



*Classic Policy Benchmarks for Economies with  
Substantial Inequality, James Bullard and Riccardo DiCecio  
Conference on Heterogeneous Agents or Heterogeneous information, Paris, 6-12-19*

**Benoit Mojon (Bank for International Settlements)**

The views expressed here are mine and should not be attributed to the BIS

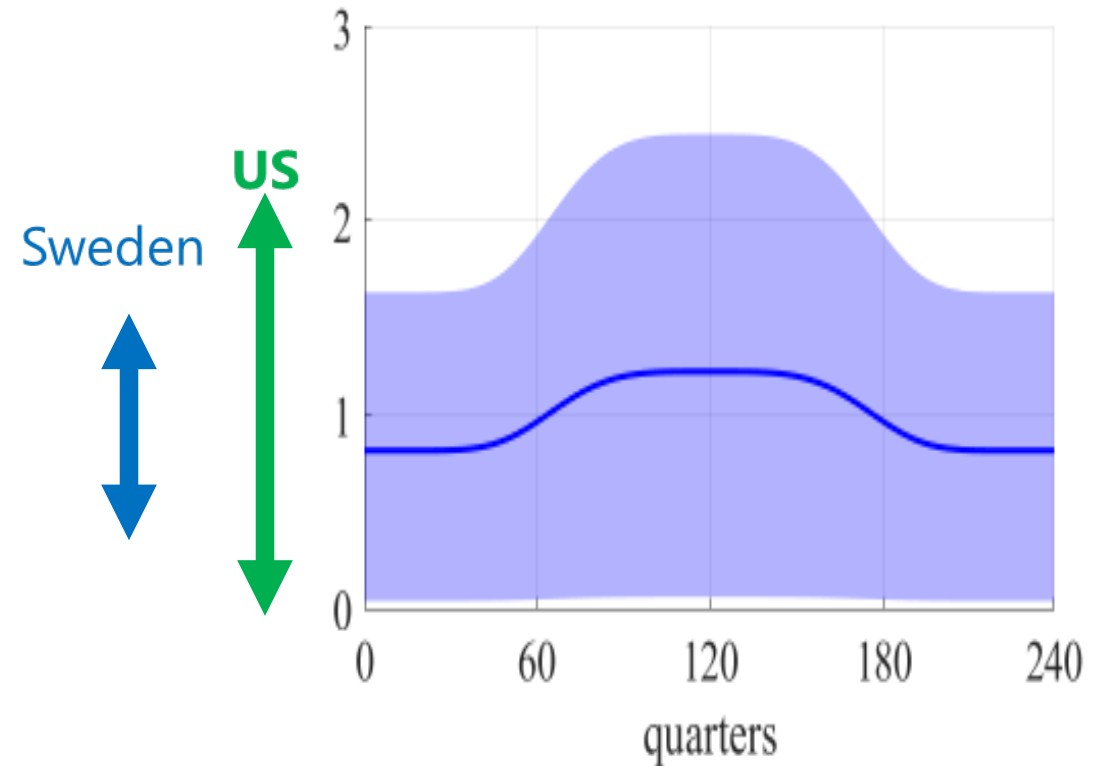
# Outline

1. Review the model
2. Puzzling inequality trends
3. Inequality and monetary policy

## The model of Bullard and DiCecio's

- MP sets  $P$
- Fiscal sets taxes and supply public goods
- Labor mkt authority set Unem. Insurance
- **Education policy limits** the ex ante Cross-section variance of individuals' productivity

