Living Standards Measurement Study (LSMS) Surveys for Poverty Monitoring

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Basic features of an LSMS Survey

- LSMS Surveys are integrated/multi-topic household surveys
- Nationally Representative
- Multi-Topic Questionnaire
- Multiple Instruments
- Quality Control
LSMS Household Qx is Multi-Topic

- **Consumption**
  - Food expenditures
  - Home production
  - Non-food expend.
  - Housing
  - Durable goods

- **Econ./Income**
  - Non-farm Self-Empl.
  - Agric. Activities
  - Labor activities
  - Other income
  - Savings and credit

**Sectoral**

- Household roster
- Housing
- Education

- Health, fertility
- Migration
- Anthropometric
LSMS can have Multiple Instruments

- Household Questionnaire
- Community Questionnaire
- Price Questionnaire
- Facility Questionnaire(s)
Quality control in an LSMS Survey

- Small Sample (↓ non-sampling error)
- Pre-coding, closed ended
- Training: in-depth
- Supervision: formal
- Concurrent Data Entry
LSMS and Capacity Building

- Data Users’ Groups
- Lengthy Customization Process
- Survey capabilities
- Data Dissemination
- Analytic capacity
- Feedback Loop
LSMS/IS Surveys 1985-2001...

- Albania
- Armenia
- Azerbaijan
- Bolivia
- Bosnia and Herzegovina
- Bulgaria
- Cote d’Ivoire
- Ecuador
- East Timor
- Gambia
- Ghana
- Guatemala
- Guinea
- Guyana
- Jamaica
- Kosovo
- Kyrgyz Republic
- Madagascar
- Mauritania
- Malawi
- Morocco
- Kazakhstan
- Nepal
- Nicaragua
- Niger
- Pakistan
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Romania
- Russia
- South Africa
- Tajikistan
- Tanzania
- Turkmenistan
- Uganda
- Viet Nam
How does LSMS fit into a Poverty Monitoring System?

- **Baseline**
  - Poverty Levels & Distribution
  - Determinants of Poverty
  - Characteristics of the Poor
  - Levels of Access to Services
  - Incidence of Public Spending
  - Determinants of Observed Outcomes
How does LSMS fit into a Poverty Monitoring System?

- **Linkages** to other data sources
  - Census (poverty maps)
  - Uni-topic or regional surveys
  - Qualitative research (to design an LSMS and/or complement analysis)
  - Budget
  - Administrative Records
How does LSMS fit into a Poverty Monitoring System?

• (ex-ante) Evaluation
  - Effectiveness of government programs
  - Targeting
  - Effect on indicators of interest
Examples

- Poverty Maps (South Africa, Ecuador, etc.)
- Levels of Poverty and Distribution: Kazakhstan
- Access to Services: Kyrgyz Republic
- Incidence and Monitoring Change: Nicaragua
- Health and Education Expenditures
- Policy Alternatives and Targeting: Jamaica
- Food Stamps
- Evaluation: Nicaragua Fise Evaluation
Poverty Maps

- Typically, multi-topic hh surveys (LSMS, DHS) have insufficient sample sizes for sub-regional estimates of poverty.
- By combining with census data, small-area estimates of poverty can be constructed.
  1. Identify set of questions in both census and HH qx (ex: housing material, roster information)
  2. Estimate consumption in HH survey using the shared set of questions
  3. Predict consumption for census sample using results from HH survey regression

Use appropriate econometric techniques along the way: http://econ.worldbank.org/programs/2473/topic/14460/
Opting for an LSMS?
Consider the cost/benefits

- Overall cost
- Timeliness
- Coverage (sample size overall; subsamples of interest)
- Level of analysis
- Ability to maintain quality
- Alternative data sources (HBS, prices, etc.)
## Multi-Topic Household Survey Alternatives

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>LSMS / IS</th>
<th>Priority Survey</th>
<th>Core &amp; Rotat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>Measure poverty; Study hhld behavior</td>
<td>Identify vulnerable groups</td>
<td>Monitor poverty</td>
</tr>
<tr>
<td>Analytic complexity</td>
<td>High</td>
<td>Low</td>
<td>Medium-High</td>
</tr>
<tr>
<td>Consumption</td>
<td>Yes</td>
<td>Maybe</td>
<td>Core</td>
</tr>
<tr>
<td>Income</td>
<td>Yes</td>
<td>No</td>
<td>Rotating</td>
</tr>
<tr>
<td>Social Indicators</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Questionnaire Length</td>
<td>Long</td>
<td>Short</td>
<td>Medium</td>
</tr>
<tr>
<td>Sample Size</td>
<td>2000</td>
<td>8000</td>
<td>2000-5000</td>
</tr>
<tr>
<td>Sampling Error</td>
<td>Medium</td>
<td>Low</td>
<td>Medium-low</td>
</tr>
<tr>
<td>Nat'l aggregate</td>
<td>High</td>
<td>Medium</td>
<td>High-medium</td>
</tr>
<tr>
<td>Sub nat’l aggre.</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Non-sampling error</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Planning Period</td>
<td>Variable</td>
<td>Variable</td>
<td>Variable</td>
</tr>
<tr>
<td>Months in Field</td>
<td>12</td>
<td>1-3</td>
<td>Flexible</td>
</tr>
</tbody>
</table>
Where to find out about multi-topic household surveys

