Exploring poverty and inequality research frontiers in Asia and the Pacific after the COVID-19 Pandemic: Data Challenges and Opportunities

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Outline of Presentation

• Trends in Poverty and Inequality in Developing Asia
• Data disruptions caused by the pandemic
• Other Unresolved Poverty-Inequality Measurement Issues
• Ways Forward
Developing Asia had a remarkable poverty reduction scorecard over the past few decades but progress had slowed even before COVID-19 pandemic started.

Developing Asia's Contribution to Global Levels of Extreme Poverty

Developing Asia's share of the world's extremely poor is declining.

Notes: Each figure for developing Asia is calculated as the regional average of 35 developing ADB member economies with available data. The dark green slices of the pie charts represent the share of developing Asia to the global poor, while the size of each pie chart represents the size of the global poor.

For the first time in many years, the pandemic disrupted poverty reduction trend in Developing Asia. The pandemic also magnified other forms of (pre-existing) socioeconomic inequalities.

Simulated $1.9 Poverty Headcount in Developing Asia Under Varying Inequality Scenarios

Note: Developing Asia comprises 35 developing countries for which data are available. 
Source: Authors’ calculations using WB’s Poverty and Inequality Platform data.
Moving forward, prevalence of extreme poverty in Developing Asia can still fall to less than 1% by 2030 if we revert to pre-pandemic pace of economic growth.

Income Groups in Developing Asia, 2015-2030

- Moderate poverty can be reduced to about 7% by 2030 if the region reverts to pre-pandemic trends.
- However, about a quarter of the population may still be economically vulnerable.
- More than 40% will be economically secure.
- A quarter will be consuming at least middle-class expenditures by 2030.

Notes: Developing Asia comprises developing economies for which data are available. Estimates are calculated based on assumption that all households within an economy experienced the same percentage decline in their per capita consumption or income. Dotted lines represent estimates under counterfactual scenario that COVID-19 pandemic did not occur.
Source: Authors’ calculations using WB’s PovcalNet and PIP Database.
Progress towards improved poverty outcomes by 2030 requires the poor to benefit from economic growth.

### Simulated Proportion of Developing Asia’s Population under Varying Pro-Poor Growth Scenarios

<table>
<thead>
<tr>
<th>Socioeconomic status in 2030</th>
<th>Less pro-poor growth (Growth of bottom 10% is 0.6 times growth of overall mean)</th>
<th>More pro-poor growth (Growth of bottom 10% is 1.4 times growth of overall mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely poor</td>
<td>1.77</td>
<td>0.27</td>
</tr>
<tr>
<td>Moderately poor</td>
<td>6.48</td>
<td>4.73</td>
</tr>
<tr>
<td>Economically vulnerable</td>
<td>24.32</td>
<td>25.64</td>
</tr>
<tr>
<td>Economically secure</td>
<td>42.45</td>
<td>44.69</td>
</tr>
<tr>
<td>Middle class and above</td>
<td>24.99</td>
<td>24.68</td>
</tr>
</tbody>
</table>

Note: Developing Asia comprises 29 developing economies for which data are available. Source: Authors’ calculations using WB’s PovcalNet and PIP Database.

- If income of the poorest 10% grows just 0.6 times of average income growth, prevalence of extreme poverty by 2030 would be 1.77%. If it grows 1.4 times of average income growth, prevalence of extreme poverty would be 0.27%.
Moving forward, there is a need to promote greater upward social mobility if no one is to be left behind.

Unequal societies tend to have lower social mobility. On the other hand, in a number of Asia and the Pacific economies, there seems to be a positive correlation between social mobility and pace of poverty reduction.

Source: Authors’ calculations using data from WEF’s GSMI and WB’s WDI and PIP database.
Additional References

Key Indicators for Asia and the Pacific 2021 (adb.org)

Key Indicators for Asia and the Pacific 2022 (adb.org)
The **Key Indicators Database (KIDB)** is ADB’s central statistical database and one of the world’s most comprehensive resources for macroeconomic and social indicators from across Asia and the Pacific.

Data were last updated on 24 August 2022.

Explore Data by Economy

View the latest macroeconomic and socioeconomic statistics for each of ADB’s 49 member economies across Asia and the Pacific. This includes data on national accounts, prices, government finance, trade, balance of payments, money and interest rates, external debt, population, labor force, and social indicators.
Our way forward needs to be illuminated by DATA!
Even before the pandemic, there were pre-existing data gaps that constrain our capacity to expand our insights on poverty and inequality in Developing Asia.
A significant proportion of developing economies in Asia and the Pacific conducted HIES or LFS too infrequently.

