Measuring Inequality and Poverty in the United States: Challenges and Opportunities in the International Context

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The views expressed in this presentation are solely those of the author and do not necessarily reflect the official positions or policies of the U.S. Census Bureau.
Outline

• Measurement of poverty and inequality in the United States
  • Concepts and measures
  • Sources of data
  • Public access to inequality data

• Involvement in international initiatives
  • SDG 2030 Working Groups and Reporting Platform
  • Participation in the UNECE Expert Group on Income and Poverty
    • Annual conferences
    • Guide on poverty measurement
    • Working group on disaggregation of poverty statistics
  • Contribute to the OECD international data base
Two basic dimensions of economic inequality

Separate but inter-related: income and wealth

Source: Pew Research Center
Economic inequality metrics

• Single index numbers to describe inequality (e.g. Gini index) that allow comparisons across time and geography

• Descriptions of the income/wealth distribution
  • Income amounts that define points in the income distribution, e.g. the middle, the top 5%, the top 1%
  • Share of wealth, income or income growth received by each fifth of the population
  • Ratios of the cutoffs for groups – e.g. Income amount that define the top quintile divided by the bottom quintile cutoff

• Poverty rates, poverty gaps, income to poverty ratios

• Size and/or well-being of the middle class

• Mobility – likelihood of moving up or down the income distribution
Income inequality indices

• GINI index (2016=0.481)
  Most commonly used measure. Area between the Lorenz curve and hypothetical line of absolute equality. (0 perfect equality, 1 perfect inequality)

• Other index numbers reported by the Census Bureau:
  • Theil index (0.425)
  • Mean logarithmic deviation of income (0.601)
  • Atkinson measures (0.103, 0.201, 0.306)

\[
G: \text{Gini Coefficient} = \frac{A}{A+B}
\]
Descriptions of the income distribution

- Examine income cutoffs for each segment of the distribution: lowest quintile, median, highest quintile, 95th percentile
- Ratio of two cutoffs, 2016
  - 90th/10th = 12.53
  - 95th/20th = 9.38
Inequality measures based on shares

- Shares of aggregate income received by each quintile
- Some analyses look at the share of “growth” by quintile
- SDG 10.1 indicator is growth of per capita income of the bottom 40 percent compared to per capita income growth of the total population

Poverty measures

- Poverty – official or supplemental poverty measures
  - Head count – how many people have income below the poverty thresholds?
  - Poverty gap – what is the difference between the poverty thresholds and income for those in poverty
  - Income-to-poverty ratios – how many people have income below 50% of poverty thresholds; below 125% of poverty thresholds, etc.
- Multi-dimensional poverty – expand concept beyond income to include health, housing, neighborhoods, educational opportunities, employment, etc.

![Poverty Rates Using the Official Measure and the SPM: 2009 to 2016](chart)

1 Includes unrelated individuals under the age of 15.

Note: The data for 2013 and beyond reflect the implementation of the redesigned income questions.
The Geography of Upward Mobility in the United States
Average Individual Income for Males with Parents Earning $25,000 (25th percentile)

Note: Green = More Upward Mobility, Red = Less Upward Mobility

- Atlanta $22.5k
- Charlotte $23.1k
- Cleveland $24.6k
- Salt Lake City $31.2k
- Cleveland $31.7k
- Dubuque $31.7k
- Seattle $27.6k
- Washington DC $27.8k
- Newark $30.1k
- San Francisco Bay Area $28.8k
- Los Angeles $27.6k

Two Americas: The Geography of Upward Mobility by Race
Average Individual Income of Males with Parents Earning $25,000 (25th percentile)

Note: Green = More Upward Mobility, Red = Less Upward Mobility; Grey = Insufficient Data

How to measure resources?

• Income vs. wealth vs. consumption vs. earnings

• Measurement concerns
  • After tax payments and tax credits
  • Include the value of noncash benefits – e.g. SNAP, housing assistance
  • Include value of health insurance?

