Social Redistribution and Social Safety Net: The case of Indonesia during the Asian Financial Crisis.

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Social Redistribution and Social Safety Net:

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Abstract

In early 1998 the government of Indonesia established several Social Safety Net (SSN) programs, in order to help protect the poor and the newly poor resulting from the economic crisis. This study assesses the impact of these government's initiatives and the findings indicate that the participation of the community in the SSN programs generally had positive impact on household consumption. However, only participation in the subsidized rice program significantly reduced the probability of a non-poor household falling into poverty. Similarly, the impact of participation in the SSN programs on the probability for poor households to move out of poverty is also largely insignificant. This implies that the benefits accrued to poor households from the SSN program are too small to have a significant impact on their likelihood of escaping poverty. Hence, despite the short term success of the SSN programs in alleviating some of the worst effects of the crisis, the program were not an effective tool for social redistribution.

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I. Introduction

Prior to the Asian crisis, Indonesia had one of the most rapid growth experiences of any country in the world. That rapid economic growth had broad based benefits and was accompanied by significant improvements in living standards: poverty — by any standard — fell dramatically. For example, between 1970 and 1996 the proportion of the population living below the official poverty line fell by almost 50 percentage points (from 60 percent to 11 percent). Infant mortality rates fell, school enrollment rates rose, and the provision of basic infrastructure facilities — water, roads, electricity — expanded significantly. In fact, Indonesia was considered to be one of the most successful countries in the endeavor to reduce poverty.

On the other hand, Indonesians had never relied heavily on government safety net programs, and wisely so. The country has neither the economic apparatus nor the political mechanism required to deliver large scale, widespread, transfer programs. Social spending was largely focussed on 'social services', with the family and communities providing 'social insurance'. Exceptions to this are social security schemes mandated for employees in medium and large enterprises (Jamsostek), public service (Taspen), the military (Asabri), and health insurance for employees (Askes).[1] As events evolved during the crisis, these schemes proved ineffective to as forms of social protection for the majority of population, simply because they excluded most of the population, particularly the poor. In addition, there were also some subsidized health schemes, but Indonesia did not have a social safety net system like the one which exists today. Establishing the social safety net in Indonesia in 1998 was therefore more of a case of casting a new net rather than expanding an existing one.

The outbreak of the Indonesian crisis in late 1997 has forced Indonesian households to adjust to the first serious economic contraction in years. Throughout 1998 real economic growth was –13.7 percent.[2] This was a sharp turn around from the high growth of the previous three decades, which averaged over 7 percent annually. The social impact of this large economic contraction was also substantial. The poverty

[1] See Purwoko (1999).

[2] See Cameron (1999).

rate increased by 164 percent from the immediate pre-crisis level in mid 1997 to the peak of the crisis by the end of 1998.[3] In the labor market, even though the open unemployment rate slightly only increased from 4.7 percent in August 1997 to 5.5 percent in August 1998, real wages fell by around one third during the same period.[4] One year later, real wage growth has returned to positive in most sectors, but the unemployment rate has continued to climb, reaching 6.4 percent by 1999.

Therefore, the response of the government to the impending social impact of the crisis was to launch the so-called social safety net programs in early 1998. These are a set of new as well as expanded initiatives widely known as the "JPS" programs, an acronym of the Indonesian term for social safety net, *Jaring Pengaman Sosial*.

The remainder of the paper is structured as follows. Section two revisits the discussions on the social impact of the crisis. Section three reviews the newly established social safety net programs and the methods of targeting used as a response to the crisis. Section four examines the performance of these social safety programs. Section five discusses the interactions between those JPS programs where there has been significant involvement with community and sectoral programs. Finally, section six summarizes the lessons learned from the social safety net and poverty reduction programs and concludes the discussion with some policy recommendations.

II. Background to the Indonesian Crisis

Throughout 1998, Indonesia was mired in a deep political and economic crisis. The crisis in the financial sector was one of the worst in the world's modern history, requiring half of Indonesia's total GDP to fix as loan recovery rates revealed massive losses. The value of the Indonesian rupiah plummeted from a pre-crisis level of approximately Rp 2,500 per US dollar to around Rp 15,000 in mid 1998. The crisis resulted in a 13.7 percent drop in real GDP in 1998. The construction sector was severely hit (-39.8 percent), followed by the financial sector (-26.7 percent), trade,

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[3] See Suryahadi *et al* (2000).

[4] See Feridhanusetyawan (1999).

hotels and restaurants (-18.9 percent). Meanwhile, the agricultural and utility sectors continued to experience positive growth at around 0.2 and 3.7 percent respectively.

The economic crisis has also tremendous impact on inflation which reached 78 percent in 1998, where food prices escalated by an estimated 118 percent in the same period. These price increases and related food shortages strongly affected the poor. For example, on average health expenditure declined by 20.5 percent at the height of the crisis. Household expenditures on health declined even faster than overall expenditures — the share of overall spending going to healthcare decreased by 14 percent for urban and 40 percent for rural households.

A. *The Poverty Rate, Characteristics of the Poor, and Vulnerability*

There have been several studies to assess the impact of the crisis on the life of households throughout Indonesia.[5] Data gathered by the Government Bureau of Statistics in a survey known as SUSENAS in 1996 and 1999 indicated that the crisis has resulted in a substantial increase in poverty.[6] According to one estimate the national poverty rate increased from 15.7 percent in February 1996 to 27.1 percent in February 1999.[7] The number of urban poor has doubled, while we have seen a 75 percent increase in the number of rural poor. A study tracking poverty over the course of the crisis is shown in Figure 1. It indicates that the poverty index increased from 100 just before the crisis in mid 1997 to 264 at the peak of the crisis by the end of 1998.[8]

