



STATISTICS

# **Discussion of “*Mind the Gap: Disparities in Assessments of Living Standards in National Accounts and Surveys*”**

**IARIW-WORLD BANK CONFERENCE ON NEW APPROACHES TO DEFINING AND MEASURING POVERTY  
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Views expressed are those of the author and should not be attributed to the IMF, its Management or its Executive Directors

# Why Study Discrepancies between Household Surveys and National Accounts?

Estimates of level and change in *poverty* and *inequality* are based on household surveys supplemented by information from the national accounts

- E.g., GDP used to move survey-based income forward from the benchmark year, so that faster GDP growth results in fewer people estimated to be below the poverty line

However, totals of household *income* and *consumption* implied by surveys typically disagree with totals published in the national accounts, and the gaps may be significant

Usual pattern is for the national accounts number to be higher

- National accounts usually thought to be more reliable
- When evidence emerges of significant measurement error in GDP, it is usually downward, suggesting that improving accuracy of the national accounts would make the gaps even bigger
- SNA definitions of income and consumption are more comprehensive – household surveys only cover types of income/consumption that people know about, and may not ask about all of them

*Benchmarking to national accounts income/consumption should improve accuracy and comparability over space and time*

# Overview of the Paper

Paper compares totals of household final consumption expenditures (HFCE) and household income from 1139 (1664?) surveys to national accounts (NA) benchmarks on HFCE and GDP

Previous literature found gap for consumption that was insignificant or 12 percent of NA total, and gap for income that was 33 or 43 of national income in NA

Average gap of 33 percent for consumption and 55 percent for survey-based income vs. GDP: the \$1.90 poverty line corresponds to per capita HFCE of \$2.47, and per capita GDP of \$3.73

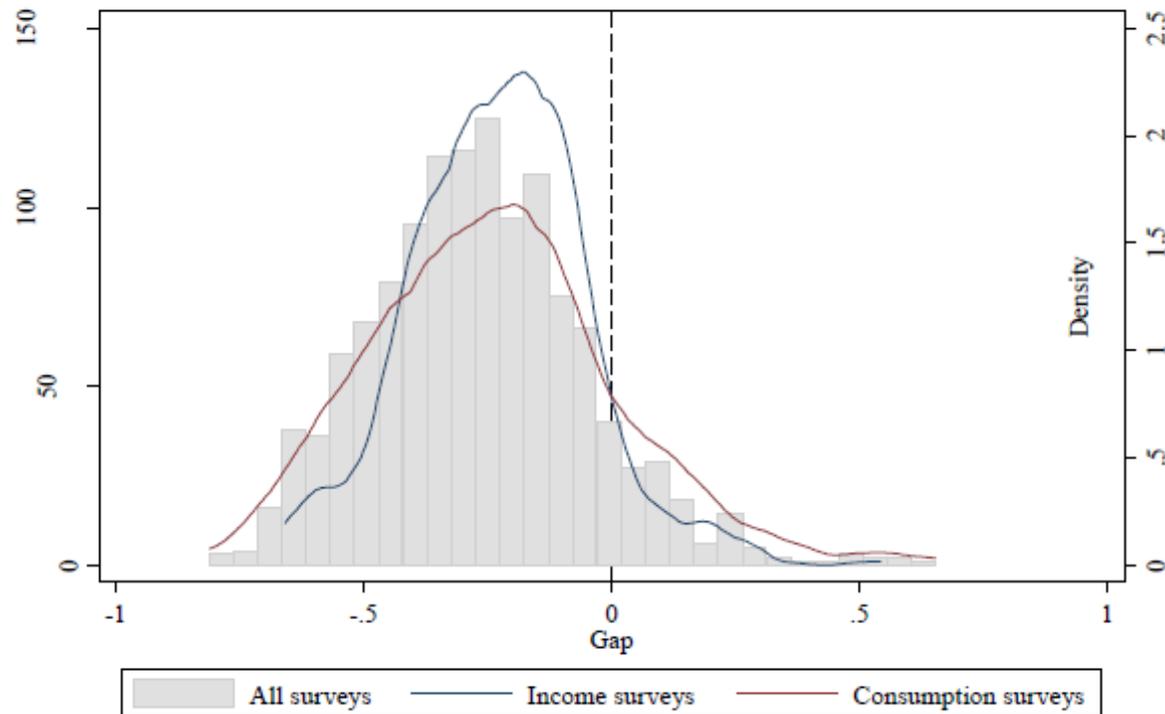
- The \$1.90 said to be suitable for measuring poverty just based on survey data (Why so?)

