Tax Policy and Income and Wealth Inequality

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Inequality of what?

- Ideally: well-being, but it is hard to measure.
- Wealth, income, earnings, consumption.
- Annual, lifetime.
- Individuals vs households.
- Different sources of data allow for measuring different things.
- Treatment of taxes and transfers.
- Mobility: is place in the society stable or mobile? Both within and across generations.
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Measurement of inequality

- Lorenz curves to describe full distribution
- Gini coefficient and shares are common summary statistics
Lorenz curves to describe full distribution

Gini coefficient and shares are common summary statistics
Figure A1: Average Real Earnings and Number of Workers

Mean (left scale)
Median (left scale)
Covered workers (right scale)

Figure from Kopczuk, Saez and Song (2010)
Figure 1: Gini Coefficient Series

- **All Workers**
- **Men**
- **Women**

Figure from Kopczuk, Saez and Song (2010)
Figure 2: Percentile ratios Log(P80/P50) and Log(P50/P20)

Figure from Kopczuk, Saez and Song (2010)
Top 10% Income Share, 1913-2009

Source: Piketty-Saez (2003), updated by Emmanuel Saez,
Decomposing Top 10% into 3 Groups, 1913-2009

- Top 1% (incomes above $368,000 in 2008)
- Top 5-1% (incomes between $153,000 and $368,000)
- Top 10-5% (incomes between $109,000 and $153,000)

Source: Piketty-Saez (2003), updated by Emmanuel Saez,
Figure 6A: Top 1% Earnings Share: Annual vs 5-Year

- **Annual earnings**
- **5 year average earnings**

Figure from Kopczuk, Saez and Song (2010)
Empirical facts about inequality

- Labor income inequality has increased dramatically since 1970s. Factors: skill-biased technological progress, compositional/demographic changes of the labor force (education, gender), institutions (minimum wage, unions, taxation), globalization.
- Mobility over the lifetime stable, intergenerational mobility less clear.
- Top income shares dropped during WWII but have increased very rapidly since the 1970s (Piketty and Saez, 2003) in the US and some other countries (though less dramatic changes in Europe).
- Labor income the key driver of top income share growth.
- Permanent changes rather than increased volatility at the top.
- Wealth concentration more stable than income in the last 30 years.
- Not too much known about intergenerational mobility at the very top. It is low in Sweden (Björklund et. al, 2011), but it may have actually increased in the US.
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Wealth concentration

- An increase in income concentration has not been accompanied by a similar increase in wealth concentration
- Current rich are more likely to be self-made than 30 years ago.
- Also, fewer wealthy women in estate tax data and in Forbes 400 despite women making huge gains in the labor market
- Edlund and Kopczuk (2009): wealthy women are a proxy for the importance of inherited wealth
- Hypothesis: old wealth declining, new wealth increasing
Wealth and Income Shares, Top .01%

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<thead>
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<th>Year</th>
<th>#Women</th>
<th>%Women</th>
<th>Total</th>
<th>Women</th>
<th>Men</th>
<th># with inheritance</th>
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Share of Women Among the Wealthiest (Decedents)

Source: Edlund and Kopczuk (2009)
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Redistributive taxation

- **Redistribution is a big part of the current system**
  - Income tax — tax liability based on income, related to (current) ability to pay
  - Many adjustments to the basic income tax structure to strengthen this link (exemptions for children, deductions for losses and for work-related expenses)
  - Welfare programs provide additional transfers for some groups with low ability to pay (single mothers, disability)
  - Social insurance programs — redistribution ex post; sometimes mixed with ex ante redistribution
  - A lot of other features of the tax and transfer system serve to encourage particular behaviors (charitable and mortgage deduction, work incentives via EITC, saving)

- Complexity growing over time, many tax incentives hard to justify
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Optimal income tax

- People work and consume
  - Everybody has some skill level (or ability to pay), unobservable
  - We can observe income, related to skills
  - Society values transfers from people with higher income/utility/well-being to those with lower levels
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Marginal tax rates and redistribution

Slope: $1 - \tau$
Marginal tax rates and redistribution

\[ \text{Slope: } 1 - \tau \]

\[ (z - z^*) \Delta \tau \]

\[ \text{Slope: } 1 - \tau - \Delta \tau \]
Optimal (single) tax rate and transfer

- Just one tax rate — not a realistic policy, but it is simple and highlights the key issue: equity-efficiency tradeoff

  - Benefit: equity.
    - Measured by the strength of relationship (covariance) between income and “deservedness”

  - Cost: efficiency
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Any useful lessons?

