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ECON 201—Montgomery College

LECTURE 07: INCOME INEQUALITY

I. Understanding What This Is About
   a. Income is not wealth. Wealth is how much money someone has; income is how much some makes.
      i. *Flow* is economic-speak for the rate of change (like water flowing into a tub). Income is a flow.
      ii. *Stock* is economic-speak for how much there is (like the amount of water in the tub). Wealth is a stock.
   b. While high-income people may also be high-wealth people, they are not the same thing.
      i. Retirees have high wealth (retirement savings), but low income (in the form of slowly selling off their assets).
      ii. Recent graduates with a professional degree (such as doctors and lawyers) have high incomes, but low wealth (student debt).
   c. Furthermore, many people treat high income inequality the same as the hardship suffered from low incomes. For example, people might say "New immigrants suffer from low inequality." That is not really accurate.
   d. Income inequality is about how equal the *distribution* of income. It is not about *how much* the poorest people have. You have less inequality and more suffering of low-income groups. You have more inequality and less suffering of low-income groups.
      i. If the richest people earn half as much income and the poorest earn 10 percent less income, inequality is lower and also the poorest are worst off.
      ii. If the richest double their incomes and the poorest triple their incomes, inequality is higher and also the poorest are better off.
   e. When "lower inequality" and "helping the poor" overlap is when we talk about redistribution (changing the distribution of income), specifically, when we talk about taxes and transfers.
      i. Taxes are the government collecting money; transfers are the government giving money.
      ii. A system that takes the wealth and gives to the poor reduces inequality AND helps the poor…in theory. It's not a straightforward thing, as we'll see. To understand what I mean, let's talk about pie.

II. Of Pie

a. When economists talk of income inequality we typically talk in terms of pie: our metaphor for income.
    i. "Equal slices of pie" implies an equal amount of income.
    ii. The "size of pie" refers to how much total income there is.

b. The metaphor is quite useful: imagine we're eating pie together and you cut yourself a very big slice, leaving less for everyone else. If you eat that whole big slice of pie, it might start out very satisfying but that joy is quite dulled at the end.
    i. In other words, there are diminishing marginal returns.

c. Meanwhile, everyone else only has a little bit of pie. We'd like some more. Because we've had so little, a bit more would make us a lot happier.
    i. If you take less, there is a small decrease in overall satisfaction.
    ii. If we take what you gave up, there is a much larger increase in satisfaction.
    iii. Reallocation of pie makes the group happier; this is why you typically split a pizza (pie) evenly. Equal shares maximizes satisfaction.

d. But suppose the pie isn't given to us. Suppose we made it together. Also suppose you worked very hard to make the pie while the rest of us slacked off. If we all take equal slices, you might not want to work as hard when we make pie again because you won't be compensated fairly.
    i. As a result, the size of the pie shrinks; not enough is being done to make it large.

e. Thus the essential question: how do you slice the pie when the more equal the slices, the smaller the pie?
    i. This is called the *equality-efficiency trade-off*.

f. The answer to this question is hard to determine but you can form an intelligent opinion by thinking about why some people make more than others. For some reasons, the incentive effect from redistribution is large. For others, the incentive effect is small or zero. How important these reasons are determine how much the pie shrinks.

III. Why is there income inequality?

a. One major reason is compensating differentials. Because high wages induce people to enter a market, wages rise if there are few people willing to enter a market, correcting the shortage.

    i. For example, consider malpractice suits. Doctors are regularly sued for alleged incompetence or poor care, even if these suits are frivolous.
    ii. To combat the threat of suits, doctors increasingly do a lot of paperwork and extra tests. They spend less time interacting with patients and more time doing rather dull work.
    iii. As a result, the cost of being a doctor has increased, or the supply curve shifts to the left. In order to keep up the same number of doctors, you have to pay them.

