

'Reassessing Tax Policies and Tax Coordination'

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Overview

- ▶ Many excellent papers on taxation in **ADEMU** WP series
- ▶ Two papers provide particularly interesting contrast:
 - ▶ Chari, Nicolini & **Teles** (2018)
 - ▶ Guerriero, Rebelo & **Teles** (2018)
- ▶ Focus on **tax design** – instrument choice **and** level
- ▶ Main lesson for intl tax policy:
 - ▶ *Ease of coordination depends on deep friction government(s) face*

Overview

Tax analysis for dummies

A typical tax design problem takes the form:

- ▶ **Maximise [Objective]**

Subject to:

1. **Resource constraint**
2. ***Distortion***

Without 2, problem is trivial (2nd FTWE \Rightarrow lump-sum taxes ...), but what should the extra friction be?

The Ramsey approach

Chari, Nicolini & Teles (2018)

CNT (2018) follow Ramsey (1927):

- ▶ Limits to lump-sum taxation \Rightarrow constraint on consumer wealth:

$$\sum_{t=0}^{\infty} \beta^t p_{i,t} \left[c_{i,t} - \frac{w_{i,t}}{p_{i,t}} n_{i,t} \right] \geq \bar{W}$$

- ▶ $\beta^t p_{i,t}$: *post-tax* futures price of good in t , country i
- ▶ $w_{i,t}$: *post-tax* wage in t , country i
- ▶ Taxes \Rightarrow choice of $p_{i,t}$ & $w_{i,t}$ (consumer choices respond)

The Ramsey approach

Chari, Nicolini & Teles (2018)

$$\sum_{t=0}^{\infty} \beta^t p_{i,t} \left[c_{i,t} - \frac{w_{i,t}}{p_{i,t}} n_{i,t} \right] \geq \bar{W}$$

Two key features of this friction:

1. Defined on *final goods* ($c_{i,t}$) & *initial inputs* ($n_{i,t}$) only
2. Relates to *value of purchases* \Rightarrow *elasticities* central

If you believe this is the key constraint:

- ▶ No motivation for distorting production process
- ▶ Distortions on initial inputs/final goods \propto inverse elasticities

The Ramsey approach

Chari, Nicolini & Teles (2018)

Paper's insight is to tease out implications for global economy:

- ▶ **No production distortion?**

- ▶ *Labour/consumption taxes + free trade, or...*
- ▶ *VAT with border adjustment, or...*
- ▶ *VAT without border adjustment + (rare) import tariffs, or...*

- ▶ **Inverse elasticity rules?**

- ▶ *Zero capital income/asset/savings taxes (wedges don't compound)*

The Ramsey approach

Chari, Nicolini & Teles (2018)

- ▶ Paper assumes global coordination on tax policy
- ▶ *How hard would this be to sustain?*
- ▶ My conjecture:

'If your trading partner throws rocks into his harbor, that is no reason to throw rocks into your own'
(Joan Robinson)

- ▶ Some productive efficiency results should survive lack of coordination – would be interesting to explore which

The Rise of the Machines

Guerrero, Rebelo & Teles (2018)

- ▶ **GRT (2018)** takes a different setup:
 - ▶ *Single country*
 - ▶ *Heterogeneity in workers (routine vs non-routine)*
 - ▶ *Redistributive (utilitarian) government*
- ▶ **Type nonobservable** \Rightarrow central distortion:

$$u(c_n) - v\left(\frac{Y_n}{w_n}\right) \geq u(c_r) - v\left(\frac{Y_r}{w_n}\right)$$

- ▶ **Redistribution vs efficiency** trade-off
- ▶ Robots \Rightarrow dispersion in pre-tax earnings, exacerbating this

The Rise of the Machines

Guerriero, Rebelo & Teles (2018)

Main message from paper:

- ▶ Efficiency considerations no longer separate out so neatly!
- ▶ Taxing robots **breaks productive efficiency** ... but **reduces pre-tax inequality**
- ▶ This eases income tax distortions, so is desirable
- ▶ Paper doesn't go there, but ... global coordination on this?

Changing the friction can really change the message!

Ramsey or Robots?

Summary

What frictions does tax policy face?

- ▶ Clear lessons for tax reform depend on answer to this...
- ▶ ... And so too the ease of coordination?
- ▶ Ramsey approach appealing because lessons **qualitative**
 - ▶ *'Don't tax intermediate production or capital'*
- ▶ ⇒ easy focal points
- ▶ A strength or a weakness?