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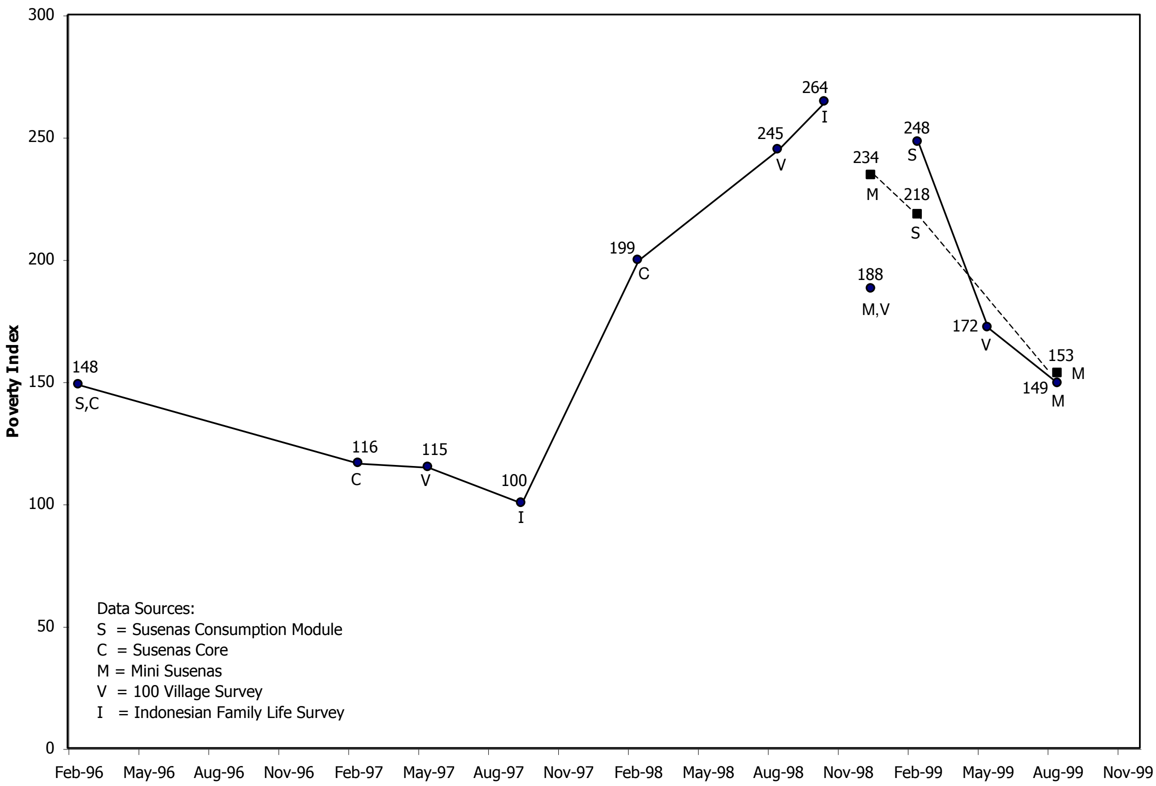
[5] See, for example, Poppele *et al* (1999), Skoufias *et al* (2000), Wetterberg *et al* (1999).

[6] SUSENAS is the National Socio-Economic Survey, conducted by the Government's Statistics Agency (BPS).

[7] See Pradhan *et al* (2000).

[8] See Suryahadi *et al* (2000).

Figure 1: Estimates of Poverty in Indonesia During the Crisis



Source: Suryahadi *et al* (2000)

The poor tend to have low education, work in agriculture, and live in rural areas. Eighty seven percent of the poor live in households in which the head of household has a primary school education or less, while only 5 percent of the poor have a secondary school education or better. Almost 60 percent of the poor are in households where agriculture is the main source of income (whether from labor or land). Even though the "modern" sector has a quarter of all workers, they only have 15 percent of the poor. In keeping with that, fully three quarters of the poor live in rural areas.[9]

Determining exactly who should be classified as "the poor" is a difficult task since who the poor are at any point in time is very fluid, and people and households enter and exit periods of poverty frequently. In Table 1 we reproduce a poverty

[9] Pradhan *et al* (2000).

transition matrix from Skoufias *et al* (2000).[10] Although during the crisis many of the households that were marginally poor before the crisis became impoverished, the transition matrix reveals considerable fluidity. Approximately 31 percent of the poor in 1997 moved out of poverty in 1998, although mainly to the category of *near poor* (17.52 percent). Also, 44.53 percent of *the near poor* in 1997 became poor in 1998, but there were also 17 percent which managed to become *non-poor*. But more surprisingly, almost 17 percent of poor households in 1998 were *near non-poor* and more than a quarter (26.24 percent) were *non-poor* in 1997. These are the households which in 1997 had expenditures more than 25 and 50 percent above the poverty line respectively. Only 35 percent of the poor in 1998 are those who were also poor in 1997. This implies that reaching *the poor* in 1998 will be difficult, as many families who otherwise would not have been at all poor have suffered large reversals of fortune during the crisis and has become poor.

[10] The data used are from a panel of 8,142 households surveyed in the "100 Village Survey" in May 1997 and August 1998.

Table 1. Poverty Transition Matrix						
		Total 1997	Poverty Status in 1998			
			Poor	Near Poor	Near Non-Poor	Non-Poor
	Total 1998	8,141	1,997	1,369	1,213	3,562
	- row percentage	100.00	24.53	16.82	14.90	43.75
	- column percentage	100.00	100.00	100.00	100.00	100.00
	- total percentage	100.00	24.53	16.82	14.90	43.75
Poverty Status in 1997	Poor	1,010	697	177	78	58
	- row percentage	100.00	69.01	17.52	7.72	5.74
	- column percentage	12.41	34.90	12.93	6.43	1.63
	- total percentage	12.41	8.56	2.17	0.96	0.71
	Near Poor	988	440	239	140	169
	- row percentage	100.00	44.53	24.19	14.17	17.11
	- column percentage	12.14	22.03	17.46	11.54	4.74
	- total percentage	12.14	5.40	2.94	1.72	2.08
	Near Non-Poor	1,114	336	282	190	306
	- row percentage	100.00	30.16	25.31	17.06	27.47
	- column percentage	13.68	16.83	20.60	15.66	8.59
	- total percentage	13.68	4.13	3.46	2.33	3.76
	Non-Poor	5,029	524	671	805	3,029
	- row percentage	100.00	10.42	13.34	16.01	60.23
	- column percentage	61.77	26.24	49.01	66.36	85.04
	- total percentage	61.77	6.44	8.24	9.89	37.21

Notes:
Poor: PCE < PL, Near Poor: PL ≤ PCE < 1.25*PL,
Near Non-Poor: 1.25*PL ≤ PCE <1.5*PL, Non-Poor: PCE ≥ 1.5*PL
PCE = Per capita expenditure, PL = Poverty line

Source: Skoufias *et al* (2000)

This also means that a large swath of the Indonesian population that is today *not poor* is nevertheless "at risk" of poverty. Any adverse shock to their incomes (or necessary expenditures) could easily force them under the line into poverty. Even if only 27 percent of population are poor now, between 30 and 60 percent of population are vulnerable to poverty over a three-year horizon. Furthermore, vulnerability to poverty varies across population groups. Table 2 reproduces estimates of vulnerable population across various groups of population from Pritchett *et al* (2000).[12] The table reveals the following: households headed by a female are more vulnerable to poverty

[12] The calculations are based on an assumption of a 20 percent overall poverty rate. The data used are a panel of 10,000 households surveyed in "Mini-SUSENAS" in December 1998 and August 1999.

than households headed by a male, the lower the education level of a household head the more vulnerable the household is to poverty, rural households are more vulnerable to poverty than urban households, while among rural households the landless are more vulnerable to poverty than landed households. Finally, households in the agriculture sector have a much higher degree of vulnerability to poverty than households in other sectors.

