CAPITAL AND WEALTH TAXES

- World today... (Scheuer-Slemrod)
  - corporate profit taxes: widespread
  - estate taxes: widespread
  - wealth tax: few but growing proposals
- Economic Theory...
  - two influential zero tax results
    - Atkinson-Stiglitz: Mirrlees tradition
    - Chamley-Judd: Ramsey tradition
- Today: recent revisions and results


Y = F(K,L) so what makes K so special? Why not tax K the same as L?

Subtle: economic theory helpful to think through this

Zero tax results as extreme examples proving this point
\[ U(v(c_0, c_1), n_0) \]
\[ y = w \cdot n \quad w \sim F(w) \]
work and consume

t = 0

labor income t = 0

capital income t = 1

consume
t = 1

tax

\[ U(v(c_0, c_1), n_0) \]
\[ y = w \cdot n \]
\[ w \sim F(w) \]
PROPER INTERPRETATION

- Are we in AS world?
  No, but is it a bad approximation?

- Even in AS world... individuals can support tax on capital
  - Taking as fixed current income tax shape
  - If some labor income escapes income tax
  - In second period, capital/wealth fixed
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Can explain a lot of disagreements without leaving AS world!
Assumptions...

- separability (approximation)
- differences in labor earning power... 
  ... but same preferences for consuming vs. saving 
  (Saez; Golosov-Tsyvinski-Weinzerl)
- perfect financial markets...
  - no borrowing constraints
  - no risk in labor income
  - no risk or differences in returns on savings
Uncertainty, precautionary savings and borrowing constraints

- **Mirslees tradition**: Inverse-Euler equation, uncertainty in consumption positive implicit tax on savings; e.g. Golosov-Tsyvinski-Werning (2006); Farhi-Werning (2012; 2013)

- **Ramsey linear tax tradition**: GE incomplete market models: find positive tax on capital optimal [Aiyagari (1995), Conesa et al. (2009)]

- Positive and significant marginal taxes but...

- ... do not point strongly towards progressive wealth taxes
MISSING INCOME TAXES AND MIMICKING

- Suppose some labor income escapes income tax...  
  ... can tax it via consumption or capital/wealth taxes
- Relevant for successful business creators
- Not crucial that the reporting of labor vs. capital be elastic!

- We may want to target differentially income tax by...
  - age (Conesa et al)
  - risk: luck vs. work  
   (Scheuer-Werning)
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**Idea:** Tax on Savings may imperfectly mimic targeting
BEQUEST TAXATION

- Atkinson-Stiglitz, but what if savings = bequests? (Farhi-Werning 2010)

- Welfare weight on future generation
  - not just altruism
  - Utilitarian: equality of opportunity

- **Results:** away from A...
  - progressive = creates more equality for kids
  - subsidy = negative tax...
    - plausible at bottom!
    - sign unimportant if F(k) very curved
    - sign may overturn with taste shocks or other considerations (Farhi-Werning 2013)
Atkinson-Stiglitz...

- **ex ante:** would not want to tax
- **ex post:** temptation to tax and redistribute

- **Limited commitment:**
  no taxation may not be credible
  discontent may lead to drastic reforms

- **Q:** What policies *ex ante*?

- **Note:** Different from concerns of political influence
POLITICAL ECONOMY

- Farhi-Werning, Farhi-Sleet-Werning-Yeltekin, Scheuer-Wolitzky

- Two periods, no direct extra weight on future

- Political Economy: credibility constraint; ex post: reform unless...

  \[ \int u(c_1) \geq u \left( (1 - \kappa) \int c_1 \right) \]

- constraint on inequality not being too high
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- **Again:** progressive tax on saving

- **New:** wealth at the top has negative value, hurts credibility constraint: **positive tax**
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- **Extension**: remove exogenous $\kappa$, add dynamic game, reputational concerns
initial capital $K_0$ given
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$$C_t + g + K_{t+1} \leq f(K_t, L_t) + (1 - \delta)K_t$$
\[ C_t + g + K_{t+1} \leq f(K_t, L_t) + (1 - \delta)K_t \]

