

Discussion of

Political Economy of Sovereign Debt: A Theory of Cycles of Populism and Austerity

by DAVIS, Golosov, and Shourideh

Francisco Roldán
IMF

XXV Workshop in International Economics and Finance
UTDT, August 2023

The views expressed herein are those of the authors and should not be attributed to the IMF,
its Executive Board, or its management.

The *want* operator

Model delivers

- Cyclical behavior
- “**Populist**” phase: low inequality, external borrowing
- “**Austerity**” phase: high inequality, debt deleveraging

What to like

- Elegant theory
- **Overshooting** component — rare with fully rational, optimizing agents
- Makes sense of seemingly **inefficient** behavior

The *want* operator

Model delivers

- Cyclical behavior
- “**Populist**” phase: low inequality, external borrowing
- “**Austerity**” phase: high inequality, debt deleveraging

What to like

- Elegant theory
- **Overshooting** component — rare with fully rational, optimizing agents
- Makes sense of seemingly **inefficient** behavior

How it works

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

How it works

Ingredients

- Productivity types + labor income taxes + endogenous labor supply
 - ... Tax revenues lower earnings inequality but depress output
 - ... Efficiency / equity tradeoff
- Sovereign borrowing + no shocks and/or complete markets
 - ... Can borrow to finance transfers
 - ... Can default ex-post: risk-free subject to debt limit
 - ... Time inconsistency: debt limit is endogenous (+ state-dependent)
- Overlapping generations + financial income taxes + save in government bonds
 - ... Can tax old people's savings (aka domestic default): reduce inequality with no distortion
 - ... Domestic debt + transfers reduces consumption inequality when income inequality is high
 - ... Time inconsistency: inequality limit is endogenous (+ state dependent)

The key: two interacting sources of time inconsistency

- Need for both debt repayments gives rise to **sustainability constraint**

$$H(Y) \leq \frac{\hat{\beta}}{\beta} (W(B') - \underline{W})$$

- Choice of debt and inequality are both time-inconsistent
- Key: *tradeoff* is **time-inconsistent**: Overdoing one adjustment = cheap incentives

	Benefits	Costs
Debt	t	$t + 1$
Inequality	t	t and $t + 1$

- When foreign debt is high
 - ... Need high output \implies high inequality
 - ... Issue domestic debt to finance transfers
 - ... Repayment of domestic debt costly tomorrow

The key: two interacting sources of time inconsistency

- Need for both debt repayments gives rise to **sustainability constraint**

$$H(Y) \leq \frac{\hat{\beta}}{\beta} (W(B') - \underline{W})$$

- Choice of debt and inequality are both time-inconsistent
- Key: *tradeoff* is **time-inconsistent**: Overdoing one adjustment = cheap incentives

	Benefits	Costs
Debt	t	$t + 1$
Inequality	t	t and $t + 1$

- When foreign debt is high
 - ... Need high output \implies high inequality
 - ... Issue domestic debt to finance transfers
 - ... Repayment of domestic debt costly tomorrow

The key: two interacting sources of time inconsistency

- Need for both debt repayments gives rise to **sustainability constraint**

$$H(Y) \leq \frac{\hat{\beta}}{\beta} (W(B') - \underline{W})$$

- Choice of debt and inequality are both time-inconsistent
- Key: *tradeoff* is **time-inconsistent**: Overdoing one adjustment = cheap incentives

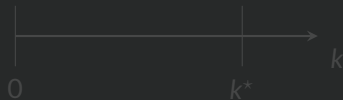
	Benefits	Costs
Debt	t	$t + 1$
Inequality	t	t and $t + 1$

- When foreign debt is high
 - ... Need high output \implies high inequality
 - ... Issue domestic debt to finance transfers
 - ... Repayment of domestic debt costly tomorrow

Two Comparisons

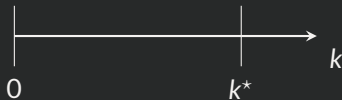
Phelan and Stacchetti (2001)

- Similar model with
 - Endogenous labor supply
 - Savings
 - Time-inconsistent taxes
- Time inconsistency: **capital** accumulation
 - Want tax capital ex-post, promise low taxes ex-ante
- No cycles? — Example with $k_0 > k^*$ overshoots initial capital reduction
 - Only **link** between t and $t + 1$ is the capital stock
 - To induce savings, can subsidize labor today or 'promise' low taxes
 - ... Same result