Table 2: Estimates of poverty and vulnerability across groups						
	Mean of log percapita expenditures in the initial period	Headcount poverty rate (%)	Yearly coefficient of variability	Average vulnerability for three annual shocks	Headcount vulnerable rate (%)	Ratio of vulnerable to poor
By gender:						
a. Male	10.9009	20.50	0.0392	0.3899	47.11	2.30
b. Female	10.9071	21.23	0.0440	0.4410	50.97	2.40
By education:						
a. Less than primary	10.6840	32.04	0.0404	0.6611	64.94	2.03
b. Primary	10.8279	21.15	0.0381	0.4624	49.67	2.35
c. Lower secondary	11.0430	10.06	0.0399	0.2544	34.20	3.40
d. Upper secondary & higher	11.3333	4.24	0.0399	0.0783	17.69	4.17
By urban-rural:						
a. Urban	11.1640	7.93	0.0405	0.1697	29.10	3.67
b. Rural	10.7284	28.88	0.0389	0.5963	59.17	2.05
By land owning (rural households only):						
a. Landless	10.4631	58.30	0.0318	0.8732	75.74	1.30
b. Landed	10.7325	28.42	0.0390	0.5919	58.87	2.07
By sector:						
a. Agriculture	10.6567	33.76	0.0389	0.6837	65.79	1.95
b. Industry	10.9881	15.24	0.0381	0.2812	39.77	2.61
c. Trade	11.0661	10.55	0.0416	0.2575	36.33	3.44
d. Services	11.1270	9.46	0.0399	0.1867	30.50	3.22

Source: Pritchett *et al* (2000)

B. The Impact of the Crisis on Labor Market

The crisis has also had tremendous effect on the labor market. Open unemployment continued to rise slightly, from 4.7 percent in 1997, to 5.5 percent in 1998, and to 6.4 percent in 1999. The decline in real wages, however, has been far more important than unemployment in channeling the impact of the contraction in the labor market.[13] Nevertheless, recent estimates of real wages by sector provide some hope. For most sectors we observe a substantial — more than 10 percent — increase in real wages between 1998 and 1999, except for the agriculture and mining sectors where real wages has continued to drop by 4 percent and 16 percent respectively.

Another component of the impact of the crisis on the labor market has been shifts in employment for women. Many factories in the modern sector which employed young, mostly unmarried, and women were hit particularly hard during the crisis. However, in many households with children women have to take on additional paid work. As a result the fraction of women in the labor force in certain areas has actually risen. Finally, there have been various reports in certain rural areas changes in migration patterns that have affected the labor market so that certain agricultural tasks which were previously dominated by women are now being performed by men.

C. Coping Strategies

It is important to understand that people are not merely passive victims of the Indonesian crisis, but have found ways to cope with the impact of these events by using their own initiatives, and also by relying on their families, friends, communities, and also (to varying degrees) by accessing government programs. A survey in December 1998 asked about how they had coped with the crisis. The results revealed three main strategies: reducing expenditures, borrowing, and attempting to raise incomes.[14] In reducing expenditures, non-necessities were cut most frequently: clothing (68 percent) and recreation (53 percent) were the most frequently cut. Then followed necessary expenses, such as reducing the quality of foods (52 percent) and reducing transportation expenses (48 percent). Another 38 percent of the poor (but only 22 percent of non-poor) were even forced to reduce the quantity of food consumed. A second option for the poor was to maintain necessary expenditures by borrowing or selling assets. The most frequent means to achieve this was to borrow from others, a method adopted by almost a third of the poor (and a quarter of the non-

[13] Feridhanusetyawan (1999) argues that this reflects the flexibility of the Indonesian labor market.

[14] BPS and UNDP (1999).

poor) during the crisis. The third option was trying to raise incomes. In a flexible labor market, this can be achieved by taking additional jobs, working longer hours, or increasing the number of members of the family who are working.

III. The Indonesian Social Safety Net Programs

A. Social Safety Net Programs as a Response to the Crisis

At the onset of the Indonesian crisis, concern was raised over whether the considerable achievements that had been made in the health and education and in poverty reduction over the previous decades would be sustained. The Indonesian government reacted quickly and put in place a number of measures aimed at safeguarding real incomes as well as providing access to social services for the needy.

Several new programs were launched, [15] which were intended to help protect the those who were already poor before the crisis as well as the newly poor as a result of the crisis through the following four strategies:

(a) ensuring the availability of food to the poor at affordable prices,

(b) supplementing purchasing power among poor households through employment creation,

(c) preserving access of the poor to critical social services such as health and education, and

(d) sustaining local economic activity through regional block grant programs and extension of small-scale credit.

Table 3 recapitulates the areas and programs of this recently established Indonesian social safety net system.

[15] See Suryahadi *et al* (1999).

Table 3. Areas and Programs of the Indonesian Social Safety Net	
Safety Net Area	Program
Food security	Cheap rice program (OPK): sales of subsidized rice to targeted households
Employment creation	Padat Karya: a loose, uncoordinated collection of several ‘labor intensive’ programs operated through several government departments
	PDM-DKE: a ‘community fund’ program providing block grants directly to villages for either public works or as a revolving fund for credit
Education	Scholarships and Block Grants: providing ✓ Scholarships directly to elementary (SD), junior secondary (SLTP), and senior secondary (SMU) students ✓ Block grants to selected school.
Health	JPS-BK: a program providing subsidies for ✓ Clinical services ✓ Nutrition ✓ Midwife services

The programs launched to address the above areas were designed by the central government and were intended to have the following characteristics: quick disbursement, direct financing to beneficiaries, transparency, accountability, and widespread participation. However, as has been revealed by various studies, these intended characteristics have not always been achieved.

B. *Method of Targeting*

In general, the targeting for JPS programs is based on a combination of household and geographic targeting. Table 4 summarizes various targeting methods that have been adopted.

