Capital Taxes and Redistribution:
The Role of Management Time and Tax
Deductible Investment

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Introduction

- The question: Should capital be taxed (in the long-run)?

  1. No. Chamley (1986), Judd (1985). See Chari & Kehoe (1999).
  2. Yes (missing tax instruments): Jones, Manueli & Rossi (1997), Chari & Kehoe (1999), Aiyagari (1995), NDPF, CKK (2009) ...

- Should different types of capital be taxed at different rates?

  1. No. Productive efficiency. Diamond & Mirrlees (1971).
  2. Yes, if tax system incomplete. Auerbach and Feldstein's work.
  3. Yes. More recently: Albanesi (2011), Conesa & Domínguez (2013), Slavík & Yazici (2014), Bakota (2019).

- Renewed interest due to:

  1. 'Robot taxation'.
  2. Straub and Werning (2018) and Chari et al (2016).

The authors

- Conesa and Domínguez (JME, 2013).

  1. Merge a model of tangible and intangible capital with a repre agent framework of Chamley (1986).
  2. Zero corporate tax rate and positive dividend tax rate equal to labor tax optimal. Intuition below ...

- This paper.

  1. Merge a similar model with workers-capitalists of Judd (1986).

Set-up

Workers

$$\max_{\{c_{1,t}, n_{1,t}\}_{t=0}^{\infty}} \quad \sum_{t=0}^{\infty} \beta^t u_1(c_{1,t}, n_{1,t}) \qquad \text{s.t. for all } t \geq 0$$

$$c_{1,t} \leq (1 - \tau_t^n) n_{1,t} w_t$$

Capitalists

$$\max_{\{c_{2,t}, n_{2,t}, e_{2,t}\}_{t=0}^{\infty}} \quad \sum_{t=0}^{\infty} \beta^t u_1(c_{2,t}, n_{2,t} + e_{2,t}) \qquad \text{s.t. for all } t \geq 0$$

$$c_{2,t} + b_{t+1} + (1 - \tau_t^d) x_t \leq (1 - \tau_t^d)[1 + (1 - \tau_t^k)(r_t - \delta)] +$$
$$(1 - \tau_t^n) n_{2,t} w_t + R_t^b b_t$$

$$k_{t+1} = I(x_t, e_{2,t}) + (1 - \delta) k_t$$

Results

- Analytical long run tax results (assuming $n_{2,t} = 0$):

  1. Optimal $\tau_k = 0$.
  2. $\tau^n \neq \tau^d \neq 0$ while in CD (2013) $\tau^n = \tau^d \neq 0$.
     Intuition: tax workers and capitalist differently, in CD (2013) no reason to distort time allocation of repre agent.

- Quantitative results:

  1. Confirm that optimal $\tau_k = 0$, $\tau^n \neq \tau^d \neq 0$.
  2. Size of τ^n and τ^d depends on parameters (Pareto weights).
  3. In some cases Ramsey is Pareto improving.

This paper is neither Judd (1985) nor Chamley (1986) married to Conesa, Domínguez (2013).

1. Judd (1985) allows for transfers, but no gvt debt; here gvt debt and redistribution instruments (severely?) restricted.

2. Chamley (1986) allows for gvt debt, but no heterogeneity.

Comments on Context

- Straub and Werning (2018) question the Chamley-Judd results. Optimal tax results depend on:
    1. Assumed convergence of allocations (and multipliers!) to interior steady state in Judd (1985).
    2. Assumed pattern of binding $\tau_k \leq 1$ Chamley (1986).
    3. In many cases optimal long-run $\tau_k \neq 0$.

- Chari, Nicolini and Teles (2016): Straub, Werning (2018) itself depends on what (exactly) is allowed (tax system incomplete).

- Note: Straub, Werning (2018) discuss a hybrid Chamley-Judd case, but again not quite the same here.

Suggestions and Questions

- Clarify to what extent your theoretical results depend:
  1. Tax system restrictions.
  2. Particular (steady-state) assumptions.

- Provide clear quant benchmark; perhaps utilitarian planner?

- For some welfare weights, Ramsey Pareto improving.
  Analyze Pareto improving reforms more generally?

- If interested in redistribution, why no transfers?

What is Cool

1. Full and immediate tax dispensing of investment.
2. Labor tax cannot depend on type.

$$\Longrightarrow$$

1. Dividend taxes do not distort capital decisions.
2. Dividend taxes can/should be used for redistribution.

... in this particular tax system. Remaining questions:

1. Is this true with transfers?
2. Is it true with type dependent labor taxes?
3. Is this true with progressive taxes à la CKK (2009)?

Minor Comments on Calibration

Should be more serious. Several parameters not calibrated to data.

1. Why 90% workers and 10% capitalists?
2. Why $k/y = 1.65$?
3. Did I miss the utility function?