• Adjust for differences in family size – equivalence adjustment

• Adjust for geographic differences in the cost of living

Source: U.S. Census Bureau
Percentage of People in Poverty by Different Poverty Measures: 2016 (In Percent)

- **Official Poverty**
- **SPM**
- **Consumption**

### 2016 U.S. Poverty by Different Poverty Measures:

- **All people**: 12.7, 14.0, 3.0
- **Under 18 years**: 18.0, 15.2, 4.1
- **18 to 64 years**: 11.6, 13.3, 2.8
- **65 years and over**: 9.3, 14.5, 2.2

**Sources:**
Gini Index 2014

- OECD - Disposable Income: 0.394
- CBO: After-Tax: 0.44
- Census Bureau: Equivalence Adjusted Income: 0.464
- Census Bureau: Money Income: 0.48
Sources of Data

• Household surveys:
  • CPS ASEC – national data, long time series
  • American Community Survey – smaller geographies
  • Survey of Income and Program Participation - wealth
  • Consumer Expenditure Survey - consumption
  • Federal Reserve Survey of Consumer Finances - wealth

• Administrative Data
  • IRS Statistics of Income – sample of tax returns

• Bureau of Economic Analysis
  • Per capita income
  • Gross domestic product
How we disseminate data

- Reports
- Websites
- Table packages
- Infographics
- Maps
- Tools
- Microdata files
- Application Programming Interface
International Initiatives
MEASURING AMERICA:
U.S. STATISTICS FOR SUSTAINABLE DEVELOPMENT

Official US Federal Statistics for the UN Sustainable Development Goals

START HERE
### Goal 10 - Reduce inequality within and among countries

**10.1.1** Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population

**10.2.1** Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities

**10.3.1** Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law

**10.4.1** Labour share of GDP, comprising wages and social protection transfers
Goal 1 – Poner fin a la pobreza en todas sus formas en todo el mundo

= Actualizado!

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Explorando fuentes de datos</strong></td>
<td>1.1.1 Proporción de la población que vive por debajo del umbral internacional de la pobreza, desglosada por sexo, edad, situación laboral y ubicación geográfica (urbana o rural)</td>
</tr>
<tr>
<td><strong>Datos disponibles</strong></td>
<td>1.2.1 Proporción de la población que vive por debajo del umbral nacional de la pobreza, desglosada por sexo y edad</td>
</tr>
<tr>
<td><strong>Explorando fuentes de datos</strong></td>
<td>1.2.2 Proporción de hombres, mujeres y niños de todas las edades que viven en la pobreza, en todas sus dimensiones, con arreglo a las definiciones nacionales</td>
</tr>
<tr>
<td><strong>Datos disponibles</strong></td>
<td>1.3.1 Proporción de la población cubierta por niveles mínimos o sistemas de protección social, desglosada por sexo, distinguiendo entre los niños, los desempleados, los ancianos, las personas con discapacidad, las mujeres embarazadas, los recién nacidos, las víctimas de accidentes de trabajo y los pobres y los grupos</td>
</tr>
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</table>
UNECE Expert Task Force on Poverty and Inequality

- Annual meetings with other poverty and inequality measurement experts:
  - Geneva – 2016
  - Montenegro – 2017
  - Vienna – 2018

- Opportunity to share experiences and challenges with colleagues from many different countries

- Other international initiatives:
  - UN Expert Group Meeting on Time Use Statistics
  - OECD/OCDE data base
  - Eurostat/OECD Expert Group on Income, Consumption and Wealth
Guide on Poverty Measurement

- Chapter 1 – Introduction
- Chapter 2 – Overview of poverty and related concepts
- Chapter 3 – Income and consumption expenditure measures
- Chapter 4 – Non-monetary deprivations
- Chapter 5 – Multi-dimensional poverty
- Chapter 6 – Challenges for the future
Task Force on Disaggregated Poverty Measures

• Introduction: measurement of poverty for policy relevant target groups
• Standard core variables for disaggregation
• Addressing coverage problems in poverty measurement
• Improving response rates and sampling precision for target groups
• Improving accuracy of measurement
• Summary of recommendations on the production, analysis and dissemination of disaggregated indicators
• Topics for further work
OECD/OCDE

• Contribute to the OECD Database
Contact Information

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Trudi.j.Renwick@census.gov
301-763-5133
Government Reports on Income and Wealth Inequality:

- Census Bureau: Income and Poverty in the United States (September 2017).