Tools for Design and Implementation

• “How to” materials
Tools for Design and Implementation

- Examples from other countries
  - Questionnaires
  - Manuals for field staff
  - Statistical abstracts
  - Documentation of data set
Tools for Design and Implementation

• LSMS Course Module:
  - ~ January, 2003
  - Overview of key characteristics
  - Decision points
  - Resources needed (and how to find)
Distribution of poverty, Kazakhstan, 1996

Fig 6: Cdf of Per Capita Annual Expenditure, 1996

Cumulative Percentages

Per Capita Annual Expenditure

0 15000.00 50000.00 75000.00 100000.00

North

South
### Service quality, Kyrgyz Republic

#### Service quality by area (rural/urban)

1996 and 1997 (% and mean)

<table>
<thead>
<tr>
<th>Electricity</th>
<th>Rural</th>
<th>Urban</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have electricity</td>
<td>99.1</td>
<td>99.8</td>
<td>99.4</td>
</tr>
<tr>
<td>Hours of elec. Per day</td>
<td>13.8</td>
<td>20.1</td>
<td>15.8</td>
</tr>
<tr>
<td>Always have electricity</td>
<td>23.1</td>
<td>47.1</td>
<td>32.1</td>
</tr>
</tbody>
</table>
Incidence of Health Spending, Nicaragua 1993-1998
Who Benefits from Food Subsidy Programs in Jamaica?

Food stamps are more pro-poor than food subsidies.
Nicaragua Social Fund: Impact: Education, Gender, Poverty

- The impact of the FISE investment on school attendance is stronger for girls (7-12%) than boys (3-8%)
- The impact on reducing the education gap (age for grade) is strongest for poor children (2 lowest quintiles) where the problem is more severe.
## Nicaragua Social Fund Impact: Health

<table>
<thead>
<tr>
<th>Metric</th>
<th>Treatment Group Mean</th>
<th>FISE Control Group Mean</th>
<th>Propensity Control Group Mean</th>
<th>p value for equal means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact rate (%)</td>
<td>10.3</td>
<td>11.1</td>
<td>5.6</td>
<td>0.000</td>
</tr>
<tr>
<td>Diarrhea (%)</td>
<td>27.0</td>
<td>22.6</td>
<td>18.0</td>
<td>0.0238</td>
</tr>
<tr>
<td>Cough (%)</td>
<td>22.5</td>
<td>23.5</td>
<td>20.7</td>
<td>0.2971</td>
</tr>
<tr>
<td>Pre-natal care</td>
<td>76.1</td>
<td>69.3</td>
<td>82.3</td>
<td>0.2584</td>
</tr>
<tr>
<td>Institutional births (%)</td>
<td>69.0</td>
<td>55.0</td>
<td>60.5</td>
<td>0.1826</td>
</tr>
<tr>
<td>Attended births (%)</td>
<td>97.7</td>
<td>94.5</td>
<td>92.5</td>
<td>0.0692</td>
</tr>
<tr>
<td>DPT vaccine coverage</td>
<td>86.7</td>
<td>94.2</td>
<td>93.7</td>
<td>0.3160</td>
</tr>
<tr>
<td>Polio Vaccine coverage</td>
<td>93.6</td>
<td>97.3</td>
<td>95.7</td>
<td>0.7010</td>
</tr>
<tr>
<td>Wasting (weight-for-height)</td>
<td>0.8</td>
<td>3.3</td>
<td>3.3</td>
<td>0.6632</td>
</tr>
<tr>
<td>Stunting (height-for-age)</td>
<td>21.4</td>
<td>10.1</td>
<td>20.7</td>
<td>0.3901</td>
</tr>
<tr>
<td>Underweight (weight-for-age)</td>
<td>9.0</td>
<td>3.6</td>
<td>11.6</td>
<td>0.5400</td>
</tr>
</tbody>
</table>

/a Moderate malnutrition with z scores less than –2 for children below 6
Nicaragua Social Fund Impact: Water

- **Changes in access:**
  - (i) Net increase of 25% more hhlds w/ access to potable water in FISE areas relative to matched non-FISE areas;
  - (ii) Distance to water source: net reduction of 600 metres

- **Changes of health nutrition indicators:** Reduction in malnutrition height for age in children under 6 from 25% a 14%