

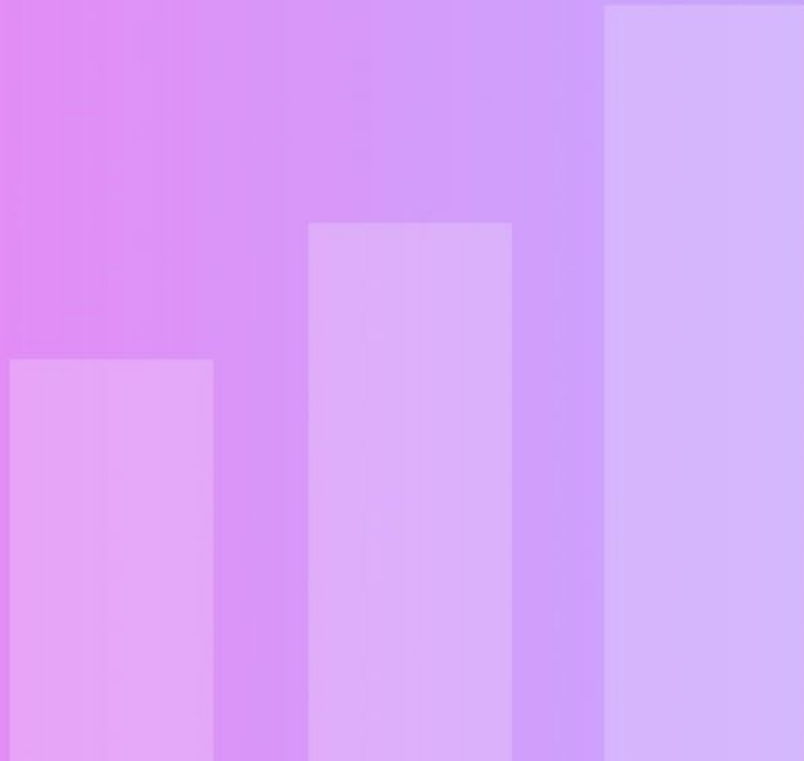
Inequality and Macro-Finance

Atif Mian (Princeton University)

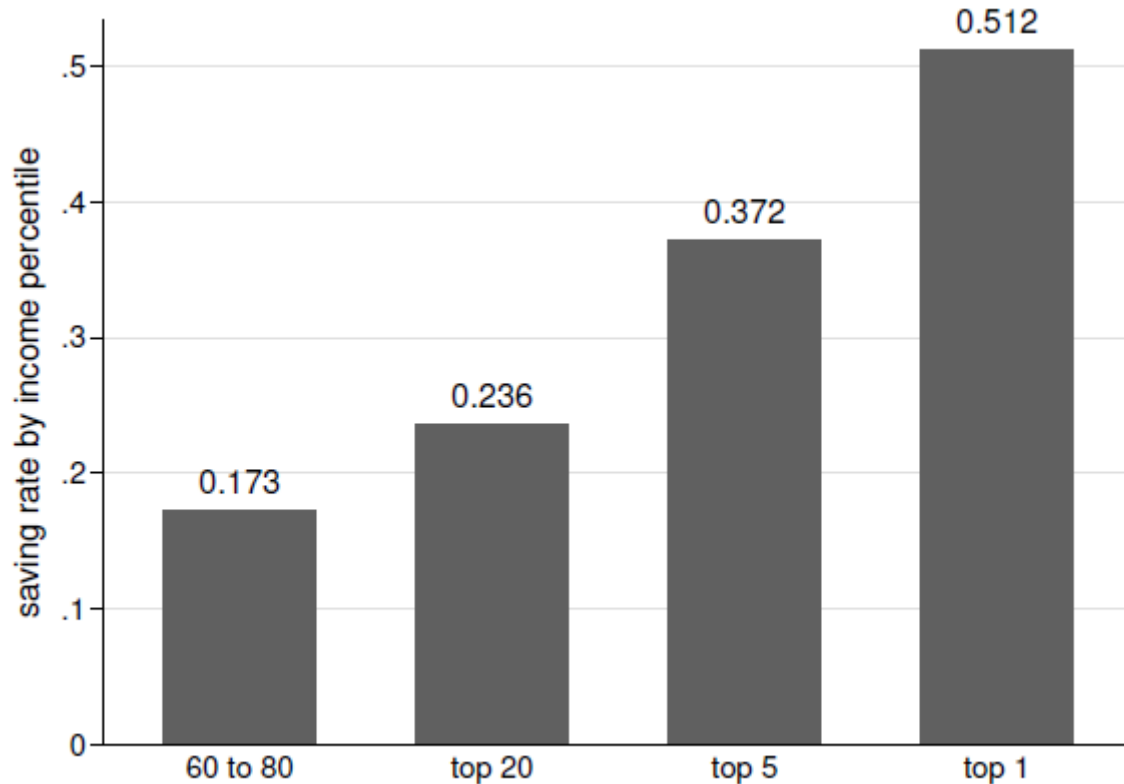
-based on joint work with

Amir Sufi (Chicago) and Ludwig Straub (Harvard)

Princeton Initiative, 2021



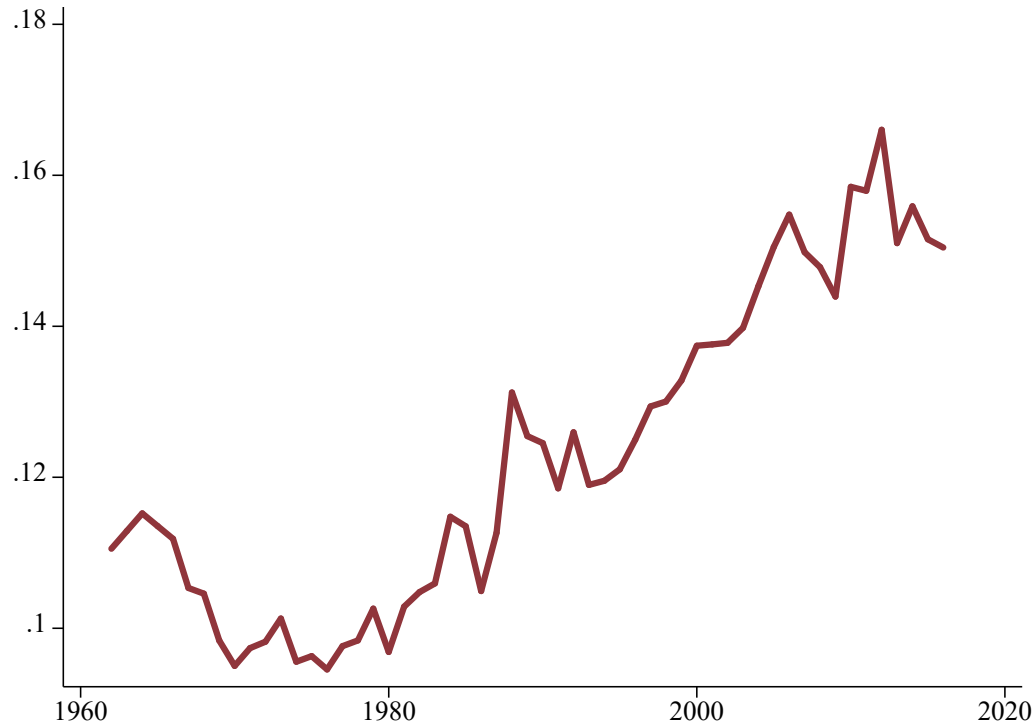
Fact #1: The rich save more out of *lifetime* income



