# Households' Macroeconomic Beliefs: The Role of Education


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## What We Do & Find

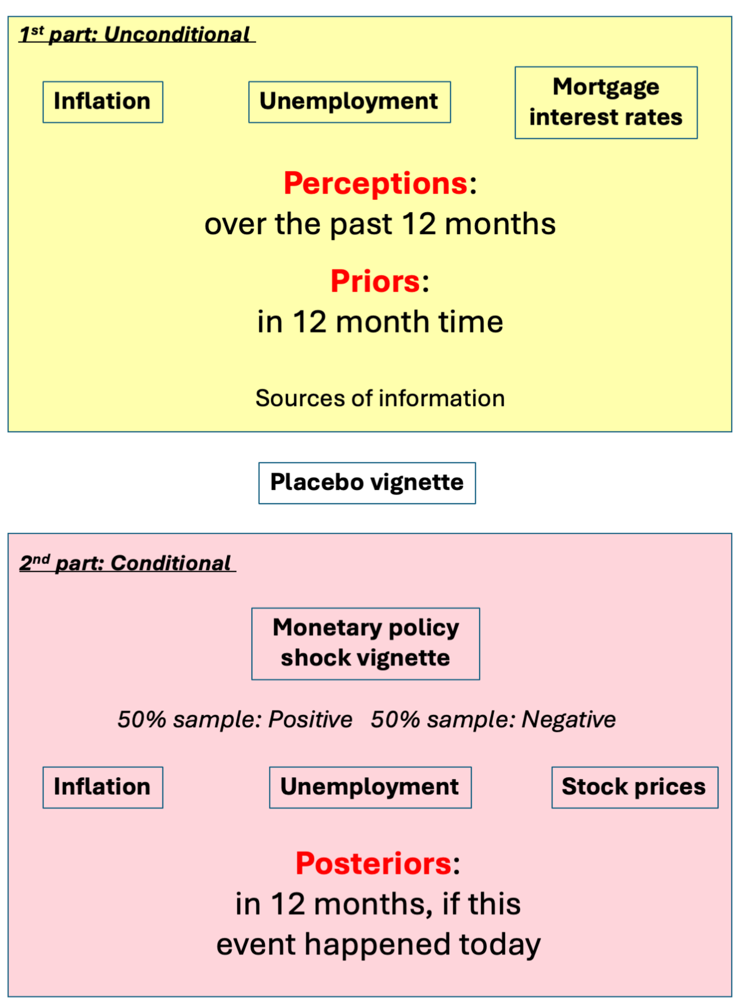
Original survey data: 1,500 Dutch households

