

Households' Macroeconomic Beliefs: The Role of Education

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What We Do & Find

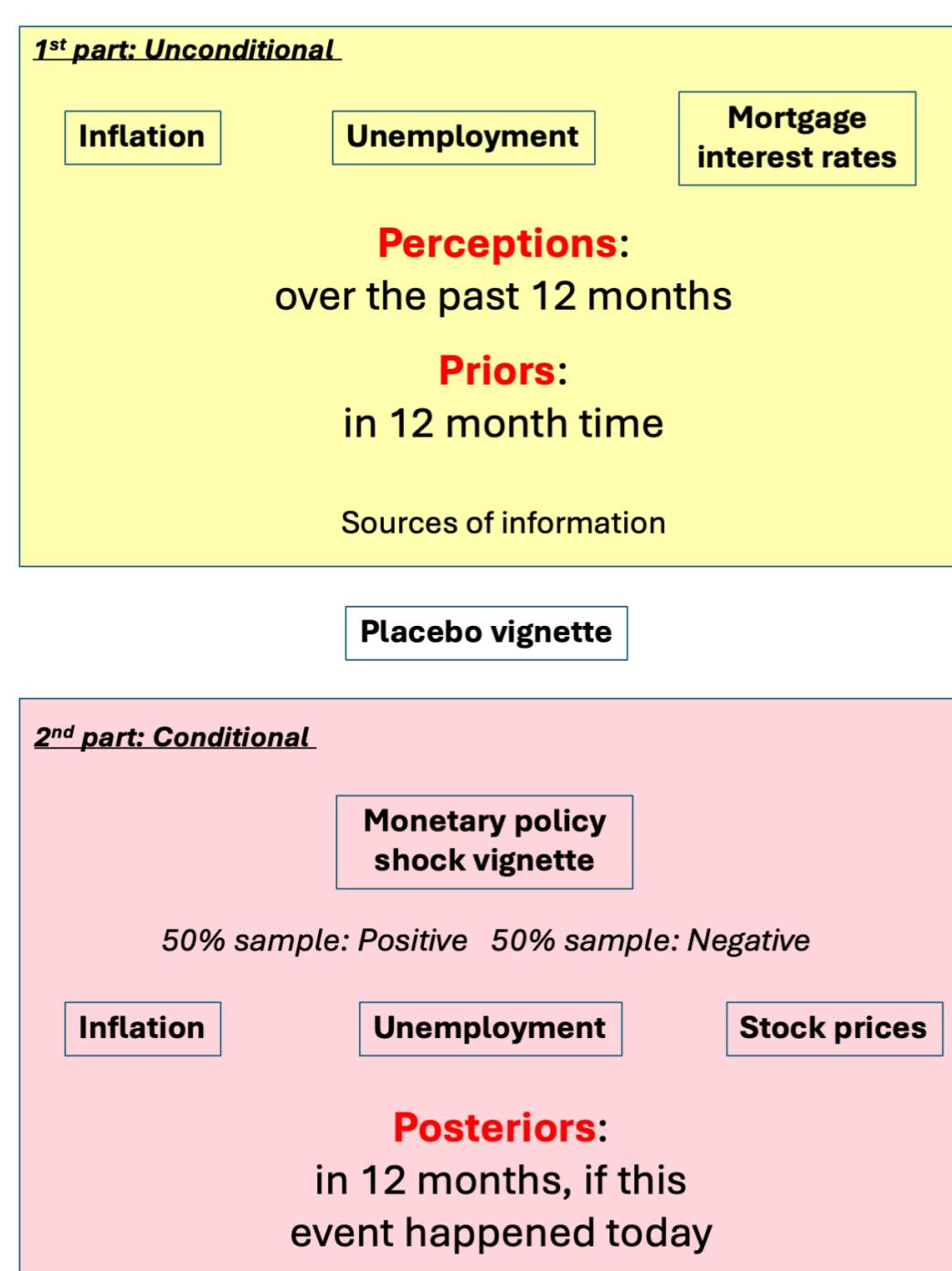
Original survey data: 1,500 Dutch households