From Dynan, et al, Table 3, column 2

Fact #2: Rise in extreme inequality

(share of income going to top 1%)



Indebted Demand

- When rich save more out of lifetime income, and extreme inequality rises
 - ... need to stimulate demand today through debt creation: rich save/lend, non-rich borrow
 - ... but that reduces demand in the future when borrowers have to repay the debt
 - ... only solution is for interest rate to fall, so non-rich could borrow even more!
 - ... this **indebted demand** cycle continues, until interest rate hits zero lower bound (ZLB)
 - ... if extreme inequality persists, remain stuck in perpetual **debt trap**

Indebted Demand model

- **Non-homothetic** preferences
... people derive greater utility from accumulating wealth (a) as they get richer

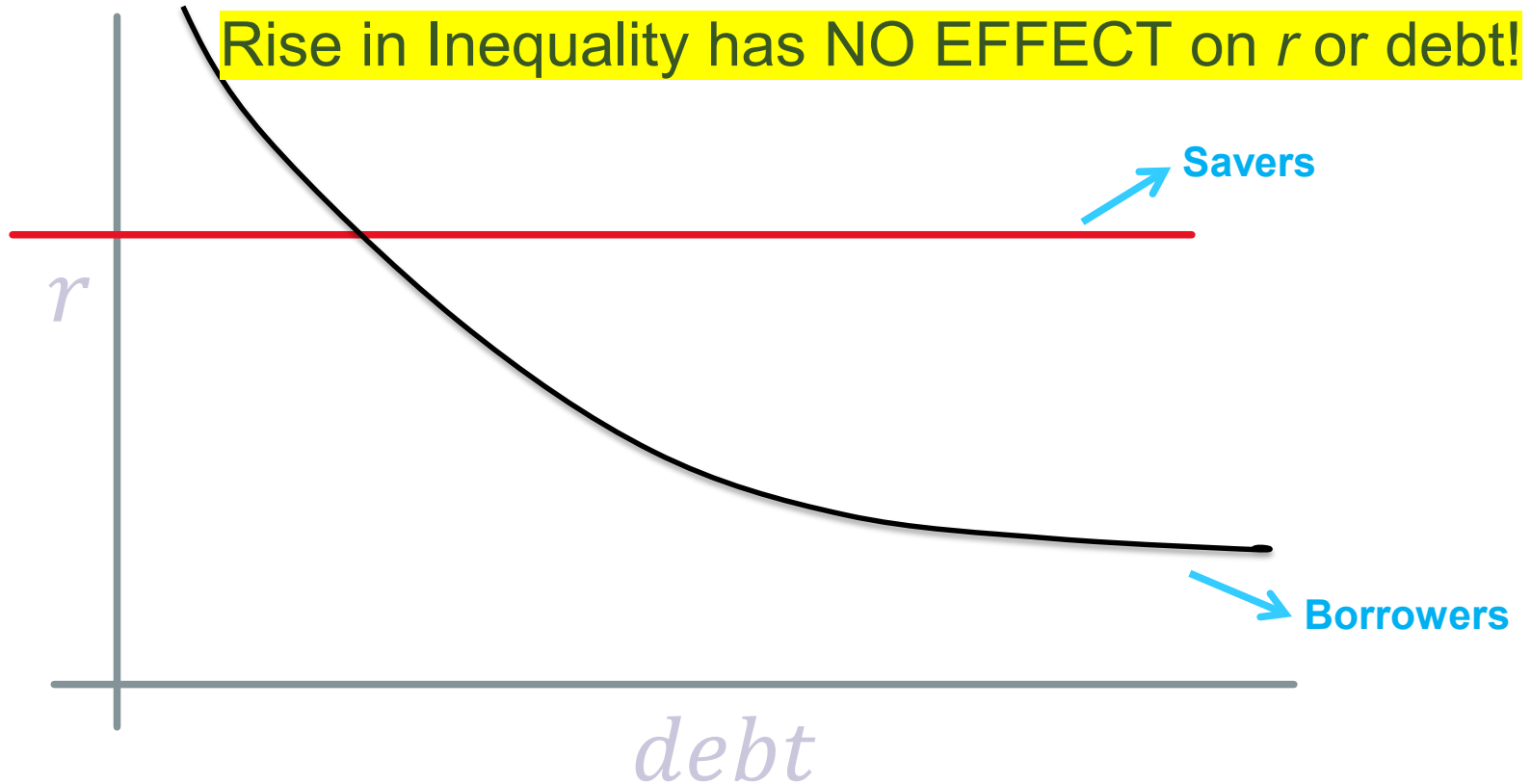
$$\int_0^{\infty} e^{-(\rho+\delta)t} \left\{ \log c_t^i + \frac{\delta}{\rho} \cdot v(a_t^i) \right\} dt$$

- Euler equation in steady-state for the rich
... determines the **long-run saving supply schedule**