Possible explanations for the gaps are that survey respondents under-report, or the sample may leave out the rich due to refusal to participate or sample design

- **Attributing the gap to the missing income of the rich has large effect on inequality (the Gini increases by a quarter)**
- **Also, the average “shared prosperity premium” (excess income growth of the bottom 40%) in 2008-2013 is reduced from +1.3 percentage points to –0.8 percentage points**

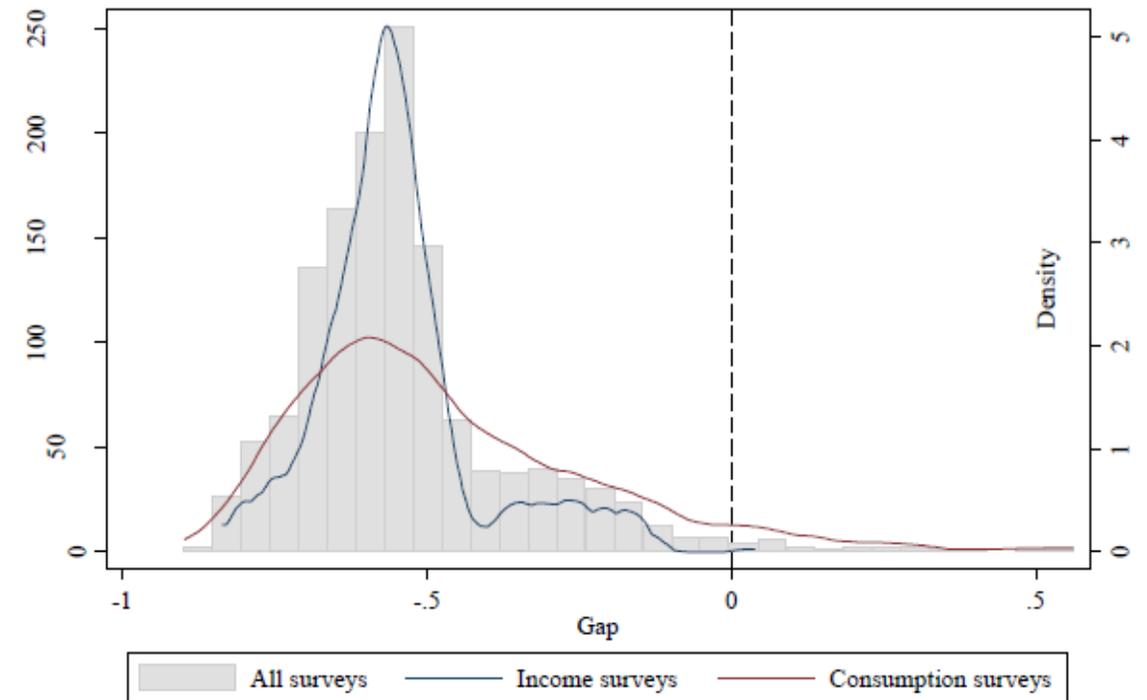
# Distributions of the Consumption and Income Gaps

