I. Introduction

In the mid-nineties, Indonesia was often cited as a remarkable success as it had emerged from being one of the poorest nations three decades ago to being on the cusp of joining the middle-income countries. For example, between 1970 and 1996, the proportion of population living below the official poverty line fell by around 50 percentage points (World Bank, 2002). During this period, Indonesian families never relied heavily on government to run safety net programs. Instead, government social spending was largely focused towards social services such as health and education, with the family and communities providing social insurance (Sumarto et al., 2002). In mid-1997, Indonesia was struck by a currency crisis, which by the first half of 1998 had already developed into a full-blown economic crisis. During this crisis period, the exchange rate fell to 15 percent of its pre-crisis value and its economy contracted by 13.7 percent (Sumarto et al., 2004). Undoubtedly, the poor are those who are the worst hit by the prolonged impact of the economic crisis and felt the crisis primarily through the falling of real wages, fewer employment opportunities, and increased prices for basic commodities. For instance, there was a substantial rise in the price of rice by 180 percent, while non-food items rose by 80 percent between February 1996 and February 1999 (World Bank, 2002).

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To mitigate the social impact of the economic crisis, the government of Indonesia launched several social safety net programs in 1998, widely known as the JPS programs (Jaring Pengaman Sosial).\textsuperscript{2} It was hoped that through the JPS programs the adverse impact of the crisis could be reduced (Sumarto et al., 2002). However, a large proportion of the benefits of the JPS programs had gone to the non-poor, due to their inadequate design and implementation (Dhanani and Islam, 2002; Sumarto et al., 2004). This may imply that the programs did not reach a large number of poor. Consequently, we would expect that the affected households rely on informal family and community links (for example through private inter household transfers) to cope with the impact of the crisis. In their seminal paper, Ravallion and Dearden (1988) point out that the distributional outcomes from the publicly funded social security systems could also be achieved by a private ‘moral economy’ whose essence is to give mutual assistance within both the family and community when there is a hardship. These voluntary transfers have been considered by economists as a form of mutual insurance network (Fafchamps, 1992). The idea is that people who are above the minimum standard of living may help others, who have fallen, or are in danger of falling, below the minimum, so that they in turn may be helped if they should come upon misfortune.\textsuperscript{3} Moreover, these transfers may reduce disparities in income and consumption levels (by being directed from rich households towards poor households). In particular, private transfer boosted the income of urban households in the lowest quintile in Kenya by 90 percent (Knowles and Anker, 1981); they raised the lowest quintile’s share of aggregate consumption by 14 percent in Peru (Cox and Jimenez, 1992); and they had a substantial equalising effect on incomes in the two Mexican villages (Stark, Taylor and Yitzhaki, 1986). Previous research on these transfers in Java in 1981 suggests that they are targeted towards the poor and are consistent with a ‘moral economy’ (Ravallion and Dearden, 1988).

In view of the positive finding of the earlier literature, and in order to see how the ‘moral economy’ might cope with the stresses caused by the economic crisis, detailed consumption expenditure data from 29,000 households on the island of Java in 1999 are used to examine the pattern of voluntary transfers between Javanese households, following the framework of Ravallion and Dearden (1988). This paper also examines whether these

\textsuperscript{2} The JPS consisted of a large rice subsidy program, a relatively large scholarship and block grant program, free medical, family planning and childbirth services for very poor households, a nutritional program for pregnant women and babies, and block grants to local communities for labour-intensive public works (Sumarto et al., 2002).

\textsuperscript{3} These informal insurance arrangements in turn frequently depend on the connections between the affected households and the extended family and community. These features of social institutions are also known as ‘social capital’ (see Coleman, 1990, and Putnam, 1993).
‘moral economy’ transfers still perform the functions of a social safety net for Javanese society in today’s more modernised society, which also serves the purpose to update the study done by Ravallion and Dearden (1988).

The remainder of the paper is organised as follows. The next section outlines the framework for moral economy and empirical model specification for the model of transfers. Section III briefly reviews previous evidence of moral economy in Java. Section IV of the paper describes the data used in this study. Section V examines whether transfers are targeted towards disadvantaged groups. Finally, Section VI provides conclusions and implications of the results.