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

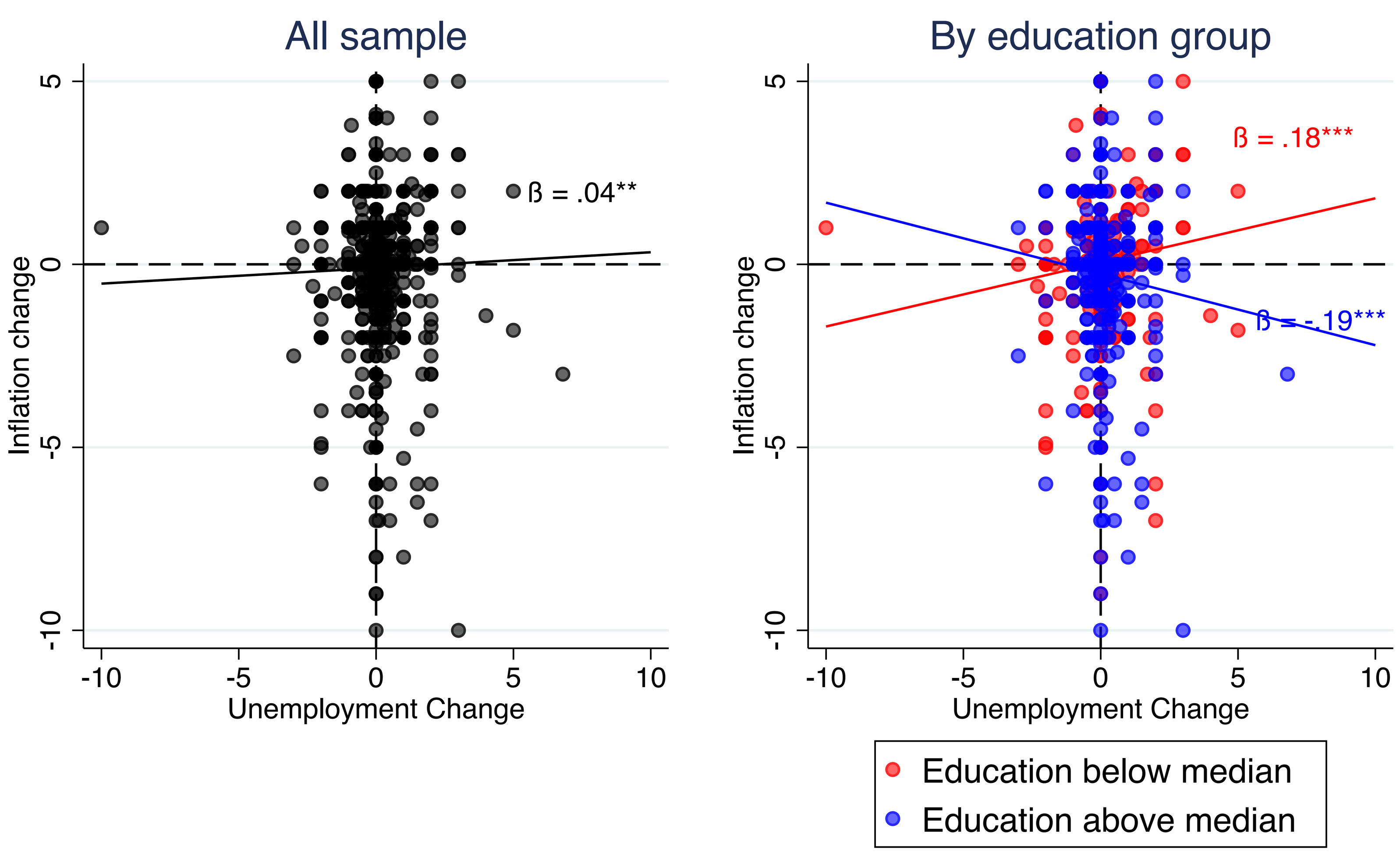
## Survey structure and key variables




Expected change = Prior - Perception

Impulse response = Posterior - Prior

## Inflation-unemployment correlation: Role of education



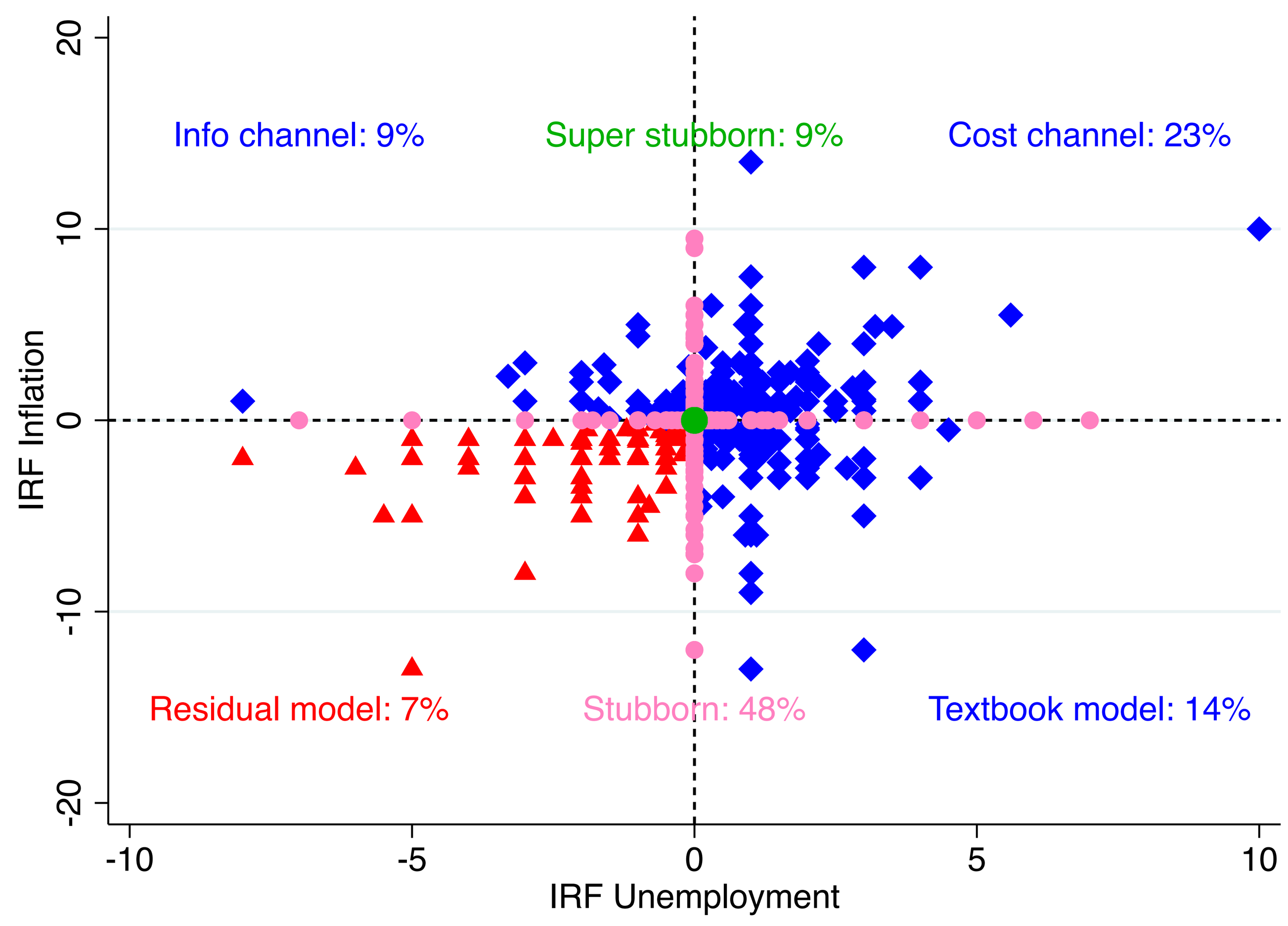

Educated households = College degree (above median education years)

Educated households understand the policy tradeoff

## Identification of monetary policy shock: Vignette

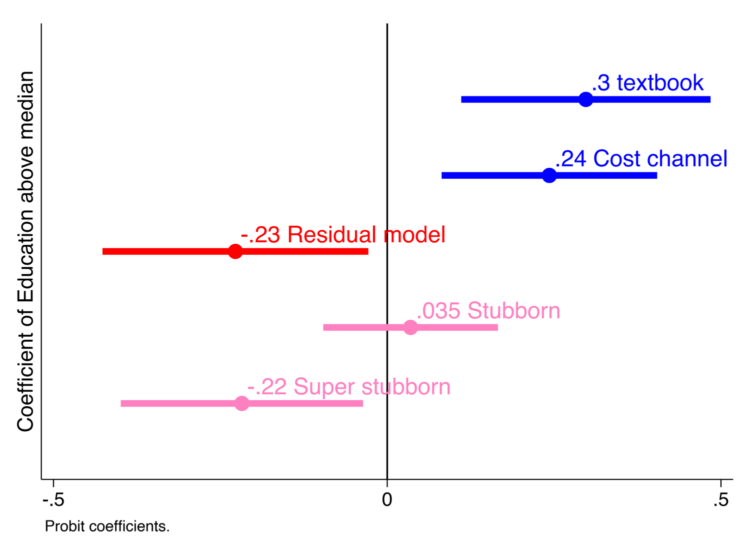
- Vignette to affect hh's beliefs
  *Imagine that the European Central Bank unexpectedly raises (lowers) interest rates from 4.5% to 5%. No other major economic events occur at the same time*