- 1 Inflation and unemployment expectations: how do they correlate?
 - Education matters for understanding inflation/unemployment trade-off
- 2 How do expectations react to monetary policy shock?
 - Elicit beliefs via vignette
 - Highly educated:
 - effects of mp shocks in line with standard models
 - economic behavior in response to a mp shock consistent with intertemporal substitution

Data collection

- Online survey: May 2024, 1,500 respondents (1,056 after censoring)
- Sample representative of the Dutch population
- Data collected through the LISS Panel (Centerdata Research Institute)
- Matched to detailed household characteristics from LISS Panel

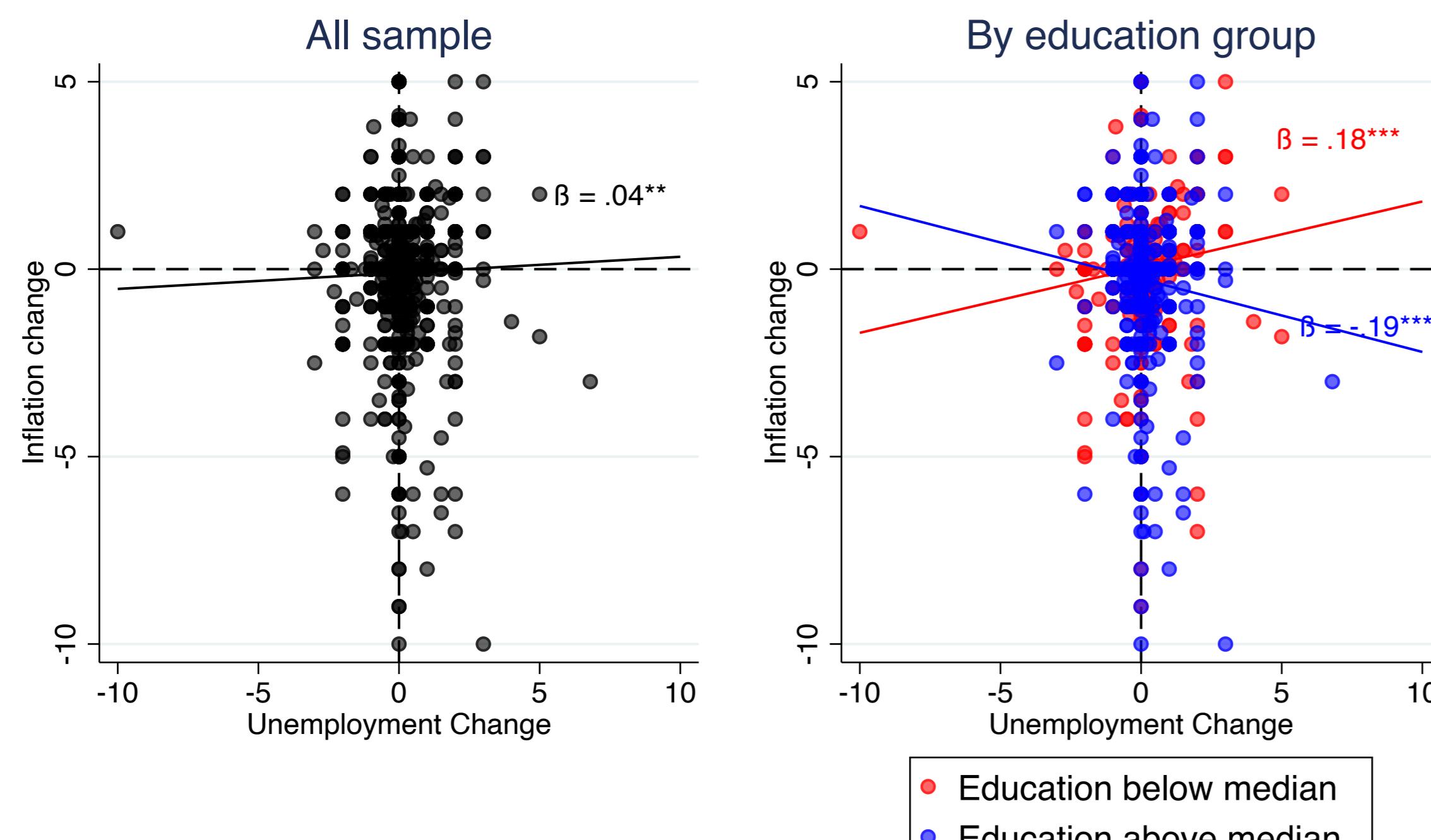
Survey structure and key variables



$$\text{Expected change} = \text{Prior} - \text{Perception}$$

$$\text{Impulse response} = \text{Posterior} - \text{Prior}$$

Inflation-unemployment correlation: Role of education



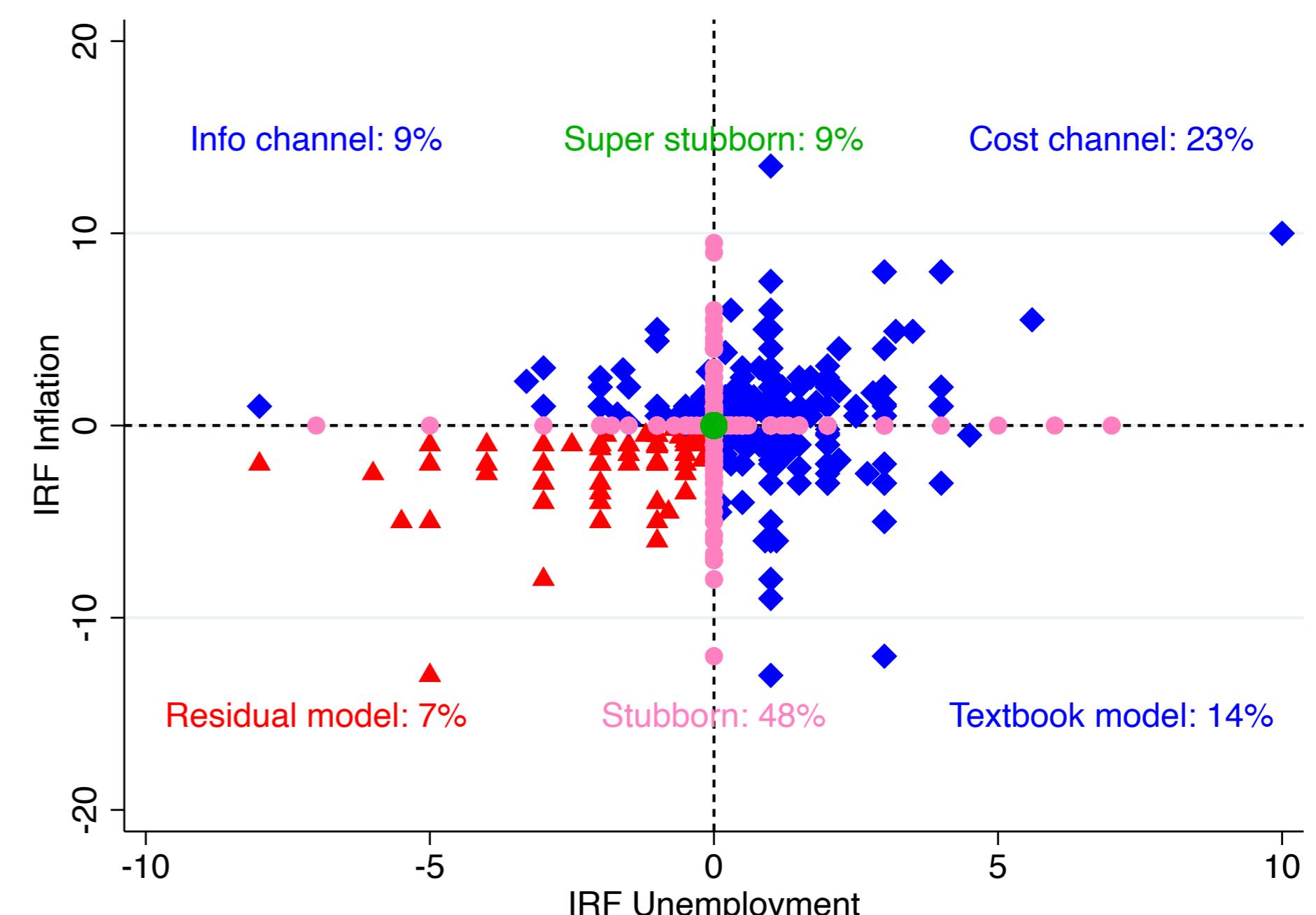
Educated households = College degree (above median education years)