- Taste for redistribution matters.
- Higher inequality, higher rate
- How well income indicates who is deserving matters
  - What is “income” for tax purposes is a policy choice
  - Arbitrary deductions, inconsistencies in measuring income ⇒ less redistribution
- How strongly people respond is an empirical question
- ...but it may also depend on policy. Example: tax enforcement.
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Starting with Diamond (1998) and Saez (2001) — express optimal income tax formulae in terms of empirically observable parameters

Let’s assume that we do not care (much) about people making top incomes. How we should we tax them?

Top marginal tax rate:

\[ \tau = \frac{1}{1 + \varepsilon \cdot a} \]

where \( a \) ("thickness of the tail") is a measure of the shape of the income distribution, \( a \approx 2 \)

and \( \varepsilon \) measures by how many % income changes in response to 1% change in its price \((1 - \tau)\).

Note that even though the top marginal tax rate may be low, the overall tax liability may be still very high!
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Incentive effect

After tax income

Income

Slope: \(1 - \tau\)

Slope: \(1 - \tau - \Delta\tau\)

A

B

\(z^*\)
Revenue cost

Revenue loss

Slope: $1 - \tau$

Slope: $1 - \tau - \Delta \tau$

After tax income

Income
What matters is the relative importance of the two effects:
1. how much income is there close to the threshold relative to how much is there far from the threshold
2. how strong the response is
Tax rate for top incomes

- Starting with Diamond (1998) and Saez (2001) — express optimal income tax formulae in terms of empirically observable parameters
- Let’s assume that we do not care (much) about people making top incomes. How we should we tax them?
- Top marginal tax rate:
  \[ \tau = \frac{1}{1 + \varepsilon \cdot a} \]
  
  where \( a \) (“thickness of the tail”) is a measure of the shape of the income distribution, \( a \approx 2 \)
  
  and \( \varepsilon \) measures by how many % income changes in response to 1% change in its price \((1 - \tau)\).
- Note that even though the top marginal tax rate may be low, the overall tax liability may be still very high!
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FIGURE 4 − Hazard Ratio \((1−H(z))/(zh(z))\), years 1992 and 1993

Source: Saez (2001), p. 219

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The key and hardest to evaluate parameter here is the extent of behavioral response.

Overall labor supply responsiveness appears small, $\varepsilon \approx 0$

$$\tau = \frac{1}{1 + \varepsilon \cdot a} \approx \frac{1}{1 + 0 \cdot 2} = 1$$

...does it mean that the efficiency cost of taxation is small?

Feldstein (1995,1999): no, there are many other margins of response. We knew that of course, but Feldstein’s point was that they can be usefully summarized by response of taxable income.
Taxable income responses

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Possible responses to income taxation

• What are those other margins of response that are relevant for income taxation:
  • Labor supply related — effort, occupational choice
  • Capital gains realizations, portfolio choice, saving
  • Organizational form of a firm
  • Deductions (charity, business expenses)
  • Tax avoidance and evasion

• There are literatures on each of these separately

• All of them (and any others) show up as a response of income subject to taxation.
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Evidence (survey Saez, Slemrod and Giertz 2011)

- Initial papers (Lindsey, 1987; Feldstein, 1995; Auten-Carroll, 1999): very high elasticities, possibly above 1.
- Note: $\frac{\partial tI}{\partial t} = I \left(1 - \frac{t}{1-t} \varepsilon\right)$; when $t \approx 0.5$, $\varepsilon > 1$ puts you on the wrong side of the Laffer curve!
- Hard to estimate econometrically, recent evidence indicates taxable income elasticity of $0.4 - 0.6$

$$\tau = \frac{1}{1 + \varepsilon \cdot a} \approx \frac{1}{1 + 0.5 \cdot 2} = 0.5$$

- Higher elasticities ($> 1$?) for high-income and self-employed.

$$\tau = \frac{1}{1 + \varepsilon \cdot a} \approx \frac{1}{1 + 1 \cdot 2} = 0.33$$

- Non-structural elasticity: results somewhat different in different countries, periods, vary with definition of income
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Do people respond to taxes?

- “Flat” tax reform in Poland in 2004
  - Reform: people with business income can opt for a flat tax of 19% — no deductions or other preferences, no joint filing. Otherwise, progressive tax rates of 19-30-40%
  - Note: administrative data
Relevance of Poland
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Were there any effects?

Tax Policy and Income and Wealth Inequality
More subtle ways of studying it

Flat tax and gross income change 2003–2004 by having a spouse in high bracket (business owners)

Spouse in...
- % flat tax
- 03–04 change

- 1st bracket
- 2nd/3rd bracket

Log of gross income in 2002

Probability of selecting flat tax in 2005

Change in log gross income, 2003–2004

Tax Policy and Income and Wealth Inequality
Final remarks

- Trends in inequality
- Equity vs efficiency costs
- Understanding the nature of top incomes — how important is rent-seeking (negative externalities)?
- Empirical research: revolution in empirical work due to access to detailed administrative datasets
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Inequality Redistributive taxation References


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