Discussion of "A Model of Secular Stagnation: Theory and Quantitative Evaluation"

by Gauti Eggertsson, Neil Mehrotra and Jacob Robbins

Michaela Schmöller

Aalto University & European Central Bank [1]

Bank of Finland / CEPR conference on
Demographics and the Macroeconomy

Helsinki, 12 October 2017

[1] The views expressed are those of the author and do not necessarily represent the views of the European Central Bank

Introduction

- Revived debate on secular stagnation (Hansen, 1938) in light of weak recoveries following Great Recession
- **This paper:** Formal analysis of secular stagnation:
  - Model capable of generating permanent stagnation, characterized by low interest rates, output below potential and deflation
  - Quantitative assessment of the key drivers of secular stagnation
  - Policy analysis in an environment of secular stagnation
- Very important paper with highly relevant policy implications

Summary & key contributions

Part 1: 3-period OLG model

- Young (borrowing constrained), middle age and old
- Key triggers of secular stagnation: Slowdown in productivity, demographics, deleveraging
- Policy analysis: Appropriately designed fiscal policy; raising the inflation target (but: multiplicity)

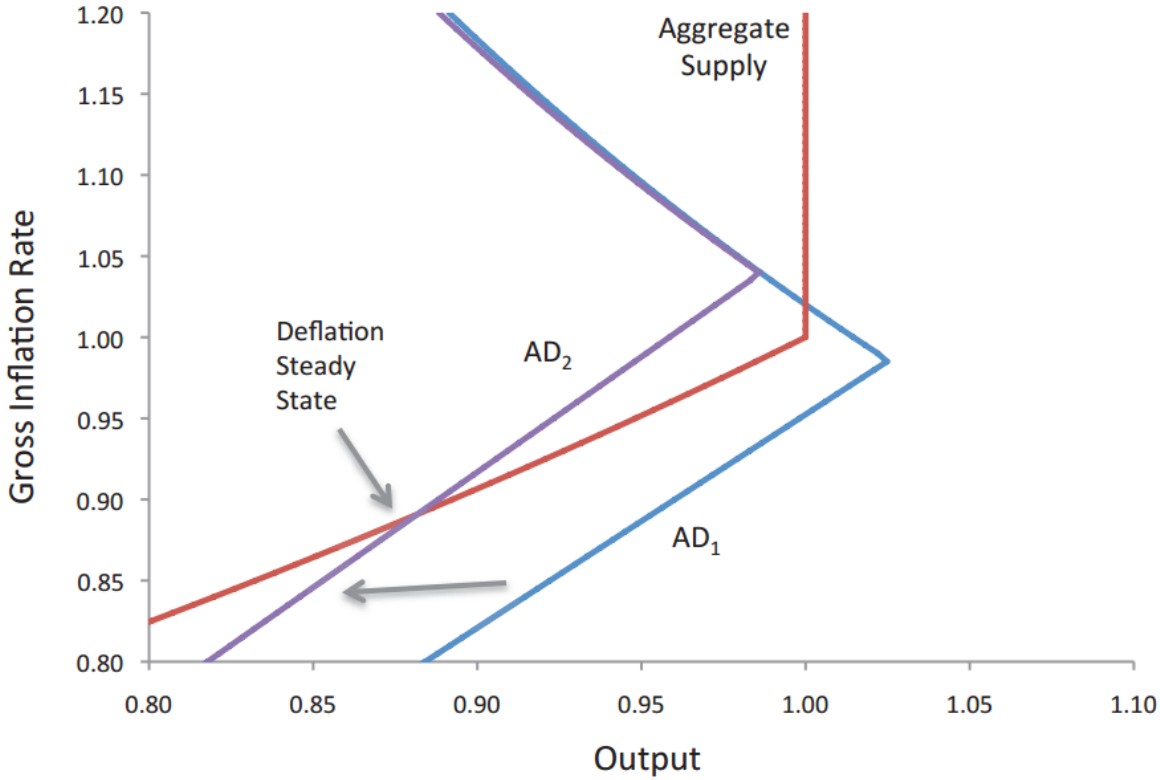
Summary & key contributions

Part 2: Quantitative Lifecycle Model

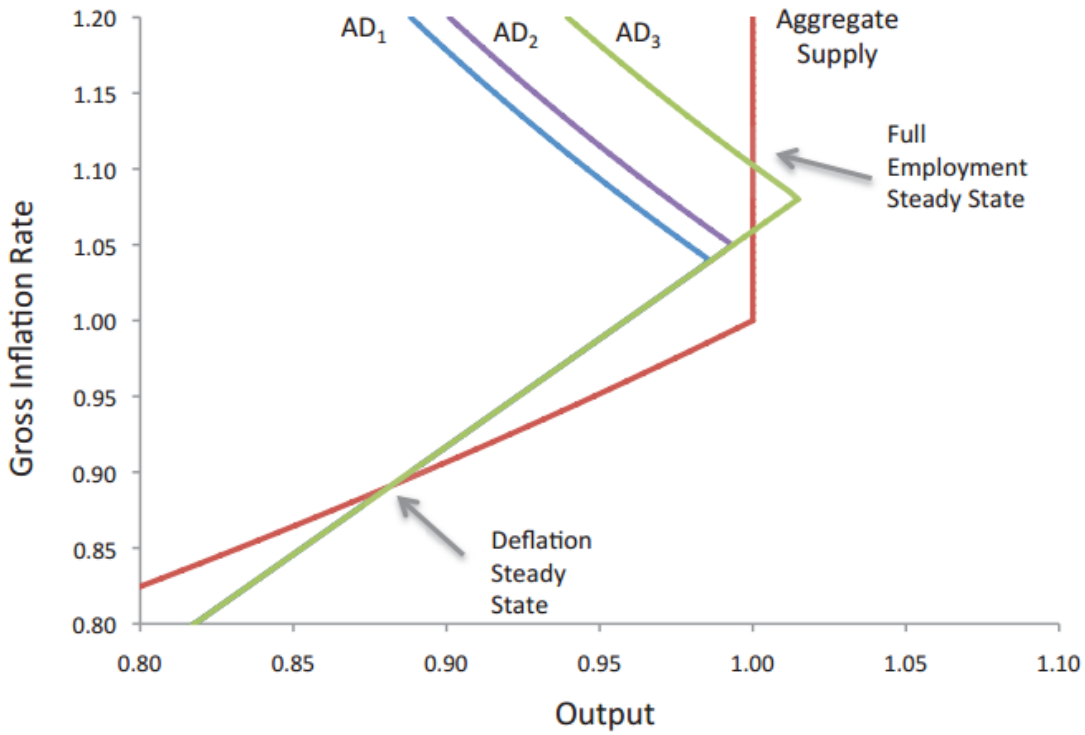
- Large-scale model which incorporates the key ingredients and channels of the OLG model
- Demonstrates that secular stagnation is quantitatively a feasible outcome
- Decomposition of the decrease in interest rates according to key contributing factors
- Allows for comparative statics and transitional dynamics

The making of secular stagnation

- Potential triggers: Tightening of collateral constraint, lower population/ productivity growth
- ZLB and downward constraint on wages bind
- Local determinacy