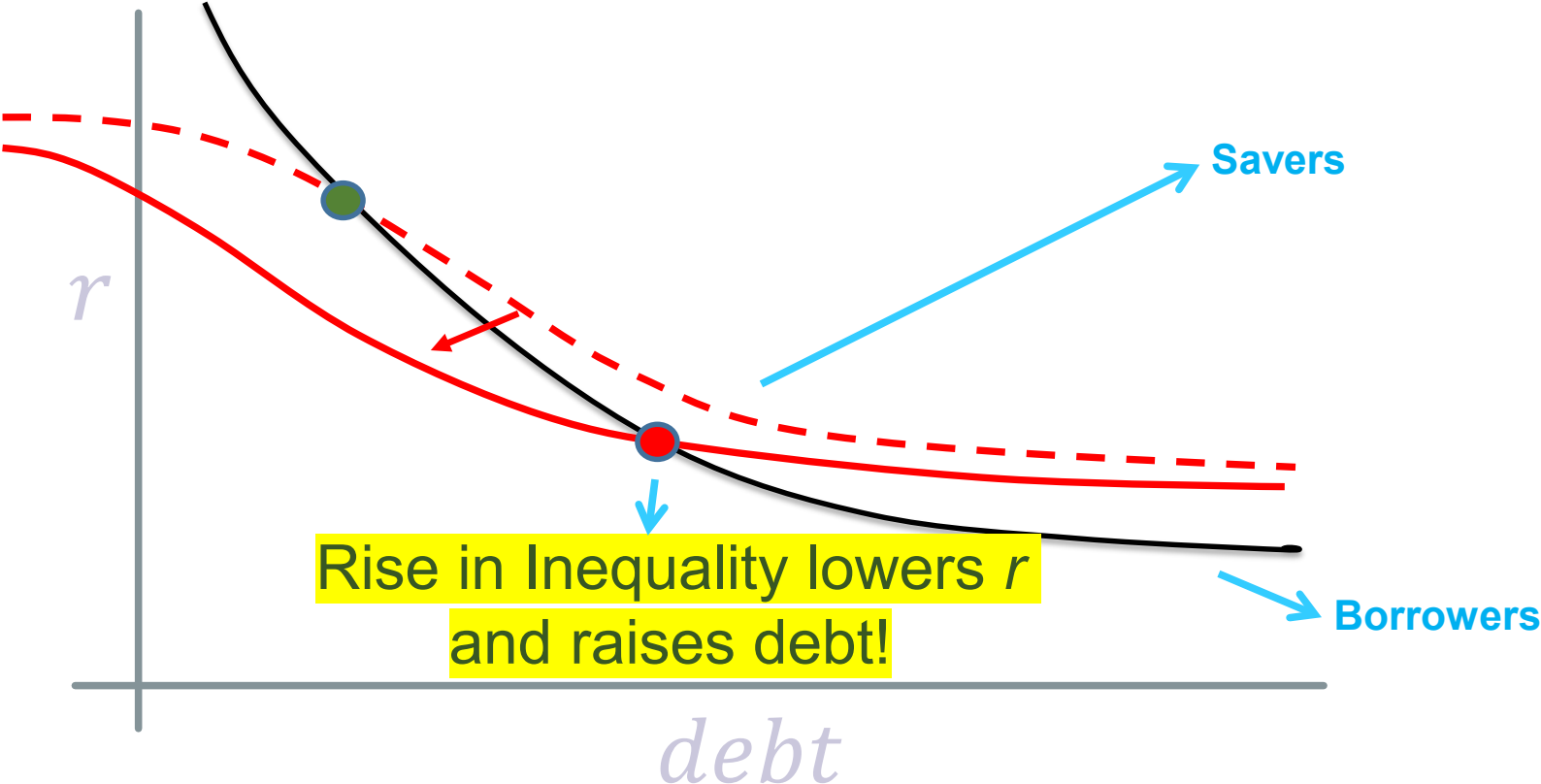
$$r = \rho \cdot \frac{1 + \rho/\delta}{1 + \frac{\rho}{\delta} \cdot av'(a)}$$

