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STRESS TESTING FOR THE POVERTY IMPACTS OF THE NEXT CRISIS

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Stress Testing for the Poverty Impacts of the Next Crisis

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Introduction

In a presentation to the World Bank's Executive Board in July 2009, at the height of the present global financial crisis, I argued that we have to prepare ourselves for the next crisis and its impact on the poor, even though we do not know when the next crisis will strike and what its precise impacts will be.[1] I proposed three stages of systematic preparation at the country level. First, a program of assessment, which "stress tests" the social protection system against a range of crises, to identify gaps and weaknesses, analogously to the role that the Financial Sector Assessment Program plays in stress testing the financial system. Second, a medium term program of financing improvements in social protection programs, now viewed as a system, to close gaps and address weaknesses. Third, a pre-qualified line of assistance for social protection that would be available to a country immediately that agreed crisis triggers are breached.

These three steps are somewhat different in nature and require different types for a discussion and debate. The third step has to be formulated in the context of overall development financing, and indeed a permanent "Crisis Response Window" is being discussed in the context of the current IDA16 replenishment. The second step comes close to "normal business" for donor agencies, although there are issues about the extent to which funding of precautionary investments, for a crisis sometime in the future, will be attractive (to donors and recipients) relative to expenditures with immediate impact. However, both of these steps build upon, and depend upon, a solid assessment of how the collection of social protection programs as currently constituted would or would not respond to protect the poor in the face of a range of crises. The set of papers presented at the World Bank workshop on simulating the impacts of crisis is an excellent contribution to this effort. In this note I will briefly discuss why the effort is important, and then consider some of the specifics of the analysis.

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* Cornell University: T.H. Lee Professor of World Affairs, International Professor of World Affairs and Professor of Economics. This is a commentary on papers and presentations at the World Bank workshop on "Distributional Impacts of Macroeconomic Shocks: An International Overview," May 24, 2010. It will be published in the proceedings of the workshop.

[1] Ravi Kanbur, "The Crisis, Economic Development Thinking, and Protecting the Poor", Presentation to the World Bank's Executive Board, July, 2009. See also Ravi Kanbur, "Systemic Crises and the Social Protection System: Three Proposals for World Bank Action", April, 2009. A detailed formal paper is available as Ravi Kanbur, "Protecting the Poor Against the Next Crisis", Distinguished Lecture Series, Egyptian Centre for Economic Studies, Cairo, April, 2010.

The Need for a Social Protection Assessment Program (SPAP)

The present global financial crisis will pass. But crises are here to stay. By a crisis I mean a macro-level shock over which the country itself has no control, but which affects economic wellbeing in the country. A crisis worth the label will have a dramatic negative impact on per capita income. But the precise impact on the pattern of incomes and wellbeing will depend on the precise origin and nature of the crisis. Developing countries are likely to face many such sources—natural climatic disasters; sudden emergence and spread of an infectious disease; unrest in a neighboring country with possible flow of refugees; collapse of demand in a particular industry (such as tourism as a result of real or perceived terrorism threats, or sudden shifts in fashion in apparel); or the consequences of a global financial crisis. Each of these headings in turn covers many specific possibilities (for example, the financial crisis of 1997 is recognized to have been quite different in nature and impact from the crisis that began in 2007-8). Further, for a given country, particularly a small country, a global crisis can have very different impact depending on the (unpredictable) reactions of its large neighbors or trading partners).

Each of the different types of crises will have very different types of impact on the poor in different countries, depending again on the detail of economic structure in that country. Added to the uncertainty of crisis type is uncertainty of crisis timing—timing of the onset of the crisis, and timing of when it recedes (the latter depending on uncertain policy responses).

I have argued that these twin uncertainties—of crisis type and crisis timing—should frame the development of an ex ante strategy for protecting the poor. We should examine how the current social protection programs, viewed as a system, would respond to the needs created by crises of different types. We should "stress test" the system to identify vulnerabilities and gaps in (i) coverage and (ii) flexibility and speed of response. Such a comprehensive assessment would be a Social Protection Assessment Program (SPAP), corresponding to the Financial Sector Assessment Program (FSAP). I would now like to review the workshop presentations with this objective in mind.