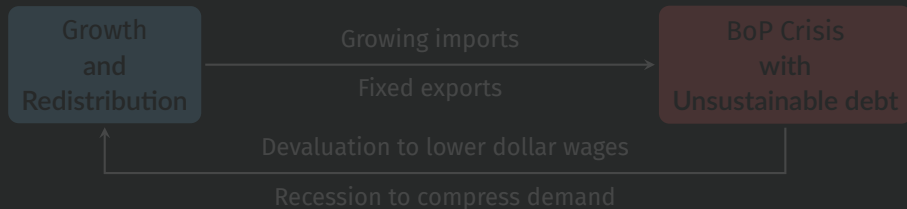
Phelan and Stacchetti (2001)

- Similar model with
 - Endogenous labor supply
 - Savings
 - Time-inconsistent taxes
- Time inconsistency: **capital** accumulation
 - Want tax capital ex-post, promise low taxes ex-ante
- No cycles? — Example with $k_0 > k^*$ overshoots initial capital reduction
 - Only **link** between t and $t + 1$ is the capital stock
 - To induce savings, can subsidize labor today or 'promise' low taxes
 - ... Same result



Stop & Go Dynamics

- Phenomenon also studied by Latin American **structuralists**
 - ... Díaz-Alejandro, Ferrer, Braun and Joy, etc...
 - ... More about shocks/imperfect planning than purposeful overshooting
- Also two phases (but with different names)



- **Testable** differences:
 - Growth in 'Go' phase v. low labor and output in 'populist' phase
 - REER depreciation in 'Stop' phase v. high after-tax wages in 'austerity'?

Stop & Go Dynamics

- Phenomenon also studied by Latin American **structuralists**
 - ... Díaz-Alejandro, Ferrer, Braun and Joy, etc...
 - ... More about shocks/imperfect planning than purposeful overshooting
- Also two phases (but with different names)



- **Testable** differences:
 - Growth in 'Go' phase v. low labor and output in 'populist' phase
 - REER depreciation in 'Stop' phase v. high after-tax wages in 'austerity'?

Stop & Go Dynamics

- Phenomenon also studied by Latin American **structuralists**
 - ... Díaz-Alejandro, Ferrer, Braun and Joy, etc...
 - ... More about shocks/imperfect planning than purposeful overshooting
- Also two phases (but with different names)



- **Testable** differences:
 - Growth in 'Go' phase v. low labor and output in 'populist' phase
 - REER depreciation in 'Stop' phase v. high after-tax wages in 'austerity'?

Concluding Remarks

- Excellent theoretical exercise
 - ... All assumptions needed, sharp characterization, basic idea applies to many setups
- Last comments
 - ... Quantitative performance?
 - ... Baseline is a little underwhelming
 - ... Three-period model seems to have larger effects
 - ... Would a full life-cycle give more traction?
 - ... How to think about best SPE?
 - ... Harsh punishments: better model for US / Advanced Europe?
 - ... Eurozone crisis, LatAm coups fit more with shocks than planning?
 - ... Are all SPEs cyclical?

Concluding Remarks

- Excellent theoretical exercise
 - ... All assumptions needed, sharp characterization, basic idea applies to many setups
- Last comments
 - ... Quantitative performance?
 - ... Baseline is a little underwhelming
 - ... Three-period model seems to have larger effects
 - ... Would a full life-cycle give more traction?
 - ... How to think about best SPE?
 - ... Harsh punishments: better model for US / Advanced Europe?
 - ... Eurozone crisis, LatAm coups fit more with shocks than planning?
 - ... Are all SPEs cyclical?

Concluding Remarks

- Excellent theoretical exercise
 - ... All assumptions needed, sharp characterization, basic idea applies to many setups
- Last comments
 - ... **Quantitative** performance?
 - ... Baseline is a little underwhelming
 - ... Three-period model seems to have larger effects
 - ... Would a full life-cycle give more traction?
 - ... How to think about **best SPE**?
 - ... Harsh punishments: better model for US / Advanced Europe?
 - ... Eurozone crisis, LatAm coups fit more with shocks than planning?
 - ... Are all SPEs cyclical?