Table 4. Targeting Mechanisms in JPS Programs

Program and Targeting Method		FY 98/99	FY 99/00
OPK (Food Security)	Geographic	None	None
	Household	BKKBN (Family Planning Board)list	BKKBN list with flexibility
PDM-DKE (Employment creation, Community Funds for public works, Credit)	Geographic	Pre-crisis data	Updated with Bappenas (national planning agency) regional data
	Household	Local decision making	Local decision making
Padat Karya (Employment Creation)	Geographic	None, various ministries	Urban areas, based on employment
	Household	Weak self selection	Self selection
Scholarship and Block grants to schools	Geographic	Old data on enrollment	Poverty updated to 1998
	Household	School committees following criteria	School committees following criteria
JPS-BK (Health)	Geographic	BKKBN pre-posperous rates	Updated pre-posperous estimates to 1999
	Household	BKKBN list	BKKBN list with flexibility

The targeting for some programs is based on a household classification created by the National Family Planning Agency (BKKBN). According to this classification, households are grouped into four socio-economic status groups: ‘pre-prosperous’ (“pra-sejahtera” or PS), ‘prosperous I’ (“sejahtera I” or KS I), KS II, and KS III. The KS I to KS III categories are often lumped together as KS category. In past years, eligible recipients for some JPS programs are only PS card holders, but for some programs eligibility was extended to include KS I households as well (e.g. OPK). This household-based targeting was used mostly for the cheap rice program (OPK) and the health program (JPS-BK).

Padat karya (which means, as an adjective, ‘labor intensive’) is not a single program but rather collection of programs which were all aimed at employment creation. These programs were created as a response to the threat of burgeoning unemployment because of the economic contraction which had forced many firms to either lay off workers or shutdown completely. In accordance with the urban nature of the crisis, the initial geographical targets for the first round of “crash” programs in FY 1997/98 were directed to urban areas plus some rural areas which had experienced harvest failures.

Following on these ‘crash’ programs, in FY 1998/99 there was a proliferation of employment creation programs (*padat karya)* with more than a dozen in this category. These programs can be classified into four types. First, some were on-going investment and infrastructure projects which were re-designed as labor-intensive projects. Second, other program, such as the *Kecamatan* Development Project, the Village Infrastructure Project, and PDM-DKE Community Fund Program gave block grants to local communities. These programs were directed to poor areas, and contained ‘menus’ that included the possibility of using funds for public works with a labor creating effect. A third set of programs were those special labor intensive schemes carried out by sectoral ministries (e.g. retraining of laid-off workers by the Ministry of Manpower). A fourth type of program were those ‘food for work’ programs, typically launched by international donors and NGOs in drought stricken areas.

Unlike the food security program, those labor intensive programs were quite diverse. Although specific programs were targeted to certain areas (e.g. drought areas), lack of coordination meant there was little or no systematic overall geographic targeting. Within programs there were no clear guidelines about the intended participants; nor were there any fixed administrative criteria to select beneficiaries. Hence, targeting was primarily through self-selection: only those who were willing to work received benefits. This self-selection mechanism has the advantage over administrative criteria of allowing individuals to choose to participate or not and creates the possibility of being more flexible to unobserved household shocks than administrative criteria.

Another important JPS program is the scholarships and block grants program providing support to poor children and schools. The scholarships provide Rp.10,000, Rp.20,000 and Rp.30,000 per month for primary, lower secondary and upper secondary school students respectively. These amounts generally cover the cost of school fees and can be used for that purpose or to cover other expenses. In choosing the recipients of the scholarships, the program combined certain administrative criteria including factors such as the family BKKBN status, the size of the family, the likelihood of the children to dropping out from school and a school committee decision. The school committee consisted of the principal, the head teacher, and the head of the local parent's association as the representative of the local community.

Scholarships funds were first allocated to schools so that "poorer" schools received proportionally more individual scholarships. Scholarships were then allocated to individual students by school committees, which consisted of the school head teacher, the chair of the parents' association, a teacher representative, a student representative, and the village head. School students in all but the lowest three grades of primary school were officially eligible. Participating students were to be selected from the poorest backgrounds. Committees were required to use household data from school records and existing household classifications prepared by BKKBN.

Scholarships were to be allocated to children from households in the two lowest BKKBN rankings. If there were a large number of such eligible students, then additional indicators to be applied were to identify the neediest students. These additional indicators included distance of family homes from school, physical handicaps and family size. Also, at least half of the total number of scholarships, were to be allocated to girls.

IV. The Impact of Household Participation in the SSN Programs

A. The Impact on Consumption

The SSN programs were aimed to help the poor and the newly poor in coping with the negative effects of the crisis. When the crisis struck — a large number of people were adversely affected, to the point that informal social protection became largely ineffective — the poor and the newly poor were thus in a situation whereby they were unable to cope with the effects of the crisis and outside help was required. This section evaluates the performance of the SSN programs; in boosting household consumption, helping the non-poor avoid falling into poverty, and helping the already poor escape poverty.

Table 5 examines the impact that household participation in the SSN programs had on consumption. The table shows the results of estimates whereby the change in log real per capita consumption is regressed on the change in log real per capita income (net of SSN income), village cluster of mean change in log real per capita income (net of SSN income), participation in the SSN programs, asset ownership, and lag of participation in social organizations. Two estimations are given, in column A the variable of village cluster of mean change in log real per capita income is excluded while in column B this variable is included. The estimations in column B are given in order to take into account Townsend's findings (1994), that changes in household consumption rates are determined by what happens to everybody else in the village, indicating that a household's consumption rate is insured by the community where it lives.

Table 5. The Impact of Participation in the Social Safety Net Programs
on Household Consumption
(Dependent variable: Change in log real per capita consumption)

Independent variable	A	B
Constant	-0.0128* (-2.353)	-0.0323** (-5.820)
Change in log real per capita income (net of SSN income)	0.2932** (98.770)	0.2777** (89.208)
Village cluster of mean change in log real per capita income (net of SSN income)	-	0.1432** (15.821)
Participation in SSN programs:		
- Subsidized rice	0.0277** (7.594)	0.0346** (9.454)
- Scholarship	0.0153 (1.893)	0.0157* (1.949)
- Medical services	0.0181** (2.967)	0.0167** (2.744)
- Nutrition	-0.0272** (-2.826)	-0.0251** (-2.620)
- Employment Creation	0.0132* (2.130)	0.0151** (2.446)
- Subsidized Credit	0.0061 (0.698)	0.0042 (0.482)
Assets ownership:		
- Radio/tape recorder	0.0157** (4.174)	0.0146** (3.910)
- Television	-0.0103** (-2.491)	-0.0113** (-2.752)
- Refrigerator	-0.0052 (-0.661)	-0.0040 (-0.508)
- Telephone	0.0089* (2.399)	0.0097** (2.630)
- Dish antenna	-0.0111 (-1.273)	-0.0121 (-1.388)
- Bicycle	0.0017 (0.457)	0.0032 (0.832)
- Motorbike	0.0031 (0.589)	0.0027 (0.500)
- Car	0.0029 (0.320)	0.0017 (0.188)
- Land	0.0045 (1.161)	0.0066 (1.702)