THE MASS OF LIFE-CYCLE PRODUCTIVITY

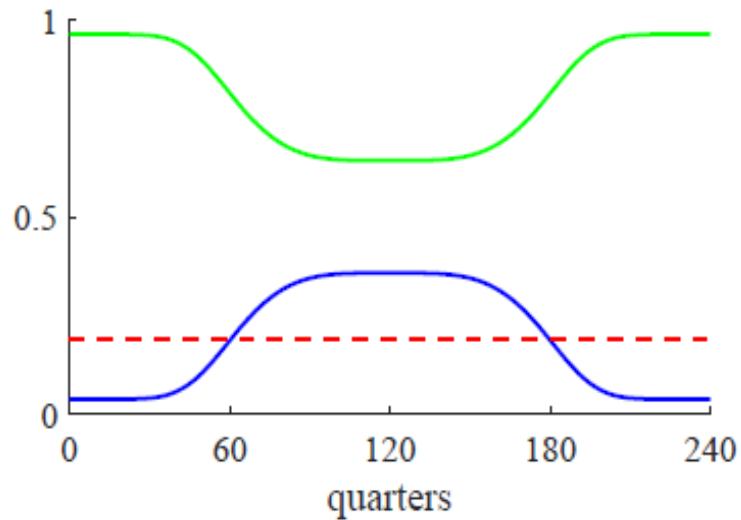


## The model of Bullard and DiCecio's

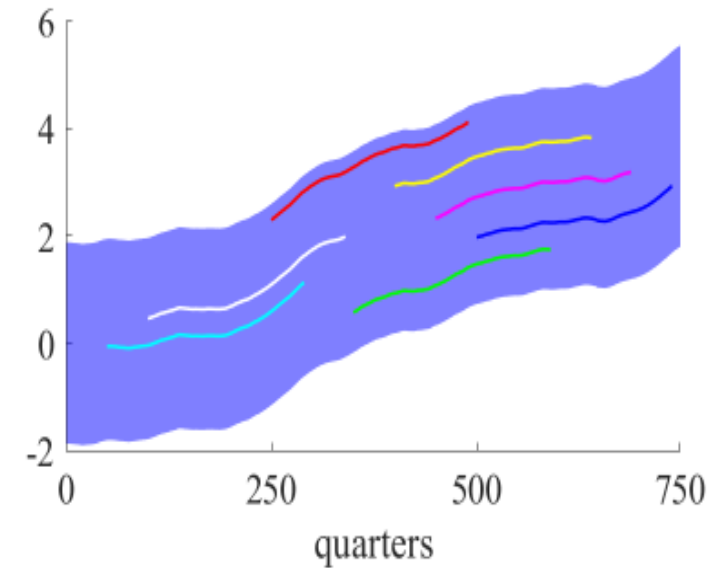
- You work more between 30 and 50

The consumption of all individuals grow at the same stochastic trend  
And inequality is stable over time