- Idea: Provide hhs with the same information about the shock all else being equal
- Questions following the 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

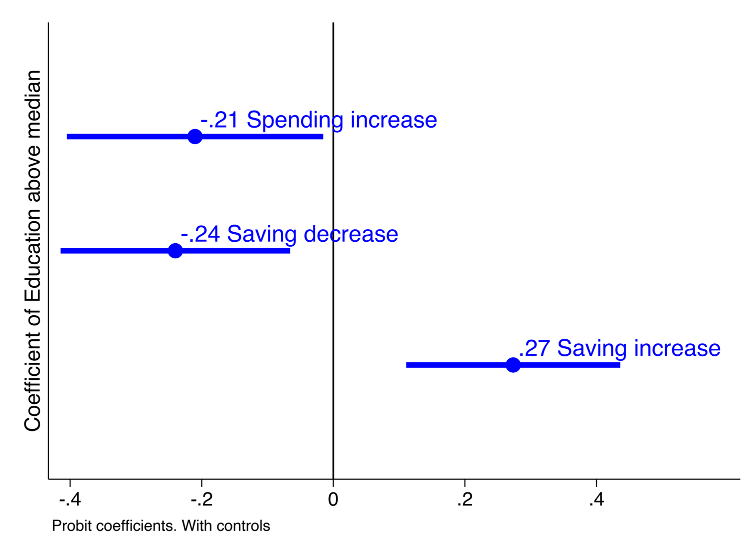



- HHs potentially forming beliefs in line with known theories
  - textbook model: Smets and Wouters (2007), Bilbiie (2008, 2020, 2023), Kaplan et al. (2018), Auclert (2019), Debortoli and Galí (2024)
  - cost channel: Christiano et al. (2005), Altig et al. (2011)
  - info channel: Melosi (2017), Nakamura 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
- Policy: financial literacy programmes. Policy communication to reach low-educated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