- Judd (1985) Capitalist vs. Workers model
  - capitalists: accumulate capital, do not work
  - workers: hand to mouth, inelastic labor
  - government: no debt

- Chamley (1986): Representative agent
  - elastic labor
  - government debt

- Upper bounds on tax rates (limited consumption taxes)
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### Chamley–Judd

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**Result.**
- At a steady state tax on capital is zero
- With constraints on taxes, maximal taxes for some time then zero taxes
Chamley-Judd at face value...

- Does not say: “If the tax is positive on capital, set the tax to zero now”
- indeed, optimal constant tax on capital is positive
- It says “In the short run tax capital very highly, in the long run zero tax on capital”
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But can we take results at face value...?
Without bounds: Positive Taxes in long run or for centuries...

Figure 1. Optimal Time Paths for Capital (Panel A) and Wealth Taxes (Panel B)
Without bounds: Positive Taxes in long run or for centuries...

...with bounds, tax on capital can be at upper bound forever and economy at steady state.
Chamley: if we converge to steady state where bound on capital does not bind then tax on capital is zero;  
Note: allows for non-constant discounting a la Koopmans

Straub-Werning: yes, but if discounting is not constant then …

- either private wealth converges to zero…
- … or labor taxes converge to zero
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AUTOMATION AND ROBOTS

- AS assume savings do not affect relative wages
- Robots and automation: evidence on distribution of wages (Acemoglu-Restrepo)

**Q:** Should we tax robots? Bill Gates: “yes!”
Costinot-Werning (2018), (also: Guerreiro-Rebelo-Teles, Thuemmel)
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\[
t^*_m = \int \tau(z) \frac{\bar{w}(z)\bar{n}(z)}{p^*_m y^*_m} \frac{\epsilon(z)}{\epsilon(z) + 1} \frac{\delta \ln \omega(z)}{\delta \ln y^*_m} |_{\delta \bar{U}=0} \, dz
\]

\[t^*_m \in [1\%, 4\%]\]
Some simple macro calculations

- tax base?
- efficiency losses?
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Q: Maximal revenue from capital/wealth taxes?

Not share of capital, need to reinvest capital to keep it

6-9% of GDP per capita? (r-g= 2-3%; K/Y=3)
WELFARE COSTS OF CAPITAL TAXES

- Shouldn’t tax capital: how big costs? Answer: <1% of GDP
- Calculation... \[ \text{Loss} \leq \frac{1}{2} \left( \frac{r}{r + \delta + g} \right)^2 \frac{s_k}{1 - s_k} (\text{tax rate})^2 \]
- Conjecture: by symmetry also efficiency benefit of taxing capital when we should tax it (e.g. Farhi-Werning, 2012)
COVID-19 AND CAPITAL LEVIES?

- Optimal tax theory... Chari-Christiano-Kehoe (1991)
  - governments should insure their public finances vis a vis private sector
  - issue state contingent debt
  - capital and inflation levies

- World...
  - not in use today in advanced economies
  - historically and in developing countries: default and inflation levies (US out of WWII)

- COVID-19 Europe: Landais-Saez-Zucman (2020)
CONCLUSION

- **Zero tax results:** proper interpretation and some results overturned
- **Alternative models:** positive taxes on capital/wealth
  - missing income taxes
  - risk and heterogeneity
  - political economy: progressive taxes
  - automation
- Capital/wealth taxation not too costly even if a mistake?

- **Optimal Taxation...**
  - capital taxes, not the same as labor taxes....
  - ....but not necessarily zero

- **Task head:** continue sorting out mechanism and quantifying them
PARTIAL LIST OF REFERENCES

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» Farhi-Werning “Estate Taxation with Altruism Heterogeneity” AEA P&P 2013

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» Landais-Saez-Zucman (2020) Vox