INCOME INEQUALITY, FINANCIAL CRISES, AND MONETARY POLICY

Discussion by Matthew Rognlie, Northwestern

Research Conference in Honor of Charles Carlstrom and Timothy Fuerst

THE EVOLUTION OF LARRY SUMMERS…

- Summers starting in November 2013:
  - We face "secular stagnation", interest rates **might be at or near zero indefinitely**

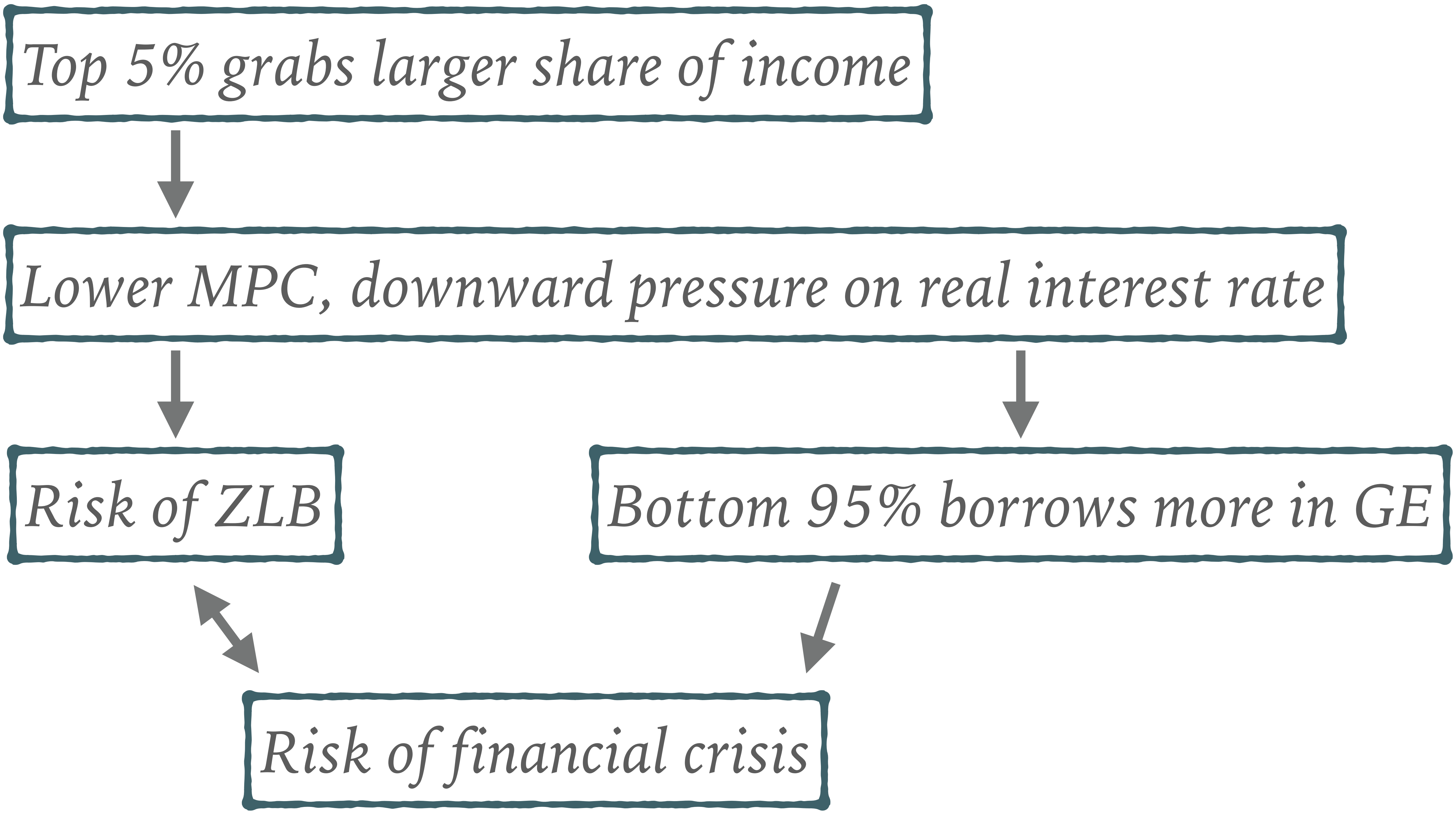
- Summers more recently, now that interest rates are on the rise, has revised this to a more subtle message:
  - The economy can't generate sufficient demand without very low real interest rates that create risk of financial crisis

"

Rather, the idea of secular stagnation is that the private economy—unless stimulated by extraordinary public actions especially monetary and fiscal policies and, or, unsustainable private sector borrowing—will be prone to sluggish growth caused by insufficient demand.