HOURS WORKED OVER THE LIFE CYCLE

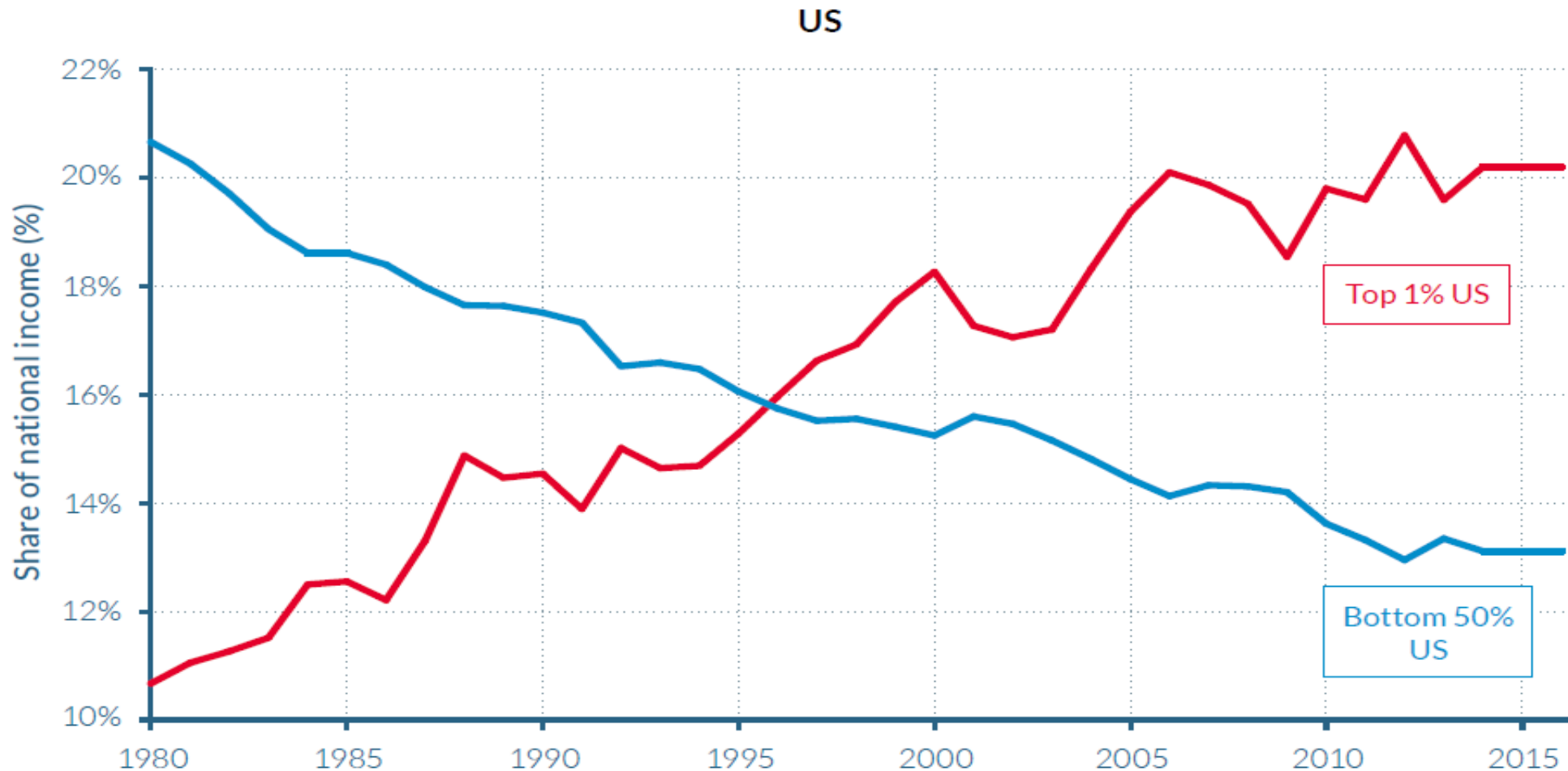


CONSUMPTION EVOLUTION

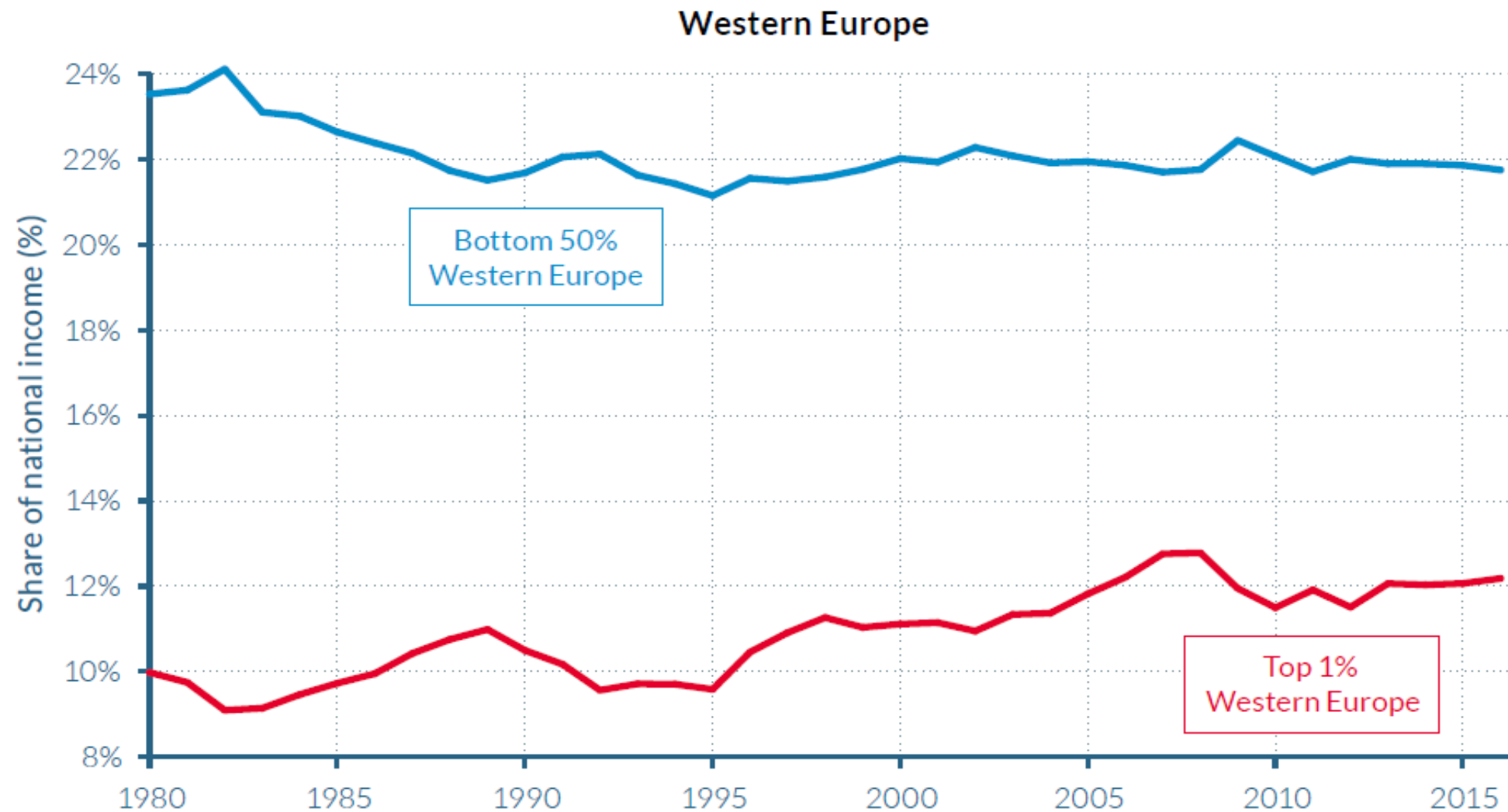


## Puzzling inequality trends (World Inequality Report, 2018)

Top 1% vs. Bottom 50% national income shares in the US and Western Europe, 1980-2016:  
Diverging income inequality trajectories

