Weaving the SSN
Poverty and Vulnerability Assessments:
Overview of Concepts and Methods

Emmanuel Skoufias
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Outline

- Safety nets and who they serve
- Which population groups need Safety Nets? And How to identify them?
  - Diagnostic Tools
  - Monetary and Non-Monetary Poverty and data requirements
- Monetary Poverty: CS survey
  - Poverty Measurement & Poverty Profiles (what can we learn?)
- Non-monetary Poverty: CS Survey
- Monetary Poverty: Repeated CS survey
- Monetary Poverty: Panel Survey
- Vulnerability to Poverty: Risk and Vulnerability Analysis
- Time permitting: Measuring Vulnerability & identifying the vulnerable
Whom do Safety Nets Serve and How do they Fit in Wider Development Policy?

- Which groups of households should benefit from safety nets programs?
- This helps us identify which instruments should be used and what other social programs and policies are necessary to address poverty and risk for them.
Whom do Safety Nets Serve

- Safety nets may serve one or a combination of the following groups:
  - The chronic (structurally) poor
    - They lack the assets (broadly defined) to earn sufficient income, even in “good years”.
  - The transitory poor
    - They earn sufficient income in “good years” but fall into poverty, at least temporarily, due to idiosyncratic or covariate shocks ranging from an illness in the household or the loss of a job to drought or macroeconomic crisis.
Whom do Safety Nets Serve

- **Vulnerable groups.**
  - Groups that face a disadvantage. Some overlap with the chronic and transient poor. Others within these groups will not be poor, especially where the vulnerability is an individual one and the individual is part of a non-poor family or community.
    - *Disabled people.*
    - *Elderly.*
    - *Orphans and Vulnerable Children.*
    - *Refugees.*
Which population groups need Safety Nets? How to identify them?

Two complementary diagnostic tools

**Poverty Analysis:**
- Level of poverty
- Characteristics of the poor
- Trends in poverty
- Duration of poverty, poverty dynamics
- Factors associated with poverty

**Risk and vulnerability analysis:**
- Main risks faced by the poor (by age group)
- Population at-risk of becoming poor
- Nature of vulnerability
  - Low level of assets
  - High variability of income or consumption
Which population groups need Safety Nets? How to identify them?

<table>
<thead>
<tr>
<th>By analyzing:</th>
<th>We get insights into:</th>
</tr>
</thead>
<tbody>
<tr>
<td>the size of the target group (poor, vulnerable)</td>
<td>the scope of the program (coverage, budget)</td>
</tr>
<tr>
<td>the characteristics of the target group (poor, vulnerable)</td>
<td>how to identify (target) these groups (eligibility, targeting method)</td>
</tr>
<tr>
<td>why do they belong to this group? what are the causes of their poverty and/or vulnerability?</td>
<td>what treatment may ameliorate their status (type of program, level of benefit)</td>
</tr>
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</table>
Which population groups need Safety Nets? Dimension of poverty

Monetary poverty:
- Income poverty
- Consumption poverty

Non-monetary poverty:
- Poor health
- Poor nutritional status
- Low education or illiteracy
- Lack of basic services
- Social exclusion
- Insecurity
- Lack of freedom & voice/ lack of empowerment

Dynamics of household welfare:
- Duration in poverty
- Chronic vs. transient poverty

Vulnerability to poverty:
- Risk-induced vulnerability
## Dimension of poverty and data requirements

<table>
<thead>
<tr>
<th>Dimension of poverty</th>
<th>Data requirements</th>
<th>Type of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Monetary</td>
<td>Cross-sectional survey with info on monetary welfare</td>
<td>Level, severity of poverty&lt;br&gt;Poverty profile&lt;br&gt;Factors associated with poverty</td>
</tr>
<tr>
<td><strong>2</strong> Monetary, non-monetary</td>
<td>Cross-sectional survey with info on monetary and non-monetary welfare</td>
<td>Level of non-monetary poverty&lt;br&gt;Households deprived in many dimensions&lt;br&gt;Poverty profile for vulnerable groups</td>
</tr>
<tr>
<td><strong>3</strong> Monetary, non-monetary</td>
<td>Repeated cross-sectional survey with info on monetary and non-monetary welfare</td>
<td>Trends in poverty, total and by sub-groups</td>
</tr>
<tr>
<td><strong>4</strong> Monetary</td>
<td>Panel survey with info on monetary welfare</td>
<td>Chronic versus transient poverty&lt;br&gt;Transition in/out of poverty, duration&lt;br&gt;Factors causing with poverty</td>
</tr>
<tr>
<td><strong>5</strong> Vulnerability to poverty</td>
<td>Cross-sectional survey with info on welfare, shocks and risk-management strategies/instruments</td>
<td>Main sources of risk to household welfare&lt;br&gt;Households with high risks exposure&lt;br&gt;Households with low coping capacity</td>
</tr>
<tr>
<td></td>
<td>Panel survey with info on welfare, shocks and risk-management strategies/instruments</td>
<td>Proximate factors of vulnerability (low consumption vs variable consumption)&lt;br&gt;Factors causing vulnerability</td>
</tr>
</tbody>
</table>
1. Monetary Poverty: cross-sectional survey