  Combines Census and SOI data.
  https://www.cbo.gov/publication/53597

- Internal Revenue Service - Individual Income Tax Return (Form 1040) Statistics. (Spring 2015).

- Joint Economic Committee: Income Inequality in the United States (January 2014).

- U.S. Department of Commerce: Middle Class in America (January 2010).
  http://www.esa.doc.gov/sites/default/files/middleclassreport.pdf


- Bureau of Labor Statistics: A look at pay at the top, the bottom, and in between (May 2015).
International Reports on Income and Wealth Inequality:

- Organization for Economic Cooperation and Development (OECD) In It Together Why Less Inequality Benefits All.

- The World Bank, Taking on Inequality: Poverty and Shared Prosperity 2016

- World Inequality Lab, World Inequality Report, 2018
### Tables:

- Census Bureau – income and poverty websites. Include detailed tables for each year and historical tables
  
  [https://www.census.gov/topics/income-poverty.html](https://www.census.gov/topics/income-poverty.html)

- Internal Revenue Service – Statistics of income
  

- Bureau of Economic Analysis – Personal income
  

- Bureau of Labor Statistics – Consumer expenditures
  
  [https://www.bls.gov/cex/tables.htm](https://www.bls.gov/cex/tables.htm)
Census Bureau Data Tools:

- American Factfinder – ACS Data
  [http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml](http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml)
  - Median household/family income
  - Poverty rates/Gini coefficients

- CPS ASEC Table Creator
  [http://www.census.gov/cps/data/cpstablecreator.html](http://www.census.gov/cps/data/cpstablecreator.html)
  - Customize income definitions
  - Poverty rates/median income

- Small Area Income and Poverty Estimates
  [https://www.census.gov/programs-surveys/saipe.html](https://www.census.gov/programs-surveys/saipe.html)

- Poverty rates by county 1959-2010

- Census Application Programming Interface (API)
  [http://www.census.gov/developers/](http://www.census.gov/developers/)
Inequality Maps:


- [http://www.reuters.com/subjects/income-inequality](http://www.reuters.com/subjects/income-inequality)


- [http://www.nytimes.com/2015/03/31/upshot/income-inequality-its-also-bad-for-your-health.html?_r=0&abt=0002&abg=0](http://www.nytimes.com/2015/03/31/upshot/income-inequality-its-also-bad-for-your-health.html?_r=0&abt=0002&abg=0)

Infographics:

- http://www.huffingtonpost.com/2013/06/12/inequality-us-_n_3421381.html
- https://www.youtube.com/watch?v=QPKQnjnsM
- http://budgetandpolicy.org/schmudget/infographic-income-inequality-is-pulling-washington-state-apart
Inequality Related Websites:

- [http://inequality.is/real](http://inequality.is/real) (Economic Policy Institute)
- [http://inequality.org](http://inequality.org)
- [http://wealthinequality.org/](http://wealthinequality.org/)
- [http://www.oecd.org/inequality.htm](http://www.oecd.org/inequality.htm)
For Tax Year 2013, taxpayers filed 147.7 million U.S. individual income tax returns, an increase of 1.9 percent from the 144.9 million returns filed for Tax Year 2012. Several notable items showed increases in 2013. While AGI and taxable income both increased by 3.7 percent, AGI and taxable income increased by 2.8 percent in 2012. Self-employment health insurance deduction grew to 1.1 million, a 6.0 percent increase. Payments to self-employment (Keogh) plans rose 4.9 percent to $20.2 billion, and contributions to IRAs increased 10.1 percent to $13.3 billion. Interest paid increased for 2013 by more than one-third. The amount of itemized deductions decreased 4.2 percent to $1,134.9 billion and the average itemized deduction decreased 1.9 percent to $25,568. A portion of this decrease was attributable to a change in the law for 2013 that limited itemized deductions if their adjusted gross income exceeded specific thresholds (see Changes in the Law section).
Real earnings increased for highest earners since 1979, unchanged for lowest earners