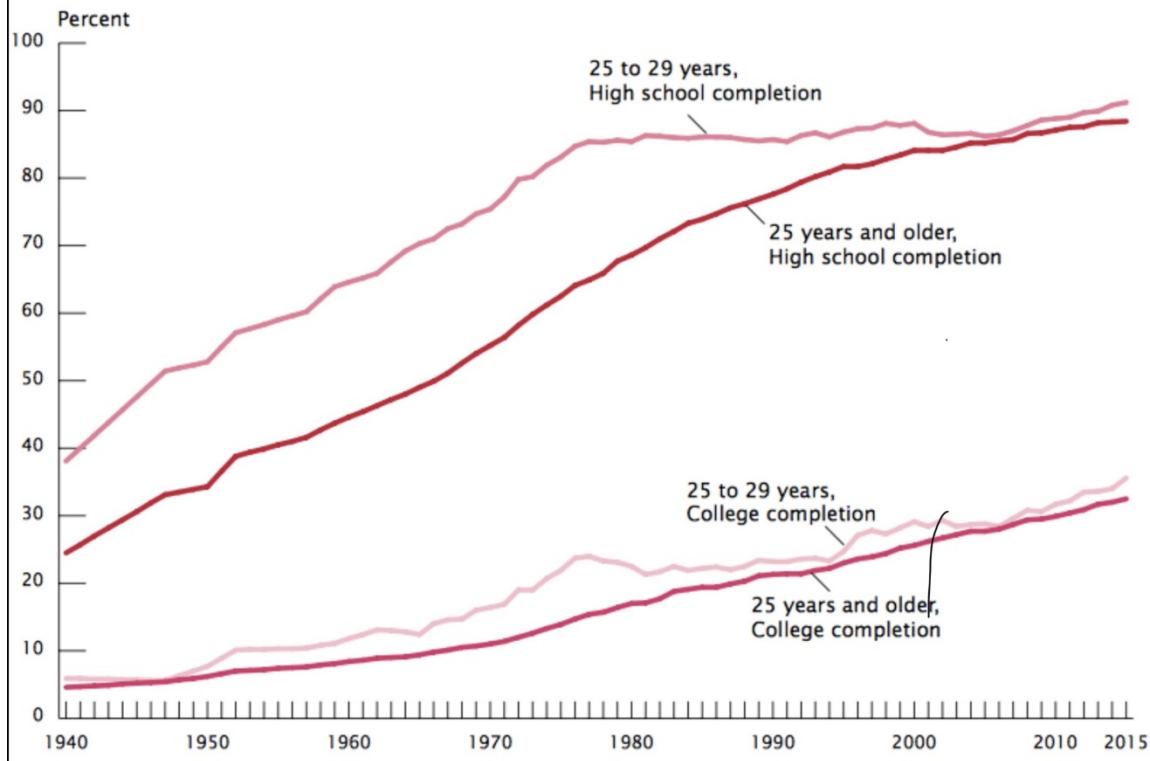


## Puzzling inequality trends (World Inequality Report, 2018)

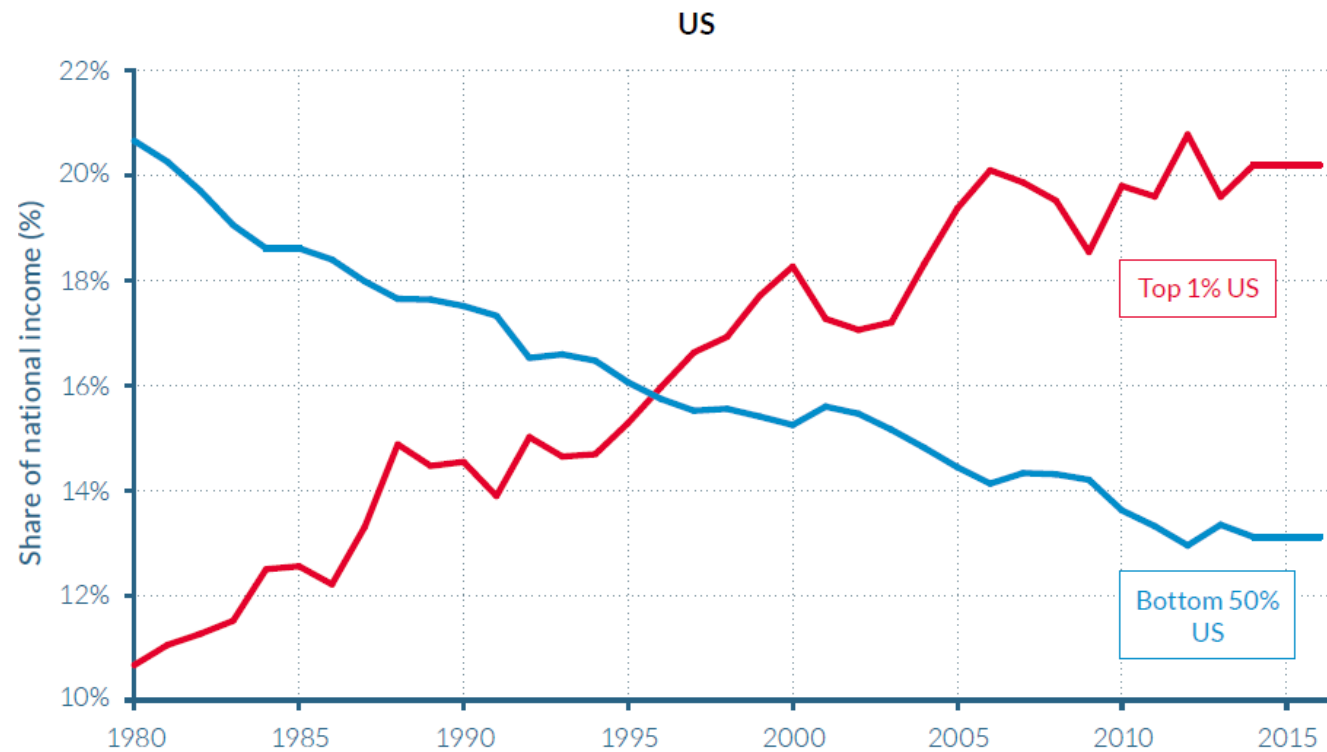


# Puzzling inequality trends: role of education?

**Percentage of the Population 25 Years and Over Who Completed High School or