Panel A: Survey mean vs HFCE mean



Distribution of Consumption Gap

Panel B: Survey mean vs GDP mean

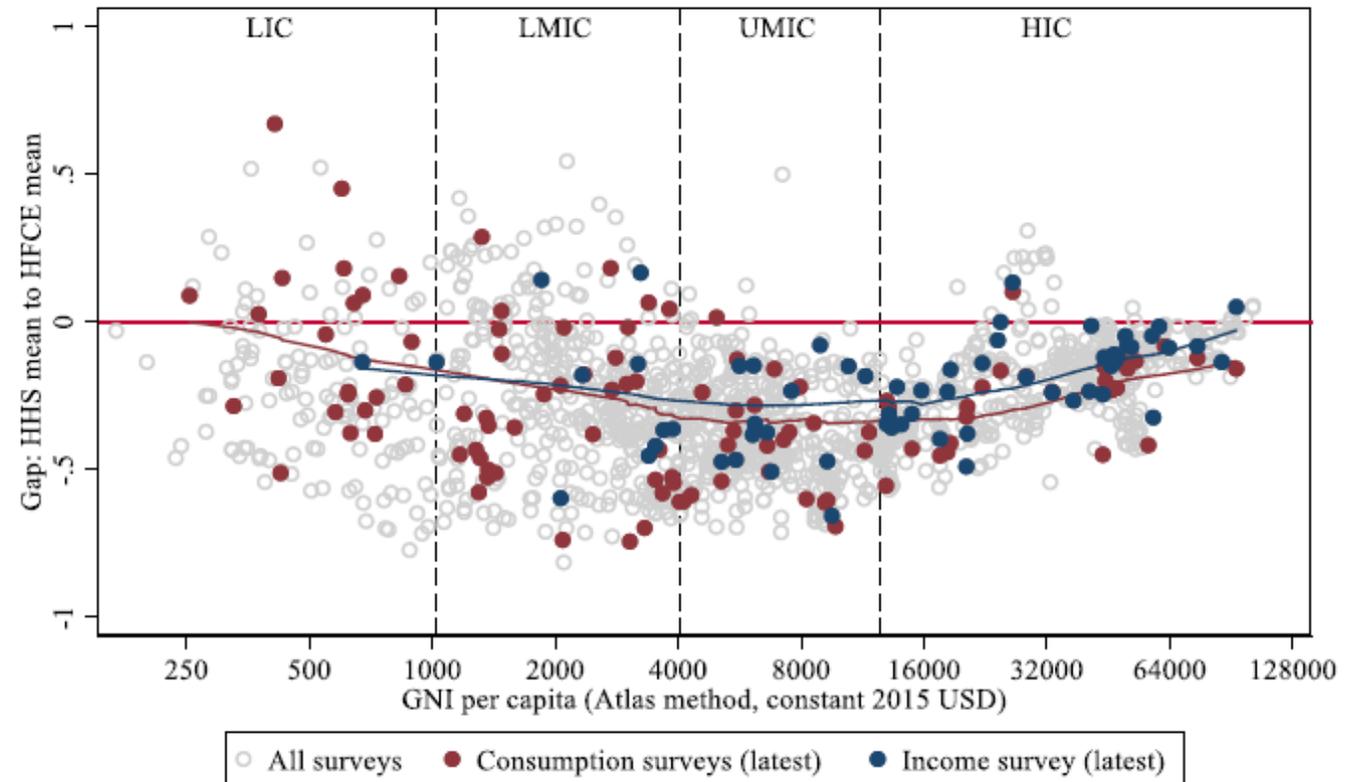


Distribution of Income Gap (vs. GDP)

# Gap between consumption estimates varies with the income level of the economy

Gap between survey-based estimate of consumption and HFCE in the national accounts is greatest for upper middle income countries

Figure 3: Survey-national accounts gap and level of development



# GDP as an extrapolator for household income growth

Although GDP and household income have little resemblance in levels, GDP growth might be a good indicator of income growth

Average gap between survey-based income growth and growth of GDP per capita over 2008-2013(?) is  $-0.27$

- Does this mean that GDP growth exceeds income growth by 5 % per year?

Regressions on GDP growth that force the intercept to zero don't look encouraging

Declines in poverty implied by extrapolating using GDP are probably overstated

No-constant Regressions of Growth of Household Income from Surveys on Growth of GDP per capita

	GDP			
	Coeff.	Std. Err	N	R <sup>2</sup>
East Asia & Pacific	0.850	0.090	558	0.620
Europe & Central Asia	0.796	0.077	3102	0.419
Latin America & Caribbean	0.994	0.124	2307	0.438
Middle East & North Africa	0.365	0.191	113	0.106
North America	0.720	0.133	408	0.482
South Asia	0.897	0.191	110	0.717
Sub-Saharan Africa	0.748	0.137	264	0.246
Low income	0.651	0.130	486	0.235
Lower Middle Income	0.648	0.117	2046	0.259
Upper Middle Income	0.804	0.058	2483	0.523
High Income	0.829	0.094	1787	0.405
All	0.799	0.051	6700	0.392

# Comments

## New database on gaps between surveys and national accounts shows that gaps are present at all levels of development and merit more attention in work on poverty and inequality

- Gap for GDP growth implies that progress on reducing poverty has been overstated
- Faster growth of GDP may partly reflect growth of income of the rich not covered by surveys, suggesting that progress on reducing inequality has also been overstated
  - ▶ Might impute the missing income of the rich using a Pareto distribution

## Three sources of apparent discrepancies are *simultaneously* important: definitions & coverage; under-reporting by respondents; and under-representation of the rich in surveys

- Approach of the EGDNA to eliminating the gap corrects for households not covered by surveys, possible presence of NPISH in NAs, and for imputed income in the NAs

## Compilers need better access to tax data

- EGDNA steps use tax data and other administrative data to fill gaps in survey data
- But access by statisticians is limited in many economies
  - ▶ Unfortunately tax data may be incomplete in many low and middle income economies