Table 5. Continued

Independent variable	A	B
Lag of participation in social organizations:		
- PKK (housewives organization)	0.0064 (1.182)	0.0040 (0.747)
- Dasa Wisma (neighborhood organization)	-0.0058 (-0.981)	-0.0022 (-0.378)
- Karang Taruna (youth organization)	0.0110 (1.727)	0.0098 (1.536)
- Kematian (burial services organization)	0.0004 (0.094)	-0.0008 (-0.208)
- Olah Raga (sports organization)	-0.0156** (-3.041)	-0.0131** (-2.560)
- Keagamaan (religious organization)	0.0136** (3.568)	0.0136** (3.591)
- Arisan (community rotating saving groups)	-0.0131** (-3.040)	-0.0115** (-2.667)
Survey round dummies	Yes	Yes
R-squared	0.2976	0.2455
Number of observations	31,847	31,847

Notes: Numbers in parentheses are t-values
** = significant at 1 percent level
* = significant at 5 percent level

The estimation results in column A indicate that the income elasticity of consumption is 0.29 and significant at a level of one percent, implying that a 10 percent increase in income results in a three percent increase in consumption. Under the full insurance hypothesis, the value of this coefficient is zero, indicating that consumption is independent of income because households can insure consumption from any shock to income. On the other hand, under the no insurance hypothesis, the value of this coefficient is one, indicating that all shocks to income are fully transferred to consumption. The value of this coefficient, which is between zero and one, rejects both hypotheses and indicates a partial insurance of consumption. Households can partially insure their consumption levels from shocks to their incomes.

The estimated elasticity in column B is only slightly lower at 0.28 and significant at the one percent level. Meanwhile, the coefficient of village cluster of mean change in log real per capita income is 0.14 and is also significant at the one percent level. This means that communities do provide some insurance to a household's consumption, however, the effect of a household's own change in income is still greater than the community effect. This is different from Townsend's findings (1994), who finds that the community effect eliminates the effect of change in a household own income.

The coefficients of participation in the SSN programs are in general positive and significant. This implies that participation in the SSN programs generally helps households increase their consumption level. The exceptions to this include the subsidized credit program, which has an insignificant effect, and the nutrition program, which has a significantly negative effect on household consumption.

The coefficients of asset ownership variables are mainly statistically insignificant, except for assets which include radio/tape recorders and telephones. The former have positive coefficients and the later, that is a television has negative coefficient. Participation in the three government created social organizations — housewives, neighborhood, and youth organizations — as well as burial service organizations had no significant effect on household consumption. However, the coefficients of participation in sports organizations and community rotating savings groups were both negative and significant, while the coefficients of participation in religious organization were positive and significant.

B. The Impact on Avoiding Poverty

To examine the effect of participation in the SSN programs on the ability of non-poor households to avoid falling into poverty, Table 6 shows the estimation results of probit regressions of the probability for non-poor households to fall into poverty. The sample group used for these estimations only included households which had either remained non-poor or changed from non-poor to poor in two consecutive survey rounds. In the estimations, a dummy variable of whether or not a household fell into poverty was regressed on lag of log real per capita consumption, the change in log real per capita income (net of SSN income), village cluster of mean change in log real per capita income (net of SSN income), household participation in the SSN programs, assets ownership, and lag of participation in social organizations. The coefficients presented in the table are expressed in terms of the probability of a household falling into poverty.

Table 6. Probability of A Non-Poor Falling into Poverty
(Dependent variable: Dummy of falling into poverty)

Independent variable	A	B
Lag of log real per capita consumption	-0.2273** (-37.94)	-0.2271** (-37.90)
Change in log real per capita income (net of SSN income)	-0.1005** (-37.34)	-0.0978** (-34.83)
Village cluster of mean change in log real per capita income (net of SSN income)	-	-0.0251** (-3.33)
Participation in SSN programs:		
- Subsidized rice	-0.0120** (-4.18)	-0.0132* (-4.56)
- Scholarship	0.0029 (0.42)	0.0028 (0.42)
- Medical services	-0.0057 (-1.21)	-0.0053 (-1.13)
- Nutrition	0.0465** (4.68)	0.0456** (4.60)
- Employment Creation	0.0107* (2.04)	0.0103* (1.97)
- Subsidized Credit	0.0052 (0.70)	0.0058 (0.78)
Assets:		
- Radio/tape recorder	-0.0051 (-1.72)	-0.0049 (-1.66)
- Television	-0.0087** (-2.71)	-0.0086** (-2.67)
- Refrigerator	-0.0205** (-2.71)	-0.0207** (-2.73)
- Telephone	-0.0284** (-9.59)	-0.0285** (-9.62)
- Dish antenna	-0.0171* (-2.06)	-0.0167* (-2.01)
- Bicycle	-0.0199** (-6.70)	-0.0202** (-6.80)
- Motorbike	-0.0108* (-2.42)	-0.0107* (-2.38)
- Car	0.0209* (2.16)	0.0216* (2.22)
- Land	0.0113** (3.57)	0.0109** (3.44)

Table 6. Continued

Independent variable	A	B
Lag of participation in social organizations:		
- PKK (housewives organization)	-0.0027 (-0.61)	-0.0026 (-0.58)
- Dasa Wisma (neighborhood organization)	-0.0016 (-0.34)	-0.0017 (-0.34)
- Karang Taruna (youth organization)	0.0030 (0.58)	0.0034 (0.65)
- Kematian (burial services organization)	-0.0014 (-0.45)	-0.0015 (-0.48)
- Olah Raga (sports organization)	0.0008 (0.19)	-0.0002 (-0.04)
- Keagamaan (religious organization)	-0.0022 (-0.72)	-0.0020 (-0.66)
- Arisan (community rotating saving groups)	-0.0065 (-1.90)	-0.0066* (-1.95)
Survey round dummies	Yes	Yes
Pseudo R-squared	0.2609	0.2616
Number of observations	21,471	21,471

Notes: Numbers in parentheses are z-values
** = significant at 1 percent level
* = significant at 5 percent level

The estimation results indicate that initial levels of consumption and change in incomes are important determinants to establish the probability of a household falling into poverty. The coefficient of lag of log real per capita consumption is –0.23 and significant at the one percent level. This implies that for each 10 percent increase in initial consumption, there is a two percent drop in the probability of falling into poverty. The coefficient of change in log real per capita income is –0.1 and significant at the one percent level. This implies that for each 10 percent increase in incomes, the probability of falling into poverty is reduced by one percent. Meanwhile, the coefficient of village cluster of mean change in log real per capita income is –0.03 and is also significant at the one percent level. This implies that with every 10 percent increase in the villagers mean income the probability of a household in that village falling into poverty is reduced by 0.3 percent.