An Overview of the Workshop Papers and Presentations

The papers and presentations at the World Bank Workshop on Distributional Impacts of the Crisis represent an important contribution to our understanding of crises, their impacts on the poor, and how social protection programs can and have responded.[2]

[2] My commentary is based on the following papers or PowerPoint presentations (i) "Analyzing the poverty and distributional impacts of macro shocks in developing countries: A microsimulation approach," (PowerPoint), Poverty Reduction Group, PREM, World Bank; (ii) "The impact of the financial crisis on poverty and income distribution: insights from simulations in selected countries," by Bilal Habib, Ambar Narayan, Segio Oliveri and Carolina Sanchez, Economic Premise, March 2010. No. 7; (iii) "Assessing the employment and welfare impacts of the 2009 recession in Latvia and Turkey," (PowerPoint), Ihsan Ajwad, Meltem Aran, Mehtabul Azam, Jesko Hentschel; (iv) "Impact of shocks and role of social protection: the case of Brazil," (Powerpoint), Francisco Ferreira, Anna Fruttero, Philippe Leite and Leonardo Lucchetti; (v) "Assessing poverty and distributional impacts of the global crisis in the Philippines: A microsimulation

The presentation "Analyzing the poverty and distributional impacts of macro shocks in developing countries: A microsimulation approach," by the Poverty Reduction Group, sets out the overall approach.

The first step is to model the crisis itself and its macro impacts on the economy. This requires a careful enumeration, elaboration and discussion of the transmission mechanisms. The exercise has to be country specific, and will involve a fair amount of judgment, for example on assumptions made about near neighbors' policy responses, which in turn can influence macro outcomes for the country. From these would come various macroeconomic projections—overall and sectoral growth, inflation in general and in its major components such as food and fuel, exchange rate, international remittances, etc. Building on these would come projections of employment and unemployment. A key method for translating these macro projections to the household level are estimated models of labor force status and Mincerian wage equations, and assumptions that allocate international and domestic remittances across households.

With the above procedure, and a base household survey, one can project the distributional impact of the crisis being modeled. Poverty calculations can then be done assuming that the expenditure to income ratio stays constant. Impacts across the distribution can be shown using growth incidence curves and other methods. Who is likely to become poor, in terms of household characteristics can thus be identified.

The general approach is then applied to a number of countries (Philippines, Bangladesh and Poland are the focus in the presentation) for scenarios matching the impact of the global financial crisis. The results are intuitive, but interesting and of relevance for policy. Poverty rises but there is not much of an impact on overall inequality. The new poor tend to be different from those who were poor before the crisis—in other words, the crisis impacts specific sections of the population. And the impacts are particularly concentrated in the middle of the income distribution.

An Assessment, and What's Missing

The above is a broad summary of the papers and presentations. Of course there is much greater detail in the specific papers, and there is a rich weaving together of country specific institutional factors. But the overall approach and method should be clear. While one can of course have specific comments and criticisms of the individual country studies, or one or more of the components described above, my overall assessment is that this is an excellent start in the direction of what I have in mind, namely preparing ourselves for protecting the poor against the next crisis.

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approach," Bilal Habib, Ambar Narayan, Sergio Oliveri and Carolina Sanchez-Paramo; (vi) "Assessing ex ante the poverty and distributional impact of the global crisis in a developing country: A microsimulation approach with application to Bangladesh," Bilal Habib, Ambar Narayan, Segio Oliveri and Carolina Sanchez-Paramo; (vii) "A methodology note on the employment and welfare impacts of the 2007-08 financial crisis," Meltem Aran, Mehtabul Azam, Mhamed Ihsan Ajwad and Jesko Hentschel; (viii) "Employment, poverty and distributional impacts of the crisis in Poland: Brief overview of results from microsimulation exercises."

The authors of the studies and overall summary are of course themselves aware of the limitations—the level of disaggregation depends on availability of macro projections; various structural relationships are assumed to remain unchanged; no factor mobility; share of profits remains constant; etc. But moving in this direction would require a full-fledged general equilibrium model of the economy, the construction and operation of which would require its own assumptions and make its own data demands.

In my view, for the task at hand this project has struck the right balance between fine detailed modeling of economic relationships and interactions, and the need to get to concrete results with the data available. I would like to suggest, however, that effort should go further developing a number of missing elements which are central to providing a complete picture of impacts on the poor.

There is a strong focus on labor market status and labor income. Other sources of income are not treated with the same degree of careful attention. This may be acceptable in economies where labor income is the dominant source of income for the poor, such as in transition economies of Eastern and Central Europe, but for economies where small holder agriculture is significant specific effort will have to go into modeling the farm and non-farm production activities of the household. I would see this as an issue in the Bangladesh case, for example. Now, it may well be that the financial crisis, which was the focus of this project, transmits its impacts mainly through labor markets in the manufacturing sector. But for crises in general there should be a capacity to build in transmission mechanisms that affect farm incomes and incomes from non-farm artisanal activities. For example, the impact of climate driven crises will certainly have this as a major transmission mechanism.