See Mian, Sufi and Straub (QJE 2021) for formal details

Standard homothetic models



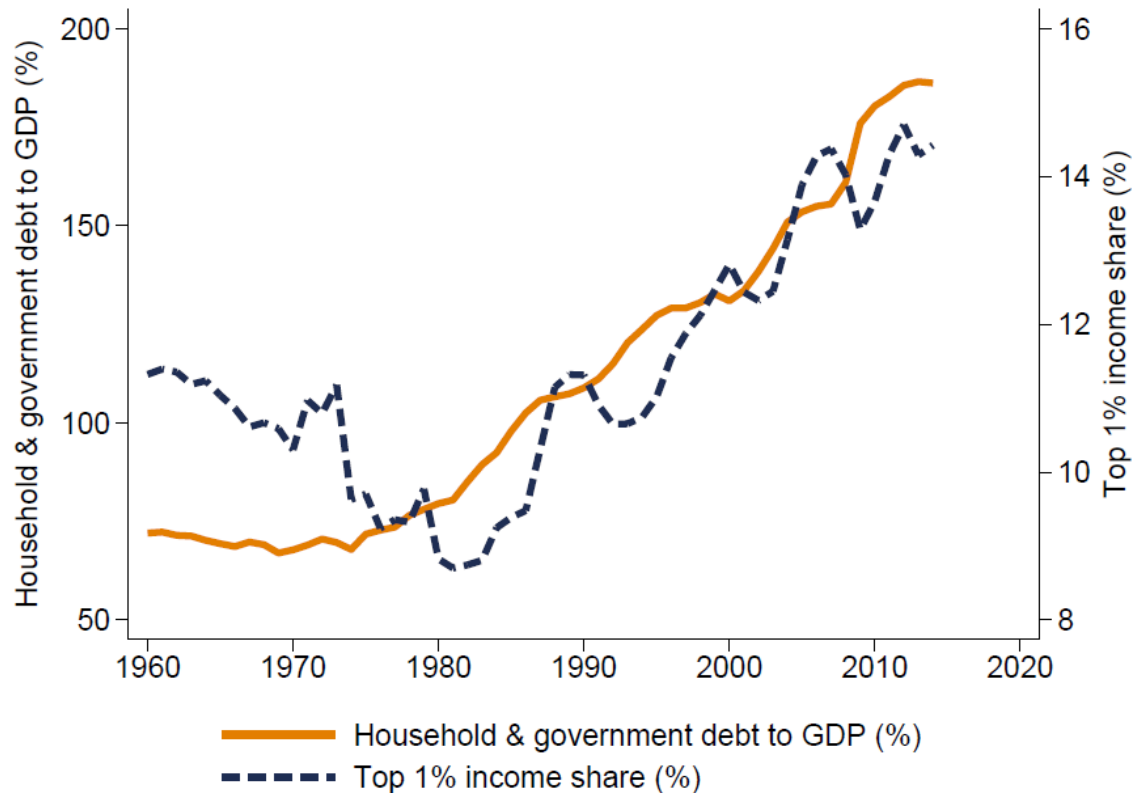
Indebted Demand model



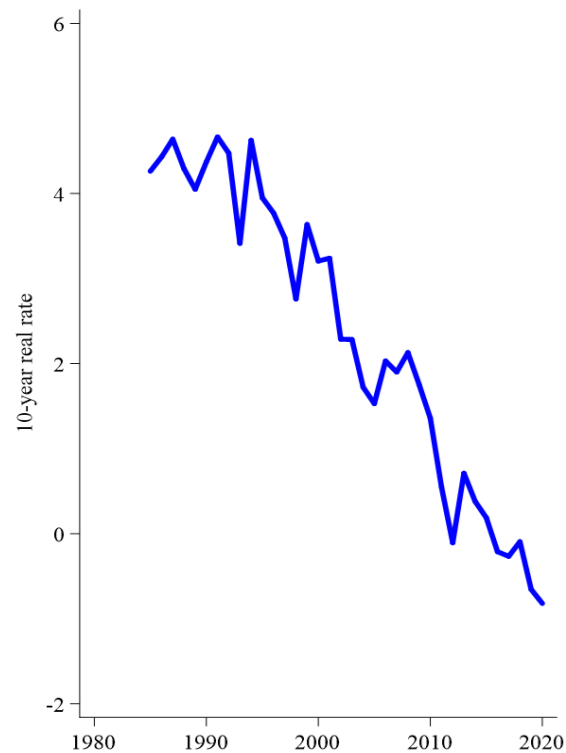
Is the Indebted Demand theory

empirically relevant?

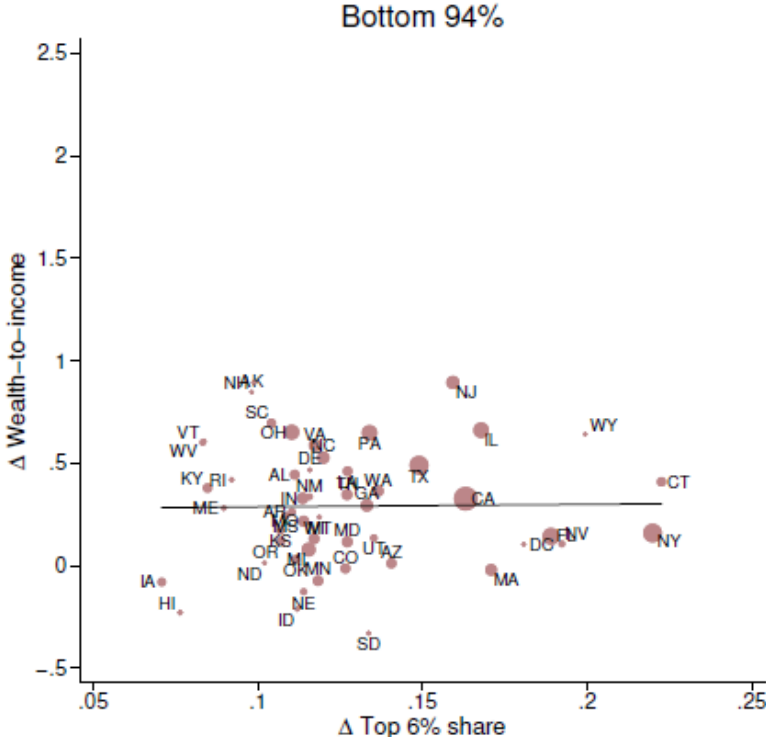
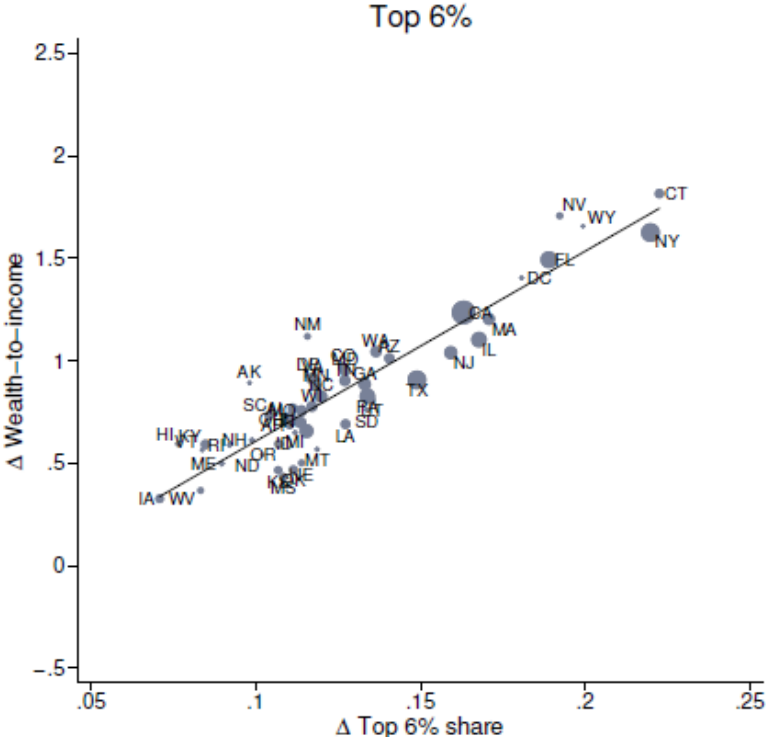
Rising inequality is associated with rising debt



