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Title: Comment on "Income Risk and the Benefits of Social Insurance: Evidence from Indonesia and the United States"

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Comment Roger Gordon

Government policies differ systematically between poorer and richer countries. One striking difference is the much smaller weight given to social insurance programs among poorer countries, particularly those in East Asia.

Past work on this topic has provided one possible explanation for this lack of social insurance. Evidence from household surveys among various developing countries suggests that transitory shocks to household income lead to remarkably little variation in household consumption. But if household consumption does not vary much, the presumption naturally has been that there is little potential welfare gain from smoothing consumption further through unemployment insurance or other safety net programs. Given the many distortions to incentives that these programs create, if potential benefits are low, then it should not be at all surprising that these programs are not used much among developing countries.

Raj Chetty and Adam Looney, in this paper, provide confirming evidence from a household survey in Indonesia that household consumption does not vary much in response to unemployment of the household head. They compare the response of consumption to unemployment in the United States and Indonesia, and remarkably find about the same drop in consumption in the two countries, in each case a relatively modest 10 percent.

Nonetheless, they question the inference others have drawn from such data that there is little room for insurance gains through the introduction of unemployment insurance programs. In particular, they argue that the fall in consumption may have been so small just because any fall is particularly costly to the household. Rather than suffering a loss in consumption, the household instead may seek out other sources of funds, potentially at great cost to the household. For example, Chetty and Looney document that household expenditures on the education of their children drop substantially in response to an unemployment spell, potentially leading to a large long-run fall in the earnings potential of these children. In addition, there is a clear increase in the labor supply of other household members, suggesting a major disruption to the household. Even given these responses, household consumption of rice and other staples still drops noticeably, particularly among nonfarm households, suggesting the substantial financial stress unemployed households are experiencing.

Given the high cost these households apparently accept to alleviate any fall in consumption, the welfare cost of even the observed 10 percent fall in consumption could well be large. This in turn suggests that the welfare benefit from introduction of unemployment insurance could potentially be large.

I very much agree with these arguments, and with Chetty and Looney's judgment in interpreting the empirical evidence. Nonetheless, my role as a discussant is to point out places where the evidence is less than compelling. I will focus in turn on three issues. First, is it so clear that the costs borne by the Indonesian household in coping with unemployment are so dramatic? Second, how confident can we be in the consistency of the point estimates suggesting a very modest fall in consumption in response to unemployment? Third, even if this drop is costly, how confident can we be that unemployment insurance would help alleviate this fall?

How Big Are the Costs of Coping?

Chetty and Looney very appropriately suggest based on the reported empirical evidence on coping strategies followed by Indonesian households that their coping responses may be very costly. How costly in fact are these coping mechanisms?

The most costly would appear to be the drop in expenditures on education. One possible interpretation of this drop, however, is that the schools are providing a short-term loan to the parents, with little or no change in the education of the children. Within a closely knit community, such sharing of short-term financial risks could well develop and be sustainable. Direct evidence on the schooling patterns of the children, both during the unemployment spell and thereafter, would strengthen this claim.

How costly is it for other household members to enter the labor force? A married couple faces time demands within the household, and financial pressure to earn money outside the household. Given the fixed costs of going to work, it may make sense for only one member of the couple to work. On economic grounds, the choice of which member works should depend on comparative advantage: relative wage rates in the labor force versus relative productivities within the household. If there were little difference in comparative advantage between husband and wife, then they might easily be able to shift roles in response to one having been laid off. While there could well be clear differences in comparative advantage, or fixed costs of finding a job, these have not been documented. The fact that consumption falls so little suggests little cost.

To the extent that households have accumulated assets, any reduction in standard of living would be spread across all future dates, and not entirely absorbed through a drop in current consumption. According to the data reported in the paper, Indonesian households have remarkably high assets relative to income. As reported in table 4.2, mean household assets are \$7,525 while mean total family income is only \$1,484 and mean labor income of the head a mere \$580. With assets equal to five times total family income and thirteen times the labor income of the potentially unemployed head, households have huge reserves to draw on to help cover short-run expenses if the head becomes unemployed. Chetty and Looney point out

that many of these assets may be illiquid. Even so, they should provide good collateral for loans, particularly in response to an event that is likely to reflect only a short-run drop in household income.

If households can make use of these assets to smooth consumption, then the change in consumption should largely reflect the change in permanent income. If so, the 10 percent fall in consumption would reflect a 10 percent fall in permanent income.

For the foregone income while unemployed to lead to a 10 percent fall in permanent income, the expected spell length would need to be several years (e.g., 10 percent of the remaining time in the labor force), rather than the more typical several months, so seems implausible. However, it would be entirely plausible that the expected earnings in future employment will have dropped by 10 percent due to becoming unemployed.