**Frequency of Conducted HIES/LFS**

- **Labor Force Survey**: Monthly, Quarterly, Annual, Quarterly/Annual, Every 6 to 10 years
- **Income and Expenditure Survey**: Monthly, Quarterly, Semestral, Annual, Every 2 to 5 years, Every 6 to 10 years

**Conducted Computer Assisted Surveys/Censuses In Pacific Economies**

- **Population Census**: Every 10 years, Every 5/10 years, Every 5 years, None, Irregular
- **Agriculture Census**: Every 10 years, Every 5/10 years, Every 5 years, None, Irregular
Nonetheless, use of more efficient data collection approaches (e.g., use of ICT tools) is becoming more common, and contributing to more efficient data collection and reduction of time lag in previously data-scarce settings.

Conducted Computer Assisted Surveys/Censuses in Pacific Economies
Some Work on Social Mobility

- Chetty et al. (2014, 2017, 2018) work on addressing questions such as: how large are the chances of children moving up the income distribution relative to where their parents were in the income distribution, how does this vary over time and across space in the US, and what is the role of race, neighborhood in shaping intergenerational income mobility.

- The largest database for IGM in education is the World Bank’s Global Database on Intergenerational Mobility.

<table>
<thead>
<tr>
<th>Income group/region</th>
<th>Number of countries</th>
<th>Percent of population</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-income countries</td>
<td>38</td>
<td>93%</td>
</tr>
<tr>
<td>Developing countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>115</td>
<td>98%</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>18</td>
<td>99%</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>20</td>
<td>99%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>16</td>
<td>97%</td>
</tr>
<tr>
<td>South Asia</td>
<td>10</td>
<td>83%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>8</td>
<td>100%</td>
</tr>
<tr>
<td>World</td>
<td>43</td>
<td>97%</td>
</tr>
</tbody>
</table>

Source: van der Weide et al. (2021).
Household surveys do not routinely collect information from the same set of respondents which make it challenging to understand poverty dynamics and intergenerational transmission of inequalities.

Poverty Status in Select Economies in Developing Asia

![Bar chart showing poverty status in different economies.](chart.png)
There are initiatives to use pseudo-panel techniques to measure social mobility and poverty dynamics.

Examples of studies involving Asia and the Pacific economies that use pseudo-panel data

<table>
<thead>
<tr>
<th>Country</th>
<th>Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Does openness reduce wage inequality in developing countries? A panel data analysis</td>
</tr>
<tr>
<td>India</td>
<td>Poverty Dynamics in India between 2004 and 2012: Insights from Longitudinal Analysis Using Synthetic Panel Data</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Using Repeated Cross-Sections to Explore Movements in and out of Poverty</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>Estimating individual vulnerability to poverty with pseudo-panel data</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Trends in Malaysian poverty and income dynamics: do regional inequalities trump ethnic disparities?</td>
</tr>
<tr>
<td>Philippines</td>
<td>Analytical Tools for Measuring Poverty Dynamics: An Application using Panel Data in the Philippines</td>
</tr>
<tr>
<td>Thailand</td>
<td>The Returns to Education in Thailand: A Pseudo-Panel Approach</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Using Repeated Cross-Sections to Explore Movements in and out of Poverty</td>
</tr>
</tbody>
</table>
The concept of inequality of opportunities provides an alternative framework for understanding how inequalities are reproduced over time, with less data requirements.

- Datt (2022) explains two main approaches to measure inequality of opportunity (IOP):
  - IOP as the component of inequality due to circumstances beyond individual control
  - IOP as the lack of or low levels of intergenerational mobility (IGM).

- The circumstance-effort approach to IOP holds greater promise of empirical implementation for developing countries.
  - Feasible using household income or expenditure survey with at least a minimum set of circumstance variables
  - Estimate and inquire into changes in IOP over time, for countries with more than one comparable surveys
  - Possible to look into intra-country variations in IOP, when larger surveys are available

While we have better sense of prevalence of non-monetary poverty, we have limited insights on what drive changes in multidimensional poverty due to lack of data.

Spatial granularity of poverty statistics have improved with availability of small area poverty maps derived from household surveys integrated with census / admin data, but there is a need to explore use of big data sources.

Initiatives of the Philippine Statistical System

• The Family Income and Expenditure Survey 2018 involves a personal interview of a national sample of 170,917 households which is four times larger than the sample households in the previous surveys. This sample size is deemed sufficient to provide reliable estimates of income and expenditure at the national, regional, provincial and highly urbanized cities (HUC) levels.

• The Community Based Monitoring System is an initiative to provide local-level data. It is an organized technology-based system of collecting, processing, and validating necessary disaggregated data that may be used for local planning, program implementation, and impact monitoring. It involves generation of data at the local level (provinces, municipalities, cities, and barangays) which serves as a basis in targeting households for government programs geared towards poverty alleviation and economic development.