# Comments (2)

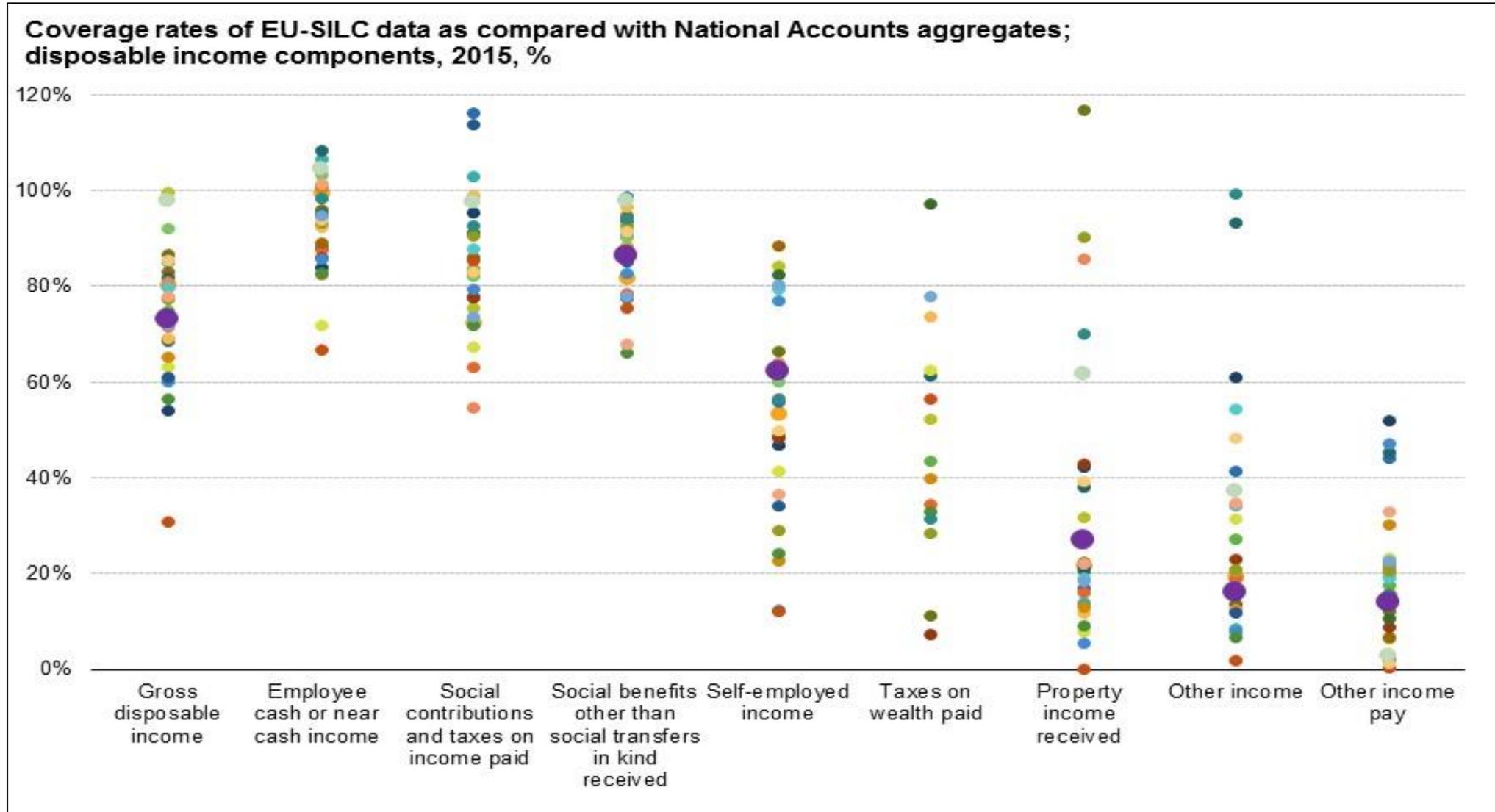
## **GDP is too remote from household income to be worth comparing in level**

- GDP includes income of corporations/government and imputed income (owner-occupiers, investment income on insurance reserves, depositor FISIM)
- GDP excludes earnings of residents temporarily working abroad
- National income and GDP both exclude *remittances*
- Nevertheless, common practice of growth extrapolation using GDP is a worthwhile question

## **The exposition is “insider-friendly”**

- Meaning of terms, variable definitions and time periods under discussion should be made clear
  - ▶ Were the variables deflated/PPP-adjusted, and if so, which deflator was used?
  - ▶ How do the household surveys define income? What do their measures of income and consumption exclude?
- How was the data base of the 1664 household surveys constructed? Did the consumption surveys also ask about income?

