WIID History

A database with cross-country information on income inequality.

- Subsequently updated and expanded
  - WIID 2 (May 2008)
  - WIID 3a,b (June 2014)
  - WIID 3c (September 2015)
  - WIID 3.4 (January 2017).

- Most recent version (December 2018)

https://www.wider.unu.edu/database/world-income-inequality-database-wiid4

World Income Inequality Database - WIID4

<table>
<thead>
<tr>
<th>Excel</th>
<th>Stata</th>
<th>User Guide</th>
<th>Revision note</th>
</tr>
</thead>
</table>
WIID: Research

• Global **inequality and poverty**:
  – Sala i Martin (Quarterly J. Economics, 2010); Ackland et al. (R. Economics and Statistics, 2013); Niño-Zarazúa and Tarp (R. Income and Wealth, 2017); Roope et al. (Economics Letters, 2018).

• Relationship of inequality with **issues** such as:
  – **economic growth**: Jovanovic (Economic Systems, 2018),
  – **foreign direct investment**: Huang et al. (R. World Economics, 2010)
  – **institutional development**: Amendola et al. (Public Chice, 2013)
  – **labor regulations**: Alesina et al. (J. Economic Growth, 2018)
  – **economic sanctions**: Afesorgbor and Mahadevan (World Development, 2018)
  – **public sector expansion**: Lee et al. (American Sociological R., 2011)
  – **political conflict**: Cramer & Kaufman (Comparative Political Studies, 2011)
  – **religiosity**: Immerzeel and Tubergen (European Sociological R., 2013)
  – **skilled immigration**: Kahanec and Zimmermann (IZA J. Migration, 2015)
Study (187) | %
--- | ---
Atkinson & Micklewright 1992 | 1.3
Brandolini 1998 | 1.1
Leigh 2005 | 1.1
Szekely & Hilgert 2002 | 1.1
Fields 1989 | 1.0

WB source | %
--- | ---
World Bank 2018 | 14.8
Jain 1975 | 3.0
Deininger & Squire 2004 | 1.7

UN source | %
--- | ---
ECLAC | 5.6
UNICEF | 4.4
UN | 0.7

NSA | %
--- | ---
Statistics Canada | 1.4
Taiwan DGB | 1.1
US Bureau | 0.9
Statistics Finland | 0.6

Source: WIID 4
WIID 4

• **Simplifying** contents and structure of variables
  – Grouping similar **categories**, while providing more details in a different variable
  – **String** variables changed to numeric
  – **Labels** corrected
• **Updating** (2017) and **cleaning** (duplicates, errors)
• **Additional** information
  – Variables identifying the **source**
  – Complementary **variables**: Per capita GDP PPP (WB), Population (UN), Region (UN and WB)
## Distributional statistics

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Partial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>11,101</td>
<td></td>
</tr>
<tr>
<td><strong>Gini</strong></td>
<td>11,054</td>
<td></td>
</tr>
<tr>
<td><strong>Quintiles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6,933</td>
<td>241</td>
</tr>
<tr>
<td>Deciles</td>
<td>6,239</td>
<td>99</td>
</tr>
<tr>
<td>Bottom 5%</td>
<td>1,595</td>
<td></td>
</tr>
<tr>
<td>Top 5%</td>
<td>2,179</td>
<td></td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>5,786</td>
<td></td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>4,520</td>
<td></td>
</tr>
</tbody>
</table>
57 obs. 1867-1949
3,446 unique country-year observations

189 countries/entities Exceptions: Libya, North Korea, some Gulf states, some microstates.

> 1 obs. per country-year if relevant information added
Ex. consistency among time series, different resource concepts, area, eq. scales.
WIID
By Region

Europe & CA 43%
LAC 26%
E Asia 13%
N America 6%
S Asia 4%
SSA 5%
MENA 3%

Source: WIID 4
WIID
By Income Group

- High income: 55%
- Upper middle income: 28%
- Lower middle income: 15%
- Low income: 3%

Source: WIID 4
Variety of concepts

**Resource**
- Income
- Consumption
- Earnings

**Scale**
- Per capita
- Equivalized
- Per household
  (No adjustment)

**Coverage**
- Geo
  - All
  - Rural
  - Urban
  - Part
- Population
  - All
  - Ec. Active
  - Specific
All countries

WIID
By Resource

- Income: 73%
- Earnings: 13%
- Consumption: 14%

Source: WIID 4
### Gini index of income and expenditure

<table>
<thead>
<tr>
<th></th>
<th>Income or expenditure</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expenditure</td>
<td>Income</td>
<td>Ratio I/E</td>
</tr>
<tr>
<td>India</td>
<td>0.394</td>
<td>0.543</td>
<td>1.38</td>
</tr>
<tr>
<td>China</td>
<td>0.431</td>
<td>0.439</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Source: Gradín and Wu (2019), using IHDS and CHIP.
# Income Gini / Consumption Gini

Cases with both income and consumption

<table>
<thead>
<tr>
<th>Region</th>
<th>Ratio</th>
<th>% cases with ratio &gt; 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia &amp; Pacific</td>
<td>1.07</td>
<td>60.4</td>
</tr>
<tr>
<td>China</td>
<td>1.02</td>
<td>40.0</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>1.07</td>
<td>68.1</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>1.20</td>
<td>97.1</td>
</tr>
<tr>
<td>Middle East &amp; North Africa (Egypt &amp; Jordan)</td>
<td>1.23</td>
<td>100</td>
</tr>
<tr>
<td>North America (US)</td>
<td>1.30</td>
<td>100</td>
</tr>
<tr>
<td>South Asia</td>
<td>1.28</td>
<td>100</td>
</tr>
<tr>
<td>India</td>
<td>1.45</td>
<td>100</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>1.20</td>
<td>87.8</td>
</tr>
<tr>
<td>Total</td>
<td>1.12</td>
<td>75.2</td>
</tr>
</tbody>
</table>