-Larry Summers, May 2018

THIS PAPER WAS THERE FIRST!



THIS PAPER WAS THERE FIRST!

Top 5% grabs larger share of income

Lower MPC, downward pressure on real interest rate

Risk of ZLB

Bottom 95% borrows more in GE

Risk of financial crisis

Borrowing by bottom 95% provides store of wealth, alleviates fall in real rate, but only at the ***cost of vulnerability to crisis***

STARTING POINT: KUMHOF, RANCIERE, WINANT (AER 2015)

- Endowment economy, two classes of society
- Borrowers ('bottom 95%') have standard preferences

$$\sum \beta_b^t u(c_t^b)$$

- Savers ('top 95%') have preferences for **wealth**

$$\sum \beta_s^t \left(u(c_t^s) + v(b_t) \right)$$

- This means savers will increase wealth in response to a **permanent** income shock, unlike the standard permanent-income consumers

KUMHOF-RANCIERE-WINANT AND CAIRO-SIM

- **KRW**: in GE, savers amass claims against borrowers
- But borrowers have option to “default”
  - benefit: haircut on debt
  - cost: pecuniary loss and also direct utility loss (drawn i.i.d)
- Rise in inequality pushes up savings, debt and increases risk of default (“crisis”)

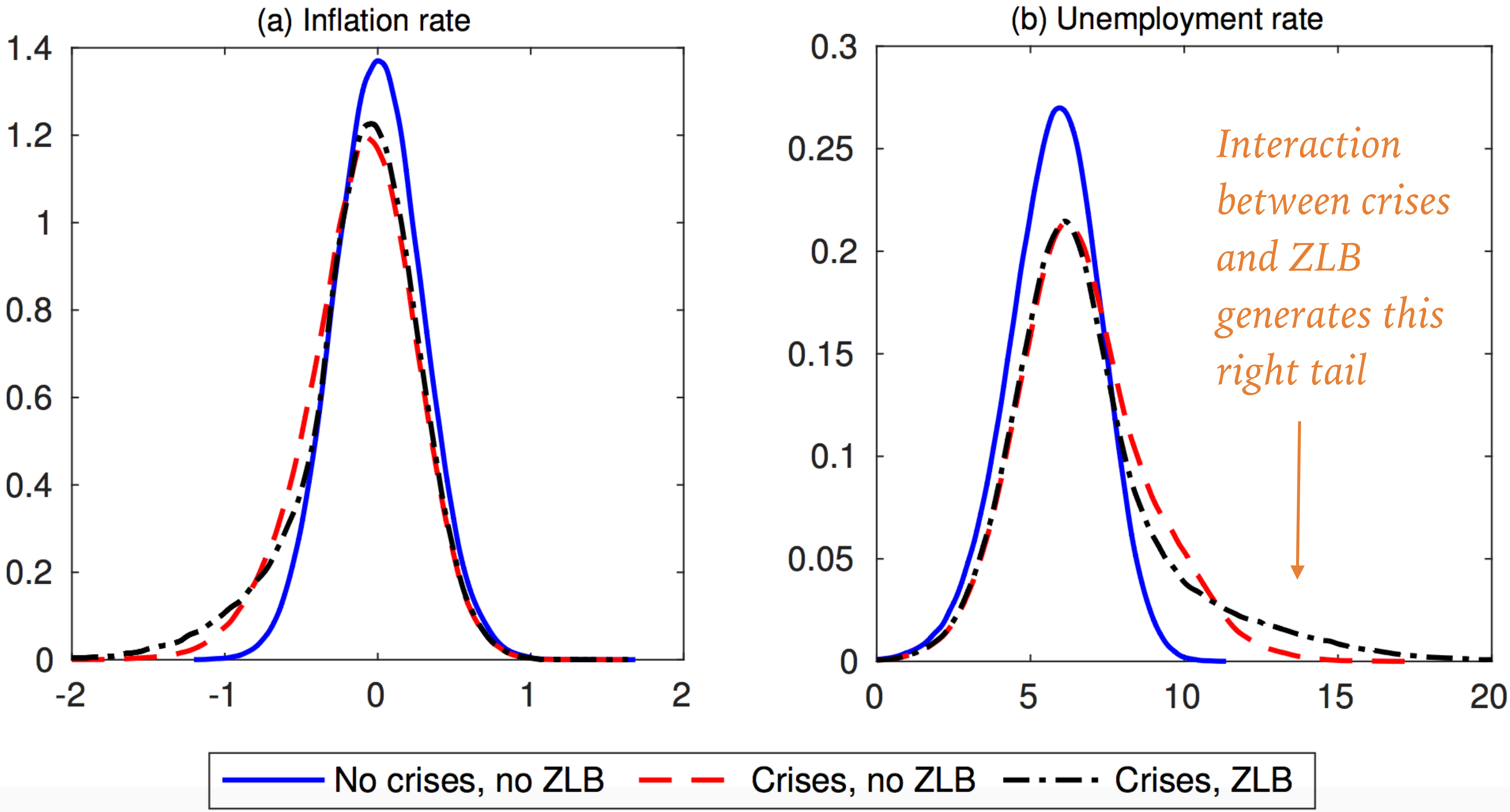
- **Cairo-Sim**:
  - Let’s embed this in a world where *aggregate demand* matters: nominal rigidities and monetary policy constrained by ZLB
  - Financial fragility has output consequences now too: households start with trouble borrowing and have temporary pecuniary costs, don’t consume as much