Assets are presumably so large to protect against just such shocks to future income. That people feel compelled to build up such large reserves, implying postponing consumption until much later in the lifecycle, is itself a reflection of the lack of insurance, and also the potentially higher risks faced by Indonesian households compared with those in the United States. Again, according to the data in table 4.2, the coefficient of variation (the standard deviation divided by the mean) of total household income in Indonesia is 2.4, compared with only 0.95 in the United States, suggesting that Indonesian households face far more risk than do U.S. households. The coefficient of variation in their food consumption is also higher than in the United States: 1.15 versus 0.64. However, the degree of smoothing of income shocks in Indonesia is a bit higher than in the United States. In particular, the ratio of the coefficient of variation in food consumption compared with the coefficient of variation in total household income is 0.47 in Indonesia compared with 0.67 in the United States, suggesting that Indonesian households are able to smooth a larger fraction of their income fluctuations. This is true even without being able to rely on unemployment insurance and even given the much larger fraction of their income spent on food.

Size of Fall in Consumption Caused by Unemployment

The paper compares the changes in consumption over time for those who become unemployed to the change in consumption for those who remain at work, with various controls, and finds that consumption of the unemployed falls by 10 percent relative to the consumption of those who remain employed. How confident can we be that this estimate reflects the causal effect of unemployment?

Keep in mind that this estimate measures the fall in consumption *relative* to what happened for those who did not become unemployed. Yet, this time period (spanning the financial crisis in Asia) involved particularly large shocks for all households, and not just for those who became unem-

ployed. As a reflection of this, average household consumption as reported in table 4.2 is 108 percent of total household income, something that is clearly not sustainable. This suggests that households as a group are receiving unusually low income at the moment relative to the standard of living they feel is sustainable.

Even employed households then seem to be experiencing a downturn in income, and presumably compensate through some drop in consumption. The estimates reflect the additional drop in consumption for those who become unemployed.

Chetty and Looney do provide one robustness check for the role of the Asian financial crisis, by splitting the samples into data for 1997 and 2000. They find similar results for the two years, and infer that their results are not strongly affected by the financial crisis. The timing of their data, unfortunately, is not ideal for such a test, since the financial crisis affected Indonesia only for the last few months of 1997, and some residual effect of the crisis would still have been present in 2000.

That current income falls *more* for the unemployed than for the employed seems clear, though no attempt has been made to estimate the differential fall in income. Regardless, the size of the drop in permanent income for those who remain employed compared with those who become unemployed is not so clear. The unemployed, for example, could represent those who quit because they were more optimistic of finding better employment elsewhere.

Probably the longest spells of unemployment arise when households move to a new location in search of a better job. The greater the potential improvement in earnings, the longer the spell of unemployment they would be willing to endure in exchange. In equilibrium, expected permanent income may not change due to this move. It may even go up if only those households able to accumulate sufficient reserves to carry them through this spell of unemployment move to these better locations, limiting the supply of migrants.

Effects of Unemployment Insurance on the Drop in Consumption

Chetty and Looney argue that a small fall in consumption in response to unemployment does *not* necessarily imply that the potential welfare benefit from provision of unemployment insurance is also small. Individuals could well be sufficiently risk averse that alleviating even this small fall in consumption could have substantial welfare benefits. That the fall in consumption is so small could in fact be indirect evidence that individuals are very risk averse.

How much of an effect, though, would provision of unemployment insurance in Indonesia have in lessening the fall in consumption following unemployment, and thereby raising welfare? That the fall in consumption

is virtually identical to that estimated in the United States raises questions about the size of any potential benefits from UI. The United States has a sizeable UI program while Indonesia provides little or no government assistance to the unemployed. Seeing an equal fall in consumption in the two countries suggests in itself that the provision of unemployment insurance provides no net smoothing of consumption. Given its distortions to layoff decisions and to spell lengths, this comparison raises serious questions about the value of the program.

Cross-country comparisons, of course, require great caution. *Unemployment* could reflect very different circumstances in Indonesia than in the United States. The unemployed, for example, may have much better access to informal jobs in Indonesia than in the United States, offsetting much of the fall in earnings in Indonesia. If the percent fall in current income is much greater in the United States than in Indonesia, and households in both countries are credit constrained, yet the fall in consumption is the same in both countries, then there is indirect evidence that unemployment insurance does help. Unemployment insurance can be very effective at relaxing credit constraints, and so can be effective at smoothing consumption to the degree that households are credit constrained.

The potential role of unemployment insurance in smoothing consumption would be very different, though, if the unemployed are not credit constrained. For the credit constrained, unemployment benefits should raise consumption dollar for dollar. In contrast, if individuals are able to smooth consumption over time by drawing on their assets, or through borrowing against future earnings, then consumption fluctuates only due to fluctuations in expectations about permanent income.