I would like to use the above to make two further, more general, points. There is a strategic choice between how general our model should be—whether the base model should be able to capture a range of different types of crises, or whether the modeling itself should be done crisis by crisis. While a final answer to this will have to wait for the results of trial and error, my initial position is that for a capacity to do ex ante assessments of crises as a category, we perhaps need a broader range of transmission mechanisms built in to the modeling, even if we decide to switch some of them off for specific simulations. In any event, what should be resisted is the notion that the same set of transmission mechanisms can be translated across crises.

My second point relates to the role of income in this analysis. The sources of household income are crucial in following through the macro transmission mechanisms down to the level of poor households. And yet, it might be argued with some justification that we give more importance in our household surveys to the expenditure side of information gathering. This flows from our natural concern with measuring poverty, and from the broad consensus that expenditure data are the best for this task. But the impacts of crises, and indeed of any major macro change whether short term or long term, on poverty passes through income. We need to be able to allocate macro level shifts in income composition, by sector and by factor, down to the household level. For this we need a detailed account of the sources of household income in our household surveys. I would argue that this aspect is underemphasized in household income and expenditure surveys,

particularly for agrarian economies. With given survey resources, the balance between emphasis on the expenditure modules and the income, employment and activity modules is a difficult one to assess. But the line of work in these papers, and the line of work that would be needed to get a handle on the impact of crises on the poor, argues for more weight than is currently given to modules that help to pin down the sources of income.

A central aspect of my proposed "stress testing" of the social protection system, in the face of different types of crises, is the need to model how individual protection programs will respond to different impacts of the crisis, transmitted through different mechanisms that are country and crisis specific. This is done to some extent in the Poland study for unemployment insurance, and it is the focus of the Brazil study for two selected programs, but I would like to argue that this aspect is not as well developed in these papers and presentations as it should be.

What is it that needs to be done? For each country, we first of all need an inventory of the major social protection programs and, very important, their rules of operation. The most obvious programs for the "employment/unemployment" focus of the present set of papers and presentations are of course unemployment benefit programs, and this is what is done for example in the Poland study. Thus when the crisis is simulated, and its unemployment effects are projected, the income impacts follow from the wage equations, but the net income impacts, that is to say net of unemployment benefits, need to be simulated based on the rules of unemployment benefit in that particular country.

But unemployment benefits are only one of a myriad of programs whose rules will, in principle, affect flows of public resources to households when a crisis hits. Thus, for example, programs of conditional cash transfers have specific rules of eligibility, sometimes based on assessed household income. If the crisis leads to a dramatic fall in the incomes of some categories of households, and the eligibility assessment happens soon after the crisis hits, then these households will start receiving cash transfers. Although the logic of the program may have little to do with crisis support—it may instead be to do with incentivizing behaviors such as keeping children in school ,or early health checks—in its operation it in effect becomes crisis support, and needs to be incorporated into the analysis. If these programs were small then perhaps they could be ignored. But some of these programs are very large in some countries—Progresa-Oportunidades in Mexico or the National Rural Employment Guarantee Act in India, for example. And even if individual programs are small, if as a collectivity they represent significant injection to poor households, then they need to be incorporated systematically into the analysis of the possible impacts of crises on the poor.

The above perspective requires of household surveys that they capture flows to households from social programs, distinguished by program in some detail. This is yet another dimension of the importance of having a detailed accounting of the sources of household income—market and non-market. The extent of detail available is likely to vary from country to country. The best is if the actual cash flow from different programs is accounted for. If this is not available, but there is information on whether the household participates or not, this could be used to develop assumptions on how the total outlay of the

program (which we would get from national level administrative data) could be allocated across households as a baseline—in the same way that international remittances were allocated in the current project. In any event, what is important is that we do develop such a baseline where the monetary benefits of major social protection programs are allocated across households.

There are two further issues on social programs that I want to raise on this theme of social protection programs in crises. First, there are programs that make a contribution in kind, not cash. Free food, or subsidized food from ration shops, is the leading example, but there are others such as the excusing of school fees or paying for school uniforms etc. There is of course a monetary equivalent of these in kind transfers, and if these transfers to households change as program rules dictate when the crisis hits, then they should in principle be incorporated into the analysis.