LOTS OF NEW INGREDIENTS, <u>INCREDIBLY</u> IMPRESSIVE EFFORT

- Sticky prices, sticky real wages
- Habits in consumption
- Search and matching
- Three shocks: TFP, risk premium, and bargaining power
- Monetary policy constrained by ZLB

- **Two big nonlinearities**: default risk and the ZLB
- Major result: ZLB and default ("crisis") can reinforce each other and lead to output distribution with extreme leftward skew

Figure 4: Skewed Distributions of Inflation and Output



PART THAT SURPRISED ME: VERY TEMPORARY SHOCK

- Kumhof, Ranciere, and Winant primarily talk about a **permanent** shock to income distribution
- This is why they need to put wealth directly in the utility, so that permanently enriching the savers leads to more desire to save
  - show in extension that for temporary shocks, this isn't necessary, and standard consumption-smoothing works
  - (indeed, wealth in utility *increases* short-run MPC: see Auclert-Rognlie-Straub)
- In Cairo-Sim, bargaining power shock has quarterly persistence of 0.90: **quite short-lived!**

EMPIRICS HARDER, BUT PERSISTENT/PERMANENT SHOCKS BETTER

- My view: should return to focus on permanent shocks in Kumhof, Ranciere, and Winant
  - otherwise, take advantage of opportunity to simplify, and eliminate wealth in utility function

- Cairo-Sim show empirically negative correlation between cyclical components of top 5% share and unemployment
  - this kind of evidence only applies to higher frequency shocks
  - … but I don't believe it, causality almost certainly runs the other direction

OVERALL IMPRESSION: AWESOME EFFORT, BUT CUT COMPLEXITY

- More generally, some complexity doesn't seem essential
    - risk premium and TFP shocks?
    - habits?
    - really need wealth in utility for short run?
- Question of monetary response to left-skewness and ZLB is more general and addressed by many other papers
    - easier to address in simpler frameworks, can handle nonlinearity better
- One part that **is** worthwhile: search and matching framework
    - introduces tradeoff between conventional vacancy-posting effect, which reduces unemployment, and new effect

VISION: NARROW IN ON THE ESSENTIAL STORY

- Permanent or highly persistent shocks to bargaining power, benefitting rich at expense of poor
- Pushes down r, risk of ZLB
- In equilibrium, this is limited by borrowing of bottom 95%
- … but that creates a whole new vulnerability and source of potential crisis

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Very cool story!

- For monetary policy: what are the <u>specific interactions</u> between monetary policy and this kind of financial fragility?

FINAL THOUGHT: THE KIND OF INEQUALITY SHOCK MATTERS

DOESN'T SHAREHOLDER WEALTH INCREASE AUTOMATICALLY?

