Monitoring Household Coping Mechanisms during Complex Crises and Recovery: A Framework

Shivani Nayyar
Poverty Group, Bureau for Development Policy, UNDP
Manila, March 21st 2011
Macro impacts of the crisis

**Philippines: Real GDP Growth**

- Growth Rate
- Avg 05-07

**Philippines: Exports during crisis**

- Million US $
- Macroeconomic data is abundantly available
- Important to monitor household coping behavior
Why study coping strategies?

✓ To understand micro impacts of shocks

✓ Harmful coping strategies can lead to long term human development consequences
  - Impacts on children and other vulnerable groups
  - Harmful intra-household coping

✓ Coping strategies are often indicative of the stage and severity of a crisis

✓ To design most effective social protection policies
An optimizing household

A two period model of a household who can invest in an asset $A$ in the first period.

Asset returns: $r$ in second period.

The household consumes $x$ of which a minimum $x_{\text{min}}$ is required (Example: Subsistence level of staple food.)

The household also consumes $y$ (other food, clothing and other goods).
$x_i$: in time period $i$
$y_i$: in time period $i$
$M_i$: Income/resources available in time period $i$

subject to the constraint:

$$x_1 + p_y y_1 + p_A A = M_1$$

Income shock: Low realization of $M_i$
$M_i$: Income/resources available in time period $i$

Resources available from:

Sale of assets (that are primarily stores of value)
Borrowing
Pawning
Transfers received
A sequence? Under certain parametric conditions:

As $M_1$ decreases

- Asset $A$ is given up at a faster rate than $y$ and $x$. This is conditional on $r$ and the price of the asset.
- Consumption of $y$ is given up at a faster rate than consumption of $x$.
- Below a certain income level, only $x$ is consumed.

Income elasticity of $x$ is lower than income elasticity of $y$, unconditionally.
Sequence:

Coping mechanisms:
- Reduce staple consumption
- Reduce non staple consumption
- Stop accumulation of asset

M<x_{min} M M_2 M_1 M_0
Corbett 1988 - at first, food is rationed and assets that primarily serve as a store of value are sold. Productive assets are sold much later and are indicative of a prolonged crisis and considerable distress.

Leprichakul 2009 - poor households adopt consumption smoothing at first by drawing down assets until the productive assets approach the ‘Micawber’ threshold at which point households tend to switch to asset smoothing…may revert back from asset smoothing to consumption smoothing when their immediate survival is at risk.
Sequence of coping strategies

✓ Draw down savings, sell assets (stores of value)
✓ Sale of other assets (?) (livestock or land??)
✓ Potential sources of additional income.
✓ Reduction in asset accumulation.
  - Girls withdrawn from school before boys? (lower r)
✓ Reduction in non essential consumption expenditure.
✓ Reduction in essential consumption expenditure (staple food).
  - D’Souza and Jolliffe 2010, Skoufias et al 2011
Drawing on assets that serve primarily as a store of value

- Use savings
- Borrow, possibly against collateral

Sale of other assets

- Sell livestock, jewellery

Drawing on potential sources of additional income

- Look for additional work
- Sell crafts
- Women and children work
- Some family members migrate

Reduction in asset accumulation

- Withdraw girls from school
- Withdraw boys from school

Reduction in non essential consumption expenditures

- Reduce consumption of fruits, vegetables, dairy products

Reduction in essential consumption expenditures

- Reduce consumption of staple
Drawing on assets that serve primarily as a store of value

Sale of other assets

Drawing on potential sources of additional income

Reduction in asset accumulation

Reduction in non essential consumption expenditures

Reduction in essential consumption expenditures
However, this really is an open question.

- Productive assets not included in the model.

- Results conditional on parameter values.

- Empirical evidence not entirely consistent.

- Any sequences are bound to be location and context specific.
More from the literature:

Kinsey et al (1998) selling cattle is the primary coping mechanism and the problem discussed by Corbett (1994) and others that sales may reduce herd sizes below the threshold of viability is relatively unimportant for this group of households.

