Bhandari, Evans, Golosov, Sargent

On The Role of Public Debt in Economies with Heterogeneous Agents

Dirk Niepelt
Study Center Gerzensee; U of Bern; CEPR

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A Nice Paper

Two themes

- Ricardian equivalence
- Ramsey policy (using debt limits)
- connected by "debt" ...but two papers?

Parallels to Werning (2007) who

- Allows for capital, but assumes complete markets
- Discusses Ricardian equivalence
- "Speculates" about implications of imperfect participation

Ricardian Equivalence

General formulation

- State μ, policy sequence p, support CE
- New (μ', p') such that
  - household choice sets unchanged
  - at CE allocation/prices, government bc satisfied

    (production possibilities unchanged,
    firm input/output restrictions unchanged)
- Then, (μ', p') support same CE, bar asset positions (Gonzalez-Eiras and Niepelt, 2015)

Examples

i. Single household, timing of lump sum taxes
ii. Single household subject to distorting taxes, timing of lump sum tax component
iii. Multiple households, keeping individual choice sets unchanged
iv. Only distorting taxes (Bassetto and Kocherlakota, 2004)

Ricardian equivalence results in paper build on example ii.

- Multiple households
- Distorting taxes with lump sum component

Findings (propositions 1 (=4), 2)

- No legacy cost of public debt (more basic than RE)

  Because lump sum tax can undo

  Implication: Not debt level but ownership structure matters, generates equity-efficiency tradeoff (cf. Japan)

  Actually, wealth distribution matters

- Optimal debt policy indeterminate

  Because optimal timing of lump sum tax indeterminate

  PDV lump sum distributes between public, private sector

  Timing (thus, debt) cannot distribute within private sector

Ramsey Policy (Using Debt Limits)

Setup

- Government may impose borrowing constraint

  Motivated as no commitment to debt enforcement

  But, loose enforcement may contradict incentive compatibility

$>$ Drop "no commitment" motivation (Ramsey!), debt limit simply additional policy instrument

  What about lending constraint?

Findings (proposition 3, example 1)

- Lump sum tax/debt policy irrelevant when debt limit slack

  See before

- But making debt limit bind can increase social welfare

  Because it can help relax implementability constraint (like "any" additional instrument)

  In example, borrowing constraint changes marginal investor pricing government loans

Comments, relation to literature

- Distorting policy affects wealth distribution, by changing prices (Bassetto, 1999), also relative tax burden (Niepelt, 2004)
- Government "monopoly power" in every Ramsey problem
- Novelty: Policy relaxes implementability constraint

  Non-linear tax would do the same

  Some discussion in Mirrlees environment
- Key that restriction relates to net financial assets (excluding PDV lump sum)
- Good (Woodford, 1990; Holmström and Tirole, 1998) vs. bad (here) to relax borrowing constraint—when what?

Mirrlees environment

- With observable debt, can completely control debt
  Ricardian equivalence as before
- With unobservable debt, cannot
  Debt limits may again be useful
  Paper claims: always useful

Outlook

- Authors suggest extension to setting without commitment
- Gonzalez-Eiras and Niepelt (2015) analyze equivalence in general settings without commitment

  Policy regimes rather than policy sequences are primitives

  Politico-economic equilibria rather than CE are outcomes

  Ricardian equivalence: (μ, p) vs. (μ', p')

  "Politico-economic equivalence:" $(\mu, \mathcal{P})$ vs. $(\mu', \mathcal{P}')$

  Gonzalez-Eiras and Niepelt (2015) provide conditions for PEE of $(\mu, \mathcal{P})$ and $(\mu', \mathcal{P}')$

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