- The top 5% in this model are called "shareholders", and they earn the rents from production, get more when worker bargaining power declines
- Idea in this paper: once they're wealthier, they need a store of value to put that wealth in, workers must borrow in GE

- But if they're actually "shareholders" in publicly traded firms, then share prices have gone up and their wealth **has already increased directly due to the shock**
- Decision to exclude this kind of wealth from the utility function somewhat arbitrary

IT CAN GO BOTH DIRECTIONS

- Auclert and Rognlie (2018): inequality ***within*** labor market leads to greater savings, pushes down equilibrium real interest rates and can cause demand shortfalls
  - (Straub 2018: also true if inequality is permanent heterogeneity, if the rich more inclined to save)

- Auclert and Rognlie (2018): assuming that shares in firms (which earn from capital and markups) are tradable, any rise in markups or technological shift toward capital that causes a decline in labor share <u>pushes up</u> steady-state real interest rates
  - **Asset supply effect** dominates

EXCERPTING THE RELEVANT PART OF THE PAPER…

Steady-state result. With the newly-enriched model, we can study the effects of three distinct shocks that influence the labor share: shocks to the production function, investment prices, and markups.

Proposition 9. *Consider an exogenous change in the production function or investment prices, or a rise in markups, that leads to a decrease in the labor share holding r constant. Under zero lower bound or constant-r policy, this causes an increase in aggregate employment starting from a depressed steady state. Under neoclassical policy, it causes a rise in r^*.*

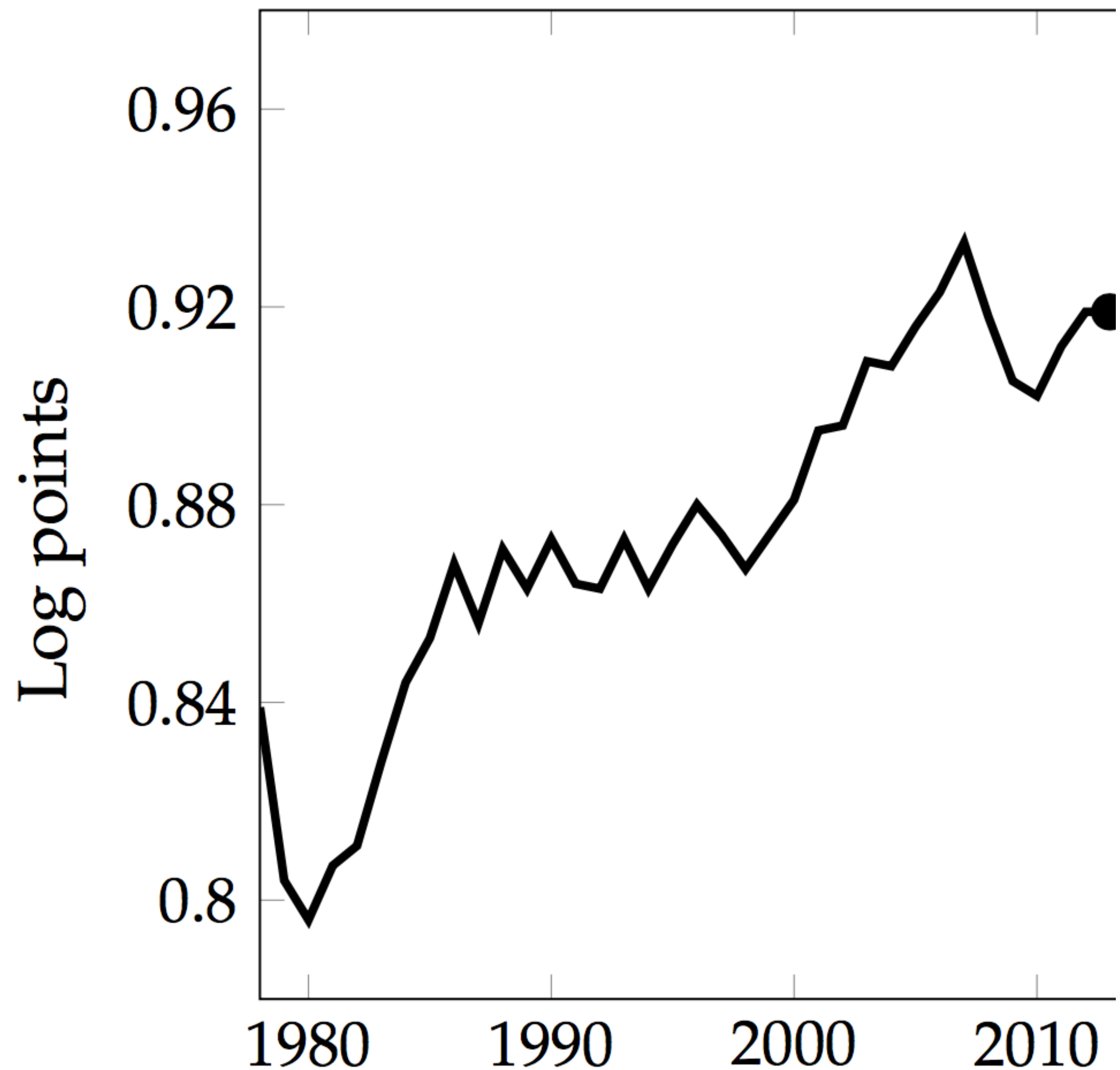
Direction is unambiguous under our assumptions!