Note: The solid red line is the poverty line.
Source: Enquete Prioritaire III, INSEE, Ouagadougou
1. Monetary Poverty: cross-sectional survey

**Poverty measurement**

- Once you have poverty line (cutoff points separating the poor from the non poor) you can define:
  - Number of poor – Poverty Rate or Headcount Poverty Rate
    - how many people are below the poverty line
  - Depth of poverty of Poverty Gap
    - How much money is needed to bring all the poor up to the poverty line
  - Severity of poverty
    - How many people and how far are they from poverty line
1. Monetary Poverty: cross-sectional survey

The distribution of Per capita Adult equivalent expenditure in Pakistan – 2001
For a poverty line of Rs 747
- Head count = 37.3
- Gap = 7.8
- Severity = 2.4
Poverty Profiles

- A poverty profile shows how poverty varies across sub-groups of the population.
- It examines the pattern of poverty, to see how it varies by:
  - geography (by region, urban/rural, etc.),
  - community characteristics (e.g. in communities with and without a school, etc.)
  - by household characteristics (e.g. by education of household head, by size of household, sector of employment etc.).
- Cross-links to non-income measures of poverty may also be useful.
1. Monetary Poverty: cross-sectional survey

What can we learn from a poverty profile?

- If poverty is concentrated in groups identified by easily observable characteristics (ethnicity, location), reaching these groups may be easy: rural poverty in Cambodia 1997

- If poverty is dispersed and not easily identifiable, household targeting systems demanding on resources may be needed
2a. Non-monetary poverty concerns as well. SSN policy as well.
2b. Non-monetary poverty concerns SSN policy as well.
2. Monetary, Non-monetary Poverty: cross-sectional survey

Information on material and non-material poverty helps identify the population at risk of multiple deprivation.
2. Monetary, Non-monetary Poverty: cross-sectional survey

- Vulnerable groups:
  - Have, typically, higher rates of poverty compared to the rest of the population
  - Specifically ‘helpless’ or ‘weak’ groups, liable to serous hardship and poverty
  - Unable to take advantage of opportunities, limited defenses if shocks occur
  - Disabled, orphans, HIV infected, elderly, female headed households

- Many SSN program combines criteria of material and non-material poverty

- Example: Armenia PFB
### 3. Monetary Poverty: repeated cross-sectional survey

Chile: failure to reduce indigence, despite growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean Income</th>
<th>Gini</th>
<th>Poverty</th>
<th>Indigence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>90,598</td>
<td>0.5468</td>
<td>40.0</td>
<td>12.7</td>
</tr>
<tr>
<td>1990</td>
<td>101,075</td>
<td>0.5322</td>
<td>33.1</td>
<td>9.0</td>
</tr>
<tr>
<td>1992</td>
<td>122,353</td>
<td>0.5362</td>
<td>24.2</td>
<td>4.7</td>
</tr>
<tr>
<td>1994</td>
<td>126,644</td>
<td>0.5298</td>
<td>23.1</td>
<td>5.1</td>
</tr>
<tr>
<td>1996</td>
<td>142,892</td>
<td>0.5409</td>
<td>19.9</td>
<td>4.2</td>
</tr>
<tr>
<td>1998</td>
<td>159,821</td>
<td>0.5465</td>
<td>17.0</td>
<td>3.9</td>
</tr>
<tr>
<td>2000</td>
<td>160,441</td>
<td>0.5457</td>
<td>15.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>
3. Monetary Poverty: repeated cross-sectional survey

Indonesia: the case of transient poverty

<table>
<thead>
<tr>
<th></th>
<th>February-96</th>
<th>February-99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Poor</td>
<td>30,781,000</td>
<td>55,800,000</td>
</tr>
<tr>
<td>Percent of Poor Population</td>
<td>15.7%</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

Percentage Share of Income or Consumption in 1996

<table>
<thead>
<tr>
<th></th>
<th>Lowest 20%</th>
<th>Second 20%</th>
<th>Third 20%</th>
<th>Fourth 20%</th>
<th>Highest 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>8.4</td>
<td>12.0</td>
<td>15.5</td>
<td>21.0</td>
<td>43.1</td>
</tr>
</tbody>
</table>
3. Monetary Poverty: repeated cross-sectional survey

What can we learn from a poverty regression?

