998/99 non-food consumption standards.

[2] 1997 and 1998: poverty lines computed on the basis of core questionnaire (not module), *Susenas* survey.

[3] Calculated on the basis of *Mini-Susenas* survey conducted in December 1998 (see note 4)

[4] *Mini-Susenas* survey of 10,000 households conducted in December 1998.

[5] *Mini-Susenas* repeat survey of 10,000 households, panel data, August 1998.

[6] Poverty lines calculated based on shares of urban and rural populations in *Susenas* survey data.

ANNEX 4: LAND OWNERSHIP

In a country where over 60% of the population resides and makes a living in rural areas, the distribution of land is central to any assessment of income inequality. However, a clear and unambiguous assessment of trends in land distribution and landlessness is difficult to undertake because of the lack of regular and consistent data, including the ten-year interval between agricultural census years, and changes in concepts and definitions between census years, both in the case of the agricultural census and the population census, and between the agricultural census on the one hand and population census and surveys on the other. The last two agricultural census years were held in 1983 and 1993, while the most recent population census dates to 1990, followed by an inter-censal population survey of 1995. An added complication relates to the size of a viable land holding, which can be much smaller in the fertile soils of Java than outside Java, especially if this is irrigated rice land.

Nevertheless, the available agricultural census data indicate that more than a third of the rural households did not own any land and a further 4% owned less than 0.1 ha of land (table A.2). Around a sixth of all agricultural households could be assumed to be landless, relying on employment from other farmers as wage labourers. The extent of landlessness may not have increased in the recent past prior to the economic crisis, mainly due to opportunities to migrate to urban areas or to take up non-agricultural work in rural areas. Nevertheless, the number of marginal and small farmers increased by a third, while average land size declined by 15%, mainly due to population pressure in rural areas.

According to the population inter-censal survey data, around 30 million households lived in rural areas in 1995, out of which some 11 million households of these, or 37%, did not own any land. According to the agricultural census data, there were just under 22 million agricultural households in 1993, so the remaining 8 million could be assumed to be relying mainly on non-agricultural incomes. The difference of around 3 million of agricultural households, or about 14% of the total, could be assumed to be landless. The proportion of agricultural households who relied mainly on wage income is consistent between the agricultural census and the population census data.

Turning now to trends, the average land size controlled by farming households declined by 15% from 1.1 Ha to 0.8 Ha, while their numbers increased by 13% from 19 million to 22 million between 1983 and 1993. The number of land-poor farm households controlling less than 0.1 Ha increased by 30% from 1.1 million to 1.5 million, while the number of households controlling between 0.1 Ha and 0.24 Ha increased by 37% from 2.5 to 3.4 million households. So the number of small farmers controlling land of less than 0.25 Ha increased from 21% to 25% of the total, while the total number of landless and small farmers with less than 0.25 Ha increased by 14% from 13 million to 15 million. As for trends in landlessness, around 0.5 million agricultural labourers moved out of agriculture, their share in the total agricultural work force correspondingly declining from 15% to 14% between 1990 and 1995.

TABLE A.5. *Access to Agricultural Land, 1983 - 1995*
(Million households)

	Agric. Census		%	Pop. Census		%
	1983	1993		1990	1995	
Rural households [1]				28.0	29.7	6
Households with no land				n.c.	11.1	
%				n.c.	37	
Agricultural households [2]	19.5	21.5	10			
Land using households [3]	18.7	21.2	13			
Average land size controlled (Ha)	1.0	0.8	-15			
Farm households controlling land [4]	17.1	19.7	15			
Controlling less than 0.25 Ha	3.6	4.88	36	n.c.	3.9	14
- Controlling less than 0.1 Ha	1.1	1.5	30		1.1	
- Controlling 0.1 Ha – 0.24 Ha	2.5	3.4	37		2.9	
No land or controlling less than 0.24 Ha				13.2	15.0	14
Percentages						
Controlling Less than 0.25 Ha	21	25		n.c.	13	
- Controlling less than 0.1 Ha	7	8			4	
- Controlling 0.1 Ha – 0.24 Ha	14	17			9	
Food crop households controlling land [5]	15.9	18.0	13			
Average land size controlled (Ha)	1.1	0.9	-18			
Total land using households or workers [6]	17.1	19.7	15	35.7	35.2	-1
Employees in agricultural work force		2.7		5.4	4.9	-9
%		14		15	14	

Sources:
[1] Population census 1990 table 67.2 and Population survey *Supas* 1995 table 60.2.
[2] Agricultural census 1993 Series A.1 table A.
[3] Agricultural census 1993 Series A.1 table C.
[4] Agricultural census Series B.1 table 15 (1983) and 2 (1993).
[5] Agricultural census 1993 Series B.1 table 3.
[6] Agricultural census series B.2 table 2 and Population census and survey table 44.9 .
Notes
Blank: no data.
n.c.: data not comparable.