Weakness: we assumed tradable shares…

If discounted value of profits can't be used to satisfy demand for wealth or liquidity, then this might go other way.

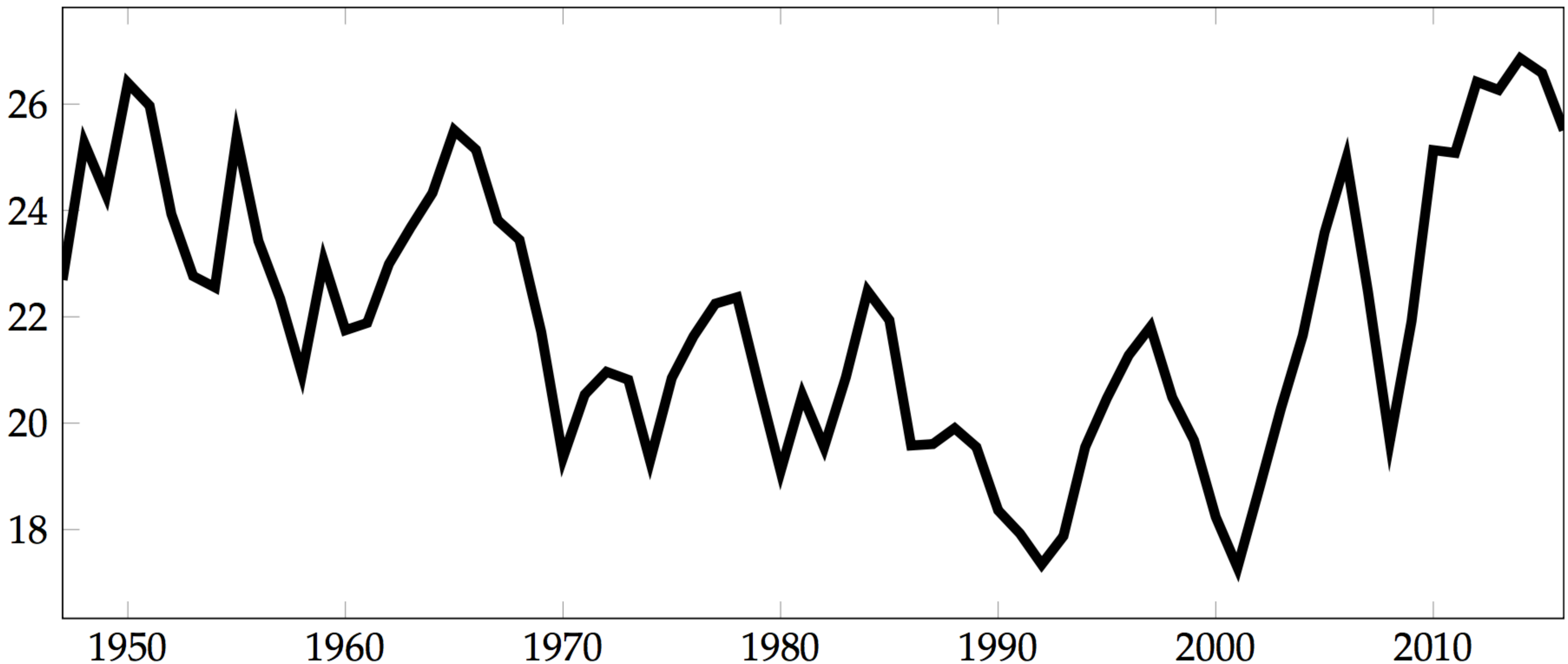
WITHIN-LABOR INCOME INEQUALITY HAS GONE UP

- When writing the paper, we emphasized the contractionary effect of labor income inequality because that's been a major trend
- Even much of the increase in the top 5%'s income has come from labor income of some form