.... and falling rates

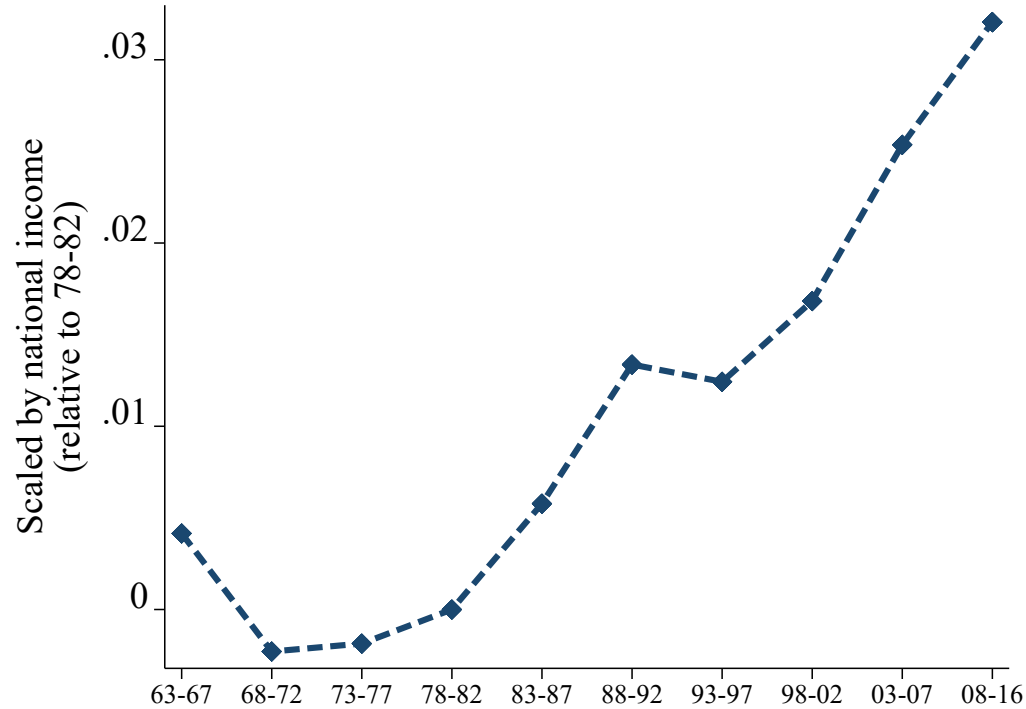


US State-level experiment



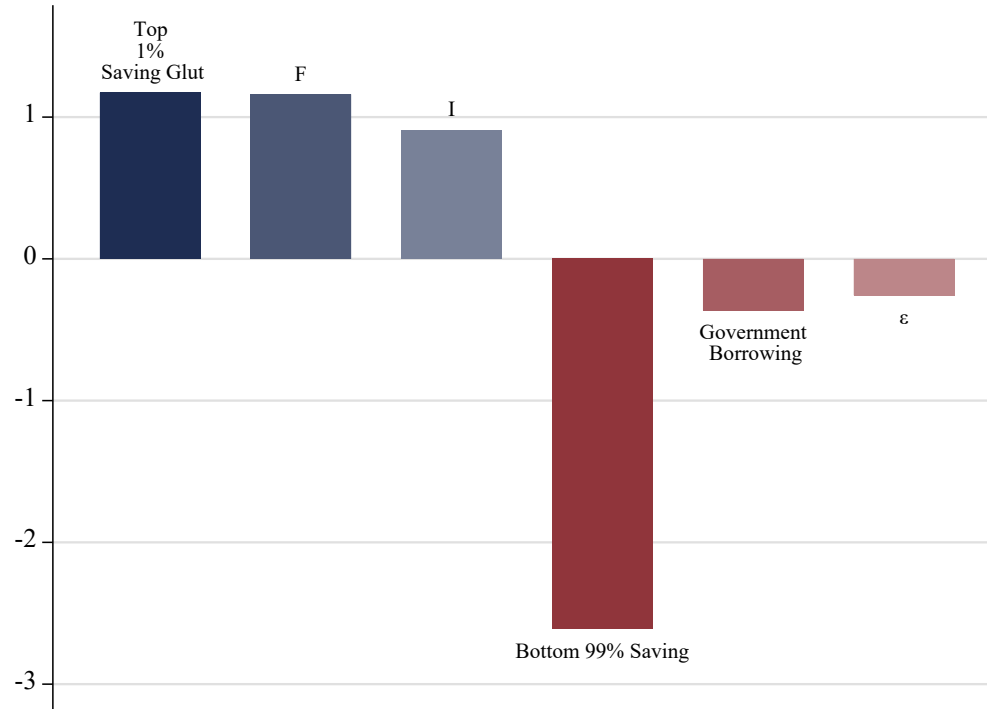
Rise in inequality leads to greater wealth accumulation, driven entirely by the top 6%

Rise in saving coming from the top 1%

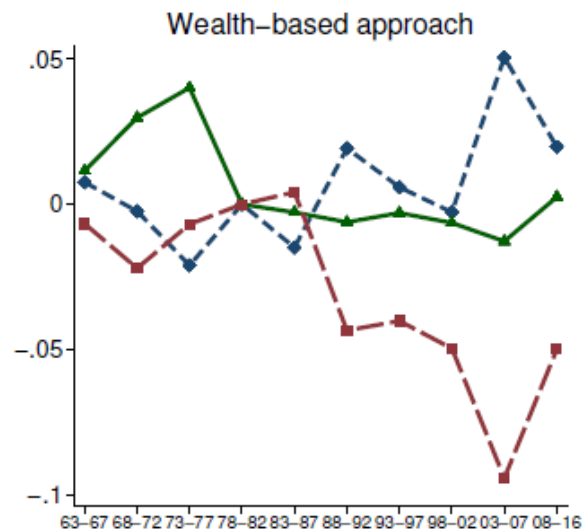
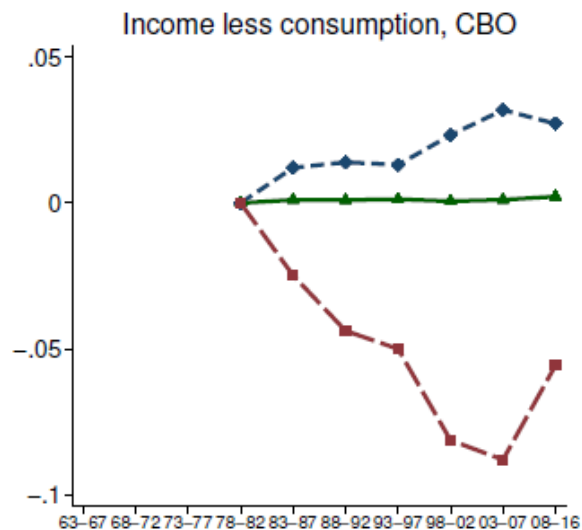
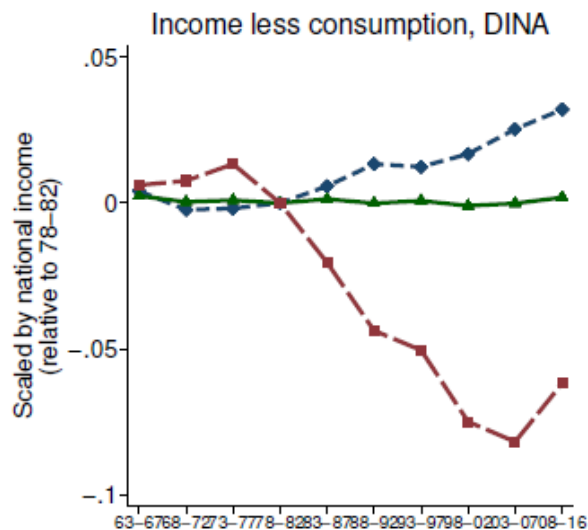


See Mian, Sufi and Straub (“Saving Glut of the Rich”) for formal details

Where does the saving glut of the rich go?