Source: Gradín and Wu (2019), based on WIID 4.
<table>
<thead>
<tr>
<th>Region</th>
<th>Country (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAC</td>
<td>Mexico (1984)</td>
</tr>
</tbody>
</table>

WIID
By Scale

- Per capita: 47%
- Equivalized: 33%
- No adjustment: 20%

Source: WIID 4
WIID
By resource & scale

- pc income: 32%
- eq. income: 26%
- pc consumption: 11%
- hh income: 11%
- earnings: 13%
- Other: 7%

Source: WIID 4
Especial cases, e.g. **Argentina**

Source: WIID 4
WIID
By Population Coverage

- Economically active: 4%
- Specific categories: 7%
- All: 89%

Source: WIID 4
Germany (income)

WIID (pc) (LIS)
India (consumption)

WIID (pc)
(World Bank)
Sri Lanka (income)

WIID (per capita) (WB)

D&S, 2004

Statistical Office
World Bank (D&S)
Sri Lanka (consumption)

WIID (no adjustment) (NSA)

WIID (pc) (WB)

D&S, 2004


20 25 30 35 40 45

Statistical Office World Bank
Sri Lanka (consumption)

WIID (pc)
(NSA; WB)
US (income)

WIID (no adjustment)
(Brandolini 1998)

WIID (pc)
(Census Bureau)

WIID (pc)
(LIS)
Brazil (income)

WIID (pc) (ECLAC)

WIID (no adjustment) (Fields, 1989)


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China (income)

WIID (no adjustment) (Dowling & Soo, 1983)

WIID (pc) (NBS)

WIID (pc) (Ravallion & Chen, 2007)
Gini by region (weighted average) in WIID

- Sub-Saharan Africa
- Latin America and the Caribbean
- Middle East and North Africa
- South Asia
- North America
- East Asia and the Pacific
- Europe and Central Asia

Source: WIID 4, using a standardization like in Niño-Zarazúa and Tarp, ROIW 2017
## Datasets

<table>
<thead>
<tr>
<th>Countries/entities</th>
<th>SWIID</th>
<th>GCIP</th>
<th>EHII</th>
<th>ATG</th>
<th>WIID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries/entities</td>
<td>192</td>
<td>161</td>
<td>151</td>
<td>193</td>
<td>189</td>
</tr>
<tr>
<td>N Country/years</td>
<td>5,226</td>
<td>8,839</td>
<td>4,882</td>
<td>2,341</td>
<td>3,446</td>
</tr>
<tr>
<td>N Observations</td>
<td>10,452</td>
<td>17,678</td>
<td>4,882</td>
<td>5,121</td>
<td>11,101</td>
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<tr>
<td>Original Gini</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Estimated Gini</td>
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<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Imputed (missing)</td>
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<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale</td>
<td>Sq. root</td>
<td>Per capita</td>
<td></td>
<td>Several</td>
<td>Several</td>
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<tr>
<td>Concepts</td>
<td>Market income</td>
<td>Consumption</td>
<td></td>
<td>Several</td>
<td>Several</td>
</tr>
<tr>
<td></td>
<td>Net income</td>
<td>Net income</td>
<td>Gross income</td>
<td>Several</td>
<td>Several</td>
</tr>
</tbody>
</table>

**SWIID:** Standardized World Income Inequality (Solt)  
**GCIP:** Global Consumption and Income Project (Jayadev, Lahoti, and Reddi)  
**EHII:** Estimated Household Income Inequality (UT, Galbraith)  
**ATG:** All The Ginis (Milanovic)
India (consumption)

WIID (World Bank)

GCIP
Sri Lanka (consumption)
Sri Lanka (income)
China (income)

WIID
(Dowling and Soo, 1983; Ravallion and Chen, 2007; NBS)

GCIP
China (income)

WIID
(Dowling and Soo, 1983; Ravallion and Chen, 2007; NBS)

SWIID
(re-scaled)
China (income)

WIID
(Dowling and Soo, 1983; Ravallion and Chen, 2007; NBS)
China (income)

WIID
(Dowling and Soo, 1983; Ravallion and Chen, 2007; NBS)

GCIP

SWIID (re-scaled)

EHII
Brazil (income)

WIID (Fields, 1989 and SEDLAC)

GCIP
Brazil (income)

WIID (Fields, 1989 and SEDLAC)

SWIID (re-scaled)
Brazil (income)

(WIID (Fields, 1989 and SEDLAC)

Reference

EHII

United Nations University
WIDER

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Brazil (income)

WIID (Fields, 1989 and SEDLAC)

GCIP

SWIID (re-scaled)

EHII
Final remarks

• Secondary datasets
  – **Pros**: coverage
  – **Cons**: lack of harmonization, inflexibility (no microdata), poor documentation ...

• **Do we still need** these compilations?
  – Increasing availability of **microdata** and **harmonization**
    • Limited coverage
  – **Standardization**
    • Handy, but comes at a price
    • Not unique, depends on sources and methods
  – **Imputation** of missing observations
THANKS!

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