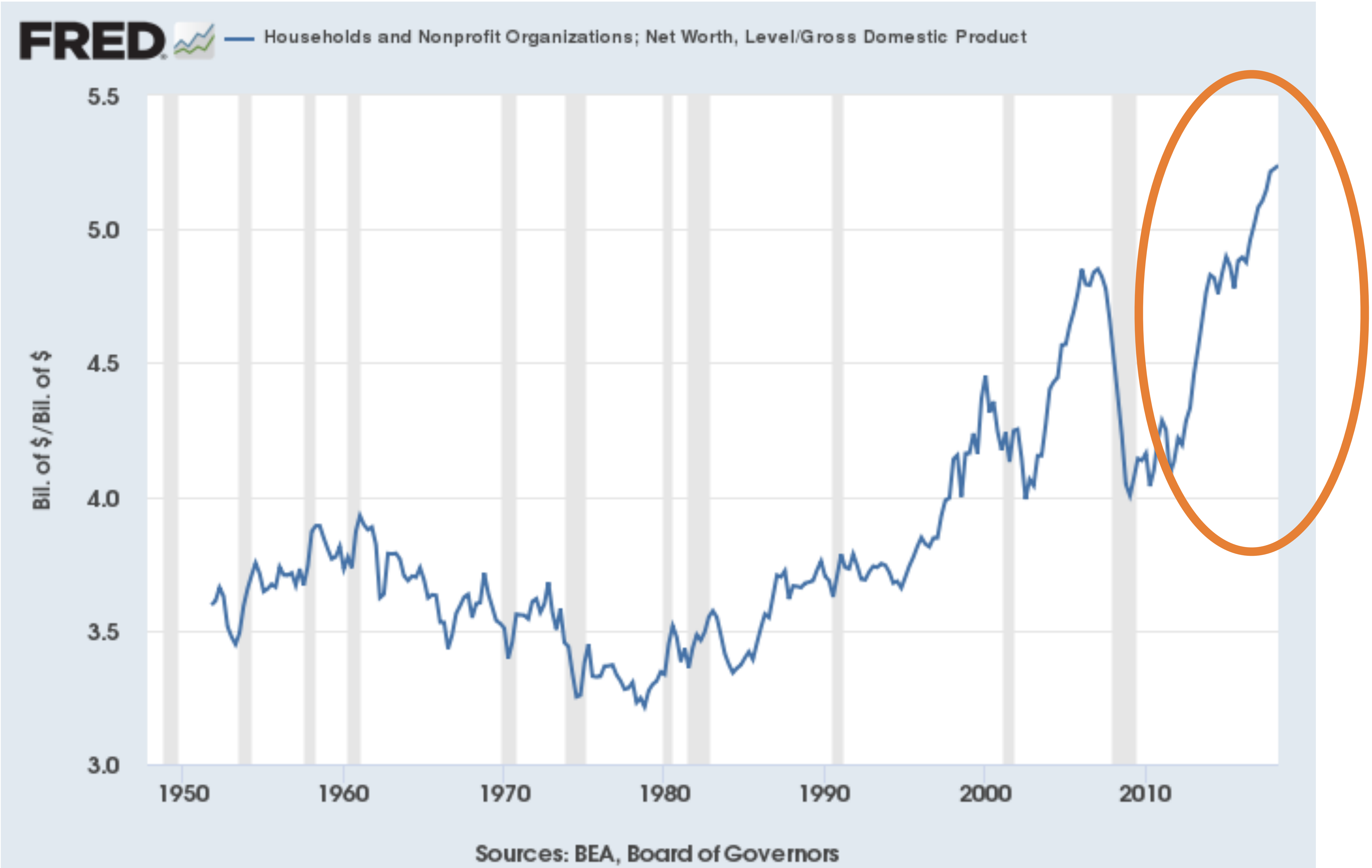
BUT LABOR IN AGGREGATE HAS LOST GROUND RECENTLY TOO

Figure 1: Non-labor share of net corporate factor income

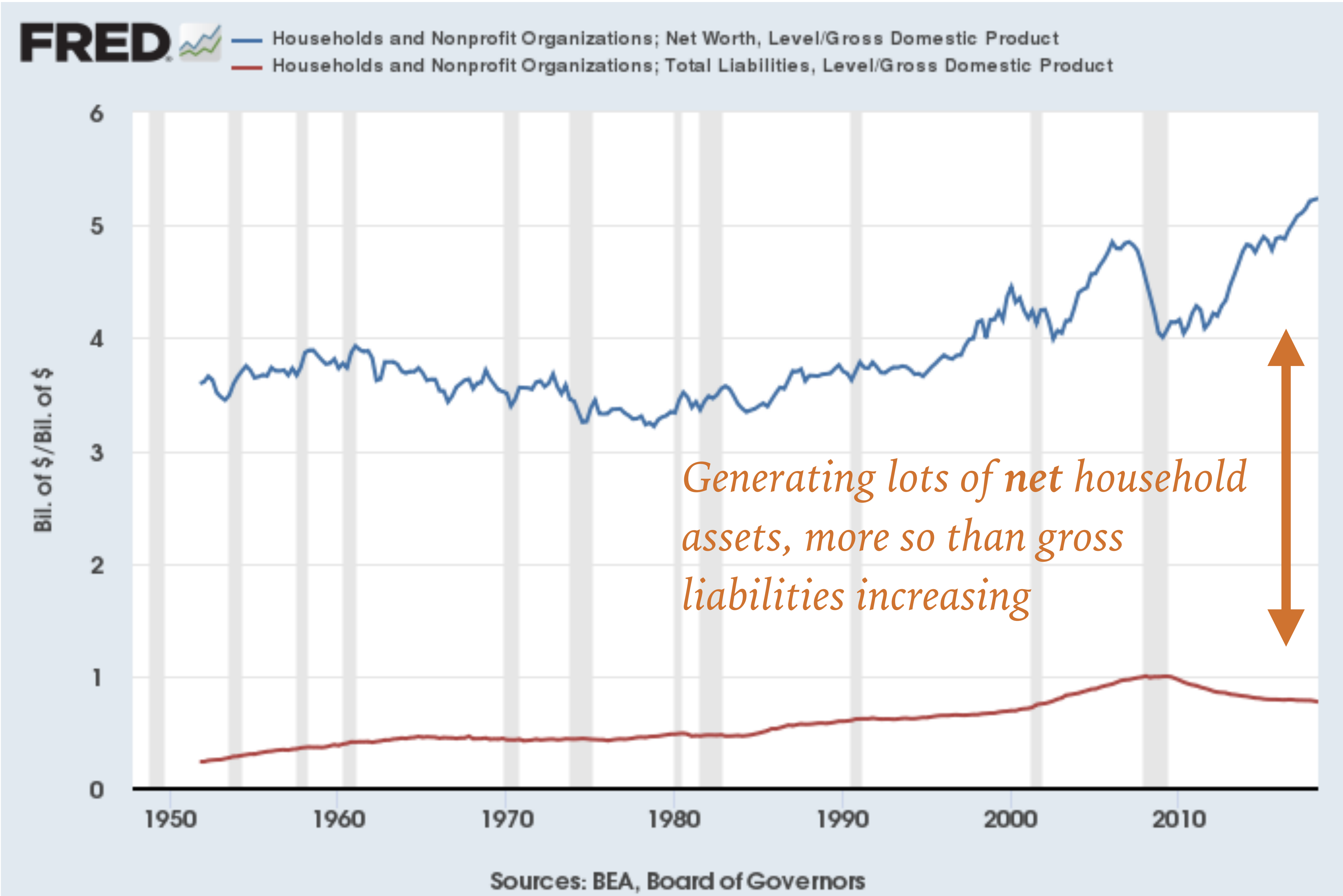


When properly measured, this is only a very recent phenomenon, but striking!

ASSOCIATED WITH RISE IN ASSET VALUES & HH NET WORTH



MUCH BIGGER THAN CHANGES IN GROSS HOUSEHOLD DEBT



SO: TWO EFFECTS PUSHING IN DIFFERENT DIRECTIONS

- Rising **within-labor** income inequality creates greater demand for assets, as in this paper
- But declining **labor** vs. **capital** means that there is a greater supply of those assets too
- Latter could dominate, depends on magnitudes and the relative importance of these two kinds of inequality changes…
- Important to think about these distinctions!

VERY FUN AND AMBITIOUS PAPER: THANKS!