

Is Life Getting Better?

A beginners guide on measuring the progress of societies:

Economic indicators
What is Inequality

Produced by

The Global Social Change Research Project
<http://gsociology.icaap.org/>

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This is the seventh in a set of pamphlets about measuring well-being and progress of societies.

In this pamphlet, we briefly describe another economic indicator of progress: inequality. The two following pamphlets briefly review issues with data and in measuring inequality.

What is inequality?

Income inequality is basically whether there is equal or unequal distribution of income. For example if a few people at the top earned a large share of the income and many low wage earners earned only a small share of the income, then this is income inequality.

Inequality is of concern as it may have adverse effects on quality of life. For example, where there is more inequality, there may be worse health.

Sources:

Dorling D, Mitchell R, Pearce J. The global impact of income inequality on health by age: an observational study. *BMJ*. 2007 Oct 27;335(7625):873. Epub 2007 Oct 22. <http://www.ncbi.nlm.nih.gov/pubmed/17954512>

Wilkinson RG, Pickett KE. Income inequality and population health: a review and explanation of the evidence. *Soc Sci Med*. 2006 Apr;62(7):1768-84. Epub 2005 Oct 13. <http://www.ncbi.nlm.nih.gov/pubmed/16226363>

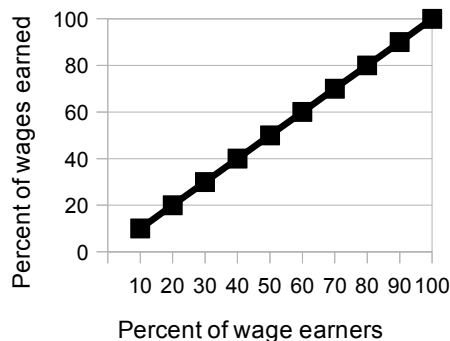
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What is inequality

The most common measure of inequality is the gini coefficient, a cumulative measure of what percent of earners earn what percent of income.

Source: Measuring Inequality. International Bank for Reconstruction and Development, The World Bank. <http://go.worldbank.org/3SLYUTVY00>

This chart shows perfect income equality, in which each cumulative percent of earners earn exactly their percent of income.

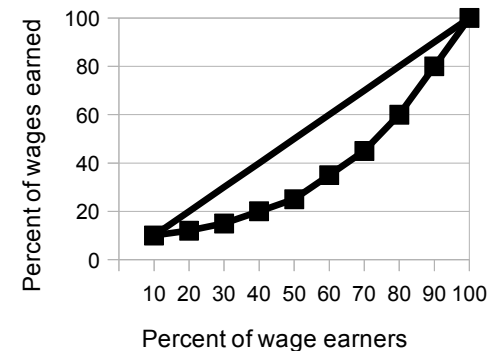


For example, suppose a country has 100 people. Each person earns \$1,000. The total income of everyone put together is \$100,000. In this country, ten people together earn \$10,000. So, 10% of the population earns 10% of the income. Twenty people together earn \$20,000, so 20% of the population earns 20% of the income. Thirty percent of the population earn 30% of the income, and so on.

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Each cumulative percent of the population (10%, 20%, 30% and so on) earns exactly that percent of the total national income.

In this next chart, showing some inequality, 40% of wage earners earn 20% of the wages, 50% of earners earn 25% of wages, 60% earn 35%, and 80% earn 60% of income.



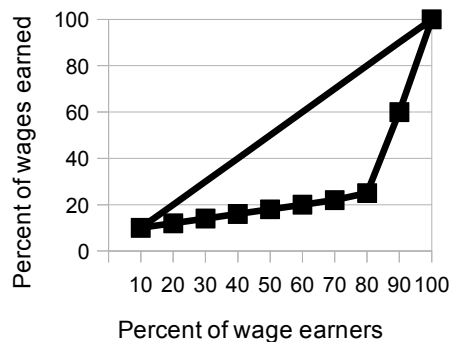
In a table, the distribution would look like this:

Percent of wage <u>earners</u>	Percent of wages <u>earned</u>
40%	20%
50%	25%
60%	35%
80%	60%

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That is, each cumulative percent of the population earns less than their 'fair share' of income.

Finally, this last chart shows much more inequality. Here, 80% of wage earners only earn 25% of all income. On the other hand, a small percent of the people are earning a large percent of the income, much more than their 'fair share'.



Source: all charts created by Gene Shackman.

Inequality is calculated by finding out how far away the cumulative income line is from the ideal line (the straight diagonal line). The further away, or the larger the area between the lines, the higher is the inequality.

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How inequality relates to other indicators of progress

Correlations of inequality, measured by:		
	World Factbook	UN
Inequality (World Factbook)		0.89
Inequality (UN)	0.89	
Poverty (UN)	0.18	0.05
Poverty (World Factbook)	0.49	0.5
Human Rights	-0.28	-0.53
Infant Mortality Rate	0.36	0.39
Expected years of school	-0.26	-0.4
GDP per capita	-0.47	-0.56

Data for table:

<http://gsociology.icaap.org/dataupload.html>

The table above uses two different measures on inequality, one by the World Factbook (U.S. CIA) and one from the UN.

Inequality is related to GDP per capita. Higher wealth per person correlates well, in general, with more equality.

On the other hand, inequality relates inconsistently with other indicators. The two measures have different relationships with human rights, schooling, and both correlate with one measure of poverty but not with another.

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Summary:

In theory, income inequality is a fairly straightforward concept. However, there are a number of problems with actually measuring inequality, and with using the indicator to measure world inequality. These problems will be described in the next two pamphlets.

Further Information:

Measuring inequality of household income: the Gini coefficient
Office for National Statistics, 2008
http://www.statistics.gov.uk/about/methodology_by_theme/gini/default.asp

Charting Income Inequality: The Lorenz Curve, Lorenzo Giovanni Bellù and Paolo Liberati, Food and Agriculture Organization of the United Nations, FAO
http://www.fao.org/docs/up/easypol/302/charting_income_inequality_000en.pdf

UC Atlas of Global Inequality
<http://ucatlas.ucsc.edu/>
University of California, Santa Cruz

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Gene Shackman's, Ya-Lin Liu's and Xun Wang's contributions to this project were on their own time, at home, and were not supported by any organization. They do not represent or speak for any organization except The Global Social Change Research Project.

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