In 2014, median weekly earnings for full-time wage and salary workers age 16 and older were $791. That means that half of these workers earned at least $791 per week and half earned less than that amount. In 1979, median weekly earnings in 2014 dollars were $733. So what we call “real” or inflation-adjusted median weekly earnings increased by about 8 percent over that 35-year span. Over that same period, real earnings for the highest paid 10 percent of workers—those whose earnings were at or above the 90th percentile—increased from a minimum of $1,422 per week in 1979 to $1,848 per week in 2014, a gain of 33 percent. By contrast, real weekly earnings for the lowest paid 10 percent of workers (or those whose earnings are below the 10th percentile) were basically unchanged over the period, as these workers earned less than $383 per week in 1979 and less than $379 per week in 2014.
### Selected Measures of Household Income Dispersion: 1967 to 2016


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<tbody>
<tr>
<td>Household Income at Selected Percentiles</td>
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<tr>
<td>10th percentile limit</td>
<td>13,606</td>
<td>13,427</td>
<td>12,445</td>
<td>12,570</td>
<td>12,778</td>
<td>12,791</td>
<td>12,802</td>
<td>13,067</td>
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<tr>
<td>20th percentile limit</td>
<td>24,002</td>
<td>23,088</td>
<td>21,728</td>
<td>21,638</td>
<td>21,533</td>
<td>21,533</td>
<td>21,211</td>
<td>21,082</td>
</tr>
<tr>
<td>40th percentile limit</td>
<td>46,600</td>
<td>44,061</td>
<td>41,746</td>
<td>41,566</td>
<td>41,096</td>
<td>41,423</td>
<td>41,825</td>
<td>41,130</td>
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<tr>
<td>Median</td>
<td>69,609</td>
<td>70,515</td>
<td>72,153</td>
<td>74,059</td>
<td>76,413</td>
<td>76,927</td>
<td>78,438</td>
<td>80,438</td>
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<tr>
<td>80th percentile limit</td>
<td>121,875</td>
<td>124,255</td>
<td>130,166</td>
<td>131,981</td>
<td>131,691</td>
<td>132,405</td>
<td>133,262</td>
<td>135,702</td>
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<tr>
<td>90th percentile limit</td>
<td>170,536</td>
<td>174,229</td>
<td>180,652</td>
<td>180,150</td>
<td>180,511</td>
<td>181,927</td>
<td>183,483</td>
<td>185,772</td>
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<tr>
<td>95th percentile limit</td>
<td>225,261</td>
<td>230,408</td>
<td>239,172</td>
<td>241,362</td>
<td>240,957</td>
<td>239,827</td>
<td>239,683</td>
<td>240,359</td>
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### Table