(the response of rural households to droughts in a panel of roughly 400 resettled households in Zimbabwe where ninety percent of households own cattle, with an average holding of some 10 animals.)
Going forward

- Sequence of coping behavior

Source: CBMS 2009
Optimizing household:

Coping Mechanisms

Reduce staple consumption

Reduce non staple consumption

Stop accumulation of asset

\[ M < x_{\text{min}} \quad M \quad M_2 \quad M_1 \quad M_0 \]
Food related Coping strategies

- Consumed staple food only
- Combined meals
- Consumed own harvest
- Reduced portion

Source: CBMS 2009
• Differences in coping behavior by income and other characteristics, including during recovery.

• Policy implications (eg. Role of credit market imperfections.)

• Panel nature of CBMS data
Panel data

- Coping Mechanisms during Recovery
  - Sequence of unraveling
  - Duration of coping strategies

- Is recovery as homogenous as the shock or more idiosyncratic?
  - Social Protection policy has to reflect differences in inherent coping capacity of different groups.
• Time poverty and quality of work issues
  - Gendered nature of poverty and vulnerability, and coping strategies.
  - Child labor
  - Unpaid work of women (and children?)

• Methodological issues and options.
  - Time diaries
  - Stylized analogues of time diaries
Sample
From the Young lives survey:

SECTION 3B: TIME ALLOCATION OF ADULTS AND CHILDREN

FIELDWORKER: THIS SECTION IS AN ATTEMPT TO GET A MORE COMPLETE UNDERSTANDING OF WHAT PEOPLE DO - INCLUDING NON-AGRICULTURAL ACTIVITIES. ALSO IT WILL PROVIDE INFORMATION ABOUT THE INTRA-HOUSEHOLD DIVISION OF LABOUR. PLEASE NOTE THAT UNPAID ACTIVITIES SUCH AS HOUSEHOLD CHORES MUST BE INCLUDED HERE.

3.11 For each member of the household please record their most important work activity (in terms of time spent) in the last 12 months beginning with the most important activity. INCLUDE SALARIED AND NON-SALARIED JOBS, INSIDE AND OUTSIDE THE HOME. If a household member has done less than one work activities or does not work at all (e.g. very young or very old) then please use the N/A code of 88 as appropriate.

<table>
<thead>
<tr>
<th>ID (from household roster)</th>
<th>3.11.1 Does this person have a permanent disability or long-term illness and if so how does it affect their ability to work and take care of themselves (ENTER CODE FROM CODE BOX #10)</th>
<th>3.11.2 Most important activity (ENTER CODE FROM CODEBOX #11)</th>
<th>3.11.3 (FIELDWORKER: You may want to write down the activity and later choose the correct code from CODEBOX #11) Enter the number of months in which any of this activity was done, give the typical number of days per week during these months and approximate hours per day</th>
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<tbody>
<tr>
<td></td>
<td>3.11.1 (DISABR3) SPECDISB</td>
<td>3.11.2 (ACTR3) SPECACT</td>
<td>3.11.3 (MONTHSR3) (DAYSR3) (HOURSR3)</td>
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<td>Other (specify)</td>
<td>Other (specify)</td>
<td>Other (specify)</td>
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</tbody>
</table>
Sample 2
Tanzania (part of Integrated Labor Force Survey)

1. What were you doing yesterday between .................. and ..................
   INT: Fill in activity in first line for time period

2. What else were you doing during that period?
   INT: Fill in activities on the next four lines for the time period

3. If more than one activity mentioned: Did you do the activities at the same time, or one after the other?
   INT: Circle code 1 if the answer is ‘Yes’ and code 2 if the answer is ‘No’

4. Did you get any payment? (e.g. Monthly salary; Food and allowance)
   INT: Fill in column 5 using system code A

5. (a) Where were you when you did the activity? (Fill in column 6 using location code B)
    (b) Which means of transport, did you use to reach the place of this activity?
    INT: Fill in column 8 using system code C

INTERVIEWER: REPEAT QUESTIONS 1 TO 5 FOR EACH CATEGORY OF TIME IN AN HOUR PERIOD FROM 6:00 AM YESTERDAY TO 6:00 AM TODAY
Thank you!