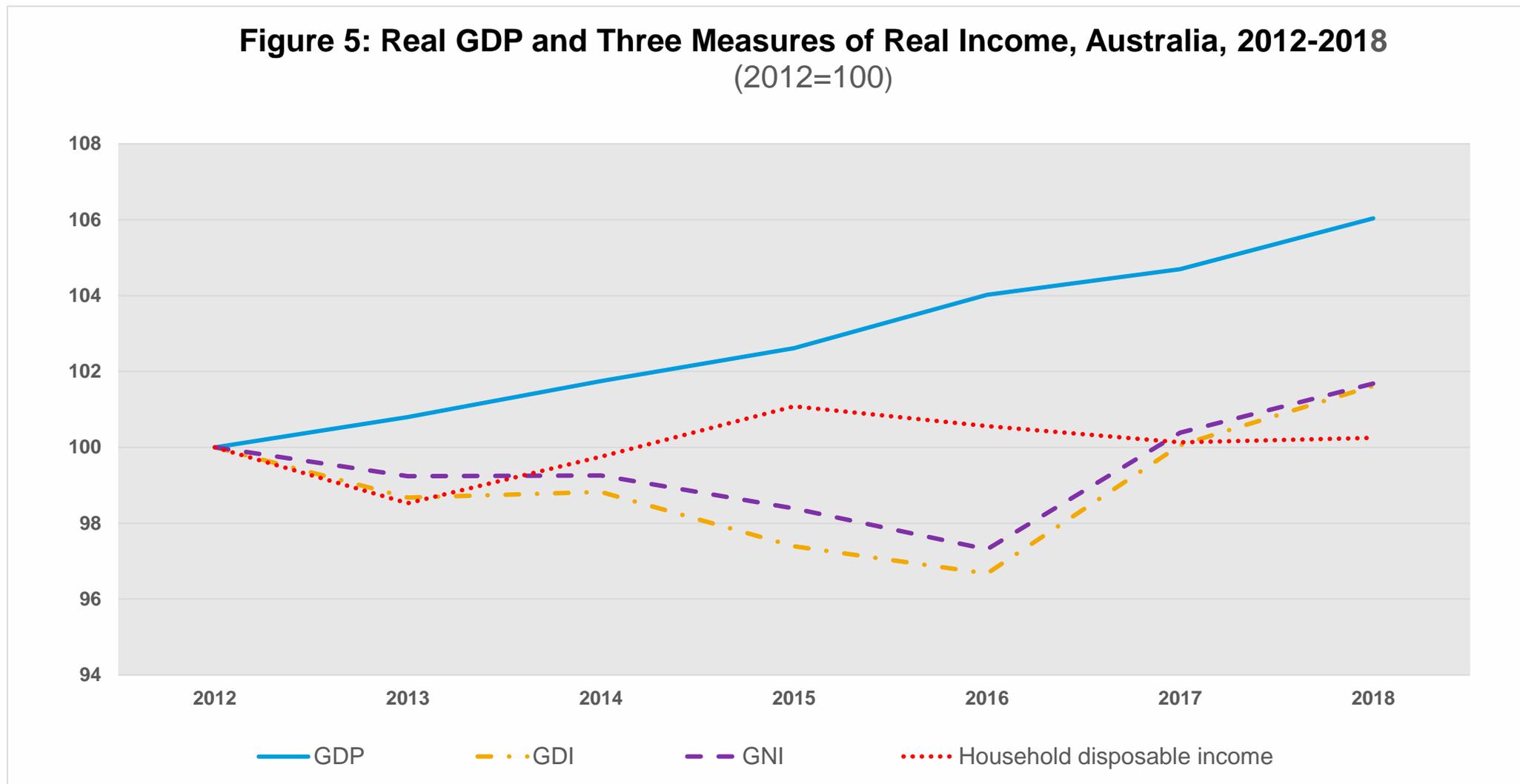
# Missing Income in Household Survey Data



Source: Eurostat, Online article on "Concepts for Household Income: Comparison between Micro and Macro Approach"  
[https://ec.europa.eu/eurostat/statistics-explained/images/4/47/Coverage\\_rates\\_of\\_EU-SILC\\_data\\_as\\_compared\\_with\\_National\\_Accounts\\_aggregates%3B\\_disposable\\_income\\_components%2C\\_2015%2C\\_%25.png](https://ec.europa.eu/eurostat/statistics-explained/images/4/47/Coverage_rates_of_EU-SILC_data_as_compared_with_National_Accounts_aggregates%3B_disposable_income_components%2C_2015%2C_%25.png)

# Gap between GDP Growth and Measures of Real Income of Australia mostly caused by *Deflators*

Figure 5: Real GDP and Three Measures of Real Income, Australia, 2012-2018  
(2012=100)



Source: Australian Bureau of Statistics (ABS)