USE IT OR LOSE IT: EFFICIENCY GAINS FROM WEALTH TAXATION

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The art of taxation consists in so plucking the goose...

...as to get the most feathers with the least hissing.

– Jean Baptiste Colbert, Minister of Finance to Louis XIV

Capital Income Taxes

Table: Capital Taxes, Select OECD Countries

Country	% of GDP	% of taxes
USA	8.0	27.0
UK		
France		
Germany		
Sweden		
Norway		
Luxembourg		
EU-28		

Source: European Commission (2011, Table 54, year 2006) and OECD (2011, USA).

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USA	8.0	27.0
UK	11.4	31.5
France	10.7	24.3
Germany	6.5	16.8
Sweden	7.5	15.5
Norway	15.9	36.5
Luxembourg	11.2	31.3
EU-28	9.2	23.2

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Simple Example

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- Government taxes to finance $G = \$50$

CAPITAL INCOME VS. WEALTH TAX

	Capital income tax		Wealth tax
	Fredo ($r_f = 0\%$)	Mike ($r_m = 20\%$)	
Wealth	1000	1000	
Before-tax Income	0	200	
	$\tau_k = \frac{50}{200} = 25\%$		
Tax liability			
After-tax return			
After-tax $\frac{W_m}{W_f}$			

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Tax liability	0	50	
After-tax return	0%	$\frac{200-50}{1000} = 15\%$	
After-tax $\frac{W_m}{W_f}$	$1150/1000 = 1.15$		

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	Fredo ($r_f = 0\%$)	Mike ($r_m = 20\%$)	Fredo ($r_f = 0\%$)	Mike ($r_m = 20\%$)
Wealth	1000	1000	1000	1000
Before-tax Income	0	200	0	200
	$\tau_k = \frac{50}{200} = 25\%$		$\tau_a = \frac{50}{2200} \approx 2.27\%$	
Tax liability	0	50		
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Before-tax Income	0	200	0	200
	$\tau_k = \frac{50}{200} = 25\%$		$\tau_a = \frac{50}{2200} \approx 2.27\%$	
Tax liability	0	50	$1000\tau_a = 22.7$	$1200\tau_a = 27.3$
After-tax return	0%	$\frac{200-50}{1000} = 15\%$	$-\frac{22.7}{1000} = -2.3\%$	$\frac{200-27}{1000} = 17.3\%$
After-tax $\frac{W_m}{W_f}$	$1150/1000 = 1.15$		$1173/977 \approx 1.20$	

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    2. (Dynamic): If savings rates respond to changes in returns, this could further increase reallocation of capital toward more productive agents.
  - Negative (-): Increased wealth inequality.
- Conjecture: positive effects will be first order and negative effects will be second order.

Why Misallocation in the Long Run?

- In the simple example above, we assumed that Mike and Fredo had the same initial wealth.
- But in reality, those with high returns will eventually hold most of the wealth.
- If so, the misallocation of wealth to low return individuals will be a small problem?

Sources of Misallocation: Variation in Returns

- Across Generations
  - Children of very successful entrepreneurs often inherit large amounts of wealth but may not be able to work it efficiently.

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  - Wealth tax can alleviate misallocation of capital across entrepreneurs who differ in their productivity.

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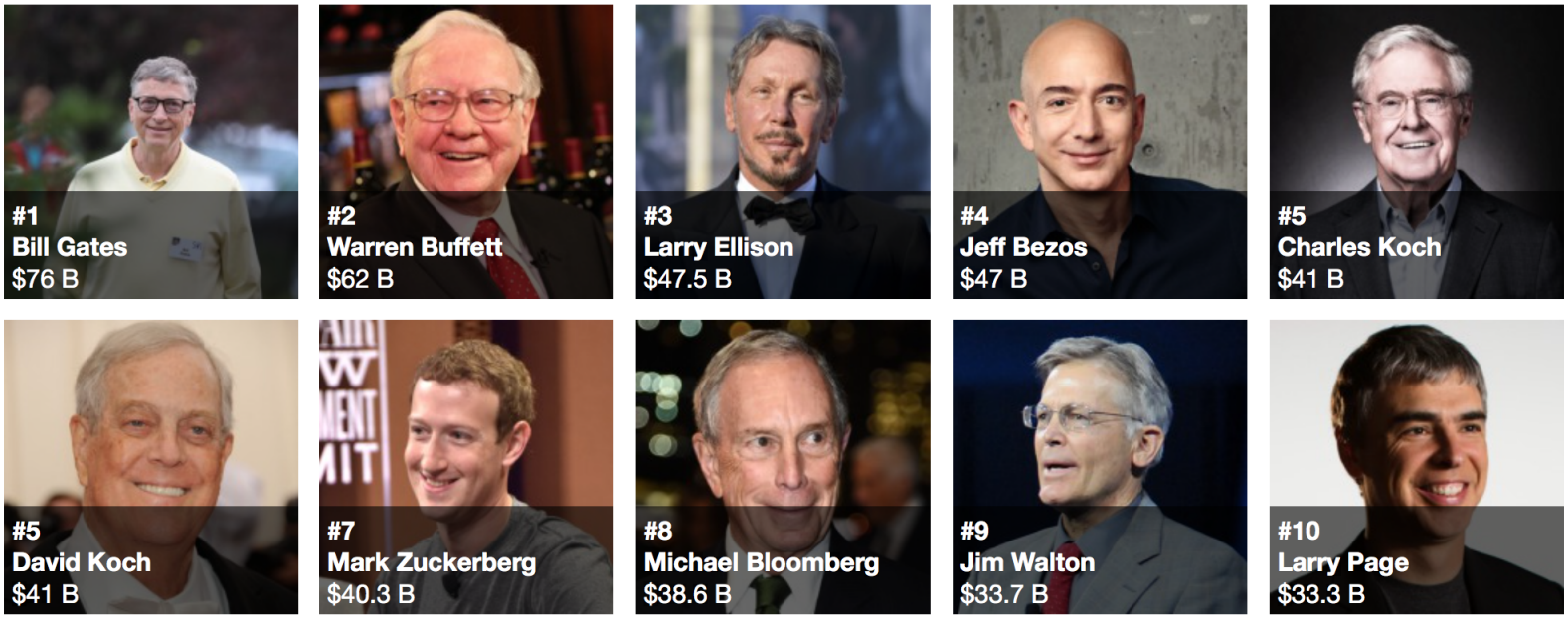
  - Sector-specific shocks.
- Key Idea:
  - Wealth tax can alleviate misallocation of capital across entrepreneurs who differ in their productivity.
  - Wealth tax is like pruning: it eliminates weak branches, strengthens stronger ones.

Outline

MODEL

How Did Rich Become Rich?

FIGURE: Precautionary saving motive or Higher returns?



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  - Return heterogeneity and return persistence across generations is key for matching the wealth distribution (and the right tail)

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  - Return heterogeneity and return persistence across generations is key for matching the wealth distribution (and the right tail)
- Fagereng, Guiso, Malacrino, and Pistaferri (2015) provide evidence for permanent differences in rate of returns.

HOUSEHOLDS

- OLG demographic structure.
- Individuals face mortality risk and can live up to H years.
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- Individuals face mortality risk and can live up to H years.
- Let ϕ_h be the unconditional probability of survival up to age h, where $\phi_1 = 1$.
- Each household supplies labor in the market and produces a differentiated intermediate good using her capital (wealth).
- Households maximize $\mathbb{E}_0 \left(\sum_{h=1}^{H} \beta^{h-1} \phi_h u(c_h, \ell_h) \right)$
- Accidental bequests are inherited by (newborn) offspring.

HOUSEHOLD LABOR MARKET EFFICIENCY

- Labor market efficiency of household i at age h is

$$\log y_{ih} = \underbrace{\kappa_h}_{\text{lifecycle}} + \underbrace{\theta_i}_{\text{permanent}} + \underbrace{\eta_{ih}}_{\text{AR(1)}}$$

- Individual-specific labor market ability θ_i is imperfectly inherited from parents,

$$\theta_i^{child} = \rho_\theta \theta_i^{parent} + \varepsilon_\theta$$

Entrepreneurial Ability

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- z is constant over the lifecycle. (Returns will not be!)
- A newborn inherits z imperfectly from her parent:

$$\log(z^{child}) = \rho_z \log(z^{parent}) + \varepsilon_z.$$

COMPETITIVE FINAL GOOD PRODUCER

- Final good output is $Y = Q^{\alpha} L^{1-\alpha}$, where

$$Q = \left(\int_i x_i^{\mu} di \right)^{1/\mu}, \quad \mu < 1.$$

- Price for intermediate good i is

$$p_i(x_i) = \alpha x_i^{\mu-1} Q^{\alpha-\mu} L^{1-\alpha}.$$

- Wage rate (per efficiency unit of labor) is

$$w = (1-\alpha) Q^{\alpha-1} L^{1-\alpha}.$$

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- Without taxes, wealth after-production:

$$\begin{aligned}
&\max_{k \leq \vartheta a} \left[(1-\delta)k + p(zk)zk - (1+r)(k-a) \right] \\
&= (1+r)a + \max_{k \leq \vartheta a} \left[p(zk)zk - (r+\delta)k \right] \\
&= (1+r)a + \pi^*(z,a)
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- After-tax wealth:

$$\Pi(a,z;\tau_k) = a + \left(ra + \pi^*(z,a)\right)(1-\tau_k) \quad \text{under capital income tax}$$
$$\Pi(a,z,\tau_a) = \left((1+r)a + \pi^*(z,a)\right)(1-\tau_a) \quad \text{under wealth tax}$$

Household Budget

- During retirement:

$$(1+\tau_c)c + a' = \Pi(a,z,\tau) + y_R(\theta,\eta)$$

- During working life:

$$(1+\tau_c)c + a' = \Pi(a,z,\tau) + (1-\tau_\ell)(wy_h n)^{\psi}$$

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- Today: $\psi \equiv 1$.
- Without heterogeneity in z and with $\mu = 1$, the two tax systems are equivalent.
- Two financial frictions:
  1. Households can borrow up to $\vartheta - 1$ fraction of their wealth a
     - $\vartheta = 1$ means HH's cannot borrow or lend.
  2. Non-negative wealth: $a \geq 0$.

GOVERNMENT

- The government budget balances. Two scenarios:

1. Taxing capital income and labor income:

$$G + SSC = \sum_{h,a,\mathbf{s}} \left[\tau_k \times \left(ra + \pi^*(z,a)\right) + \tau_\ell \times wy_h + \tau_c \times c_h(a,\mathbf{s})\right] \Gamma(a,\mathbf{s};h)$$

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2. Taxing wealth and labor income:

$$G + SSC = \sum_{h,a,\mathbf{s}} \left[\tau_a \times \left(\left((1+r)a + \pi^*(z,a)\right)\right) + \tau_\ell w y_h + \tau_c c_h(a,\mathbf{s})\right] \Gamma\left(a,\mathbf{s};h\right)$$

- $\mathbf{s} \equiv (\theta,\eta,z)$ and $\Gamma\left(a,\mathbf{s};h\right)$ is the stationary distribution of agents over states.

Functional Forms and Parameters

- Preferences:

$$u(c,\ell) = \frac{\left(c^{\gamma}\ell^{1-\gamma}\right)^{1-\sigma}}{1-\sigma}$$

- Pension system:
  - $y_R(\theta,\eta) = \Phi(\theta,\eta) \times \overline{Y}$ where $\overline{Y}$ is the average earnings in economy, and
  - $\Phi(\theta,\eta)$ is a concave replacement rate function taken from Social Security's OASDI system.

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5. Repeat (4) with progressive labor taxes (in progress).

Calibration Targets and Outcomes

- We calibrate 5 parameters to match 5 data moments:
  - 5 Parameters: $(\beta, \rho_z, \sigma_{\varepsilon_z}, \sigma_{\varepsilon_\theta}, \gamma)$
  - 5 Moments: K/Y ratio, top 1% and top 10% wealth shares, standard deviation of log earnings, average hours worked.

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- We set $\tau_k = 25\%$, $\tau_\ell = 22.4\%$, and $\tau_c = 7.5\%$ (Source: McDaniel, 2007)

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- We set $\tau_k = 25\%$, $\tau_\ell = 22.4\%$, and $\tau_c = 7.5\%$ (Source: McDaniel, 2007)
- Calibrated model generates:
  - total tax revenues of 29.5% of GDP
  - ratio of capital tax revenue to total tax revenue of 28%
  - both matching the US data perfectly.

Parameter Choices

TABLE: Benchmark Parameters Calibrated Jointly in Equilibrium

Parameter		Value
Curvature of utility	σ	4.0
Curvature CES aggregator for varieties	μ	0.90
Capital share in production	α	0.33
Interg. persistence of labor efficiency	ρ_θ	0.50
Persistence of labor efficiency shock	ρ	0.90
Std. dev. of labor efficiency shock	σ_η	0.20
Discount factor	β	0.942
Consumption share in utility	γ	0.449
Persistence of entrepr. ability	ρ_z	0.50
Std. dev. of entrepr. ability	σ_{ε_z}	0.65
Std. dev. of individual fixed effect	$\sigma_{\varepsilon_\theta}$	0.34

Tax Reform

Tax Reform: Wealth Distribution

Table: Benchmark vs. Wealth Tax Economy

	US Data	Benchmark	Wealth Tax
Top 1%	0.34*		
Top 10%	0.69*		
Top 20%	0.82		
Wealth Gini	0.82		
Capital/Output	3.00*		
Bequest/Wealth	1–2%		
$\sigma(\log(\text{Earnings}))$	0.80*		
Avg. Hours	0.40*		

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Bequest/Wealth	1–2%	1.17%	
$\sigma(\log(\text{Earnings}))$	0.80*	0.80	
Avg. Hours	0.40*	0.40	

Rate of Return Heterogeneity

TABLE: Benchmark vs. Wealth Tax Economy

	Percentiles of Return Distribution (%)				
	P10	P50	P90	P95	P99
	Before-tax				
Benchmark	2.18	5.69	12.69	17.34	26.08

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Wealth tax	1.99	5.30	11.39	15.32	23.26

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	P10	P50	P90	P95	P99
			Before-tax		
Benchmark	2.18	5.69	12.69	17.34	26.08
Wealth tax	1.99	5.30	11.39	15.32	23.26
			After-tax		
Benchmark	1.64	4.27	9.52	13.00	19.56
Wealth tax	0.21	3.46	9.45	13.31	21.11

Tax Reform: Wealth Distribution

Table: Benchmark vs. Wealth Tax Economy

	US Data	Benchmark	Wealth Tax
Top 1%	0.34*	0.35	0.43
Top 10%	0.69*	0.68	0.74
Top 20%	0.82	0.83	0.86
Wealth Gini	0.82	0.84	0.86
Capital/Output	3.00*	3.00	3.10
Bequest/Wealth	1–2%	1.17%	1.27%
$\sigma(\log(\text{Earnings}))$	0.80*	0.80	0.79
Avg. Hours	0.40*	0.40	0.41

Reallocation of Wealth Across Agents

TABLE: Tax Reform from τ_k to τ_a: Change in Worker Composition

	% Change in Types in Top x% Wealth Group						
Top x%	z_1	z_2	z_3	z_4	z_5	z_6	z_7
1	–	–42.05	–30.37	–17.08	–3.93	0.01	10.39
5	–24.02	–21.38	–17.54	–14.13	–2.13	12.76	4.89
10	–21.20	–19.27	–15.02	–9.35	1.15	11.56	3.34
50	–6.99	–5.82	–4.87	–1.34	3.75	1.89	0.68

- Composition of wealth holdings shift toward more productive individuals.

Tax Reform: Aggregate Variables

Table: Benchmark vs. Wealth Tax Economy

	Benchmark	Wealth Tax	% Change
τ_k	25.0%	0.00	
τ_a	0.00	1.74%	
$\overline{k}$			
Q			
w			
Y			
L			
C			

Tax Reform: Aggregate Variables

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	Benchmark	Wealth Tax	% Change
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τ_a	0.00	1.74%	
$\overline{k}$			11.48
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τ_k	25.0%	0.00	
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$\overline{k}$			11.48
Q			22.62
w			
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C			

Tax Reform: Aggregate Variables

Table: Benchmark vs. Wealth Tax Economy

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Welfare Analysis: Two Measures

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$$V_0((1 + CE_1(\mathbf{s}_0))c^*_{\text{US}}(\mathbf{s}_0), \ell^*_{\text{US}}(\mathbf{s}_0)) = \mathbb{V}_0(c(\mathbf{s}_0), \ell(\mathbf{s}_0))$$

$$\overline{CE}_1 \equiv \sum_{\mathbf{s}_0} \Gamma_{\text{US}}(\mathbf{s}_0) \times CE(\mathbf{s}_0)$$

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- Measure 2: Fixed proportional consumption transfer to all individuals in the benchmark economy:

$$\sum_{\mathbf{s}_0} \Gamma_{US}(\mathbf{s}_0) \times V_0((1+\overline{CE}_2)c^*_{US}(\mathbf{s}_0), \ell^*_{US}(\mathbf{s}_0)) = \sum_{\mathbf{s}_0} \Gamma(\mathbf{s}_0) \times \mathbb{V}_0(c(\mathbf{s}_0), \ell(\mathbf{s}_0)).$$

Tax Reform: Who Gains, Who Loses?

Table: Welfare Change, By Age and Productivity

	Productivity group						
Age	z_1	z_2	z_3	z_4	z_5	z_6	z_7
20–25	5.58	5.46	5.18	4.64	4.11	6.67	13.53
25–34	5.24	5.12	4.85	4.29	3.62	6.23	13.82
35–44	4.34	4.21	3.94	3.38	2.70	5.41	13.38
45–54	3.16	3.04	2.78	2.28	1.66	4.38	12.37
55–64	1.25	1.16	0.98	0.63	0.24	3.17	10.97
65–74	–0.32	–0.35	–0.43	–0.60	–0.71	2.38	9.63
75+	–0.03	–0.04	–0.06	–0.12	–0.22	1.82	7.58

Note: Each cell reports the average of $CE_1(\theta, z, a, h) \times 100$ *within each age and productivity group.*

Political Support for Wealth Taxes

Table: Fraction with Positive Welfare Gain

	Productivity group						
Age	z_1	z_2	z_3	z_4	z_5	z_6	z_7
20–25	0.99	0.98	0.97	0.94	0.89	0.99	1.00
25–34	0.99	0.98	0.97	0.95	0.90	0.99	1.00
35–44	0.96	0.95	0.94	0.91	0.88	0.99	1.00
45–54	0.90	0.88	0.85	0.82	0.78	0.99	1.00
55–64	0.71	0.69	0.67	0.62	0.57	0.99	1.00
65–74	0.00	0.00	0.00	0.16	0.22	0.99	1.00
75+	0.00	0.00	0.00	0.68	0.49	1.00	1.00

Tax Reforms: Summary

	$\overline{CE}_1$	$\overline{CE}_2$
Average CE for newborns	4.92%	
Average CE	2.31%	

Tax Reforms: Summary

	$\overline{CE}_1$	$\overline{CE}_2$
Average CE for newborns	4.92%	5.06%
Average CE	2.31%	2.91%
Fraction in favor of wealth tax	71.8%	

Optimal Taxation

Two Optimal Tax Problems

We consider two scenarios. The government chooses:

1. (linear) labor taxes and capital income taxes
2. (linear) labor taxes and wealth taxes.

(Progressive labor taxes are work in progress)

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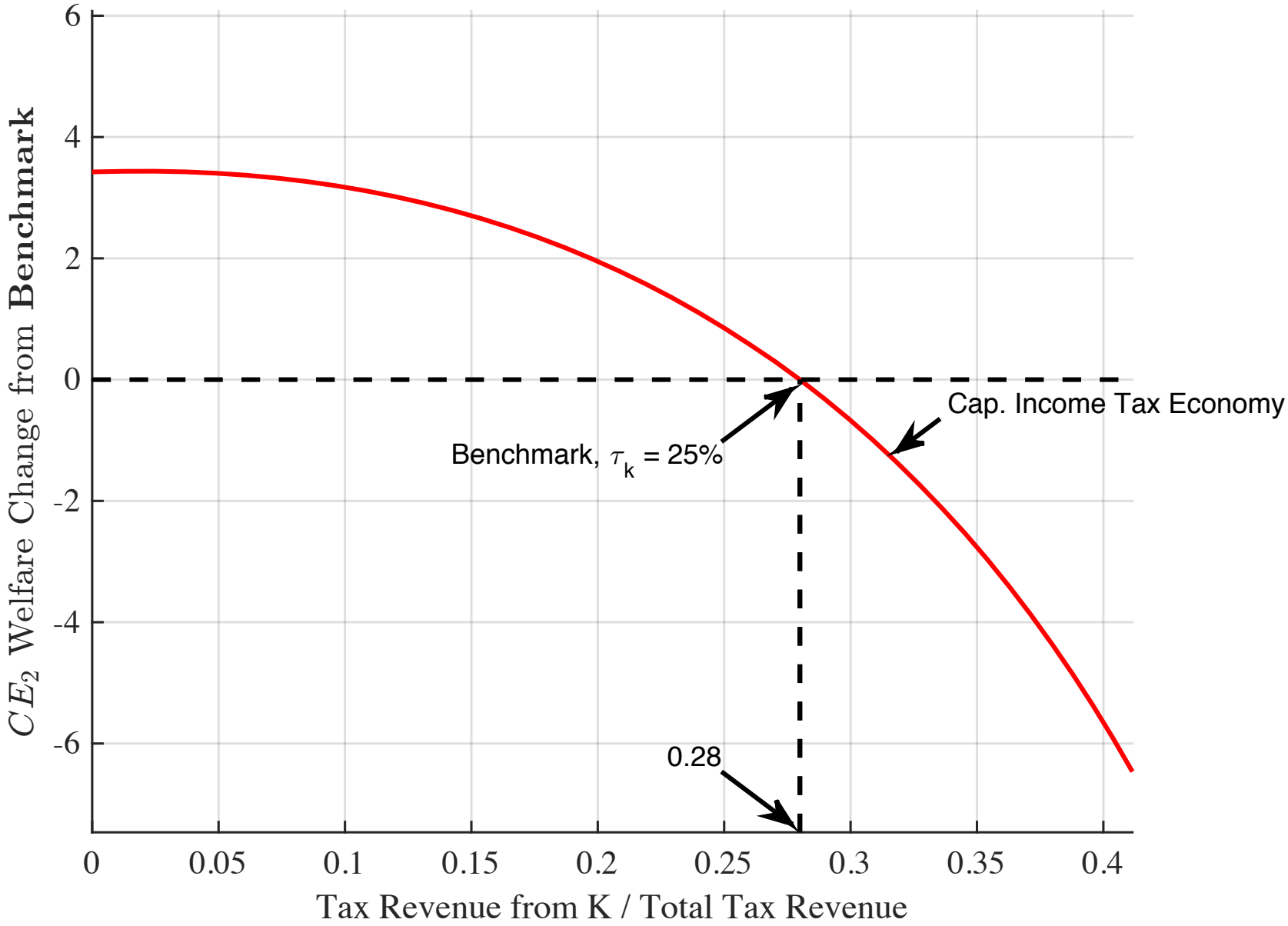
(Progressive labor taxes are work in progress)

The government maximizes average utility of the newborn.

Then analyze:

- Benchmark vs. Optimal tax (either capital or wealth)

Welfare Change: Optimal Taxes



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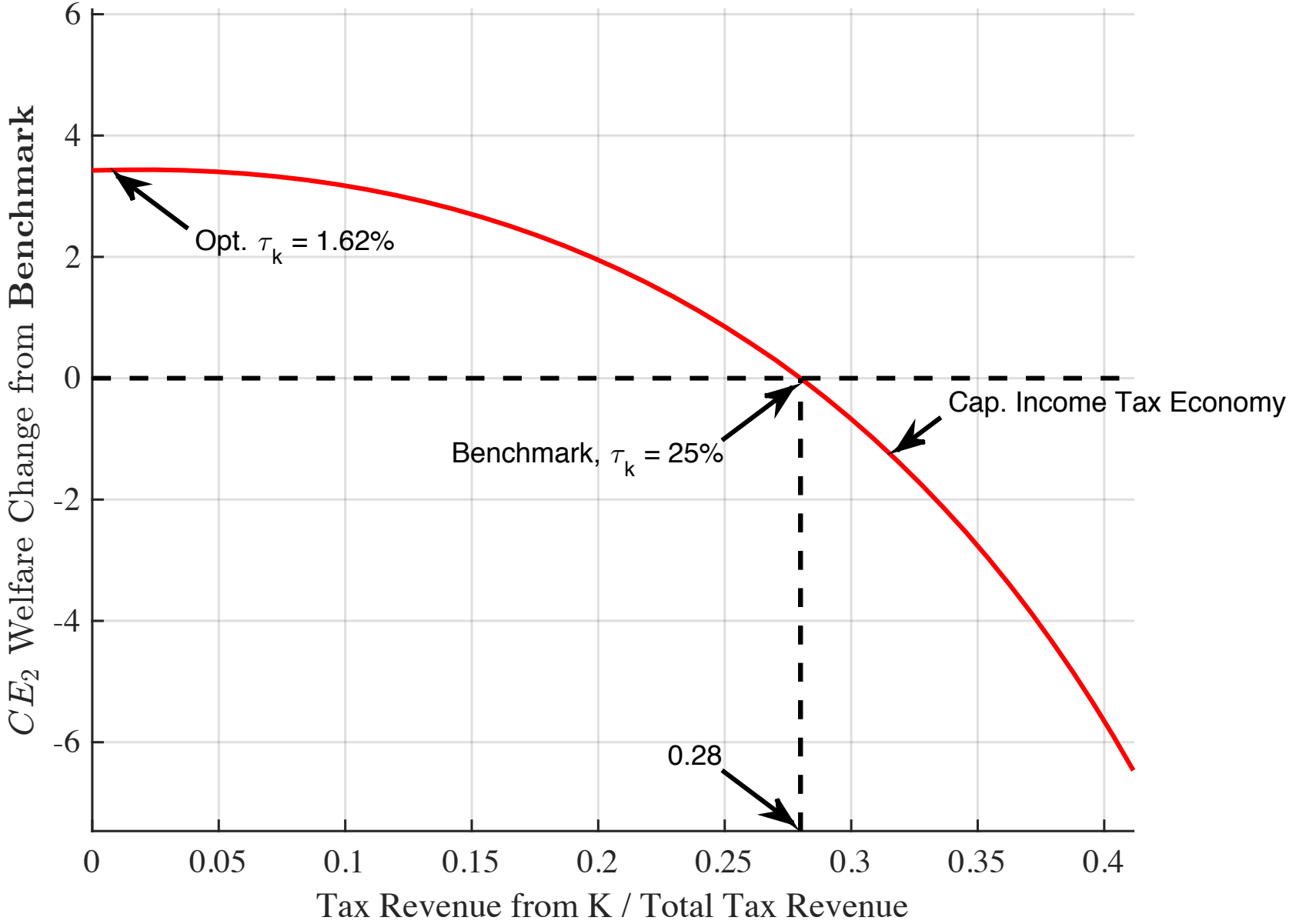

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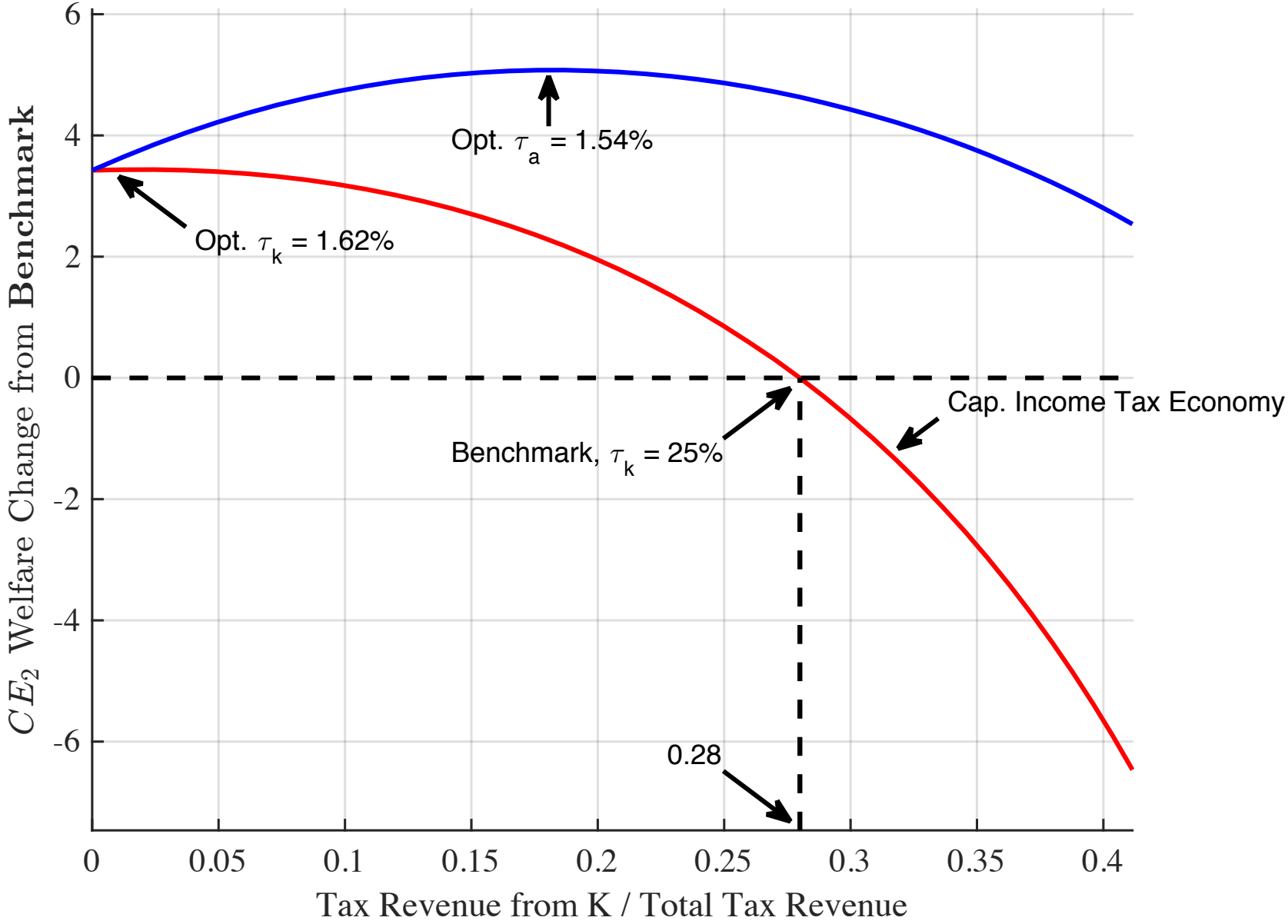

Optimal Taxes: Wealth Distribution

TABLE: Optimal Taxes and Wealth Distribution

	τ_k	τ_ℓ	τ_a	$\overline{k}/Y$	Top 1%	Top 10%
Benchmark	25%	22.4%	–	3.0	0.35	0.68
Tax reform						
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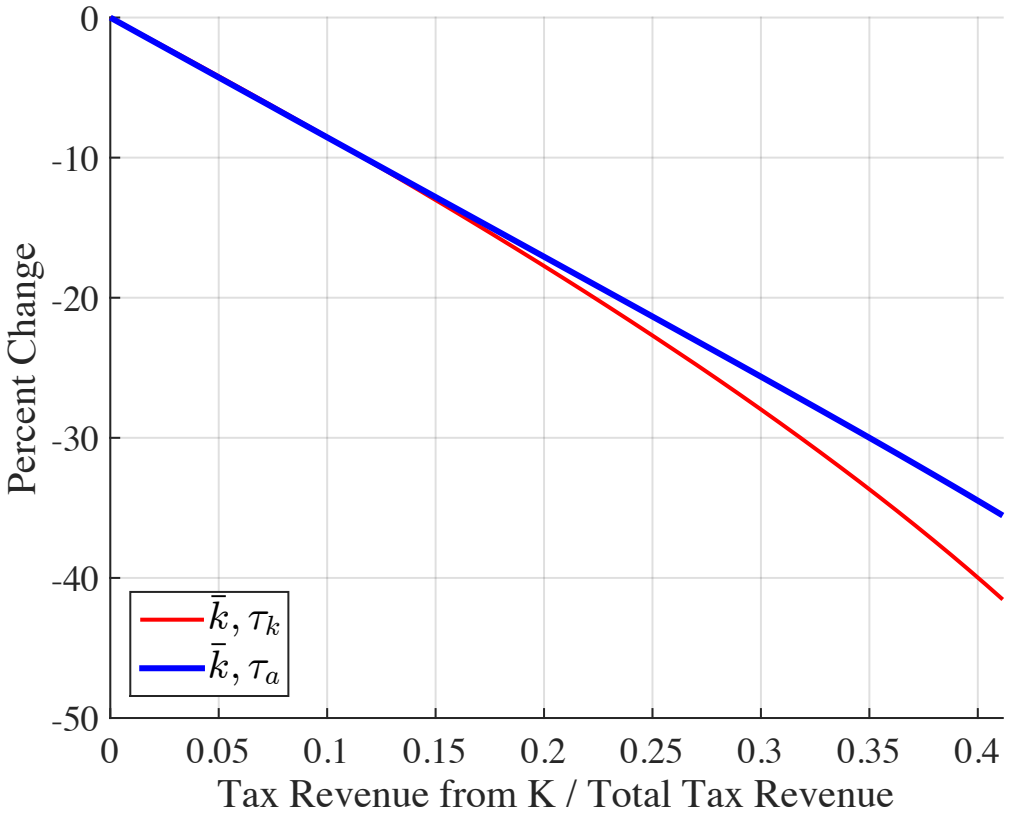
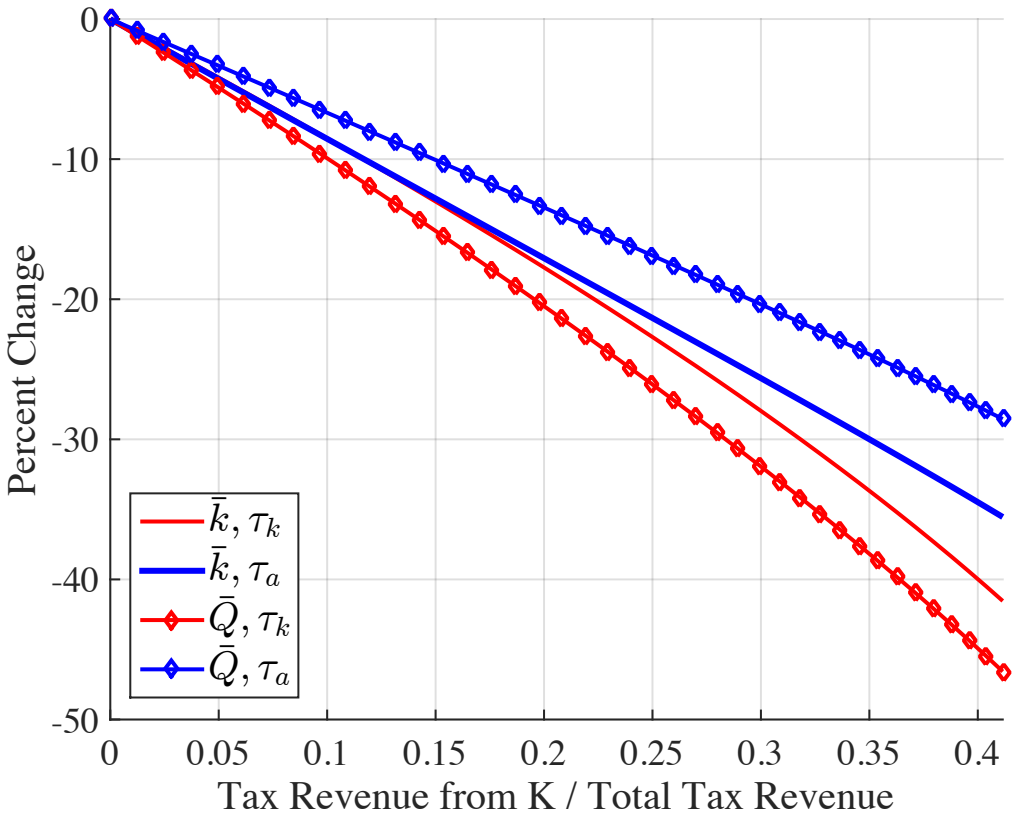
Wealth Taxes and Efficiency Gains



- Raising revenue through wealth taxes reduces capital stock **less** than raising through capital income taxes.

Wealth Taxes and Efficiency Gains



- Quality-adjusted capital, $\overline{Q}$, declines **less** than k under wealth taxes. Opposite is true under capital income taxes.

Optimal Taxes: Aggregate Variables

TABLE: Optimal Taxes and Aggregate Variables

	ΔQ	ΔL	ΔY	Δw	Δw (net)
Benchmark	0.0	0.0	0.0	0.0	0.0
Tax reform	22.63	1.35	7.93	6.49	6.49
Opt. τ_k					
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Opt. τ_k	39.18	–1.46	10.43	12.07	1.70
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Opt. τ_k	39.18	–1.46	10.43	12.07	1.70
Opt. τ_a	24.77	1.07	8.34	7.20	6.15

Optimal Taxes: Welfare

Table: Optimal Taxes and Welfare Gains

	τ_k	τ_ℓ	τ_a	$\overline{CE}_2$ (%)
Benchmark	25%	22.4%	–	–
Tax reform	–	22.4%	1.74%	5.06
Opt. τ_k				
Opt. τ_a				

- Because wealth taxes raise revenue in a less distorting fashion, it allows gov't to reduce the more distrorting labor income taxes especially relative to capital income taxes.

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Optimal Wealth Tax: Distribution of Welfare Changes

Welfare gain by age/productivity group							
Age:	z_1	z_2	z_3	z_4	z_5	z_6	z_7
<25	5.33	5.22	4.98	4.51	4.13	6.69	13.08
25–34	5.01	4.91	4.68	4.19	3.70	6.35	13.41
35–44	4.19	4.08	3.84	3.37	2.87	5.63	13.05
45–54	3.09	2.98	2.76	2.33	1.88	4.66	12.11
55–64	1.25	1.17	1.02	0.72	0.47	3.46	10.78
65–74	-0.28	-0.31	-0.37	-0.51	-0.52	2.64	9.48
>75	-0.03	-0.03	-0.05	-0.10	-0.15	1.97	7.46

Optimal Capital Tax Welfare

Financial Markets Extension

Financial Markets Extension: Overview of Results

- HH's borrowing decision:

$$\max_{k \leq \vartheta a} \{(1-\delta)k + p(zk)zk - (1+r)(k-a)\}$$

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Table: Moments under **Capital Income Tax**

	$\overline{k}/Y$	Top 1%	Top 10%	$\sigma(\log(\text{E}))$	Hours	$\frac{\overline{B}}{\overline{k}}$	$\frac{\overline{B}}{Y}$
$\vartheta = 1$	3.00	0.35	0.68	0.80	0.4	0	0
$\vartheta = 1.5$	3.00	0.36	0.68	0.80	0.4	0.32	0.96
$\vartheta = 2.5$	3.00	0.36	0.68	0.80	0.4	0.56	1.61

Parameters

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- $\vartheta = 1.5$ seems quite generous.

Moments under Tax Reform

TABLE: Moments under **Wealth Tax**

	τ_a	$\overline{k}/Y$	Top 1%	Top 10%	$\sigma(\log(\text{E}))$	Hours
$\vartheta = 1$	1.74%	3.10	0.43	0.74	0.79	0.41
$\vartheta = 1.5$	1.80%	3.11	0.44	0.73	0.79	0.41
$\vartheta = 2.5$	1.94%	3.08	0.43	0.72	0.79	0.41

Tax Reform and Output

Table: Bond Market, Tax Reform, and Output

	$Y(\tau_k)$	$Y(\tau_a)$	ΔY
$\vartheta = 1$	1.50	1.62	7.93%
$\vartheta = 1.5$			
$\vartheta = 2.5$			

Tax Reform and Output

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	$Y(\tau_k)$	$Y(\tau_a)$	ΔY
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Tax Reform and Output

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	$Y(\tau_k)$	$Y(\tau_a)$	ΔY
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$\vartheta = 2.5$	1.90	2.00	5.46%

Changes in Aggregates

Welfare Gains from Tax Reform

TABLE: Welfare Gains from Tax Reform

	Newborn		All		Fraction
	$\overline{CE}_1$	$\overline{CE}_2$	$\overline{CE}_1$	$\overline{CE}_2$	in favor
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Optimal Taxes

TABLE: Optimal Taxes

	τ_k	τ_ℓ	τ_a	$\frac{G_k}{G+SS}$	ΔY	Δw	Δw (net)	$\overline{CE}_2$ NB	$\overline{CE}_2$ All
				All numbers in %'s					
Opt. τ_k									
$\vartheta = 1$	1.62	29.6	–	2	10.43	12.07	1.70	3.44	3.40
$\vartheta = 1.5$	3.67	29.1	–	4.5	9.11	10.69	1.21	2.90	3.00
$\vartheta = 2.5$	6.38	28.5	–	7.6	7.16	8.84	0.35	2.18	2.68
Opt. τ_a									
$\vartheta = 1$	–	23.2	1.54	19.8	8.34	7.20	6.15	5.08	3.12
$\vartheta = 1.5$	–	23.4	1.54	19.7	7.70	6.67	5.36	4.49	2.83
$\vartheta = 2.5$	–	24.1	1.46	18.7	6.52	6.07	3.70	3.46	2.40

Comparison To Earlier Work

- Conesa et al (AER, 2009) study optimal capital income taxes in incomplete markets OLG model
  - with idiosyncratic labor risk
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  - and find optimal $\tau_k = 36\%$
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Conclusions and Current work

- Many countries currently have or have had wealth taxes:
  - France, Spain, Norway, Switzerland, Italy, Denmark, Germany, Finland, Sweden, among others.
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Conclusions and Current work

- Piketty (Capital in Twenty-First Century, 2014, p. 526):

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- Here, we are proposing a case for wealth taxes entirely based on efficiency benefits and quantitatively evaluating its impact.

Conclusions and Current work

- Wealth taxes have different, sometimes opposite, implications from capital income tax.
- Revenue neutral tax reform from τ_k to τ_a:
  - reallocates capital from less productive wealthy to the more productive wealthy
  - gives the right incentives to the right people to save
  - increases output, consumption, wages, and welfare.
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- Optimal wealth taxes are positive and large. Optimal capital taxes are small.
  - Welfare gain is substantially larger under wealth taxes.

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  - Global wealth taxes?

Thanks!

TABLE: Wealth Concentration by Asset Type

	Stocks w/o pensions	*All stocks*	*Non-equity financial*	*Housing equity*	*Net Worth*
Top 0.5%	41.4	37.0	24.2	10.2	25.6
Top 1%	53.2	47.7	32.0	14.8	34.0
Top 10%	91.1	86.1	72.1	51.7	68.7
Bottom 90%	8.9	13.9	27.9	49.3	31.3

Gini Coefficients

Financial Wealth	*Net Worth*
0.91	0.82

Source: Poterba (2000) and Wolff (2000)

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	Percentiles of Rate of Return Distribution (%)						
	P10	P25	P50	P75	P90	P95	P99
Population:	1.96	3.31	5.12	8.7	11.42	15.61	23.47
Age group:							
<25	2.14	3.31	5.68	9.76	12.33	20.19	29.15
25–34	2.01	2.86	4.97	8.36	10.56	16.07	20.27
35–44	1.87	2.59	4.54	8.20	10.55	15.29	19.12
45–54	1.8	2.4	4.29	7.70	9.75	14.77	18.12
55–64	1.82	2.47	4.36	7.68	10.27	14.67	19.20
65–74	2.14	3.83	5.43	9.55	12.05	14.6	17.76

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TABLE: Optimal Capital Tax: Distribution of Welfare

Welfare gain by age/productivity group							
Age:	z_1	z_2	z_3	z_4	z_5	z_6	z_7
<25	1.64	1.65	1.69	1.89	2.78	5.47	8.56
25–34	1.62	1.64	1.69	1.91	2.90	6.02	9.47
35–44	1.50	1.53	1.60	1.85	2.91	6.35	9.84
45–54	1.24	1.28	1.34	1.58	2.58	6.07	9.55
55–64	0.62	0.65	0.69	0.88	1.76	5.19	8.77
65–74	0.01	0.02	0.05	0.18	0.95	4.34	7.86
>75	0.00	0.00	0.01	0.04	0.36	2.94	6.15

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TABLE: Parameters with Bond Market

Parameter		$\vartheta = 1$	$\vartheta = 1.5$	$\vartheta = 2.5$
Discount factor	β	0.942	0.941	0.940
Consumption share in utility	γ	0.449	0.449	0.449
Persistence of entrepr. ability	ρ_z	0.50	0.50	0.50
Std. dev. of entrepr. ability	σ_{ε_z}	0.65	0.64	0.64
Std. dev. of individual fixed effect	$\sigma_{\varepsilon_\theta}$	0.34	0.34	0.34

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Tax Reform: Changes in Aggregate Variables

Table: Tax Reform and Aggregate Variables

	$\Delta\bar{k}$	ΔQ	ΔY	ΔC	ΔL	Δw	ΔR $R_1 - R_2$	ΔR (net)
				All numbers are in %				
$\vartheta = 1$	11.48	22.62	7.93	9.58	1.35	6.49	–	–
$\vartheta = 1.5$	10.67	20.04	7.16	8.65	1.32	5.75	0.08	–0.73
$\vartheta = 2.5$	8.07	14.93	5.46	6.64	1.09	4.32	0.14	0.11

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