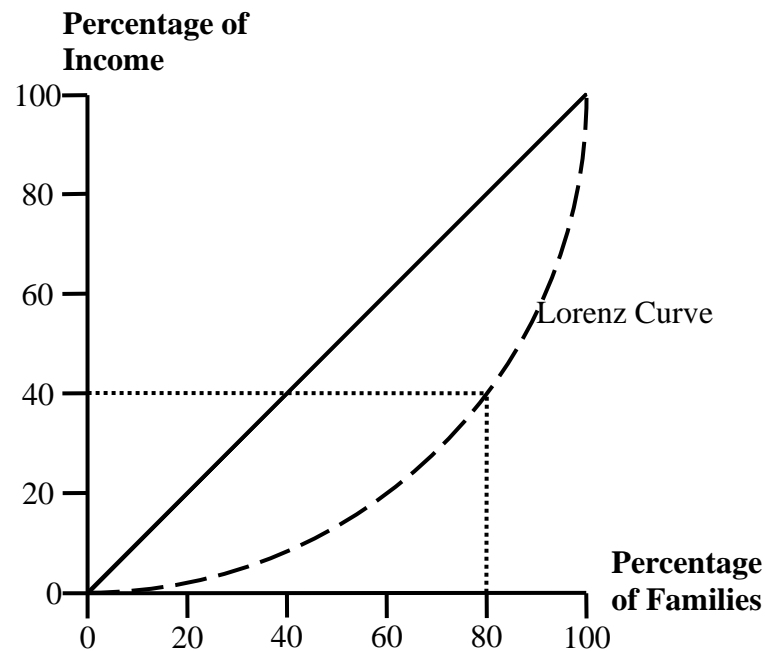


## LECTURE 10: INCOME INEQUALITY II

### I. Measuring inequality

- a. Imagine we're going to add up everyone's income starting with the lowest and ending with the highest. In a perfectly equal world, the bottom 20% of families will have 20% of income as the top 20% of families has 20% of income. This equal world is represented by a 45-degree line.
- b. The actual distribution is the Lorenz Curve. Like the 45-degree line, it a cumulative distribution. In this example, the top 20% of earners (100 – 80) make 60% of the total income (100 – 40).



- c. If you take the area between the 45-degree line and the Lorenz Curve and divide it by the total area under the 45-degree line, you get what's called the *Gini Ratio*.
  - i. Higher ratios mean more inequality, lower ones mean less inequality.
  - ii. It's sometimes multiplied by 100 for ease of interpretation.
  - iii. Here's a world map of Gini ratios. Darker countries mean higher Gini ratios.



II. A word of caution

- a. It's tempting to think of higher inequality as bad and lower inequality as good but how equal or unequal the distribution is does not tell us about a person's quality of life.
  - i. If the poorest people are getting richer and everyone else is getting richer at a faster rate that means more inequality. But that doesn't mean the poorest are worse off.



ii. Note here that while there are times Gini and median income move in opposite directions, sometimes they move in the same direction as they did in the 1990s.

- b. We see this also with claims of the shrinking middle class. It's true that fewer Americans are in what's typically considered "middle class" but it's because some are getting poorer *and* some are getting richer.
- c. Pew Research Center defines "middle" and "upper" incomes based on the size of the household, as below.<sup>1</sup>

**Share of adults living in middle-income households is unchanged since 2011**

% of adults in each income tier

	Lower	Middle	Upper
2016	29%	52	19
2011	29	51	20
2001	28	54	18
1991	27	56	17
1981	26	59	15
1971	25	61	14

Note: Adults are assigned to income tiers based on their size-adjusted household income. For 1971 to 2011, incomes refer to earnings in the calendar year prior to the survey year. For 2016, incomes refer to the 2015-16 calendar years. Source: Pew Research Center analysis of 1971, 1981, 1991, 2001 and 2011 Current Population Survey Annual Social and Economic Supplements and 2016 American Community Survey (IPUMS).

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**Who is 'middle income' and 'upper income' in 2016?**

Minimum household income needed to qualify for middle- and upper-income categories, by family size

	1	2	3	4	5
UPPER INCOME	\$78,281	110,706	135,586	156,561	175,041
MIDDLE INCOME	\$26,093	36,902	45,195	52,187	58,347

Note: Household incomes are adjusted for the cost of living in a metropolitan area before assignment to an income tier in the area.

Source: Pew Research Center analysis of 2016 American Community Survey (IPUMS).

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<sup>1</sup> <https://www.pewresearch.org/fact-tank/2018/09/06/the-american-middle-class-is-stable-in-size-but-losing-ground-financially-to-upper-income-families/>