The second issue is an important one, but difficult to address in practice. Of course, from the program rules of eligibility we can identify households that would fall into the program after the crisis hits, or specify the change in benefits of households already enrolled in the program. But this is the de jure analysis. In reality, whether the program delivers on the benefits depends on the budgetary allocations made to it. A good example of this is an "employment guarantee" scheme. In these programs, employment is supposedly guaranteed at a given wage (usually the local minimum wage) to all who turn up to the public works site. Thus, when the transmission mechanisms translate the crisis into employment losses and sharp wage declines, the number of people showing up at the public works site goes up. But will they be hired? The answer depends of course on whether the budget will rise pari passu. If it does not, there will be rationing of employment. For the domestic political economy, this raises the question of whether such budgetary allocations can indeed be guaranteed. In India, the National Rural Employment Guarantee Act provides a justiciable guarantee, an example of the polity trying to tie its own hands behind its back. For analyst, however, the above scenario requires that a judgment has to be made on whether or not budgets will indeed be increased to convert de jure rules into de facto outcomes. Of course, once the machinery for simulations is set up, we can simulate the impact of different levels of budgetary provisions, if we are willing to model how the rationing is implemented.

All of the above is in relation to identifying needs, gaps and vulnerabilities as a range of crises materializes. But recall that there are two types of uncertainties—uncertainty of crisis type and uncertainty of crisis timing. The second type of uncertainty also raises issues for policy. In particular, it requires us to focus not so much on the ex ante *comprehensiveness* of the system of social protection programs, but on their *flexibility*. And this flexibility has two aspects—rapid response in scaling up programs when the crisis strikes, and equally rapid scaling sown when the crisis passes. In a sense we have already touched on the first—the question of budgetary resource availability can be related to the speed with which budgets can be increased. But we have not as yet discussed flexibility in the other direction, and this requires us to discuss what happens when the crisis passes—which none of the papers or presentations in the workshop do.

To illustrate the issues that arise, let us compare food and fuel subsidies with employment guarantee schemes. On the scaling up side, the first has relatively easy flexibility both in technical terms (for example, simply reintroducing pass-through provisions for global fuel prices into domestic fuel prices) and in terms of political economy (generalized subsidies will have greater political support than employment schemes, which benefit only the poorest). When the crisis passes, however, the ranking is reversed. As employment and wages pick up after the crisis, public works rolls will presumably simply melt away as workers move to better opportunities in the rest of the economy. But once generalized subsidies are increased, it is very difficult politically to reduce them—for the very reason that the constituency that benefits from them is much larger.

The general point I am making is that an assessment of how well a social protection system does in the face of a crisis is incomplete without an assessment of what is left behind when the crisis passes. A full assessment will allow us to better design ex ante programs that, as a collectivity, are comprehensive and flexible, and flexible moreover in both directions.

Conclusion

To conclude, I have looked at the papers and presentations in the workshop through a particular lens—whether they contribute towards preparing to protect the poor against the next crisis. I believe they represent an excellent step in this direction, and any further work should and indeed will have to use them as a starting point. But future work will also need to extend and elaborate the analysis conducted here in a number of directions, including different types of crises, sources of market income, sources of non-market income, and the operation of a full range of social protection programs when crises hit and when crises recede.

OTHER A.E.M. WORKING PAPERS

WP No	Title	Fee (if applicable)	Author(s)
2010-16	Conceptualizing Social Security and Income Redistribution		Kanbur, R.
2010-15	Food Stamps, Food Insufficiency and Health of the Elderly		Ranney, C. and M. Gomez
2010-14	The Costs of Increased Localization for a Multiple-Product Food Supply Chain: Dairy in the United States		Nicholson, C.F., Gómez, M.I. and O.H. Gao
2010-13	Wine in your Knapsack?		Conrad, J.M., Gómez, M.I. and A.J. Lamadrid
2010-12	Examining consumer response to commodity-specific and broad-based promotion programs for fruits and vegetables using experimental economics		Rickard, B., Liaukonyte, J., Kaiser, H. and T. Richards
2010-11	Harnessing the Forces of Urban Expansion – The Public Economics of Farmland Development Allowance		Chau, N. and W. Zhang
2010-10	Estimating the Influence of Ethanol Policy on Plant Investment Decisions: A Real Options Analysis with Two Stochastic Variables		Schmit, T., Luo, J. and J.M. Conrad
2010-09	Protecting the Poor against the Next Crisis		Kanbur, R.
2010-08	Charitable Conservatism, Poverty Radicalism and Good Old Fashioned Inequality Aversion		Kanbur, R. and M. Tuomala
2010-07	Relativity, Inequality and Optimal Nonlinear Income Taxation		Kanbur, R. and M. Tuomala
2010-06	Developing viable farmers markets in rural communities: an investigation of vendor performance using objective and subjective valuations		Schmit, T. and M. Gomez
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