Using household surveys to produce national, regional and global estimates of the working poor

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Why measure working poverty?

• Strong linkage between poverty and employment
  – Quantity and quality of employment
• Standard labour market indicators such as unemployment are insufficient in developing countries
• Appropriate labour market policies require good targeting
• MDG target to “Achieve full and productive employment and decent work for all, including for women and young people” includes indicator on working poor.
Working definition

• Working poor:
  Employed persons living in households in which per-capita income/expenditure is below the poverty line
  – Employment status determined at individual level
  – Poverty status determined at household level
  – International or national poverty line
Previous “Macro-based” global and regional working poverty estimates

• In absence of direct measurement, working poverty had been estimated as follows:
  – \( WP_L = \) Total poverty rate * employed
  – \( WP_u = \) Total poverty rate * labour force

• Key assumptions
  – Poverty rate 0+ = poverty rate 15+
  – LFPR_{poor} = LFPR_{nonpoor}
  – Unemployment rate of poor is negligible

• Advantages:
  – Allowed for regional and global monitoring for MDGs
    • ILO econometric model
  – Easily updatable

Source: ILO, Trends Econometric Models, October 2010

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What’s missing from the macro-based global & regional estimates?

• Country-level trends
• Information about different groups within societies
  – Women vs. men, youth vs. adults and elderly, workers in different sectors & industries, different levels of education, rural vs. urban, etc.
• Linkages with other indicators
  ...In short, policy relevance at the national level
• And macro-based estimates have been found to be biased (some underlying assumptions do not hold)
Towards national household survey-based working poverty estimates

- Household survey-based “micro” estimates
  - Main national data sources: household income/expenditure surveys, labour force surveys
  - Crucial that both household income/expenditure and employment status are included in survey
  - Cross-tabulation of poverty status and employment and other labour market indicators

- Advantages:
  - Direct measurement, no strong assumptions
  - Allows for much richer and more detailed analysis at national & sub-national levels

- Disadvantages:
  - It hasn’t been done before in standardized way
  - Household income/expenditure surveys often not designed to capture employment variables
Current ILO work & technical support

• ILO-World Bank collaboration to produce country-level working poverty estimates at $1.25 & $2 levels
  – Use existing HIES/LSS to tabulate working poverty data
  – Cross-tabulations of poverty status with:
    • Employment, unemployment, status in employment, industry, education, age and gender
  – Produce detailed metadata & compare HIES with LFS where possible
  – Background paper: KILM 6th Edition, Chapter 1b; KILM 7th Edition (forthcoming), Chapter 1a

• Support to countries in producing national estimates
• National studies on the working poor
Measuring working poverty with income/expenditure surveys

- HIES surveys often do not include probing questions needed to fully ascertain employment status. The following should ideally be included:
  - Paid employment, incl. persons temporarily absent from work
  - Self employment
  - Unpaid family work
  - Production of economic goods and services for own and household consumption
  - Paid apprentices
  - Persons both at work and in school
  - Members of armed forces
Important to document & analyse potential shortcomings (metadata)

- Definition of employment/unemployment & any exceptions
- Reference period for employment/unemployment
- Age for employment questions
- Other key differences with labour force surveys
Comparing LFS/HIES labour market statistics: Sri Lanka 2006/07

<table>
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<tr>
<th></th>
<th>Employment rate</th>
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<th>Unemployment rate</th>
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<td></td>
<td>Males</td>
<td>Females</td>
<td>Both sexes</td>
<td>Males</td>
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<td>HIES (2006/07)</td>
<td>91.0</td>
<td>80.7</td>
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Regional coverage of national working poverty estimates

Source: ILO KILM 7th Edition (Forthcoming)
A new model for estimating the number of working poor in the world

- **Objective**: produce a complete time series of internationally comparable country-level working poverty estimates which can be summed to aggregate estimates at the global and regional levels.
- “Bottom-up” approach: based on direct estimates from national household surveys.
- Two main steps:
  - **Step 1**: Estimate working poverty rates for countries and years for which no national working poverty estimate is available but for which total poverty rate estimates are available from PovcalNet.
  - **Step 2**: Impute working poverty estimates for the remaining countries and years, producing a complete time-series of national working poverty estimates.
    - Independent variables: output per worker, agricultural employment share, prime-age population share, regional dummy variables, country fixed effects
## Determinants of working poverty rates

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<td>Share of employment in agriculture</td>
<td>6.68***</td>
<td>4.37***</td>
<td>-0.57</td>
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<td>(0.365)</td>
<td>(0.555)</td>
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<td>Share of population aged 25-54</td>
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<td>-13.06***</td>
<td>-8.73***</td>
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<td>(1.386)</td>
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<td>1.58***</td>
<td>1.34**</td>
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<tr>
<td>Constant</td>
<td>-5.61***</td>
<td>1.85***</td>
<td>15.66***</td>
<td>19.13***</td>
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<td>(0.170)</td>
<td>(0.599)</td>
<td>(1.370)</td>
<td>(1.649)</td>
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<td>R-squared</td>
<td>0.438</td>
<td>0.601</td>
<td>0.692</td>
<td>0.808</td>
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Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Source: ILO KILM 7th Edition (Forthcoming)
Comparison of working poverty estimates: CEE & CIS region

Source: ILO KILM 7th Edition (Forthcoming)
Selected resources

- ILO Key Indicators of the Labour Market, 6\textsuperscript{th} edition, \url{www.ilo.org/KILM}
  - Indicator 20b: National working poverty
  - Chapter 1c: Background of ILO working poverty activities
- ILO Key Indicators of the Labour Market, 7\textsuperscript{th} edition (forthcoming)
  - Chapter 1a: “Working poverty in the world: Introducing new estimates using household survey data”
- ILO Employment Trends Website \url{www.ilo.org/TRENDS}
- World Bank PovcalNet, Online Poverty Analysis Tool