Eco L3 - Globalization, Inequality, and Redistribution

Lecture 7: The ideal tryptich of progressive taxation

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Three pillars of ideal progressive tax systems:

- Progressive comprehensive income tax

- Progressive inheritance tax

- Progressive wealth tax

1   Income taxation and the equity-efficiency trade-off

When the government taxes income, this has two effects

- Generates tax revenue: mechanical (positive) revenue effect

- Workers respond by reducing labor or capital supply: behavioral (negative) revenue effect

The optimal labor income tax problem

Goal of gov. is to balance the equity gains with the efficiency losses

- Objective: A social welfare function (SWF), $W = W(U_1, ..., U_n)$, where U_i is the utility of individual i.

- Instrument: A tax function $T(z)$ that gives the amount of taxes owed by individual with earnings z

- Contraints: gov. budget constraint and indiv.optimizing behavior

- The problem: Design $T(.)$ to maximize SWF subject to the government budget constraint and individual optimization

- This problem was first solved by Mirrlees (1971). In its general form, it is difficult to solve.

- We will simplify the problem by:
  1. Simplifying the tax system: piecewise linear taxes
  2. Considering a special social welfare function

Simplification number one: linear income tax

- The simplest tax system is one with a constant marginal tax rate τ and a guaranteed minimum income $G > 0$:
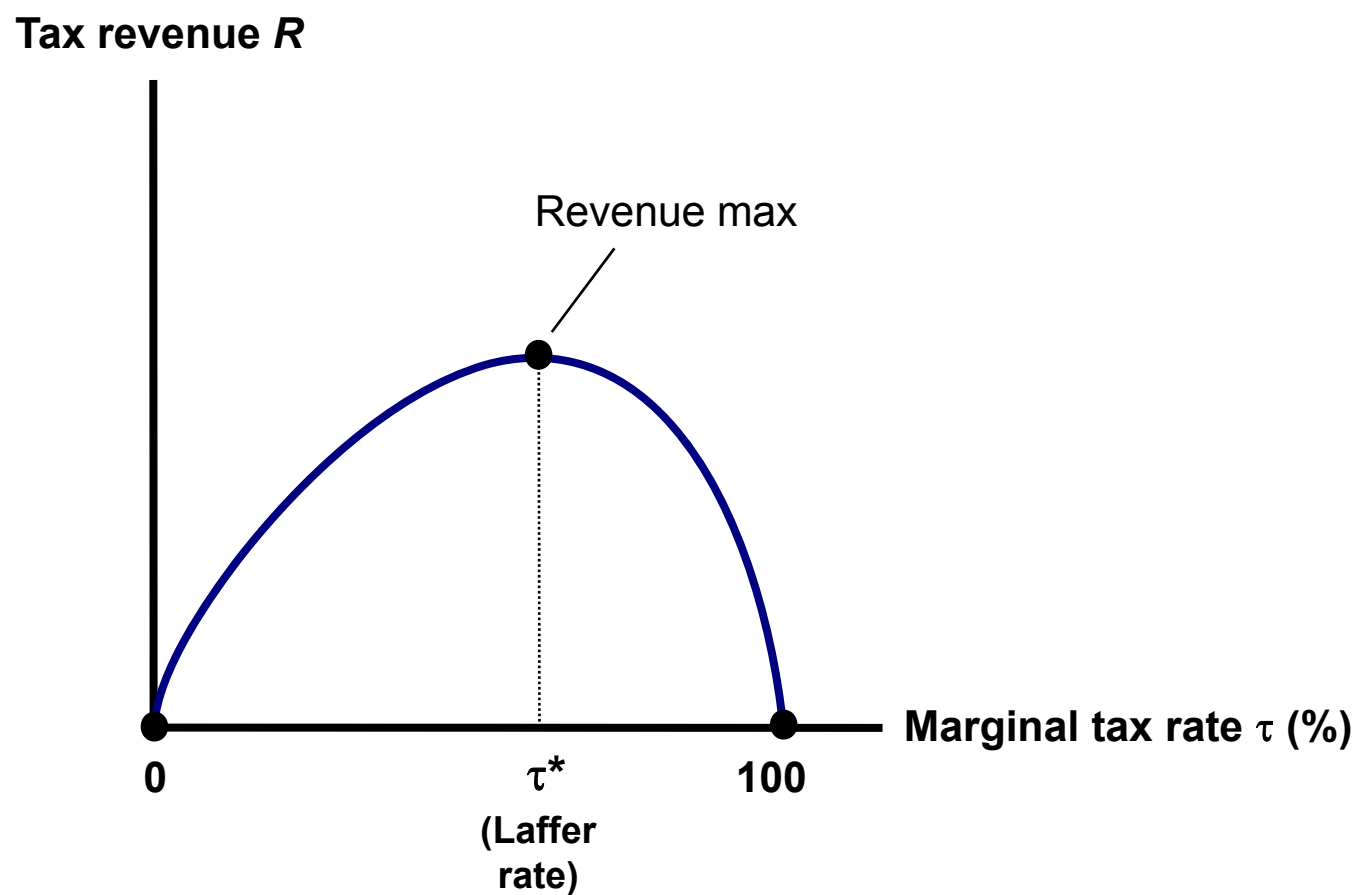
$$T(z) = \tau \cdot z - G. \tag{1}$$

- Also known as a **flat tax**

- The average tax rate is given by $\dfrac{T(z)}{z} = \tau - \dfrac{G}{z}$.