II. The Idea of Moral Economy and Empirical Model Specification

In anthropology, moral economy is often viewed as one in which a subsistence ethos guarantees at least minimal provisioning to all households (Scott, 1976). In this setting, people put themselves in the situation of others, and are aware of others’ distress and suffering. This gives an optimistic view of the performance of the moral economy as a social security system. The idea is that people who are above the minimum standard of living may help others, who have fallen below the minimum, so that they in turn may be helped if they should come upon misfortune. In other words, it can be viewed as a form of mutual insurance network (Fafchamps, 1992). In his paper, Fafchamps (1992) points out that although a mutual insurance network may face incentive problems, with people tempted to work less and rely on the help of others for their survival, an insurance network can be stable. The reason is that the self-interested members of the network may have a long-lasting relationship. Consequently, opportunistic behaviour can be prevented as long as short-run benefits from deviation are smaller than long-run punishments. Examples of long-run punishments are being excluded from the network, so that free riders would not get assistance in the future when they needed it. In this way, the mutual insurance agreement becomes self-enforcing, since it is based on voluntary participation rather than on coercion. Another solution to the incentive problem of mutual insurance is to limit the network where reciprocal sharing takes place to a small group whose members know and continually interact with one another and who are broadly similar (Posner, 1980).

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4 Cribb and Brown (1995) argue that the economic boom and the resulting large scale migrations in Indonesia could lead to an increasingly rapid rate of corrosion of the long-standing social and moral ties which bound the traditional communities together.

5 Surprisingly, to my knowledge, no one has used household survey data to update Ravallion and Dearden’s findings.
Following Ravallion and Deardon (1988), in this paper, Scott’s (1976) principle is interpreted as an assumption about the social preferences of donors in the moral economy. That is, they exhibited an aversion to inequality. This could arise either from altruism or reflecting a risk-sharing arrangement, in which the donor will behave as if averse to inequality. Scott’s principle assumes this aversion to be high, that donors care only about the worse off person and endeavour to bring that person’s welfare up to some minimal subsistence niche. In other words, there is a moral expectation based on the right to subsistence that leads to redistribution within the community.

The empirical model used in this paper follows the methodology proposed by Ravallion and Dearden (1988). The model of transfers used by Ravallion and Dearden can be written as:

\[
\log T_i' = \alpha + \delta \log Y_i + X_i' \gamma + \mu_i \text{ if } i \in R
\]

\[
T_i' = 0 \text{ otherwise}
\]

where \( T_i' \) are the cash transfers received by the \( i^{th} \) household during the previous 12 months, \( Y_i \) is the household’s income, \( X_i \) is a vector of the household’s other characteristics (which includes household size, age of the household head, and dummy variables indicating whether the household had experienced births, deaths, ill-health or unemployment), \( \mu_i \) is a stochastic error, and \( R \) is the set of all recipient households. Given that transfers and income variables are in logarithms, \( \delta \) can be interpreted as elasticity of transfer receipts with respect to income, which shows what the percentage change in transfers would be for a one percent change in the recipient household’s income.

III. Previous Evidence on Moral Economy in Java

Using the 1981 SUSENAS (National Socio-Economic Survey) data for Yogyakarta, Ravallion and Dearden (1988) found voluntary transfers played a big part of household income. Indeed, the average transfers received as a percentage of the income of recipients was almost 50 percent for urban

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\(^6\) Income is deemed to be one of the most important explanatory variables in Equation 1 because the effect that income has on transfers received helps to determine whether the transfers make the distribution of income more or less equal than it would have been without transfers.

\(^7\) Yogyakarta is one of the five provinces located on Java (including the capital region).
Yogyakarta and about 30 percent in rural Yogyakarta. One reason that transfers in urban Yogyakarta may have been so high is that the city where the survey was done had a lot of university students whose living costs were being supported with payments made by their families who lived outside the city.

They also found that donors’ social preferences in rural Yogyakarta exhibited significant aversion to inequality, with receipts increasing more than proportionally with falls in income. In terms of household characteristics, there is evidence that ill health and birth emerge as strong attractors of transfers in rural Yogyakarta. They also found that there is a pattern of significant transfers from young to old in Java.

In Ravallion and Dearden’s results, transfer behaviour was markedly different amongst urban households. Aggregate net receipts are higher, but the distribution of receipts reveals little aversion to inequality. Therefore, transfers have negligible effect on the distribution of income amongst urban households in Yogyakarta. The direction of the effect of age on urban transfers is the opposite of that found amongst rural households with a decreasing receipt as age increases. In addition, being unemployed in urban areas significantly increases the probability of receiving a transfer.

IV. Data

The analysis of this study is based on the consumption module of the 1999 National Socio-Economic Survey (SUSENAS) collected every three years by the Central Statistical Agency (BPS) of the government of Indonesia. The consumption module is nationally representative of urban and rural areas within each of the twenty-seven provinces. The survey asks respondents to report on transfers, receipts and outlays, comprising all gifts of money and goods. The survey’s definition of private transfers includes only interhousehold transfers; and hence, transfers between individuals within one household cannot be identified, although transfers between members of the same family living in different households are included.