Belarus: Impact of Education on Household Consumption

Note: The horizontal axis measures the percentage change in household consumption, for a given education level of the household head, compared with a similar household where the head has only primary education. Marginal effects and 95% confidence interval of the estimate reported for each education category.
Transient and Chronic Poverty

When several years of panel data are available, we can classify households according to the time they spend in poverty and the frequency of their poverty spells.

- **transient poor**: households that experience poverty every now and then.
- **chronic poor**: households that have a higher probability of remaining poor.

4. Monetary Poverty: panel survey
Although the poverty rate declined from 61 percent to 46 percent, the data still suggest significant flows in and out of poverty, a sign of vulnerability.
Risk and vulnerability analysis

- Identifying main sources of risk and their relative importance
- Identifying those most affected by them
- Understand the sources of vulnerability:
  - High exposure to risks?
  - Low resilience against shocks (low level of assets)?
- If feasible, assess the welfare costs associated with the occurrence of shocks and their distributional impact
Vulnerability to poverty: Bringing in the vulnerability lens

Population

Currently non-poor
- Currently healthy
  - Not at risk of becoming poor
    - Not at risk of falling sick
  - At risk of becoming poor
    - At risk of falling sick

Currently poor
- Currently sick
  - Likely to move out of poverty but may be poor again
    - Likely to recover but may fall sick again
  - Chronically or structurally poor
    - Chronically sick

Vulnerable
## 5. Vulnerability to Poverty: Risk and vulnerability analysis

The case of Malawi: from risks and shocks to affected groups

<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Examples</th>
<th>Affected groups</th>
<th>Frequency/ timescale</th>
<th>Numbers affected</th>
<th>Appropriate response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disasters, shocks</strong></td>
<td>Drought</td>
<td>Whole regions, most agriculture dependent households</td>
<td>Occasional, transitory / up to 12 months</td>
<td>Up to100% in affected areas</td>
<td>- Disaster relief (food, inputs, cash) in short term</td>
</tr>
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<td></td>
<td>Flood</td>
<td>Whole communities</td>
<td></td>
<td></td>
<td>- Diversification and preparedness measures in longer term.</td>
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<tr>
<td><strong>Structural failures of development</strong></td>
<td>Severe rural “lean period” food stress</td>
<td>Labor or land scarce smallholders</td>
<td>Chronic / 2-4 months each year</td>
<td>2-3 million</td>
<td>- Productivity enhancements</td>
</tr>
<tr>
<td>(deepened by precipitous adjustment shocks)</td>
<td>Growing urban poverty</td>
<td>Urban unemployed, working poor.</td>
<td>Chronic / year-round</td>
<td>120,000?, growing</td>
<td>- Land tenure measures</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>- Micro-credit / Income generating activities</td>
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<td></td>
<td></td>
<td></td>
<td>- Alternative employment</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>- Self-targeting safety nets</td>
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<tr>
<td><strong>Personal adversity</strong></td>
<td>Disability, disease (AIDS), accident, crime</td>
<td>Disabled, elderly or orphans without carers</td>
<td>Chronic / year-round</td>
<td>600,000?, growing</td>
<td>- Employment</td>
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<td>- Microcredit</td>
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<td>- Self-targeting safety nets</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Cash and/or food transfers</td>
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</table>
THANK YOU
Measuring Vulnerability and Identifying the vulnerable

- **Vulnerability as Expected Poverty (VEP):**
  - is the likelihood that the household’s welfare in the future will be below the poverty line
Vulnerability as Expected Poverty, cont’d

*Advantages*

- Produces an index of vulnerability or a “headline” vulnerability figure
- May identify households “at risk” who are not poor
- Relatively straightforward to calculate
- Can be estimated with a single cross-sectional data set
- VEP measure gives more weight to downside risk.
Vulnerability as Expected Poverty, cont’d

Disadvantages-1

- Variance of welfare typically estimated using a single cross-section: must make the strong assumption that the cross-sectional variability summarizes accurately the inter-temporal variability of a household’s consumption
  - Ideal: estimate the inter-temporal variability of a household’s consumption using MANY repeated observations on the same households over time.
  - Reality: panel data sets are scarce and most contain 2-4 observations over time.