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
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<tbody>
<tr>
<td>IE-1</td>
<td>Measures of Individual Earnings Inequality for Full-Time Year-Round, 1967–2016 (percent)</td>
</tr>
<tr>
<td>IE-2</td>
<td>Measures of Individual Earnings Inequality for Full-Time Year-Round, 1967–2016 (percent)</td>
</tr>
<tr>
<td>H-1 All Races</td>
<td>Income Limits for Each Fifth and Top 5 Percent of Households</td>
</tr>
<tr>
<td>H-1 White</td>
<td>Income Limits for Each Fifth and Top 5 Percent of White Households</td>
</tr>
<tr>
<td>H-1 White, Not Hispanic</td>
<td>Income Limits for Each Fifth and Top 5 Percent of White, Not Hispanic Households</td>
</tr>
<tr>
<td>H-1 Black</td>
<td>Income Limits for Each Fifth and Top 5 Percent of Black Households</td>
</tr>
<tr>
<td>H-1 Asian</td>
<td>Income Limits for Each Fifth and Top 5 Percent of Asian Households</td>
</tr>
<tr>
<td>H-1 Hispanic</td>
<td>Income Limits for Each Fifth and Top 5 Percent of Hispanic Households</td>
</tr>
<tr>
<td>H-2 All Races</td>
<td>Share of Aggregate Income Received by Each Fifth and Top 5 Percent of Households</td>
</tr>
<tr>
<td>H-2 White</td>
<td>Share of Aggregate Income Received by Each Fifth and Top 5 Percent of White Households</td>
</tr>
<tr>
<td>H-2 White, Not Hispanic</td>
<td>Share of Aggregate Income Received by Each Fifth and Top 5 Percent of White, Not Hispanic Households</td>
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<td>Share of Aggregate Income Received by Each Fifth and Top 5 Percent of Black Households</td>
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<td>H-2 Hispanic</td>
<td>Share of Aggregate Income Received by Each Fifth and Top 5 Percent of Hispanic Households</td>
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<tr>
<td>H-3 All Races</td>
<td>Mean Household Income Received by Each Fifth and Top 5 Percent of Households</td>
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<td>H-3 White</td>
<td>Mean Household Income Received by Each Fifth and Top 5 Percent of White Households</td>
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<td>H-3 White, Not Hispanic</td>
<td>Mean Household Income Received by Each Fifth and Top 5 Percent of White, Not Hispanic Households</td>
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<td>H-3 Hispanic</td>
<td>Mean Household Income Received by Each Fifth and Top 5 Percent of Hispanic Households</td>
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</table>
SEE INEQUALITY GROW

Explore how income inequality has worsened, median income has fallen and poverty has risen over time.

The 51 circles represent each state and the District of Columbia. They're sized according to degree of inequality (smaller is better), median income (bigger is better), or poverty rate (smaller is better). Hover over or tap a circle to see underlying data.

<table>
<thead>
<tr>
<th>Year</th>
<th>Show</th>
<th>Map</th>
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Gini Index, Median Income, Poverty Rate
How Census Measures Poverty

The Census Bureau releases two reports every year that describe who is poor in the United States. The first report calculates the nation’s official poverty measure based on cash resources. The second is known as the supplemental poverty measure (SPM) and takes account of cash resources and noncash benefits from government programs aimed at low income families.

In 2012, there were 46.5 million people in poverty.

The Official Measure

The United States has an official measure of poverty. The current official poverty measure was developed in the early 1960s when President Lyndon Johnson declared war on poverty. This measure was not intended to determine who the low-income population was but rather that the time had come to address the poverty problem.

2012 Poverty Rates by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>All people</td>
<td>15.6%</td>
</tr>
<tr>
<td>18-64</td>
<td>13.7%</td>
</tr>
<tr>
<td>65 and over</td>
<td>16.8%</td>
</tr>
</tbody>
</table>

The Supplemental Measure

There is now a second measure of poverty called the Supplemental Poverty Measure (SPM). Every year since 2010, the Census Bureau has released a report describing the SPM. The SPM extends the official poverty measure by taking account of government benefits and necessary expenses that are not included in the official cash resources, identifying 11.7 million people as poor. This is 15 percent of the population.

How do you know if you're earning fair pay at work?

IT STARTS WITH A CONVERSATION.

But... 51% of women report that they are either discouraged or forbidden from discussing their wages.

IF THEY DON'T KNOW THEY'RE UNDERPAID COMPARED TO MEN, WOMEN CAN'T TAKE STEPS TO ADDRESS THAT GAP.

40 Congressional Budget Office
Nonpartisan Analysis for the U.S. Congress

Shares of Income After Transfers and Federal Taxes, 1979 and 2007

- Top 1 Percent

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov