

Capital Tax Incidence and Inequality

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Agenda

- ① **Capital Income Inequality and Taxation**
 - What is capital income?
 - The level and distribution of capital income
 - How much is capital income taxed?
- ② **Tax Incidence: Who bears the burden of capital taxation?**
 - Simple model
 - Evidence from State Corporate Taxation
- ③ **Capitalists in the Twenty-first Century**
 - Rise of Pass-through businesses
 - Business Income and Inequality

What is capital income?

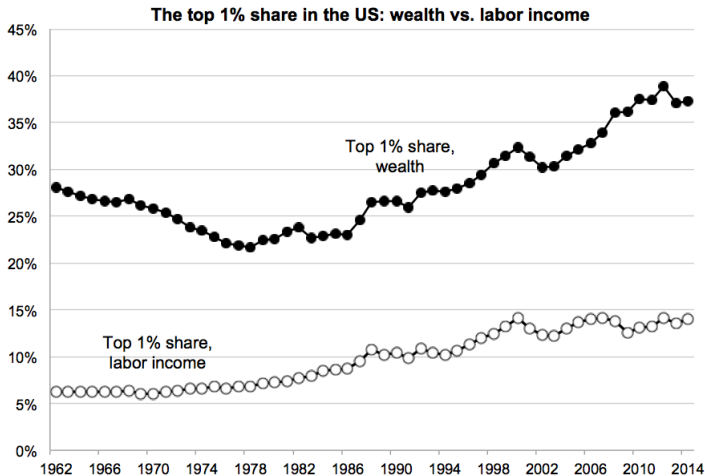
Individuals derive market income (before tax) from **labor** and **capital**:
 $z = wl + rk$ where w is wage, l is labor supply, k is wealth, r is rate of return on wealth

- 1 **Labor income inequality** is due to differences in working abilities (education, talent, physical ability, etc.), work effort (hours of work, effort on the job, etc.), and luck (labor effort might succeed or not)
- 2 **Capital income inequality** is due to differences in wealth k (due to past saving behavior and inheritances received), and in rates of return r (varies dramatically over time and across assets)

Level and distribution of capital income (1/2)

- Labor income $wl \simeq 75\%$ of national income z
- Capital income risk $rk \simeq 25\%$ of national income z (has increased in recent decades)
- Wealth stock $k \simeq 400\% - 500\%$ of national income z (is increasing)
- Rate of return on capital $r \simeq 5\%$
- $\alpha = \beta \cdot r$ where $\alpha = rk/z$ share of capital income and $\beta = k/z$ wealth to income ratio
- In GDP, gross capital share is higher (35%) because it includes depreciation of capital ($\simeq 10\%$ of GDP)
- National Income = GDP – depreciation of capital + net foreign income

Level and distribution of capital income (2/2)



Source: Piketty, Saez and Zucman (2016).

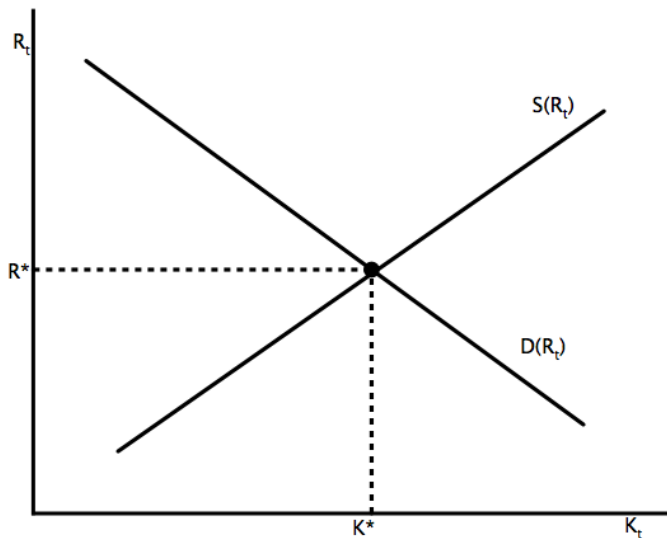
How much is it taxed?

In the US, total capital taxes can be decomposed into three categories of roughly equal importance:

- 1 Corporate tax = 3% of Y (around 20% of a 15% tax base)
- 2 Annual property rates = 3% of Y (around 1% of a 300% tax base)
- 3 Personal taxes on a capital income = 2.8% of Y (around 30% of a $15\% \times 60\% = 9\%$ tax base) + estates = 0.2% of Y (around 2% of a 10% tax base)

Capital Tax Incidence

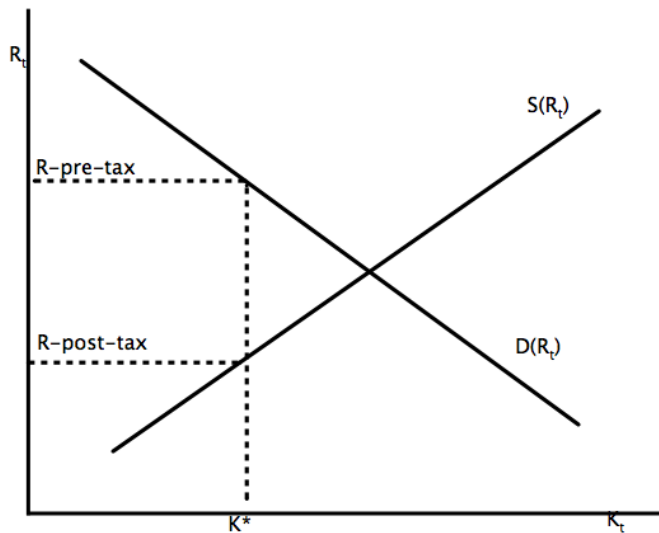
Impact of a Capital Tax



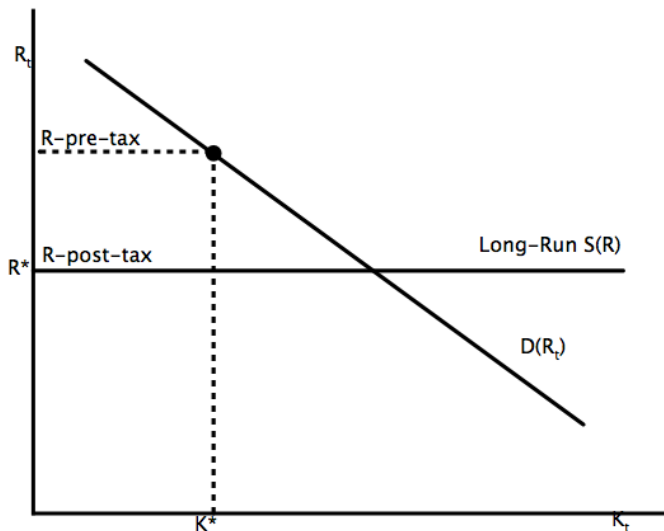
Impact of a Capital Tax

- The real price of capital will be determined in the use market
- A tax on capital will increase the pre-tax return to capital and decrease the after-tax return
- The key question is how the capital tax is split between a decline in the after-tax return and a rise in the pre-tax return
 - Short run: supply of capital is likely to be quite inelastic so that a tax on capital will mostly reduce the after-tax return with little increase in the pre-tax return
 - Long run: supply of capital is likely more elastic (net returns tend to be about 6 to 7% and independent of level of capital taxes, but there's little evidence on long-run capital supply elasticities).

Impact of a Capital Tax



Impact of a Capital Tax (in Long Run)



Impact of a Capital Tax

Who bears the capital tax in the long run?

- Who gets the triangle above R -pre-tax (i.e., consumer surplus in the typical S and D graph)?
- If firms don't earn profits, this all goes to workers in terms of higher wages or lower prices
- Note that the distortion in the capital market reduces surplus more than it increases tax revenues

Evidence from State Corporate Tax Cuts

Abolish the Corporate Income Tax

By LAURENCE J. KOTLIKOFF JAN. 5, 2014

I, like many economists, suspect that our corporate income tax is economically self-defeating – hurting workers, not capitalists

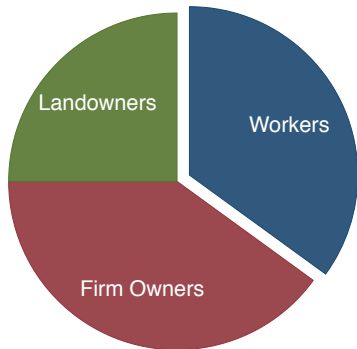
What can workers do to mitigate their plight? One useful step would be to lobby to eliminate the corporate income tax. That might sound like a giveaway to the rich. It's not. The rich, including Boeing's stockholders, can take their companies & run

Classic Question: Who Benefits from Tax Cuts?

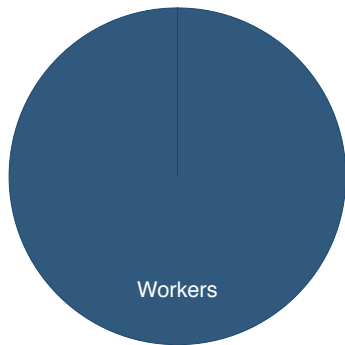
- 1 New framework that relaxes two classic assumptions
 - Firms are perfectly competitive
 - Firms are perfectly mobile
- 2 New evidence on impacts of state corporate tax cuts
 - Variation from state corporate tax system
 - Detailed micro data on all establishments in US to measure tax cuts
- 3 New assessment of corporate taxation in an open economy

Who Benefits from State Corporate Tax Cuts?

Our Estimate



Standard Model



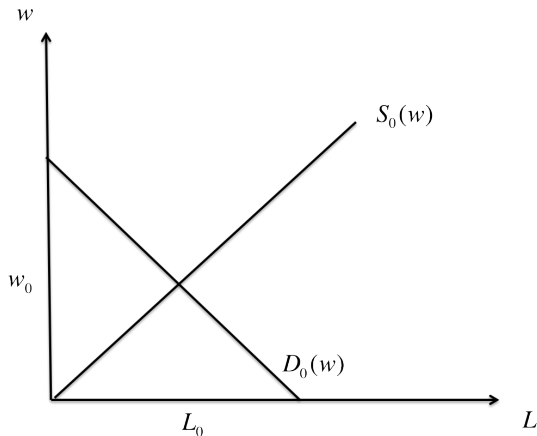
A Spatial Equilibrium Model with Firms

You have to start this conversation with the philosophy that businesses have more choices than they ever have before. And if you don't believe that, you say taxes don't matter. But if you do believe that, which I do, it's one of those things, along with quality of life, quality of education, quality of infrastructure, cost of labor, it's one of those things that matter.

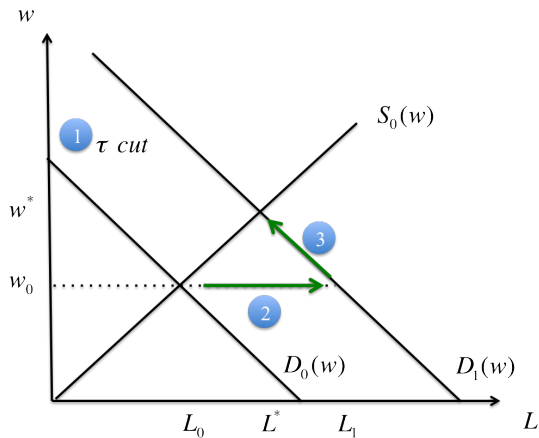
—DELAWARE GOVERNOR JACK MARKELL (11/3/2013) ¹

¹ “Low wages ‘aren’t what it’s about anymore’: Delaware’s governor on bringing jobs home,” *The Washington Post* 11/3/2013.

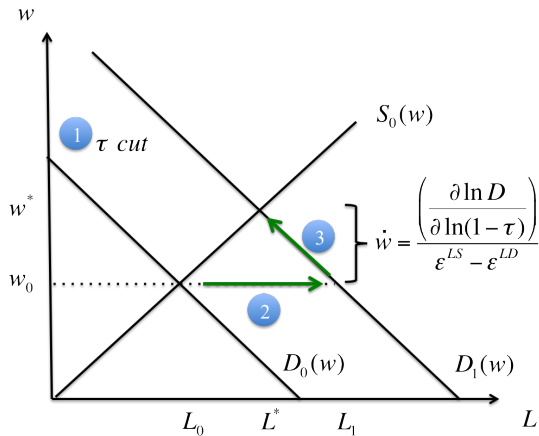
Equilibrium in the Local Labor Market Before a Corporate Tax Cut



Equilibrium in the Local Labor Market



Equilibrium in the Local Labor Market After a Corporate Tax Cut



Identification of Local Incidence on Welfare

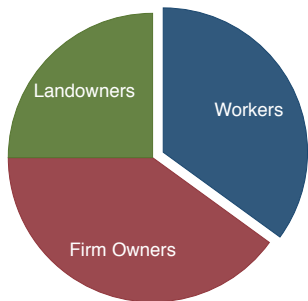
Stakeholder	Benefit	Statistic
Workers	Disposable Income	$\hat{\beta}^W - \alpha \hat{\beta}^R$
Landowners	Housing Costs	$\hat{\beta}^R$
Firm Owners	After-tax Profit	$1 + \left(\frac{\hat{\beta}^N - \hat{\beta}^E}{\hat{\beta}^W} + 1 \right) \left(\hat{\beta}^W - \frac{\delta}{\gamma} \right)$

Had to use theory to infer this because there was not micro data on firm profits

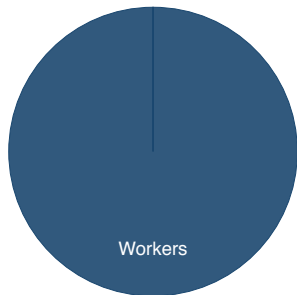
How Much do Workers, Landowners, and Firm Owners Benefit?

- 1 Real wages go up by 1.1%
- 2 Rents go up by 1.2%
- 3 After-tax firm profits go up by 1.6%

Our Estimate



Standard Model



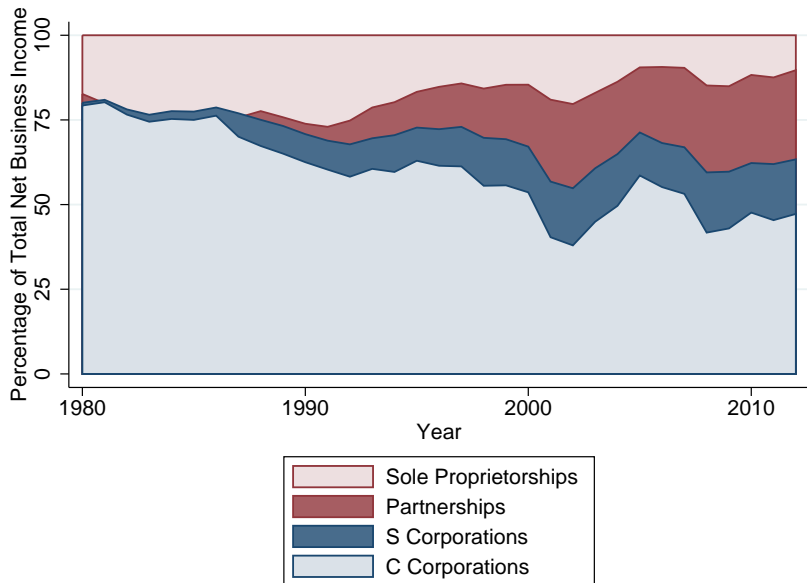
Conventional view: corporate taxation in an open economy hurts workers since “shareholders can take their companies and run”

- New measure of business tax rates
- New reduced-form estimates of impact on economic activity
- New spatial equilibrium framework within firms

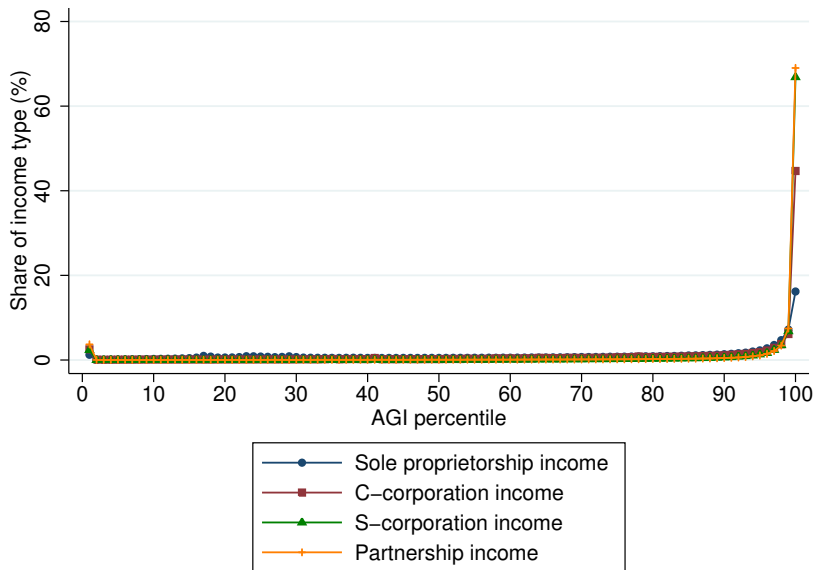
New assessment: in terms of equity and efficiency, corporate taxation in an open economy may not be as bad as we thought

Business Income and Inequality

The Rise of Pass-through businesses

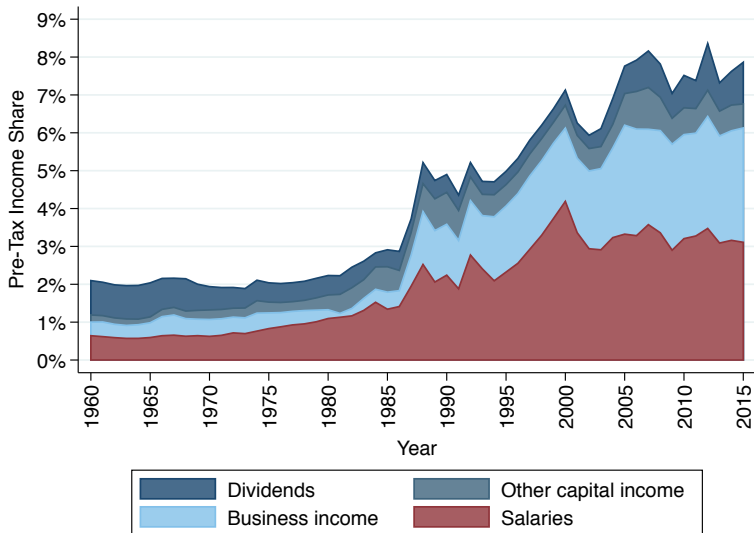


Business Income Shares by AGI Percentile



Capitalists in the Twenty-First Century

Top 0.1% Income Shares by Income Type



① Capital Tax Incidence

- In theory, capital tax cuts benefit workers ($\uparrow K \Rightarrow \uparrow w$ and/or $\downarrow p$)
- Open questions about behavioral responses: how much would capital stock actually increase? Wages? Employment? More affordable goods?

② Mechanical Effects

- Capital income is much more concentrated than labor income
- Pass-throughs now account for majority of business income and account for much of the rise in top inequality
- Approx 70% of pass-through income is earned by the top 1%