Participation in various SSN programs has mixed effects on the probability of a household falling into poverty. However, only through participation in the subsidized rice program did a household probability of falling into poverty significantly decrease. A non-poor household which participated in this program had a one percent less probability of falling into poverty. On the other hand, a household which participated in the nutrition and employment creation programs has a higher probability of falling into poverty. These coefficients need to be interpreted carefully as they do not indicate that participation in these programs increase the chance of a household becoming poor. Instead, households which participated in these programs are perhaps those which experienced adverse shock, and the benefits of these programs were not sufficient in preventing them from falling into poverty. Meanwhile, the rest of the programs have no statistically significant effects on the probability of a household falling into poverty.

Most asset ownership variables have statistically significant coefficients and many of those coefficients have negative signs. This implies that in general, owning assets reduces the probability of a household falling into poverty. The exceptions are car and land ownership, where the coefficients of these assets are positive. Perhaps this indicates that these two assets are less liquid than the other forms of assets because during a crisis it is not easy to find people who are willing to buy relatively valuable assets. Meanwhile, almost all of the variables of participation in social organizations have statistically insignificant coefficients, except for the community rotating saving groups which has a negative and significant coefficient. This implies that the participation of non-poor households in most social organizations are of no consequence in determining their probability of falling into poverty. Participation in community rotating saving groups, however, did reduce such probability.

C. The Impact on Escaping Poverty

To examine the effects of participation in SSN programs on the ability of poor households to move out of poverty, Table 7 shows the estimation results of probit regressions determining the probability for poor households to escape poverty. In these estimates, the sample included only households which either remained poor or changed from poor to non-poor in two consecutive survey rounds. In the estimations, a dummy variable of whether or not a household escaped from poverty is regressed on the same set of variables used in Table 6. The coefficients presented in the table determine the probability of a poor household moving out of poverty.

Table 7. Probability of A Poor Household Moving Out of Poverty
(Dependent variable: Dummy of moving out of poverty)

Independent variable	A	B
Lag of log real per capita consumption	0.7198** (31.28)	0.7192** (31.20)
Change in log real per capita income (net of SSN income)	0.2948** (31.07)	0.2935** (29.54)
Village cluster of mean change in log real per capita income (net of SSN income)	-	0.0101 (0.37)
Participation in SSN programs:		
- Subsidized rice	0.0189 (1.75)	0.0195 (1.78)
- Scholarship	-0.0700** (-3.71)	-0.0701** (-3.71)
- Medical services	0.0113 (0.68)	0.0111 (0.66)
- Nutrition	-0.0641** (-2.70)	-0.0641** (-2.70)
- Employment Creation	0.0044 (0.27)	0.0044 (-0.27)
- Subsidized Credit	-0.0191 (-0.85)	-0.0193 (-0.86)
Assets:		
- Radio/tape recorder	0.0428** (4.10)	0.0427** (4.08)
- Television	0.0458** (3.43)	0.0457** (3.42)
- Refrigerator	0.0821 (1.85)	0.0823 (1.85)
- Telephone	0.0820** (7.43)	0.0822** (7.44)
- Dish antenna	-0.0022 (-0.04)	-0.0024 (-0.05)
- Bike	0.0641** (5.24)	0.0641** (5.24)
- Motorbike	0.0239 (1.20)	0.0240 (1.21)
- Car	-0.0192 (-0.44)	-0.0194 (-0.45)
- Land	-0.0574** (-4.24)	-0.0573** (-4.23)

Table 7. Continued

Independent variable	A	B
Lag of participation in social organizations:		
- PKK (housewives organization)	0.0108 (0.61)	0.0107 (0.60)
- Dasa Wisma (neighborhood organization)	-0.0209 (-1.08)	-0.0207 (-1.07)
- Karang Taruna (youth organization)	0.0302 (1.51)	0.0302 (1.51)
- Kematian (burial services organization)	-0.0229* (-2.02)	-0.0230* (-2.03)
- Olah Raga (sports organization)	0.0127 (0.78)	0.0128 (0.78)
- Keagamaan (religious organization)	0.0040 (0.36)	0.0040 (0.36)
- Arisan (community rotating saving groups)	0.0095 (0.70)	0.0097 (0.71)
Survey round dummies	Yes	Yes
Pseudo R-squared	0.2151	0.2150
Number of observations	10,376	10,376

Notes: Numbers in parentheses are z-values
** = significant at 1 percent level
* = significant at 5 percent level

Just like the probability of non-poor households falling into poverty, the probability of poor households moving out of poverty is also largely determined by their initial levels of consumption and changes in income. The coefficient of lag of log per capita consumption is 0.72 and significant at the one percent level. This implies that for each 10 percent increase in consumption of a poor household after the initial period, there is a seven percent higher probability for that household to move out poverty in the following period. In other words, the poor households whose consumption levels are only slightly lower than the poverty line have a higher probability of escaping poverty than the poor whose consumption levels are further below the poverty.

The coefficient of the change in log real per capita income is 0.29 and significant at the one percent level. This implies that a 10 percent increase in income raises the probability of moving out of poverty by almost three percent. Meanwhile, the coefficient of the village cluster of mean change in log real per capita income is statistically insignificant. This means that what happens to the rest of the villagers does not effect the chance of a poor household in the village moving out of poverty.

All variables of household participation in the SSN programs have insignificant coefficients, with the exception of the scholarship and nutrition programs which have negative and significant coefficients. This means that participation in the SSN programs did not improve the probability of a poor household moving out of poverty. In fact, participation in the scholarship and nutrition programs had negative effects on the probability of a poor household moving out of poverty.[11] This probably relates to the opportunity cost of schooling. What these results imply is that the benefits accrued by poor households from the SSN programs are too small to have an impact on their chances of escaping poverty.

Some of the asset ownership variables have positive and statistically significant coefficients. These indicate that asset ownership improves poor households chances of moving out of poverty. The exception is land ownership, the coefficient on owning land is negative and significant. Meanwhile, most of the variables of participation in social organizations have statistically insignificant coefficients, implying that such participation does not help a poor household to escape poverty. In fact, participating in a burial service organization significantly reduced the probability that a poor household would move out of poverty.