The 1999 SUSENAS surveyed 65,664 households, but data for the present study were limited to 28,964 households located on Java. The households in the sample were the ones for whom it was possible to merge the consumption module with the core questionnaire, which is administered to a larger sample. It is the core questionnaire that provides the information on the demographic characteristics and economic activity of the household.

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8 Indonesia currently has thirty-three provinces, of which three have special status (Aceh, Yogyakarta and Papua) and one is a special capital region (Jakarta).

9 Sumarto et al. (2002) also used the merged SUSENAS consumption module and core in their analysis.
Table 1 gives summary data on the importance of voluntary household transfers in Java, where the figures relate to the gross value of transfers received by quintile of income level. About four-fifths of the households in the poorest quintile in the sample received transfers during the period in which they were surveyed. The poorest quintile stands out as a relatively substantial receiver, with receipts equivalent to approximately 18 and 22 percent of consumption for urban and rural households respectively. As would be expected, the richest quintile has the lowest participation rate for receiving transfers. This holds for both urban and rural households. This suggests some targeting of transfers towards the poor. Thus, in terms of a donor’s social preference, one can hypothesise that Javanese may be motivated by an aversion to inequality.

Table 1. The Importance of Voluntary Household Transfers in Java, 1999

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Urban Java</th>
<th>Rural Java</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean transfers received</td>
<td>Receiving transfer %</td>
</tr>
<tr>
<td>Quintile 1^a</td>
<td>44,554</td>
<td>72.7</td>
</tr>
<tr>
<td>(poorest)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quintile 2</td>
<td>35,472</td>
<td>63.7</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>39,711</td>
<td>57.7</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>48,315</td>
<td>52.7</td>
</tr>
<tr>
<td>Quintile 5</td>
<td>86,920</td>
<td>52.5</td>
</tr>
<tr>
<td>(richest)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^a The household quintiles are formed from the expenditure per capita rank.

^b In Rupiah.\(^1\)

^c Total expenditure excludes transfer receipts.

It is notable from Table 1 that aggregate receipts for rural households are a higher proportion of consumption compared with those for urban households with the exception of the richest quintile of urban households. In terms of the participation rate in receiving transfers, there is evidence that rural households have a higher participation rate compared to urban households. The average size of incoming transfer receipts for the poorest recipients in rural households is approximately Rp. 53,000, which is Rp. 8,000 higher than received by the poorest quintile in the urban sector.

\(^{10}\) The cash transferred covered by the SUSENAS consumption module include remittances, legacies, donations, gifts and aid, but no subtotals are available for these categories.

\(^{11}\) 1 US$ = Rp. 9,135 as of September 2006.
V. Does a Moral Economy Perform the Functions of a Social Security System?

The SUSENAS data provide a choice between income and expenditure as a measure of household income. Anand and Harris (1994) point out that expenditures are usually considered closer to the concept of permanent income because they fluctuate less and are believed to be recorded more accurately than income (Grootaert, 1983). Therefore, the income level in this study was measured by the value of total expenditures.

Figure 1 gives the predicted probabilities of receiving transfers, separately for urban and rural Java, over the range of log income observed in the sample. It is apparent from Figure 1 that an increase in household income is associated with considerable reduction in the probability of receiving transfers. As a result, one can conclude that these transfers tend to go from the rich to the poor and may act to somewhat equalize the distribution of income.

At the sample mean of log income of 11.6, the predicted probabilities of incoming transfers are 0.65 and 0.76 for urban and rural Java respectively. Furthermore, a reduction in income from, say, log 13 to 10 increases the probability of receiving transfers by 0.35 for urban Java, while it is only 0.20 for rural Java. Thus, one can conclude that transfer receipts are more responsive to changes in urban areas than in rural areas. This more elastic response contradicts Ravallion and Dearden’s (1988) results. The plausible explanation for urban households displaying a high degree aversion to inequality is due to the fact that members of many urban households lost their jobs as a result of the economic crisis in 1997/1998. Indeed, according to BPS (1999), 30 percent of urban households reported that the main reason for them being unemployed was due to being laid off by their employers, while only 13 percent of rural workers were laid off from July. As a result, we would expect that urban households tend to receive more assistance from friends and family than rural households (Beegle, Frankenberg and Thomas, 1999). Furthermore, Daryanto (1999) reported that despite the Indonesian economy’s contraction by 13.7 percent in 1998, the agricultural sector did not decline. During the period of economic crisis, the agricultural sector functions as a ‘social safety valve’ by absorbing some of the retrenched labour, as well as new entrants to the labour force unable to find work in

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12 This result is derived from the Probit model. The Probit model is used when the dependent variable (outcome of interest) is a categorical variable that takes a value of one or zero depending on which of two possible results happen. In this context, we will observe transfer receipts for a particular household if and only if the household receives any transfer. Full details are available from the author.