Simplification number two: Rawlsian SWF

- The Rawlsian SWF is $W = \min(U_1, ..., U_n)$: gov. only cares about the worst-off individual in the population

- Let's assume that the worst-off individual in the population is not able to work hence live off the transfer G

- A Rawlsian government then wants to maximize $G \Rightarrow$ the optimal income tax τ maximizes revenue $\Rightarrow$ rech top of the **Laffer curve**.

THE LAFFER CURVE

Tax revenue _R_

Revenue max

τ^*
(Laffer rate)

0   100

Marginal tax rate τ (%)

Laffer curve is important in two ways:

- Laffer rate is the optimum under Rawlsian social preferences

- Laffer rate represents upper bound on optimal tax rates:

  − If the goal is to maximize tax revenue

  − But other goals are possible

2   The optimal labor income tax rate

Laffer rate under linear taxation

- Theorem: the Laffer rate is given by $\tau^* = \frac{1}{1+\varepsilon}$

- where $\varepsilon \equiv \frac{dz/z}{d(1-\tau)/(1-\tau)}$ is the the elasticity of taxable income

- With $\varepsilon \approx 0.2$ then $\tau^* \approx 83\%$

Piecewise linear tax systems

- Most tax systems are not linear, but piecewise linear: impose different marginal tax rates over different income intervals

- Within each bracket, the marginal tax rate is constant. Across brackets, marginal tax rates differ and typically increase with Y_L

- Let's focus on the Laffer rate in the highest-income tax bracket, assuming that income is Pareto-distributed at the top

- Variables pertaining to top-rate taxpayers are denoted by "hat"

- Theorem: the high-income Laffer rate is given by

$$\hat{\tau}^* = \frac{1}{1 + \hat{\varepsilon} \cdot a}$$

- where $\hat{\varepsilon}$ is the elasticity of taxable income at the top

- And $a =$ Pareto coefficient

- The more unequal the distribution of income, the higher the optimal top marginal income tax rate

- The higher the elasticity of taxable income, the lower the optimal top marginal income tax rate

- Plugging real number in the formula:

- If $a \approx 2$ and $\hat{\epsilon} \approx 0.2$ then $\hat{\tau}^* \approx 71\%$

3   Optimal capital taxation

- If inequality entirely came from labor income, it would be useless to tax K

- But in practice inheritance plays a big role

- And it is not easy to separate L from K income flows

$\rightarrow$ These are the two key reasons why capital should be taxed

3.1 Fuzzy frontier between capital and labor

Main situations where the K/L frontier is fuzzy:

- Business owners can decide how much they get paid in wages vs. dividends

- Freelancers (journalists, consultants...) and self–employed (doctors, lawyers, etc.) can incorporate

Vast empirical evidence on how differential tax treatment can induce shifting:

- Finnish dual income tax system: taxes separately K income at preferred rates since 1993 → people report more K income

- Carried interest in the US for hedge fund and private equity fund managers → people report capital gains instead of wages

The higher the shifting elasticity, the closer the tax rates on labor and capital income should be

- Extreme case where government cannot distinguish at all between labor and capital income

- Govt observes only $wl + rK \Rightarrow$ Only option is to have identical marginal tax rates on labor and capital

- In practice, this seems to be an important consideration when designing income tax systems, especially for top incomes

3.2   Optimal inheritance taxation

- Most normative theories of distributive justice put a strong emphasis on individual merit $\rightarrow$ tax bequests

- But individuals value the possibility of leaving a bequest to their children $\rightarrow$ don't tax bequests

$\rightarrow$ Interesting trade-off

# Simplified optimal inheritance tax model:

- Meritocratic Rawlsian criterion: maximize welfare of those receiving no inheritances

- **Optimal inheritance tax rate:**

$$\tau_B = \frac{1 - \bar{b}}{1 + e_B}$$

with $e_B =$ elasticity of aggregate bequests and $\bar{b} =$ relative bequest left by zero-bequest receivers

Key insights:

- Optimal $\tau_B < 1/(1 + e_B)$ revenue maximizing rate because zero-receivers care about bequests they leave

- $\tau_B = 0$ if $\bar{b} = 1$ (i.e, zero-receivers leave as much bequest as average)

- If bequests are quantitatively important, highly concentrated, and low wealth mobility then $\bar{b} << 1 \rightarrow$ high τ_B