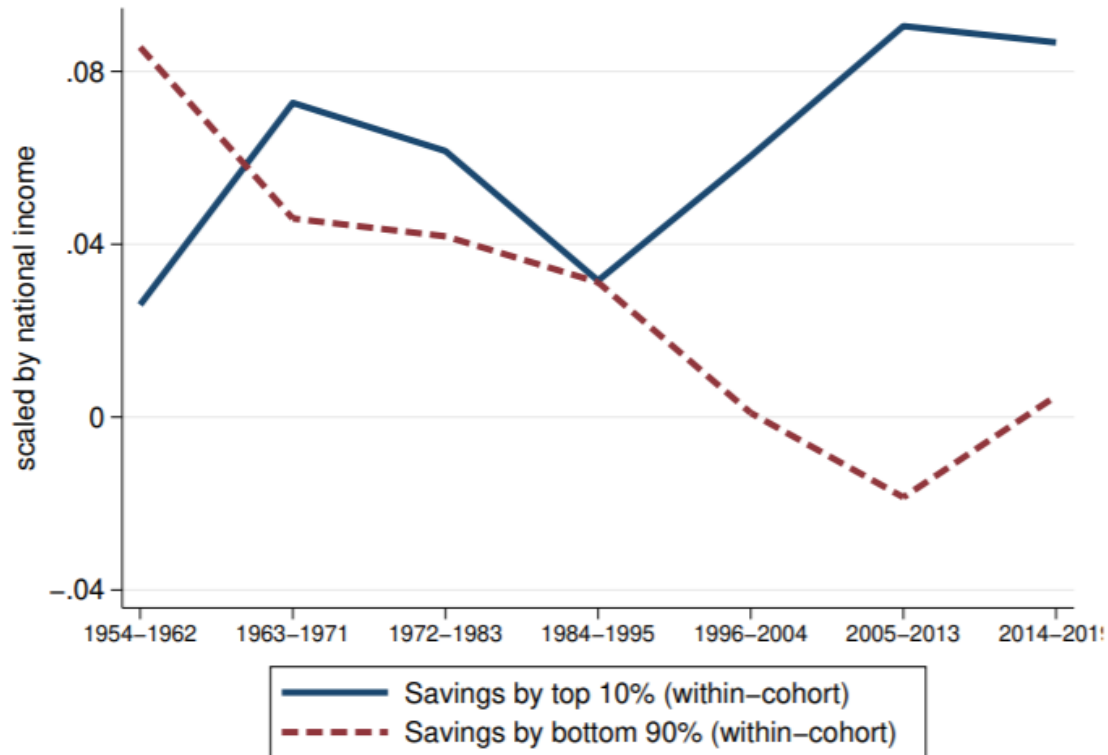


Where does the saving glut of the rich go?



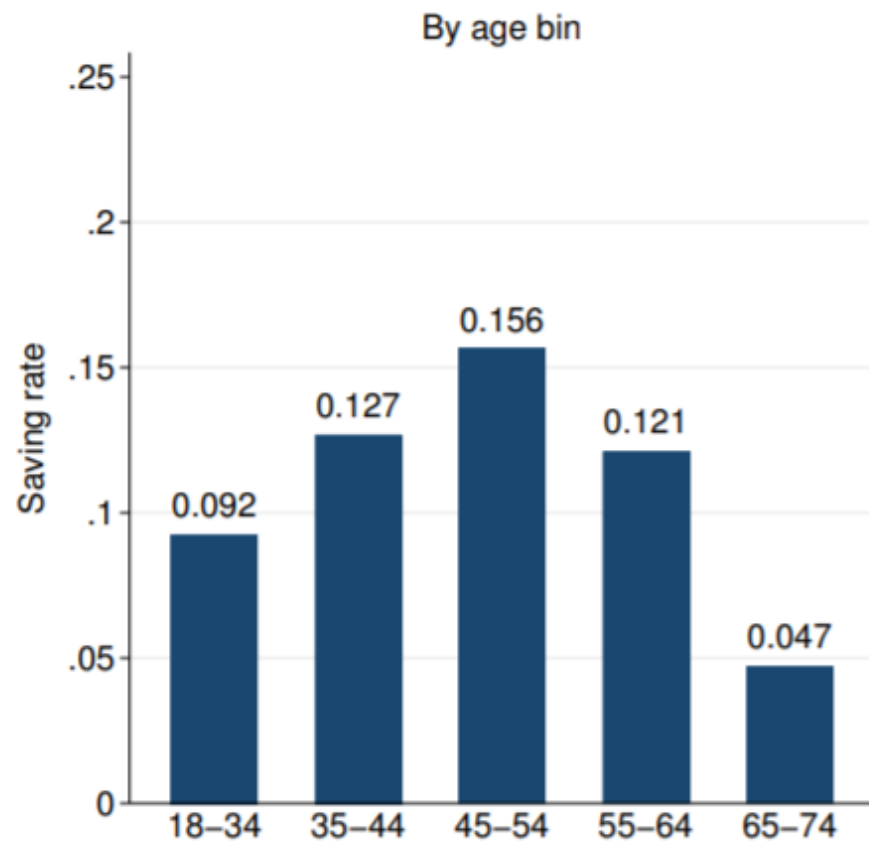
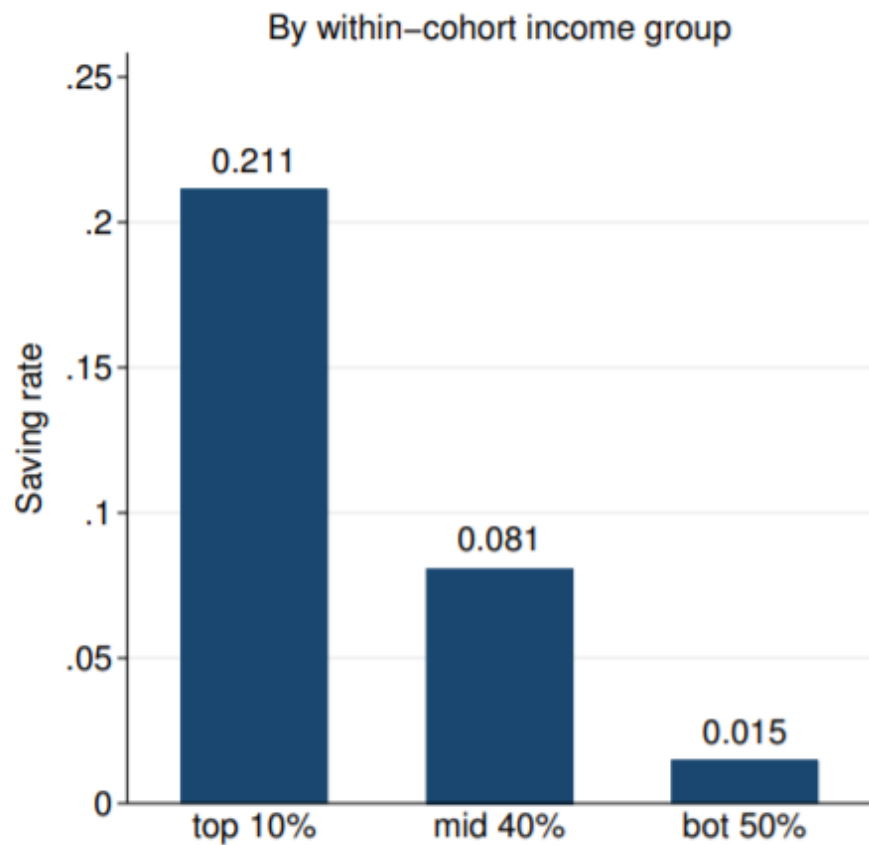
---◆--- top 1% —▲— next 9% - - -■- - - bottom 90%