13 Equivalent to Rp. 120,000.
urban areas, somewhat reversing the village to city migration trends which occurred in the previous years of high economic growth.

**Figure 1. Effect of Income on Transfer Receipts in Java, 1999**

![Graph showing the effect of income on transfer receipts in Java.](image)

It has been argued that private transfers can be used as a support for the elderly in retirement. Figure 2 shows that the patterns of transfers in Java are consistent with the notion that transfers do provide support in old age. Specifically, an increase in age from 35 to 75 increases the probability of receiving transfers by 15 percent for urban households, while it is 9.8 percent for rural households. These findings are consistent with other evidence on significant transfers from young to old (Butz and Stan, 1982). Overall, the changes are smaller during younger years and larger after age 55. It is also apparent from Figure 2 that receipts exhibit a strong u shaped relationship with age for urban households, with a turning point at 47 years. This suggests that urban transfers reveal significant targeting towards both the young and elderly. The most likely explanation for this pattern is that many urban residents have migrated from rural areas, and will return to their villages of origin when they reach old age. It is also likely that transfers are an important source of funding for students who come from Outer Islands to attend numerous educational institutions in Java.\footnote{Most of the prestigious universities in Indonesia are located on Java.}
Does the probability of receiving transfers rise if a household suffers an earning shock? Multiple regression models as appeared in Equation 1 were used to test whether transfers insure against reductions in earnings due to illness and unemployment. Following Ravallion and Dearden (1988), the particular concept used for unemployment was whether the household head was in the workforce but not working in the weeks prior to the survey. The illness variable records whether anyone in the household was sick in the week of the survey. Variables are included for two other types of shock that may affect transfers: whether there had been a birth or death in the last 12 months. The models also include the household’s income, age of the household head and the size of the household.

Results in the first column of Table 2 show that the probability of receiving transfers is almost 20 (14) percentage points higher for an urban (rural) household where the head was not working, compared with a household with average characteristics but the head working. The other variable measuring shocks (illness) suggests that transfers do react to illness. The results in first column of Table 2 also show that the probability of receiving transfers is lower for richer households and is lower for larger households.
Table 2. The Effect of Household Income, Household Size, Age and Various Shocks on the Receipt of Transfers in Java

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Change in Probability of Receiving Transfers&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Effect of a Unit Change on Expected Value of Transfers&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban Java</td>
<td>Rural Java</td>
</tr>
<tr>
<td>Income (log)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-0.11</td>
<td>-0.07</td>
</tr>
<tr>
<td>Household size (log)</td>
<td>-0.03</td>
<td>-0.07</td>
</tr>
<tr>
<td>Age</td>
<td>-0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Deaths</td>
<td>0.18</td>
<td>0.03</td>
</tr>
<tr>
<td>Births</td>
<td>0.04</td>
<td>0.09</td>
</tr>
<tr>
<td>Ill-health</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.19</td>
<td>0.13</td>
</tr>
</tbody>
</table>

<sup>a</sup>The change in probability of receiving transfers is calculated from a probit model, and is for a discrete change from 0 to 1 for dummy variables, otherwise for infinitesimal changes.<sup>15</sup>

<sup>b</sup>Given by the product of the Tobit coefficient and the proportion of the sample receiving transfers, or the exponential of this product minus one if the independent variable is a dummy variable.

<sup>c</sup>Based on a Tobit model with predicted income as the instrument.

<sup>d</sup>Based on Ravallion and Dearden’s (1988) results.

<sup>e</sup>Per capita income.

The results in the fourth and fifth columns of Table 2 report the proportionate increase in transfers received following a unit change in each of the explanatory variables as appeared in Equation 1 using the 1999 SUSENAS data, while the last two columns present Ravallion and Dearden’s (1988) results. A one percent decrease in household income increases the expected value of transfers by 0.91 for urban households and 0.21 for rural households. Ravallion and Dearden (1988) show a way of illustrating the economic effects of this degree of inequality of aversion. Consider household A whose expenditure is Rp. 400,000 per month and has gross receipts of about Rp. 40,000. Household B is much poorer and has expenditure of Rp. 250,000 per month. How big will the incoming transfers be for household B? The results in Table 2 suggest that the predicted value of receipts for urban household B is Rp. 40,000 + (-0.375 x -0.91 x Rp. 40,000) = Rp. 53,650; while it is Rp. 43,150 for rural household B. Thus, one can conclude that transfer receipts are more income inequality reducing in urban areas than in rural areas. This finding contradicts Ravallion and Dearden’s (1988) results which show that rural households are more inequality averse than the urban households. As discussed before, the difference in pattern of household transfers in Java can be attributed to the 1997/1998 economic crisis, where the impacts had been more severe in urban areas.