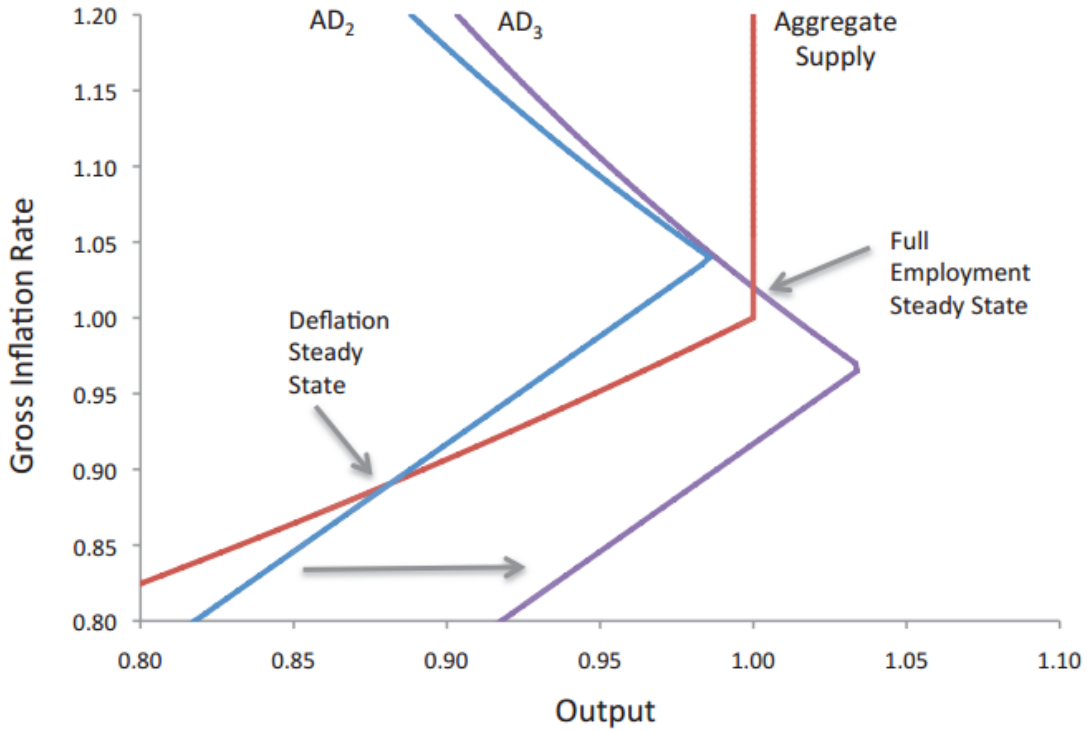


Policy implications: Raising the inflation target



- Full employment steady state
- Locally indeterminate steady state at full employment with $i = 0$ and $\Pi < \Pi^*$
- Secular stagnation steady state persists

Policy implications: Effect of fiscal policy



- Fiscal policy can rule out the stagnation equilibrium $\rightarrow$ favorable as opposed to changes in inflation target
- But: Positive effect hinges on the design and financing of fiscal policy

Quantitative lifecycle model: Key elements

- Population growth
- Mortality risk
- Bequest motive
- Borrowing constraint
- CES production function in labor and capital
- Downward nominal rigidity, Taylor rule with ZLB constraint
- Calibration to the US economy

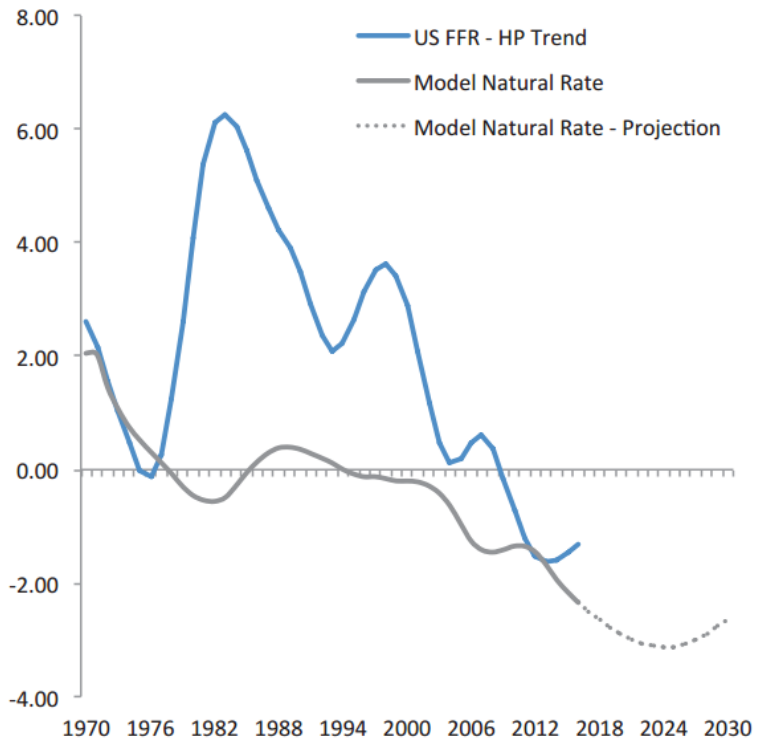
Decomposition of the decline of the natural rate

