

**Summary:** The goal of this document is to summarize previous findings from the literature on dynamic optimal (Mirrleesian) taxation. Within this, there are two sub-goals:

1. Characterize the existing intuition on dynamic capital (income) taxation, to note what changes when we assume heterogeneous *returns*, rather than labor productivities.
2. Characterize the existing intuition on dynamic labor income taxes, to highlight the similarities and contrasts between the intuitions behind taxing these sources of income.

## 1 Albanesi and Sleet (2006)

- The focus here is mainly on the implementation of constrained-efficient allocations in a decentralized economy.
- As in other studies, such as Golosov *et al.* (2003) (section 4), Albanesi and Sleet (2006) find the optimality of a positive intertemporal (savings) wedge
  - Intuition: in order to ensure that the proper labor effort is supplied, savings should be taxed in order to prevent agents from self-insuring against future labor income shocks

## 2 Shourideh (2014)

- A proposition analogous to Proposition 2 in Shourideh (2014) appears in our current paper. There are three implications of Proposition 2:
  1. The long-run wealth distribution has a Pareto tail
  2. WEedges independent of history
  3. Consumption of old related to promised utility in a history-independent way
 Points (2) and (3) do not apply to our model, as we have dynamic complementarities and infinitely-lived agents. Point (1) may apply.
- Optimal savings tax: subsidize savings of old, tax savings of young
  - Savings of young *tightens* the incentive problem, because it offers insurance against negative shock in future
  - Savings of old *relaxes* incentive problem, as it confers more consumption to their descendants, relaxing the descendants' incentive constraint.
- Progressive bequest subsidy echoes result in Farhi and Werning (2010): should subsidize bequests, which is a distortion, and distort the decisions of more productive agents *less*
  - Counter to Golosov *et al.* (2003): in this model, saving *increases* resources in the future (by relaxing the incentive constraint of the future generation), while in the models of labor income, saving *decreases* future resources (through diminished labor effort)

### 3 Kocherlakota (2005)

- Optimal wealth tax is zero in expectation, and regressive: high for surprisingly low-skilled agents, and low for surprisingly high-skilled.
  - Intuition is the same as before: in order to ensure efficient exertion of labor effort, need to deter agents from carrying a high level of wealth into the next period.
- Crucial distinction: because utility is additively separable between consumption and labor, marginal utilities and IMRS are publicly observable: private information does not affect either. In our paper, this is not the case.

### 4 Golosov *et al.* (2003)

- Main result is *inverse Euler equation*
- Intuition is as usual: savings reduce the dependence of  $t + 1$  consumption on  $t + 1$  skill level, which tightens the incentive problem. Thus, savings should be taxed

### 5 Farhi and Werning (2010)

- In dynamic model, Farhi and Werning (2010) discuss an implementation using linear inheritance taxes (levied on heirs, rather than estates).
- Nests Kocherlakota (2005) “zero expected wealth tax” result as a special case in which the utility of descendants valued *only* through altruism of parents ( $\nu_t = 0$ )
  - Otherwise, expected inheritance taxes not zero
- Intuition: as in the static model, the “progressive subsidies” on bequests follows from insurance motives
  - If the planner values utility of future generations in above and beyond altruism of ancestors, she wants to insure them against the risk of being born into a poor dynasty
  - Consumption across generations is *mean-reverting* (think “squeezing” consumption from  $t$  to  $t + 1$ )

## References

- Stefania Albanesi and Christopher Sleet. Dynamic optimal taxation with private information. *The Review of Economic Studies*, 73(1):1–30, 2006.
- Emmanuel Farhi and Iván Werning. Progressive estate taxation. *The Quarterly Journal of Economics*, 125(2):635–673, 2010.
- Mikhail Golosov, Narayana Kocherlakota, and Aleh Tsyvinski. Optimal indirect and capital taxation. *The Review of Economic Studies*, 70(3):569–587, 2003.

Narayana R Kocherlakota. Zero expected wealth taxes: A mirrlees approach to dynamic optimal taxation. *Econometrica*, 73(5):1587–1621, 2005.

Ali Shourideh. Optimal taxation of wealthy individuals. Technical report, Working paper, 2014.