Saving glut of the rich in the SCF+



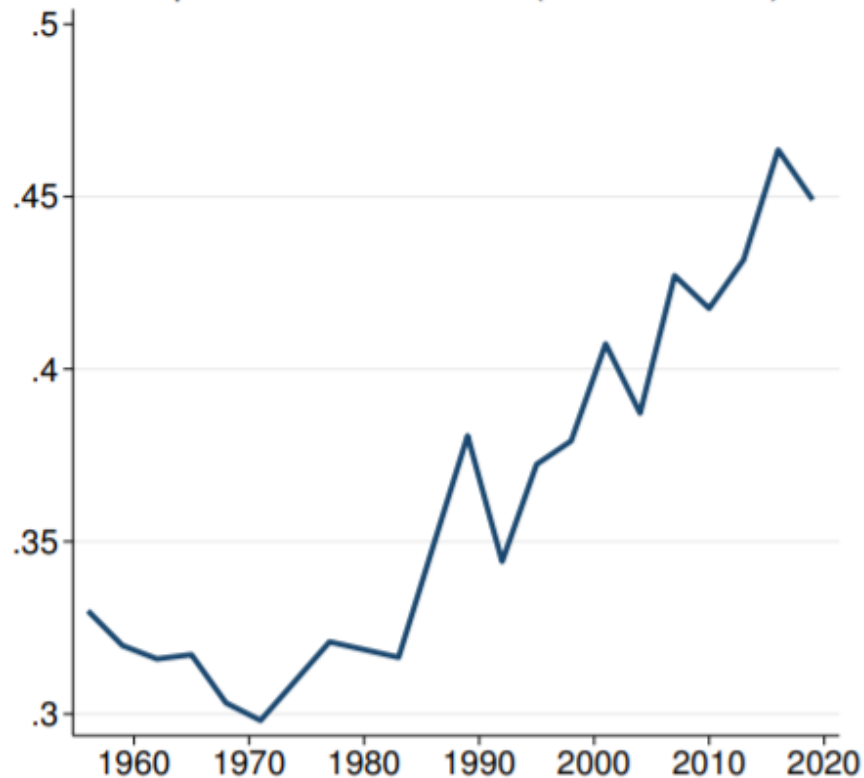
See Mian, Sufi and Straub 2021 Jackson Hole symposium paper