Table 6: Decomposition of decline in natural rate of interest: 1970-2015

Forcing variable	Δ in r	% of total Δ
Total interest rate change	-4.02%	100%
Mortality rate	-1.82	43%
Total fertility rate	-1.84	43%
Productivity growth	-1.90	44%
Government debt (% of GDP)	$+2.11$	-49%
Labor share	$-.52$	12%
Relative price of investment goods	-0.44	10%
Change in debt limit	$+.13$	-3%

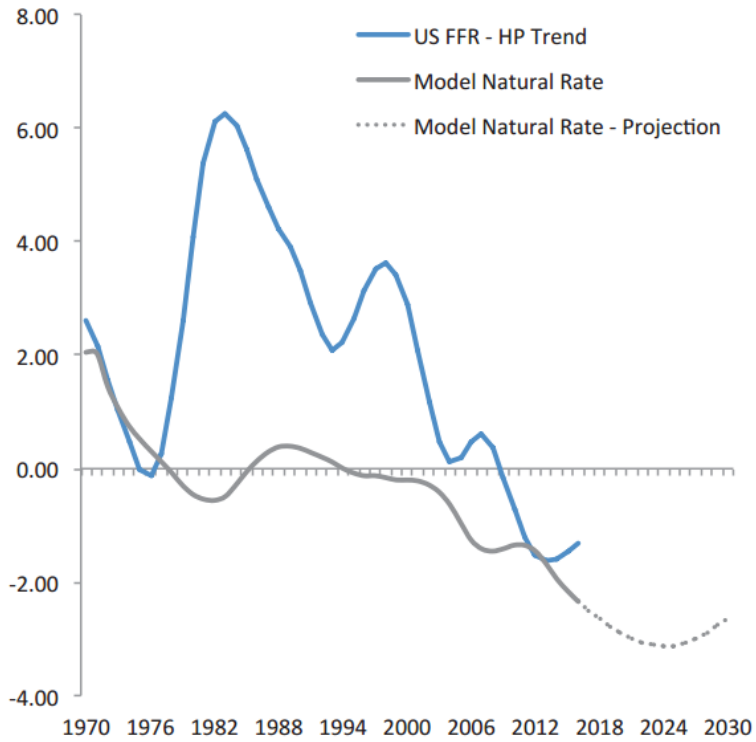
- Key drivers: demographic factors
- Counter-balancing force: increase in government spending
- Corresponding decomposition for the Euro Area?

Transition path



- Model can generate a decline in interest rates from 1970 to 2015
- Strong assumption on agents' expectations (perfect foresight)

Transition path



- Predicts more rapid decline than observed in the data
- Summers (2014): Tech and housing boom may have masked the pre-crisis decrease in interest rates
- Potential remedy: exogenously fluctuating constraint (future research?)

Raising the natural rate?

Table 7: Raising the natural rate of interest to 1%

Forcing variable	2015 Value	Counterfactual value
Total fertility rate	1.88	3.28
Government debt (% of GDP)	118%	215%
Productivity growth	0.65%	2.43%
Relative price of investment goods	1.00	2.43

- Very large changes required to raise the natural rate
- No self-restoring forces

Conclusion

- Very important contribution on understanding potential mechanisms of secular stagnation
- From the view point of the model: No inherent drivers to revert the economy to full employment
- Call for policy intervention:
  - Fiscal policy and increases of inflation target in the OLG model
  - Validity in lifecycle model?
- Looking forward to reading more on the topic in the future!