College by Age Group: Selected Years 1940-2015**



**Top 1% vs. Bottom 50% national income shares in the US and Western Europe, 1980-2016: Diverging income inequality trajectories**



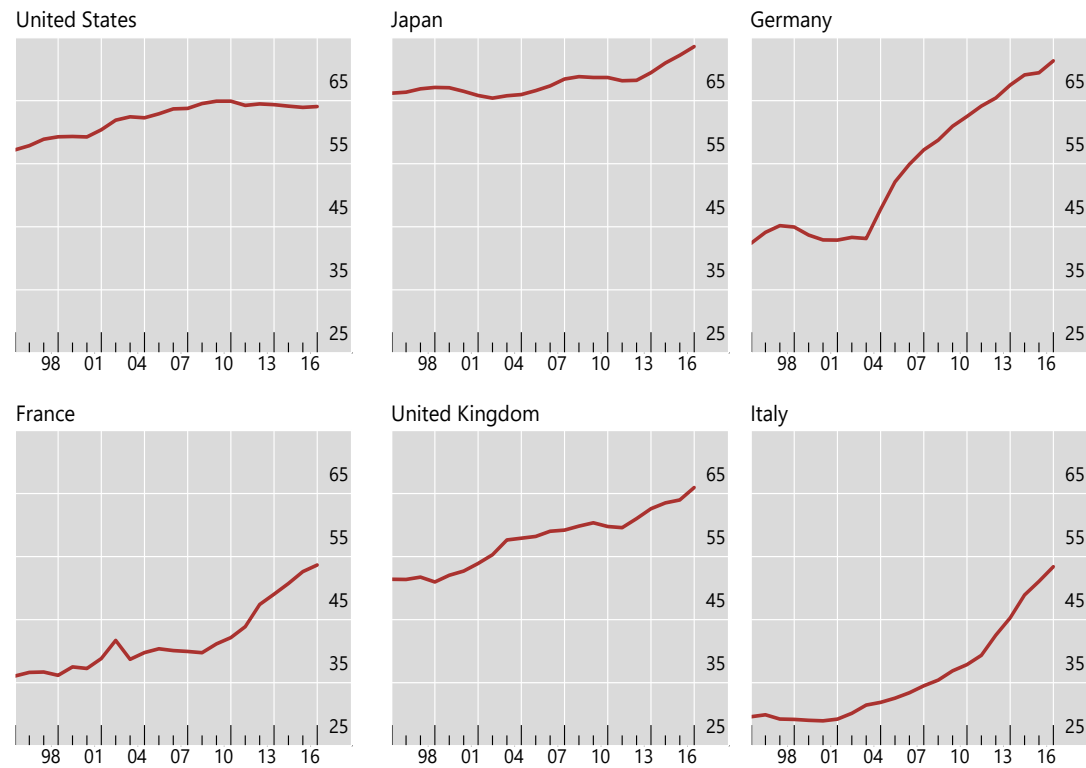
Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