V. JPS Interaction with Community Efforts and Sectoral Programs

Poorly designed JPS programs can weaken those "informal" safety nets provided by the family and the local community, as well as undermining existing efforts and institutions. The facts are: (a) people have mainly relied on themselves, their families, and their local communities and groups to cope with the crisis; (b) the portion of the budget allocated for JPS programs have been quite small and, aside

[11] This is of course ignoring the long term impact through return to education.

from the food security program, only small numbers of people have actually benefited and (c) even those benefits typically only constitute a small fraction of total household expenses. This means that it is important that the formal JPS programs do not undermine the much larger and more important existing “informal” safety nets.

Micro-credit. An example of the conflict between on-going efforts and JPS programs is in the area of micro-credit. Many believe that providing the poor with access to credit can be an important means of economic empowerment enabling them a sustainable escape from poverty. Long experience has taught several lessons about how to implement a micro-credit program successfully: (a) credit should be at cost recovering (if not “market”) interest rates, (b) repayments should be maintained, (c) credit through group guarantee of repayment is a useful way of ensuring repayment and saves on administrative costs — but these groups should be formed around pre-existing groups or groups with a natural social affinity.

Some programs, such as the PDM-DKE, have attempted to strengthen the local economy through the operation of credit. This credit however, does not specify a fixed interest rate, so that in many locations the interest rate have been zero. The program has lent to groups which have been formed just to receive this credit, and the repayment terms have not been specified — in fact, in many cases there are no repayment terms.

Many local groups who have been working for years to build sustainable micro-credit programs, are sharply critical of the new JPS programs providing micro-credit, because they have undermined their own efforts. Borrowers who have been told for years of the necessity of high interest rates, group solidarity, and timely repayments suddenly see others in the community (and not always the worst off) receiving much larger amounts of credit with none of those features.[21]

Employment creation. Another example is the impact of labor creation programs on community self-help activities (*gotong royong*). In most communities in Indonesia people are expected to contribute a certain amount of time per year to

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[21] The operating manual of the PDMDKE was revised to create higher interest rates and fixed repayment periods for the revolving fund for economic activities.

activities which benefit the entire community. Some of the employment-creation programs have paid people for activities that are traditionally carried out for free by the communities as part of the mutual known as '*gotong royong*. Many fear that this undermines future community ventures as people would either expect them to be done by the government or they expect to be paid.[22]

During the crisis, one important if under-acknowledged function of the JPS programs has been to sustain funding for health and facilities at the lower level education. This, however, is a temporary measure. An "exit strategy" is needed to reduce dependency on the JPS programs and reorient efforts to the overall sectoral agenda, but in manner which does not jeopardize the funding received indirectly through the JPS programs.

VI. Some Lessons Learned from the Indonesian Experience

The two-year Indonesian experience with the JPS program provides very useful lessons for designing and implementing social safety net programs, particularly in the context of developing countries. Below is a list of five lessons learned.

First, the Indonesian experience shows that the capacity of the government or donors to respond to shocks with effective geographic targeting was hampered by a lack of up to date, complete, and accurate data. This is why reliable information is vital. Static administrative targeting is unable to catch newly poor, or shocked, households. When the crisis hit Indonesia, there were conflicting projections and differing assessments over the probable social impact, and there was no well-designed, publicly accessible real-time information system that could assist those efforts to address the needs of either the traditionally poor or the newly poor resulting from the crisis. Such a system, complemented by data from other organizations, NGOs, and donors could play a key role in combating the negative effects of the crisis.

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[22] The *padat karya* programs were eliminated after FY 98/99 and replaced with a single program in urban areas carrying out maintenance and small construction.

Second, designing and implementing large social safety net programs in a crisis situation at the central government level requires institutional commitment, supported by clear objectives and simple design. Implementation in the regions depends upon the capacity of local government and local community groups. At this level, clear targeting criteria and a reliable decision-making process are crucial to the effectiveness of the program.

Third, although a simple design is important, there must still be some allowance for local flexibility in countries of the size and complexity of Indonesia. The OPK program is an example of a crisis initiative that worked well. It had a simple design using the National Logistics Bureau distribution channels to provide rice at subsidized prices to those with a National Family Planning Agency ‘poor card’. But pressure at the local level for a ‘fairer’ distribution of the rice was overwhelming, since the ‘almost poor’ or the ‘newly poor’ families had no entitlement to the subsidized rice. It appears that the emergence of flexibility during the implementation of this program actually improved targeting and in April 2000 the program design was changed to take this into account.

Fourth, most long-term poverty alleviation measures or development strategies are unsuitable as social safety nets, especially in an emergency or crisis. This is especially true of micro-credit. Not only new businesses unlikely to be successful during a crisis but the expansion of credit in an ‘emergency’ fashion can undermine the slow, patient and painstaking groundwork that successful micro-credit programs require. Further, once people perceive that the credit is a ‘transfer’ rather than a ‘loan’, the programs are quickly abused through the widespread allocation of credits to powerful local individual as happened in Indonesia with some of the agricultural credit schemes.

Fifth, the impact of household participation in the SSN programs on consumption in general is positive and significant. However, only participation in the subsidized rice program which significantly reduced the probability of a non-poor household falling into poverty. Similarly, there has largely been an insignificant impact on the probability for poor households to move out of poverty based on their participation in the SSN programs. This implies that the benefits accrued by poor households from the SSN programs are too small to have an impact on their chances of escaping poverty. Hence, this suggests that SSN programs are not an effective tool for social redistribution.

VII. Some Ideas for Future Directions

The social safety net programs in Indonesia were established due to the crisis. As the crisis will ultimately end, the question emerges regarding the future. Will these programs be simply terminated, or will they be maintained as part of a national strategy to provide social protection for the poor?[12]

Before the crisis Indonesia did not have any social safety net programs, at least none like those which exist now. Hence, initially Indonesia was ill prepared to deal with the social problem which emerged. There is a need to learn from this experience: Indonesia should maintain and develop social safety net programs although on a much smaller scale and scope and with sufficient flexibility so that these initiatives can be expanded quickly when the need arises.

In addition, the modernization of the Indonesia economy, increasing urbanization and formalization of the labor force, declining birth rate, and increasing life expectancy will all exert increasing pressure on the informal social protection system. Weaker informal protection mechanisms must be balanced by a stronger formal measures, including formal social safety nets.

