Methodological approaches on how to measure risk of poverty with income and wealth

Piotr Paradowski, PhD
Jörg Neugswender, PhD
Heba Omar, MSc

UNECE Group of Experts on Measuring Poverty and Inequality
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Motivation (1)

- In developed countries, income is mostly used to define poverty, while in developing countries, it is consumption.
- Thus, income and consumption have been good proxies for determining and assessing poverty and guiding policy actions.
- But, income and consumption alone do not fully constitute the well-being of households.
Household material well-being is also determined by the possession of wealth, specifically assets and debts.

- **Assets contribute to living standards and can be sold out in case of income shortfall or unexpected events.**
- **Excessive debts can put households in undesirable economic situation.**

According to Brandolini, Magri, and Smeeding (2010), the role of wealth in the definition of poverty is twofold:

- **Wealth (assets & debts) affects current well-being**
- **the possession of assets is a major determinant of the longer-term prospects of households and individuals**

Comparability of wealth data across countries and over time from the Luxembourg Wealth Study (LWS) Database allows empirical implementation of assets into poverty indicators.
Data source and country coverage

*Luxembourg Wealth Study (LWS) Database:*

- Austria: 2011 2014 2017
- Estonia: 2013 2017
- Finland: 2009 2013 2016
- Greece: 2009 2014 2018
- Luxembourg: 2010 2014 2018
- Slovakia: 2010 2014 2017
- Slovenia: 2014 2017
We employ 3 measures, that interlink financial assets and income:

- (1 & 2) Households whose equivalised gross household income falls below the relative income poverty line at 50% of the median
  - ... and (1) who do not have sufficient financial assets to cover consumption for at least 3 months: *Income and Asset Poor*
  - ... and (2) who have sufficient financial assets to cover consumption for at least 3 months: *Income Poor, but not Asset Poor*

- (3) Households whose equivalised gross household income does not fall below the relative income poverty line at 50% of the median...
  - ... but who do not have sufficient financial assets to cover consumption for at least 3 months: *Not Income Poor, Asset Poor*
Recap UNECE 2021 presentation: The ranking of countries: Combining income and asset poverty

Source: Luxembourg Wealth Study (LWS) Database

- **Income poor AND asset poor**
  - Reduced by ‘vulnerable’ group 2
    - *Income poor, but not asset poor*

- **Income poor**
  - Extended by ‘vulnerable’ group 1
    - *Asset poor, but not income poor*

- **Income poor OR asset poor**
Recap UNECE 2021 presentation: The ranking of countries: Combining income and asset poverty

Source: Luxembourg Wealth Study (LWS) Database

Income poor AND asset poor

Reduced by ‘vulnerable’ group 2
income poor, but not asset poor

Income poor

Extended by ‘vulnerable’ group 1
asset poor, but not income poor

Income poor OR asset poor

Source: Luxembourg Wealth Study (LWS) Database
Updated motivation

- Household material well-being is also determined by the possession of wealth, specifically assets that contribute to living standards and can be sold out in case of income shortfall or unexpected events.

- Further clarify the diversity of the group ‘not-income poor, asset poor’
  
  - Many are financial asset poor, but may possess non-financial assets.
  - Many have more stable income, a lower risk as against the ones with rather instable income (unemployment, temporary employment, self-employed).
  - Many have high income, a lower risk as against the ones with low income.
  - Some have rather high expenses (actual rent / utilities / mortgage & other loans) as compared to their income / assets (debt burden)
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Build a methodology that accounts for these differences, but still is informative for cross-national differences.
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Build a methodology that accounts for these differences, but still is informative for cross-national differences

Build an economic well-being deprivation index
Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by employment status

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by work intensity

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by homeownership

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by debt burden repayments

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by housing expenditure

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by debt to asset ratio

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Breakdown of ‘not income poor, asset poor’ by debt to income ratio

Note: individual level data, restricted to core working age group (25-59)
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Breakdown of ‘not income poor, asset poor’ by income quartile

Note: individual level data, restricted to core working age group (25-59)
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Breakdown of ‘not income poor, asset poor’ by wealth quartile

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The ‘economic well-being deprivation index’

- Currently not employed
- Low work intensity (weekly hours <= 20 or labour earnings below 25 % of median labour income)
- Has fixed-term contract or is self-employed
- Financial assets not lasting longer than 3 months of income
- Debt-to-income ratio above 3
- Debt-to-asset ratio above 0.8

- Household income below 50 % of the equivalized household median income
- Ratio of debt burden (mortgage + other loans) by income above 30% and income below the median
- Ratio of housing expenditure (rent + utilities) by income above 30% and income below the median
The relative contribution of each indicator

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
The headcount ratio vs. the index

Note: individual level data, restricted to core working age group (25-59)
Source: Luxembourg Wealth Study (LWS) Database.
Linear Probability Model
headcount ratio of multidimensionally poor

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| gender (ref. male)                  |     |     |     |     |     |     |     |     |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| female                              | DE(+)| IT(+)| UK(+)|     |     |     |     |

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Conclusions

- We showed the heterogeneity of those defined asset poor

- We demonstrated that income, assets, debts, and consumption expenditures integration better describes the living standards of households than income poverty alone (or any other indicator alone).

- We constructed an economic well-being deprivation index that incorporates three dimensions: income and expenses, wealth, and labour market attachment.

- Cross-national availability of detailed micro-data at the individual level is key to study risk of poverty and its explanatory factors.
Thank you for your attention
Any questions are welcome!