Educated households understand the policy tradeoff

Identification of monetary policy shock: Vignette

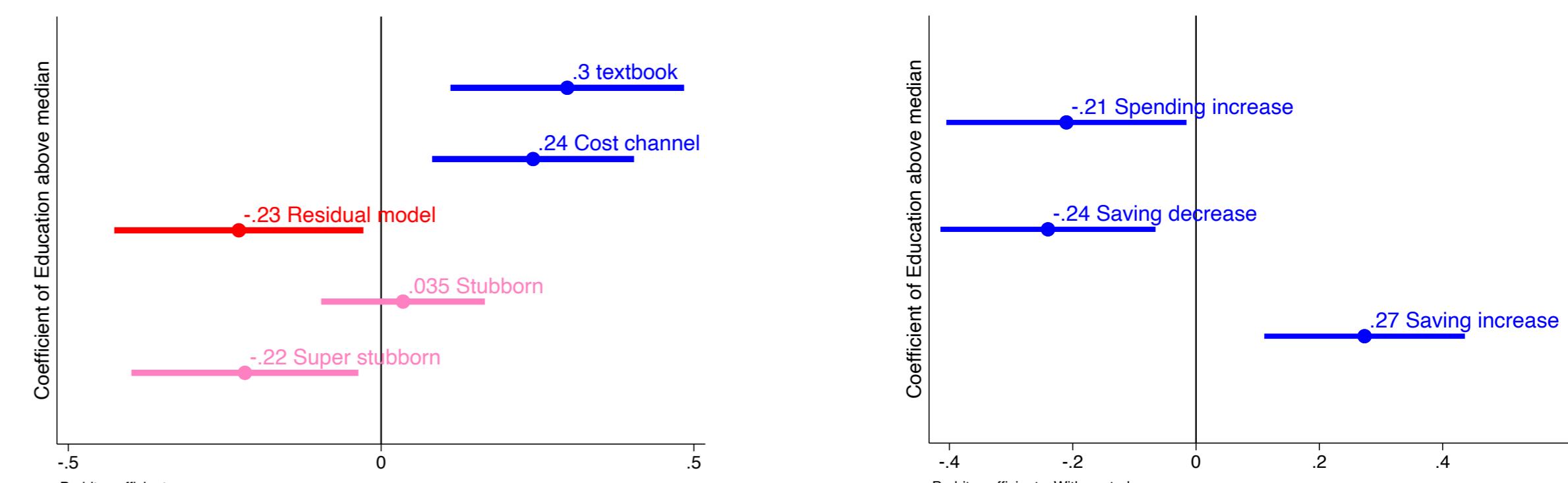
- Vignette to affect hh's beliefs
- *Imagine that the European Central Bank unexpectedly raises (lowers) interest rates from 4.5% to 5%. No other major economic events occur at the same time*
- Idea: Provide hhs with the same information about the shock all else being equal
- Questions following the vignette (posterior):
 - *What do you think inflation/unemployment/stock prices will be in 12 months if this event happened today?*

Interpretative models of monetary policy shock



- HHs potentially forming beliefs in line with known theories
 - textbook model: Smets and Wouters (2007), Bilbiie (2008, 2020, 2023), Kaplan et al. (2018), Auclert (2019), Debortoli and Gali (2024)
 - cost channel: Christiano et al. (2005), Altig et al. (2011)
 - info channel: Melosi (2017), Nakamura and Steinsson (2018)
- HHs forming beliefs not in line with known theories
 - stubborn/super stubborn: HHs not adjusting beliefs
 - residual models: HHs adjusting beliefs not in line with typical macroeconomic models

Interpretation monetary policy shocks: Role of education



Educated: mental models in line with standard ones
(textbook/cost channel)

Educated: choices coherent with intertemporal substitution
in response to mp shocks

Conclusions

Education key in interpretation of

- 1 inflation-unemployment trade-off
- 2 impacts of monetary policy shocks

Implications

- **Modeling:** Models with education-related heterogeneity to understand transmission of mp shocks
- **Policy:** financial literacy programmes. Policy communication to reach low-educated