The pattern of transfers also suggests that donor households respond to

<sup>15</sup>Details of derivation are available from the author.
reductions in recipient households’ earning potential due to unemployment. As discussed before, a crisis caused lots of urban workers to be laid off, thus the expected value of receipts is 2.5 times higher for a household head who is not working compared with only 0.98 for rural households, which is comparable to Ravallion and Dearden’s results. This difference between the samples is consistent with the widely held view that greater wage flexibility and the existence of work sharing arrangements in the rural labour markets of less developing countries render unemployment a less serious welfare disadvantage than in the cities (Ravallion and Dearden 1988). The present study also found that donors assist the sick and households with recent births and deaths, which support Ravallion and Dearden’s (1988) results. To sum up, the models reported in Table 2 show that transfers do insure against reductions in earnings. The result also reaffirms that voluntary transfers are targeted towards the poor.

Interaction terms are commonly included in regression models when the effect of an independent variable is thought to vary depending on the value of another independent variable. In this case, it is interesting to see whether there is any change in probability of receiving transfers with respect to various household characteristics as household income varies. The interaction effects reported are restricted to those significant characteristics: employment status of the household head, the health status of the household and the size of the households. Figure 3 plots the predicted probabilities of receiving transfers if households experience unemployment over the range of income observed in the sample. As would be expected, the probability of receiving transfers is higher for households whose head was not working. For example, in urban Java, a household with average characteristics (including an average income of Rp. 120,000) has a 65 percent chance of receiving transfers if the head was working during the survey period, while the same household has an 80 percent chance of receiving transfers if the head was not working. An important point to note is that the marginal effect on the probabilities is substantial. The marginal effect is simply the gap between ‘work’ and ‘not working’, which shows that the gap is getting smaller as household income increases (only for urban households). The probability of receiving transfers as households experienced sickness is depicted in Figure 4. There is evidence that households that experienced sickness tend to have a high probability in receiving transfers. As would be expected, the higher the income level, the lower the probability of receiving transfers. Figure 5 shows the effect of household size on the probability of receiving transfers with respect to income for urban Java. The smaller the household, the higher the probability of receiving transfers. This result may reflect transfers received by single students living away from home.

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16 Rural households also exhibit this pattern.
Figure 3. Effect of Income on Transfers As Household Head was Unemployed During the Survey Period in Java, 1999

Figure 4. Effect of Income on Transfer Receipts as Household Experienced Sickness in Java
VI. Conclusions and Policy Implications

In this paper, consumption expenditure data from Java are used to examine the pattern of voluntary transfers between households following the economic crisis. The results suggest that transfers are targeted towards the poor for both urban and rural areas in a resurgence of the ‘moral economy’ that echoes the 1980s. In contrast to Ravallion and Dearden’s (1988) results, this study found that transfer receipts are more responsive to changes in income in urban Java than in rural Java. The difference in patterns of household transfers in Java can be attributed to the economic crisis which occurred in 1997/1998. During the period of economic crisis, the agricultural sector did not decline, despite the economy’s contraction. As a result, the rural sample was less likely to receive transfers due to the ability of labourers to earn a livelihood in the rural sectors. There is also evidence of transfers being targeted towards disadvantaged households, such as the sick, elderly and the unemployed. Thus, the overall pattern of these results suggests that these private transfers are crucial in helping many poor households in Indonesia cope with misfortune.

Understanding more about these transfers is important for designing policies because these transfers provide social and economic benefits similar to those of public programs, such as insurance against shortfall in income, support for the elderly in retirement, educational loans and help during illness. Consequently, they may supplement or overlap with public transfers, particularly those programs aimed at people who have retired or experienced a decline in earning power (see Cox and Jimenez, 1992). One of the policy implications is that government subsidies may have less effect than originally
intended if they displace public transfers. Furthermore, benefits of a public transfer program may be shared by private donors if they feel they can give less than before (Cox and Jimenez, 1990). To the contrary, well-designed public action can strengthen and broaden the capacity of households to act independently through informal mechanisms. Making savings safer and more convenient, helping to expand credit access and fostering basic insurance programs are promising ways to help households help themselves in the face of adversity.

References