Estimated saving rates, 1953-2019

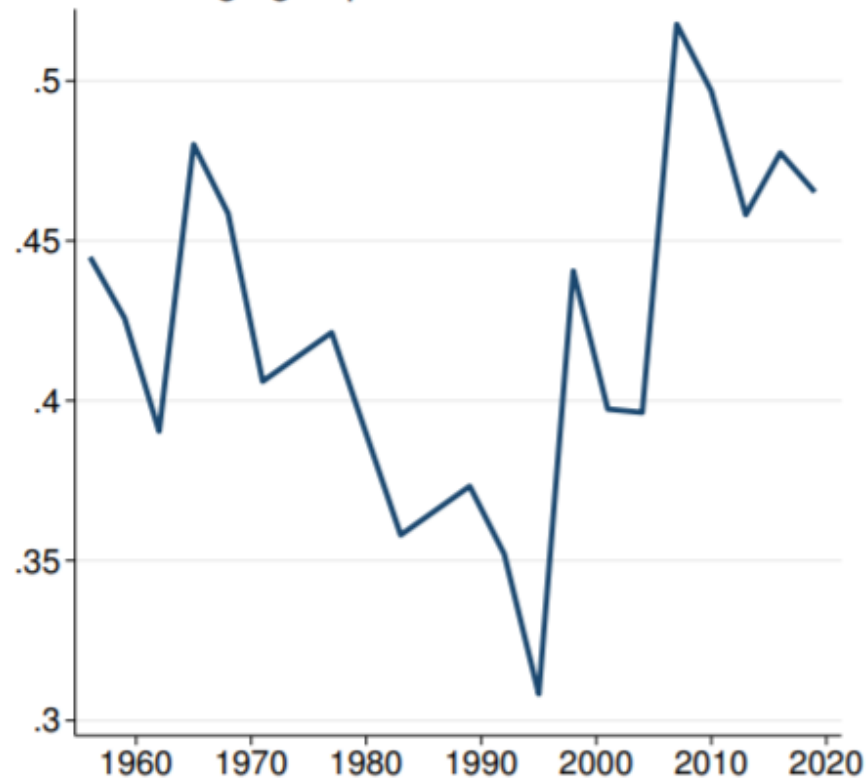


Income shares over time, 1953-2019

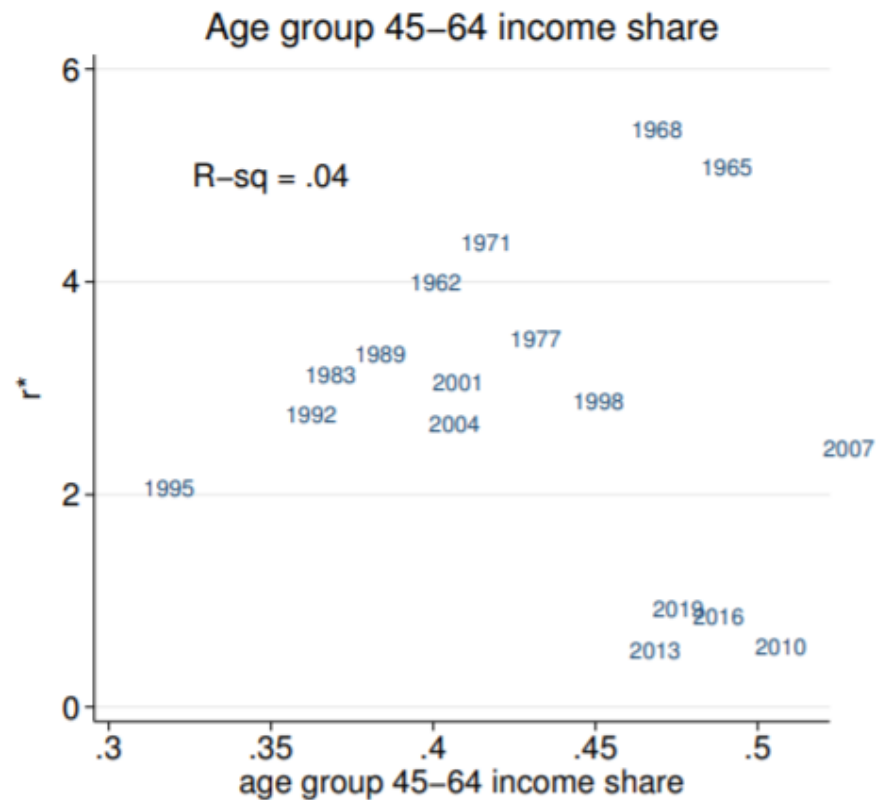
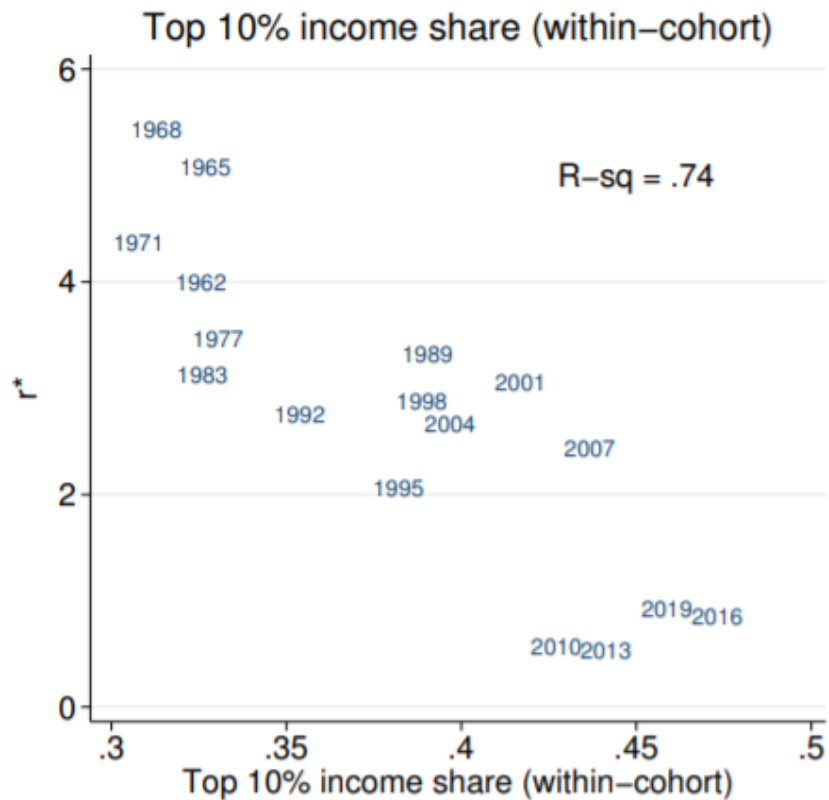
Top 10% income share (within-cohort)



Age group 45-64 income share



Income shares: Inequality, demographics, and r^*



**What are the policy implications
of Indebted Demand theory?**

Implications for monetary policy

- Rising inequality **forces the hand of monetary policy** by lowering r^*
... reduces space for monetary policy to operate
- Easy monetary policy often raises demand through debt creation
... but that creates indebted demand, putting downward pressure on future rates: monetary policy has **limited ammunition**.

“the sustainability of debt burdens depends on interest rates remaining low” – Mark Carney
- Persistent extreme inequality pushes monetary policy against ZLB, and economy stagnates inside a **debt trap**

Implications for fiscal policy

- With “specialness”, such as “convenience yield”, of government debt, $R < G$ for government borrowing when aggregate demand is weak ... fiscal policy is like a wealth tax!
- Rising inequality **expands fiscal space**
- There is an MMTesque “**free lunch**” when $R < G - \psi$, i.e. government can increase primary deficit permanently without ever having to raise taxes
- The **design of tax policy is really important** for moving and staying away from the ZLB

See Mian, Sufi and Straub “A Goldilocks Theory of Fiscal Policy”

What should policy makers do?

- **Revise macroeconomic models** to incorporate the key role that inequality plays in determining macroeconomic dynamics and fundamentals
 - ... possibly explains persistent over-forecasting of interest rates
- Monetary policy is ill-equipped to deal with weak aggregate demand resulting from extreme inequality. Emphasis should be on,
 - ... policies that deliver **equitable and inclusive growth**
 - ... **progressive taxation**, consider **wealth taxes**
 - ... Increase **public investment**, especially in areas that promote equality of opportunity
 - ... promote **competitive markets**