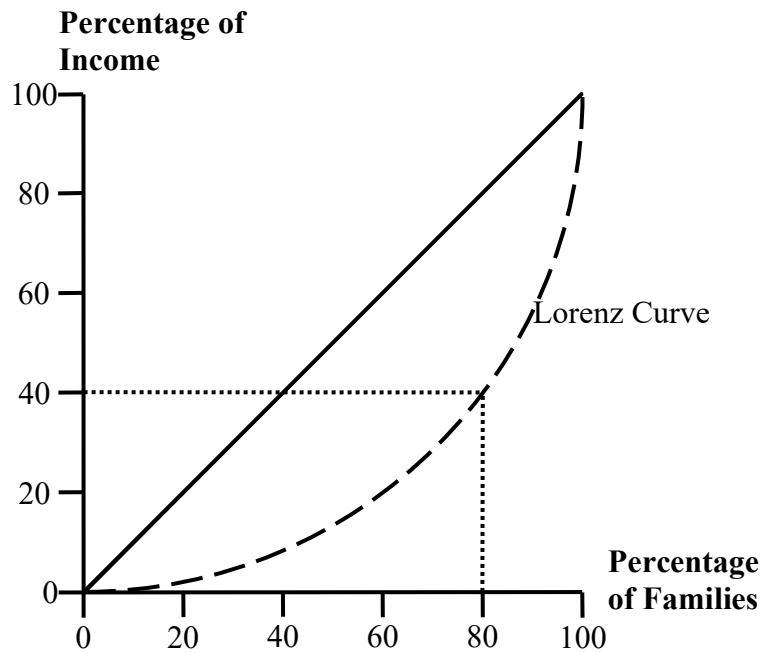
b. Fun jobs are jobs with lots of people interested in doing them. The wage for that job falls.
c. And less fun jobs means there are few people willing to do them. The wage for that job rises.
d. A *compensating differential* is a differences in working conditions are offset by differences in wages.
    i. Thus, dangerous jobs pay more than less dangerous jobs.
    ii. Boring jobs pay more than exciting jobs.
    iii. Jobs with lots of flexibility pay less than jobs with little flexibility.
    iv. Professors, given our education level, don't get paid that much. But we have some of the best working conditions in the world.
    v. Due to compensating differentials, all jobs should be equally desirable for the random individual.
e. Compensating differentials is a good reason for inequality—more equality will discourage people from unpleasant jobs and encourage pleasant ones, even if those unpleasant jobs need to be done and those pleasant jobs aren't needed. In a world of lots in income equality, you'd have few trash collectors and lots of artists (who, likely, are making trash art).
f. Two other reasons that favor <u>more</u> income inequality: the role of education and experience (to incentivize people to develop valuable skills); and the role of ability (to incentivize people to use their talents, like high intelligence and attention to detail).
g. But there are reasons for different incomes that favor <u>less</u> income inequality: intrinsic motivation (some people enjoy creating things of value, thus taxing most of their income won't notably change their behavior); luck (because, for the lucky, income isn't connected to productivity, so discouraging them for working won't make society poorer); and cronyism (taxing people who earn more because market

manipulation could actually *grow* the pie because they'll be less interested in restricting competition).

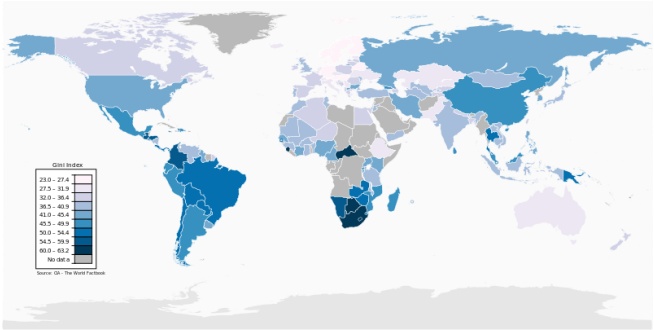
IV. Measuring inequality

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.

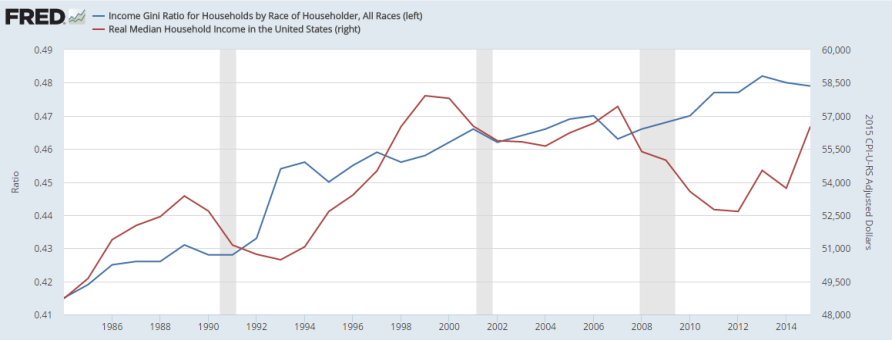
ii. It's sometimes multiplied by 100 for ease of interpretation.

iii. Here's a world map of Gini ratios. Darker countries mean higher Gini ratios.

V. 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.[1]

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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[1] 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/