Select Countries in Asia and the Pacific that Use the World Bank’s Poverty Mapping Methodology

<table>
<thead>
<tr>
<th>Country</th>
<th>Level of Disaggregation of Poverty Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>district</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>rayon (district)</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>upazilla (subdistrict)</td>
</tr>
<tr>
<td>Bhutan</td>
<td>subdistrict</td>
</tr>
<tr>
<td>Cambodia</td>
<td>commune</td>
</tr>
<tr>
<td>Fiji</td>
<td>tikina (district)</td>
</tr>
<tr>
<td>Georgia</td>
<td>municipality</td>
</tr>
<tr>
<td>India</td>
<td>district</td>
</tr>
<tr>
<td>Indonesia</td>
<td>village</td>
</tr>
<tr>
<td>Laos</td>
<td>district</td>
</tr>
<tr>
<td>Mongolia</td>
<td>soum (district)</td>
</tr>
<tr>
<td>Nepal</td>
<td>village development committee level</td>
</tr>
<tr>
<td>Pakistan</td>
<td>district</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>local level government area</td>
</tr>
<tr>
<td>Philippines</td>
<td>city, municipality</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>district</td>
</tr>
<tr>
<td>Thailand</td>
<td>subdistrict</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>district</td>
</tr>
</tbody>
</table>

More recent initiatives on poverty mapping use big data and artificial intelligence.

- Satellite imagery provide rich data that can be used to complement traditional sources of poverty data.
- Computer vision techniques and machine-learning algorithms can be used to process unstructured data from images.
ADB statisticians are continuously contributing towards strengthened statistical capacity in measuring poverty.

Data for Development Phase 1 Technical Assistance

- The TA is designed to strengthen the capacity of national statistical offices to provide relevant disaggregated data for policy and targeted interventions to support vulnerable groups.
- Knowledge sharing activities were targeted to a wide range of audience such as national statistical systems, academe, and development practitioners.
  - Two regional workshops were organized.
  - 12 country-specific training workshops were conducted to enhance the capability of DMCs’ NSSs to generate more granular poverty statistics using innovative data.
  - Two country studies were conducted in collaboration with Philippine Statistics Authority and Thailand National Statistical Office.
- The project also developed guidebooks and manuals on key topics relating to production of granular and disaggregated data for enhanced SDG monitoring.

Japan Fund for Prosperous and Resilient Asia and the Pacific - Development of New Statistical Resources and Building Capacity in New Data Sources and Technologies

- The project aims to equip policy makers with the necessary tools to understand the impact of shocks on different sections of the economy and society in a timely and granular way.
- It explores improving the method of mapping the spatial and temporal distribution of poverty.
- The TA proposes integrating innovative data sources with census and household income surveys, to produce more granular poverty maps for Indonesia and the Maldives.
Design of poverty-targeting programs may also benefit from availability of intra-household measures of well-being.

Evidence and Data for Gender Equality (EDGE) Initiative

**EDGE Background**

- Joint initiative of the United Nations Statistics Division (UNSD) and the United Nations Entity for Gender Equality and the Empowerment of Women (UN WOMEN) in collaboration with national statistics offices (NSOs), the Asian Development Bank (ADB), the Food and Agriculture Organization of the United Nations (FAO), the Organisation for Economic Co-operation and Development (OECD), International Labour Organization (ILO), and the World Bank.

- Aims to **facilitate regular compilation of sex-disaggregated statistics** to promote evidence-based policymaking.
- Seeks to accelerate existing efforts to **generate internationally comparable gender statistics and indicators** by developing guidelines on statistical data collection.

**EDGE Accomplishments**

- **2018**
  - Measuring Entrepreneurship from a Gender Perspective: Lessons Learned from the EDGE Project
  - A dynamic data portal
  - Capacity Development
    - On gender statistics for national statisticians

More about EDGE:
- [https://unstats.un.org/edge/](https://unstats.un.org/edge/)
Building environmentally-augmented multidimensional poverty indicators

- How to expand the scope of multidimensional poverty to embrace deprivations related to the environment? Examples of MPIS that include some environmental indicators (El Salvador, Chile, Mexico, Dominican Republic, and Panama).

- Conceptual challenges: (i) development of a typology of environmental deprivations within a conceptual framework of multidimensional capabilities; (ii) how hhld and other non-hhld, but geo-referenced, environmental data can be utilized to construct measurable indicators; (iii) addressing the geographic and occupational specificity of environmental deprivations; (iv) avoiding potential double counting with respect to other dimensions of poverty; (v) how to weight environmental indicators.

THANK YOU.

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