Consequently, the attempts which are now being considered in Indonesia to reform the system of social protection are timely.[13] However, it is important to note

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[12] Social protection programs include all actions that are aimed to (i) assist individuals, households, and communities to better manage risk, and (ii) provide support to the chronically poor (World Bank, 2000a).

[13] To redress past problems in social policy implementation the government is now working to improve both the planning and the implementation process in this area. This effort is being coordinated by the Office of the Vice President. The Vice President will be supported by a Steering Committee or Task Force on Poverty Reduction chaired by the Coordinating Minister for the Economy. The committee will be comprised of members from other ministries, central government institutions, civil society groups, parliament, and donors. The initial agreement for this task force was signed between

that there is no simple answer to the question of the extent to which Indonesia can afford social protection programs. Some 65 percent of the Indonesian work force is engaged in the informal sector, where there is no record of earnings, or potential for tax revenue. Hence, the goal of establishing 'unemployment insurance' and 'social security' to cover such workers remain problematic, and it will take some time for Indonesia to establish formal sector social protection programs. Nevertheless, Indonesia should start preparing for a period of transition, from a situation where these risks are handled informally through the family and the community to where these are tackled through formal structures.

Drawing on the last three decades of remarkable achievement in poverty reduction and recent experience with the implementation of social safety net programs, Indonesia's social policy strategy should at least include the following element: (i) the promotion of an economy free of favoritism and one conducive to labor intensive activities, with fair access and fair returns to assets (labor, land, natural resources, capital), (ii) public expenditure on the "essentials" — investments in human beings (health and education) and in basic infrastructure to create a suitable physical environment where the poor can be productive (roads, irrigation, water, urban services), (iii) public expenditure on well-designed community development programs which encourage growth in underdeveloped regions.

We have learned that the adoption of these three measures will help the poor and the vulnerable to cope with risk and enable them to cope better with shocks. In addition, the government should also provide some basic income assistance to the small group of chronically poor, i.e. those who lack earning power such as widows, orphans, and the physically disabled. As for the much larger group who are occasionally and unexpectedly subject to life's vicissitudes (losing a job, ill health), such individuals need a temporary hand — not a safety net but a safety trampoline that provides them with a temporary cushion but propels them back into productive activity.

Indonesian government and the UNDP in February 2001.

This paper has examined Indonesia's expenditure on social safety nets during the crisis. This expenditure was an important part of the government's 'crisis expenditure' and the programs have been subject to a great deal of public scrutiny. In sharp contrast, however, other larger 'crisis expenditure' initiatives have not received the same level of scrutiny. The Indonesian government spent thirty times more on bailing out the financial sector than it did on social safety nets, while five times the social safety net expenditure was spent on a general energy subsidy that demonstrably did not benefit either the poor or the hardest hit households.[14]

As Indonesia is presently embarking upon a major decentralization process, with power and authority being devolved from the center to the regions, the precise financing arrangements for future poverty reduction measures and social safety net program and the respective roles to be played by central and regional governments all need to be clarified.[15]

One of the challenges for independent researchers and civil society in Indonesia is to ensure that the questions discussed above stay firmly on the government's agenda.

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[14] These are relevant and important comparisons. As argued in World Bank (2000b), these and other government initiatives should be judged by the extent to which they contribute to raising the broad standard of living of Indonesians, especially the poorest.

[15] At the CGI meeting in October 2000 the government proposed the following strategy: 'the central government can set the criteria by which the provinces will select the poor areas to receive funds and create incentives which will reward provinces for allocating the funds to the poor areas within their jurisdiction'.

References

BPS and UNDP (1999), *Crisis, Poverty, and Human Development in Indonesia, 1998*, Badan Pusat Statistik, Jakarta.

Cameron, Lisa (1999), 'Survey of Recent Developments', *Bulletin of Indonesian Economic Studies*, 35(1), pp. 3-40.

Feridhanusetyawan, Tubagus (1999), *The Impact of the Crisis on the Labor Market in Indonesia*, Report prepared for the Asian Development Bank, Centre for Strategic and International Studies, Jakarta.

Poppele, Jessica, Sudarno Sumarto, and Lant Pritchett (1999), *Social Impacts of the Indonesian Crisis: New Data and Policy Implications*, SMERU Report, February, Social Monitoring and Early Response Unit, Jakarta.

Pradhan, Menno, Asep Suryahadi, Sudarno Sumarto, and Lant Pritchett (2000), *Measurements of Poverty in Indonesia: 1996, 1999, and Beyond*, SMERU Working Paper, June, Social Monitoring and Early Response Unit, Jakarta.

Pritchett, Lant, Asep Suryahadi, and Sudarno Sumarto (2000), *Quantifying Vulnerability to Poverty: A Proposed Measure, with Application to Indonesia*, SMERU Working Paper, May, Social Monitoring and Early Response Unit, Jakarta.

Purwoko, Bambang (1999), *Towards a New Social Security System: The Indonesian Case*, Paper presented at Conference on the Economic Issues Facing the New Government, LPEM-FEUI, August 18-19, Jakarta.

Skoufias, Emmanuel, Asep Suryahadi, and Sudarno Sumarto (2000), 'Changes in Household Welfare, Poverty and Inequality during the Crisis', *Bulletin of Indonesian Economic Studies*, 36(2), pp. 97-114.

Sumarto, Sudarno, Asep Suryahadi, and Lant Pritchett (2000), *Safety Nets and Safety Ropes: Comparing the Dynamic Benefit Incidence of Two Indonesian "JPS" Programs*, SMERU Working Paper, February, Social Monitoring and Early Response Unit, Jakarta.

Suryahadi, Asep, Sudarno Sumarto, Yusuf Suharso, and Lant Pritchett (2000), *The*

Evolution of Poverty during the Crisis in Indonesia, 1996 to 1999 (Using Full Susenas Sample), SMERU Working Paper, March, Social Monitoring and Early Response Unit, Jakarta.

Suryahadi, Asep, Yusuf Suharso, and Sudarno Sumarto (1999), *Coverage and Targeting in the Indonesian Social Safety Net Programs: Evidence from 100 Village Survey*, SMERU Working Paper, August, Social Monitoring and Early Response Unit, Jakarta.

Townsed, R.M. (1994), 'Risk and Insurance in Village India', Econometrica, 62(3), pp. 539-591.

Wetterberg, Anna, Sudarno Sumarto, and Lant Pritchett (1999), 'A National Snapshot of the Social Impact of Indonesia's Crisis', *Bulletin of Indonesian Economic Studies*, 35(3), pp. 145-52.

World Bank, (2000), *Social Risk Management: A New Conceptual Framework for Social Protection*, Draft, February, Washington, D.C.