# Puzzling inequality trends: role of Ageing

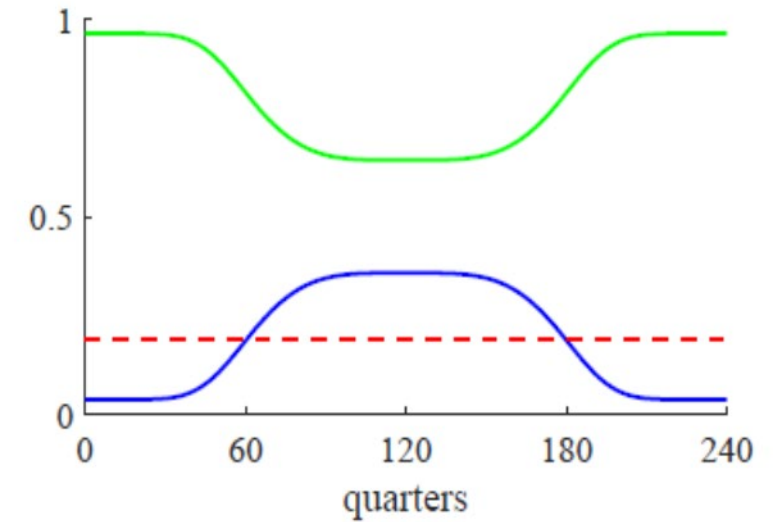
Participation rates: 55-64

In per cent of the population

Figure 3



## HOURS WORKED OVER THE LIFE CYCLE



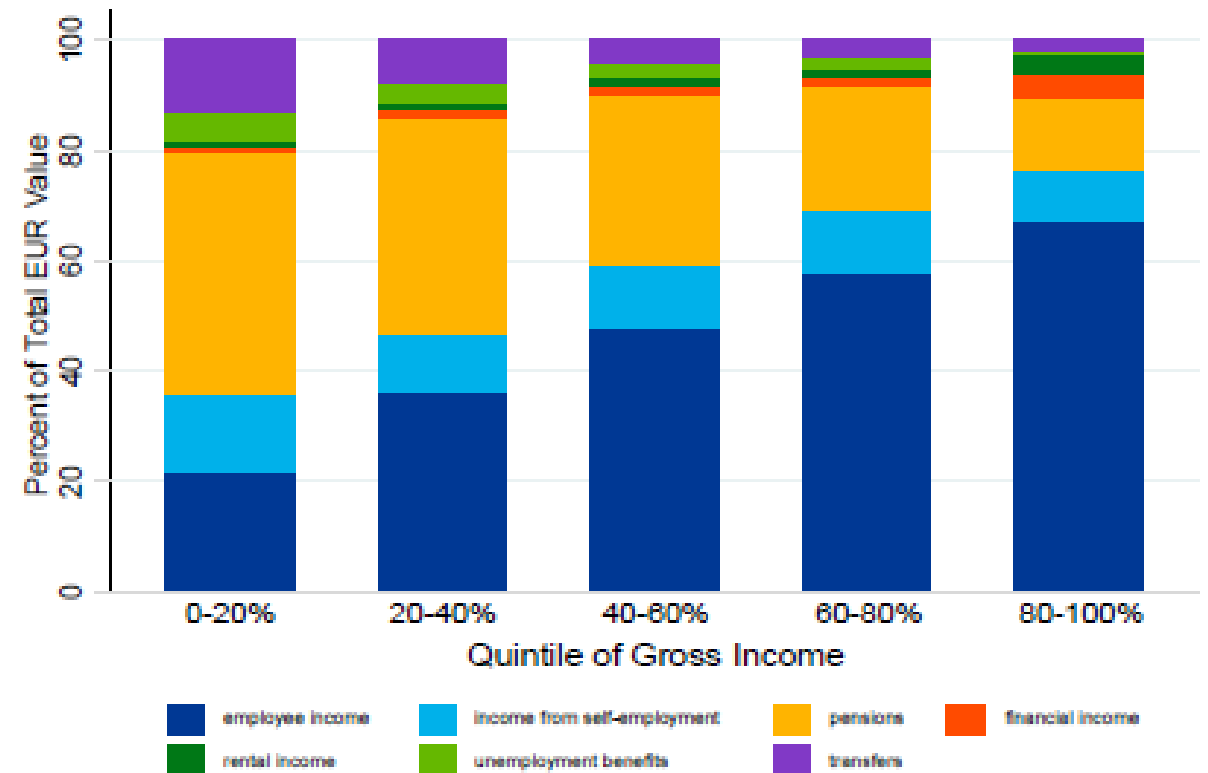


# Inequality and monetary policy: the case of the euro area

- A major critic of APP and QE:

*"It benefits the "rich" as only they have a portfolio of financial assets"*

Figure 1 Composition of Income

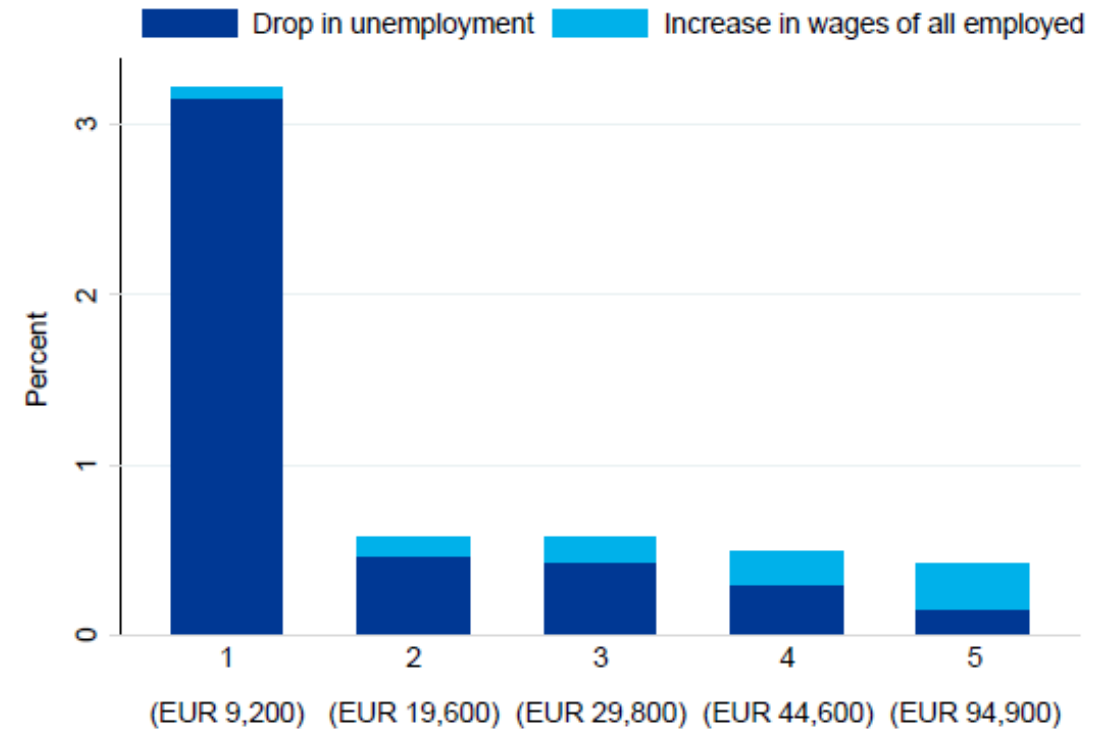


# Inequality and monetary policy: effects of the ECB APP

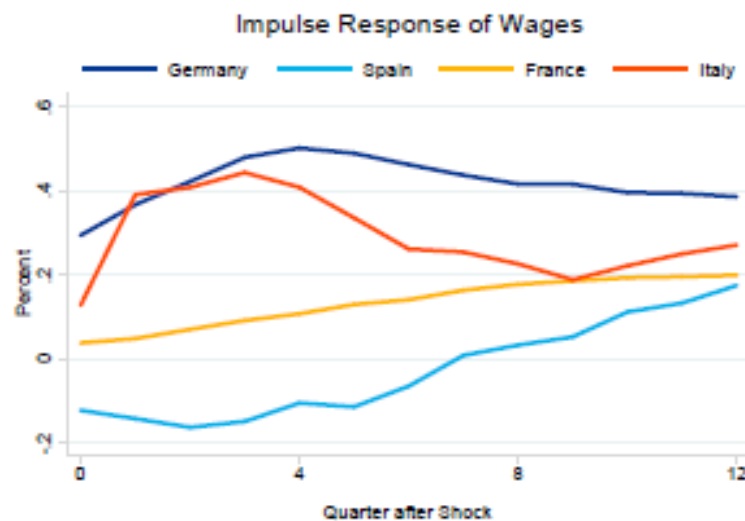
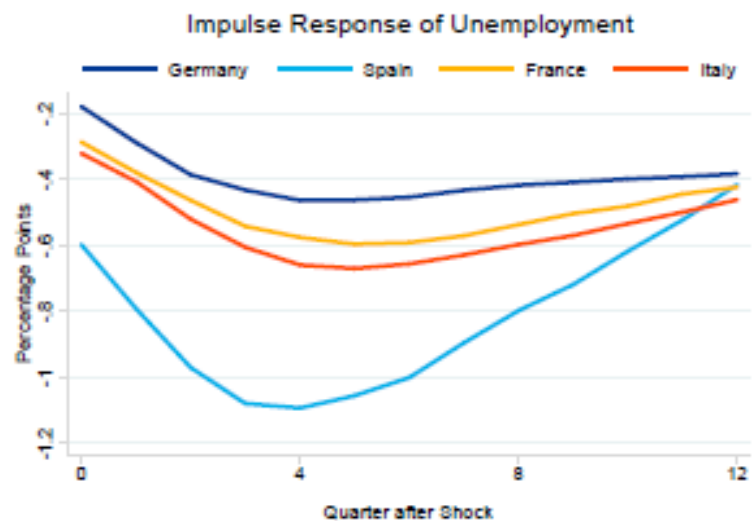
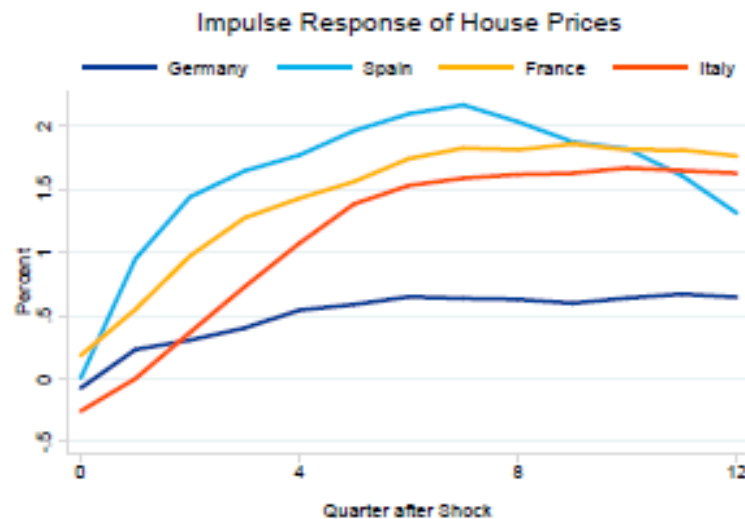
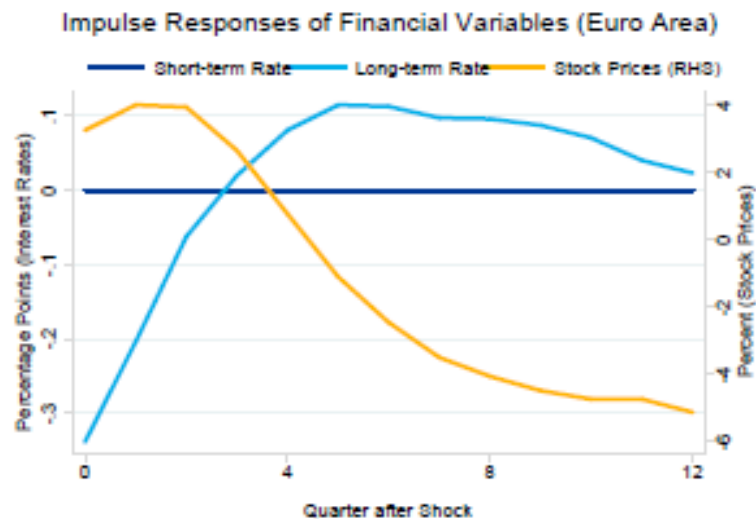
(Lenza and Slacalek, 2018)

- The dominant effect of the ECB APP has been on employment (+ 11 million jobs created in the EA since 2013)
- Unemployment has dropped from 13 to 8% with large cross-country differences
- This has benefited most the bottom quantile
- In the US, 20 million jobs were created since 2008...

Effects on mean income by quantile



# Inequality and monetary policy: effects of the ECB APP (Lenza and Slacalek, 2018)



## Conclusion

- Bullard and DiCecio have build an impressive model
  - Can it be used to look into trends?
    - what is “wrong” with education?
    - Why has the proportion of US workers over 55 grown from 12 to 25 % of the work force since 2005?
- Inequality is assumed to feed populism
  - so far somewhat less (of an increase in inequality) and less “populism” in Europe
- Monetary policies since the GFC have reduced inequality by reducing unemployment