Unemployment insurance makes no attempt to insure uncertainty about the earnings in one's future job. At best, unemployment insurance covers some fraction of the foregone income while unemployed. Yet the lost earnings while unemployed may be small relative to the loss in the present value of lifetime earnings resulting from an unemployment spell. For example, if an unemployment spell on average lasts for f percent of a year, and subsequent jobs pay on average a percent less than one's current job, then the net percent loss in lifetime income due to unemployment equals approximately $f(r - g) + a(1 - f[r - g])$, where r is the real interest rate and g is the growth rate in earnings. If $f \approx .5$ (more typical in the United States would be around .2), $a \approx .1$ implying a 10 percent fall in earnings, and $r - g \approx .04$, then the loss in future earnings is five times as large in present value as the lost wages while unemployed. Yet UI at best offsets only a fraction of these lost wages, and so a very small fraction of the drop in lifetime income. Unemployment insurance will therefore be largely ineffective at smoothing consumption to the extent that fluctuations in consumption reflect fluctuations in lifetime income.

To what extent are observed fluctuations in consumption in Indonesia

due to credit constraints rather than fluctuations in lifetime income? To the extent that individuals have sufficient assets (or sufficient borrowing capacity) to finance their consumption until they are reemployed, then the current fall in consumption should reflect the size of the fall in lifetime earnings, and not the fall in current income while unemployed. The sizeable assets available to Indonesian households certainly suggest that they are in a position to smooth consumption.

To what degree are Indonesian households credit constrained, in spite of their substantial assets? More concretely, to what degree is the fall in their consumption larger than would be expected based on the change in their lifetime income caused by becoming unemployed, suggesting the presence of credit constraints?

To judge this, it would be helpful to see evidence on the effects of unemployment on lifetime incomes in Indonesia. With the survey data, what is feasible is to measure the effects of unemployment on expected earnings three years later. To what degree are expected earnings lower in year $t + 2$ for those unemployed in year t , relative to earnings in year $t - 2$, compared with the outcomes for those who do not become unemployed? How does the 10 percent drop in their relative consumptions compare with the relative percent drop in their future earnings? To begin with, any excess drop in consumption provides an estimate of the degree to which credit constraints are binding. Of course, the answer here may depend strongly on the stage in the lifecycle, with the young presumably more credit constrained than the middle-aged.

One other complication, though, is that the variance of future income could be greater for the unemployed than for those who are employed in year t . Facing greater uncertainty, the unemployed may reduce their current consumption as a form of precautionary savings, even without any liquidity constraints. Unemployment insurance plays little role in alleviating this future uncertainty, and so would have little effect on current consumption if precautionary savings rather than liquidity constraints explain the current fall in consumption.

In sum, the observed fall in consumption in Indonesia following unemployment can reflect a fall in permanent income, increased precautionary savings, and/or the presence of liquidity constraints. Unemployment insurance would be effective at smoothing consumption largely to the degree to which liquidity constraints explain the observed fall.

Summary

In sum, Chetty and Looney argue that there could be large potential welfare gains from the introduction of unemployment insurance in Indonesia, to help alleviate costly coping mechanisms in response to unemployment, particularly the drop in spending on education. Whether unemployment

insurance would plausibly be effective at alleviating such costs, though, is a separate question that merits further investigation.

Comment Mario B. Lamberte

The paper empirically shows that idiosyncratic unemployment shocks lead to consumption fluctuation of similar magnitude in the United States and Indonesia. One may conclude from these results that developing economies like Indonesia have adequate social insurance because they can smooth consumption paths in the face of shocks despite the absence of formal social insurance similar to those that can be found in developed economies. If so, the implication is that formal social insurance for developing economies offers small marginal welfare gains. However, this may not necessarily be the case. By developing a normative framework, Chetty was able to demonstrate that a small drop in consumption after a shock can be attributed to either of the two: (a) agents are able to easily and inexpensively smooth consumption by borrowing or through informal insurance mechanisms, or (b) agents are risk averse to fluctuations and are inclined to undertake costly consumption-smoothing actions. In the first case, formal social insurance will yield small marginal welfare gains, while in the second case the same will generate large marginal welfare gains. He then went on to provide three sets of evidence for the presence of high risk aversion in Indonesia. This being the case, formal social insurance can therefore yield large marginal welfare gains.

One of the interesting proofs offered by Chetty that point out the possibility of having high risk aversion in Indonesia is that households undertook costly consumption-smoothing methods by reducing educational expenditures on children to deal with temporary idiosyncratic shock. As is well known, the Philippines was also adversely affected by the recent Asian financial crisis, and there were pieces of evidence that households attempted to fend off a decline in consumption by making some adjustments. Reyes et al. (2001, 168), for instance, made the following conclusion from their analysis:

Even if figures from different data sources did not match, still it was clear that the crisis had the following effects: (1) enrollment in both elementary and secondary school levels had increased but at a lower rate than the usual rate; (2) households had allowed their older children already in school to continue, but postponed the enrollment of new entrants both

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