Top inheritance tax rates, 1900-2013
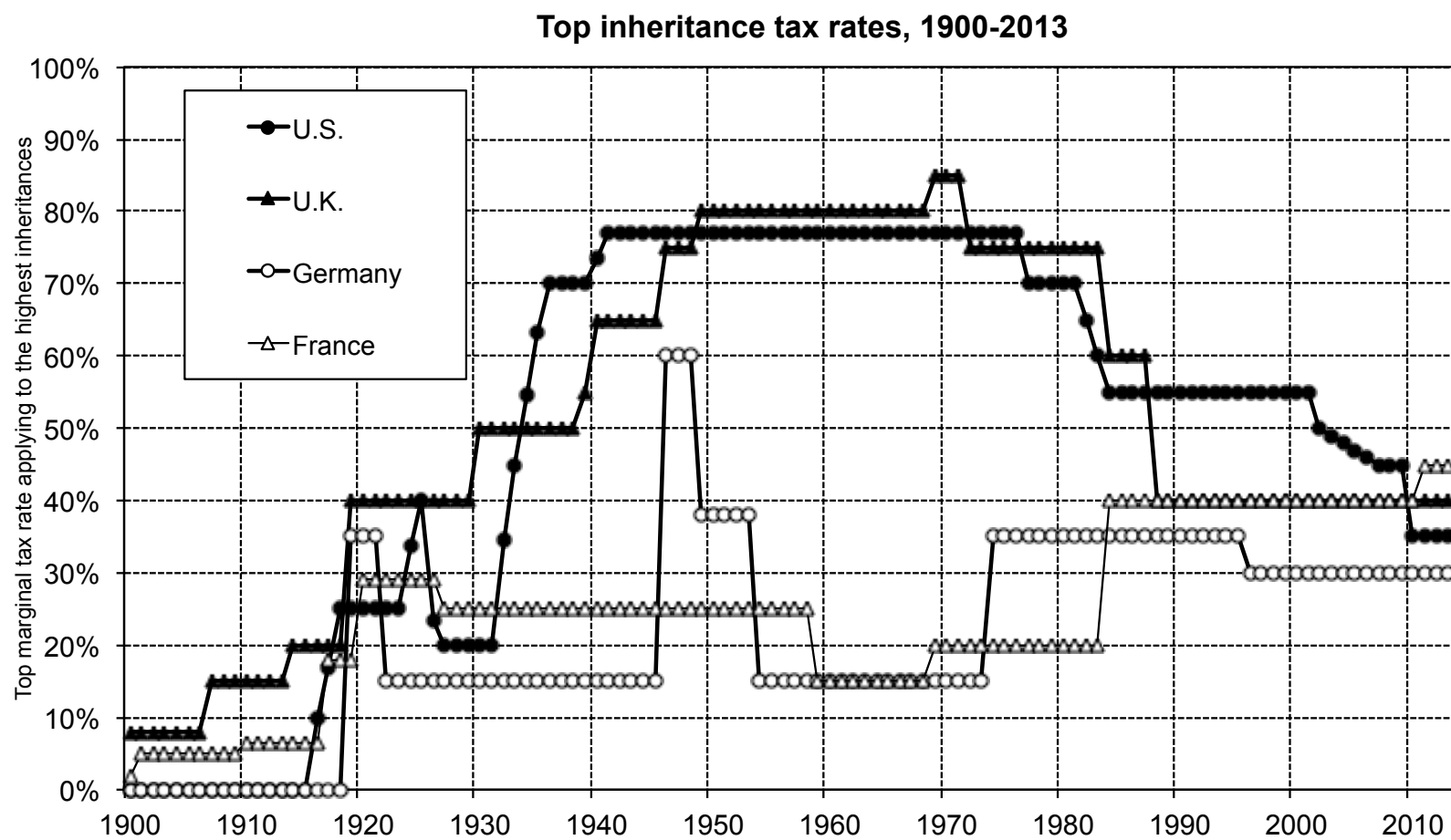
The top marginal tax rate of the inheritance tax (applying to the highest inheritances) in the U.S. dropped from 70% in 1980 to 35% in 2013. Sources and series: see piketty.pse.ens.fr/capital21c.

4   The proper way to tax billionaire: a wealth tax

Income flow can be difficult to observe for top wealth holders:

- Capital income retained in holding companies, trusts, etc., can create large gap between economic and taxable income

- On the contrary W_{ti} is well defined

The lower the elasticity of the rate of return $\tilde{R}(e_{ti})$ with respect to the tax rate, the higher the optimal wealth tax rate on billionaires

- Some evidence suggests $\tilde{R}(e_{ti})$ may largely be determined by initial wealth

- Above a certain threshold, high fortunes tend to grow fast, whatever their source

Figure C4: Return on foundation wealth, 1990-2010 average
Returns including realized & unrealized gains