50 Basis Points of Marriage Counseling: Monetary Policy Shocks and Marital Stability

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"Inspirational" quote

I love being divorced. Every year has been better than the last. By the way, I'm not saying don't get married. If you meet somebody, fall in love and get married. Then get divorced. Because that's the best part.

— Louis C.K.

Research Question

- *How do monetary policy shocks (i.e. changes in disposable income) affect the likelihood of divorce?*

- *Interest rate shocks as exogenous variation i disposable income*: monetary policy shocks interacted with an individual's net interest exposure (debt less bank deposits)
- *Working hypothesis*: hikes lower disposable income - less tempting to incur cost of divorce.

Main results

- **Main result**:
  Interest-rate surprises (changes in disposable income) affect the probability that a married couple separates.
  - Interest rate hikes substantially *reduce* the probability of divorce for indebted households.
  - Interest rate cuts *increase* slightly the likelihood of divorce.
- **Heterogeneity**
  Below-median income couples affected, but high income couples' divorce probability not affected by interest rate shocks.
- **Asymmetry**
  Rate hikes decrease divorce likelihood more than rate cuts increase it.

Why Study Divorce?

- **High social cost.** Long-run effects on adult well-being, child development, and intergenerational mobility.
- **Macro relevance.** Income shocks from layoffs, housing busts, or interest-rate moves originate in macro policy yet ripple through the family - an under-researched feedback loop.
- **Policy design.** What destabilise marriages helps target safety net programs and calibrate monetary or fiscal policy with family outcomes in mind.
- **Equity dimension.** Evidence suggests low-income, high-debt households are most vulnerable; understanding mechanisms can inform distributional policy and financial regulation.
- **Theory testing.** Family-level responses to well-identified shocks provide a clean lab for evaluating Becker's surplus framework and modern bargaining models.

Knowledge gaps that we contribute to fill

- We don't know much about how *exogenous* and *bi-directional* changes in income affect decision to divorce
- We know little to nothing about how monetary policy affect family life and marital stability
- Asymmetry and heterogeneity of response is novel

Wealth shocks give mixed bag of results

Prior studies identify wealth effects on divorce using lottery windfalls or income using policy reforms:

- Hankins (2011): no effect of lottery prize on divorce
- Golosov (2024) lottery wins $\rightarrow$ lower divorce rates
- Cesarini (2023): lottery prize reduce divorce risk for men and slightly raise it for women.
- Berniell (2020): pension reform $\rightarrow$ increased permanent income for older women in Argentina - increased divorce rate

Our contribution

- Problem in the literature to find exogenous sources of income variation. We address this by using monetary policy shocks interacted with rate exposure.
- We are able to show effect of *bi-directional* liquidity changes, unlike unilateral positive lottery windfalls.
- Negative income shocks important, yet very little evidence: Individual layoffs raise divorce risk, whereas disability and plant closures do not-suggesting it's the partner layoff's negative signal, not lost income, that matters (Charles and Stephens, 2004).
- We shed light on a previously unknown channel of monetary policy transmission

Becker's Surplus Theory

- **Marital surplus:** The extra joint utility a couple can obtain together, above what each spouse could enjoy on their own.
- **Stay-or-separate rule:** A marriage continues as long as the surplus can be split so that both spouses are at least as well off as they would be outside the marriage.
- **Implications:**
  - Shocks that *raise* the surplus or *lower* outside options tend to *reduce* divorce risk.
  - Shocks that *lower* the surplus or *raise* outside options tend to *increase* divorce risk, unless the spouses can fully compensate each other.
- **Our setting**: The policy shocks shifts each spouse's *outside option* through disposable income, allowing us to test the surplus framework with a new, macro-driven source of variation.

Divorce Is Costly

- **Legal and court fees**: Attorney retainers, filing costs, mediation or arbitration services.
- **Two households instead of one**
  - Duplicate rent or mortgage, utilities, insurance.
  - New furnishings and deposits for the spouse who moves out.
  - Lost scale economies: Shared fixed expenses (internet, streaming, groceries in bulk)
- **Asset division and liquidation**: Real-estate fees from selling family home often; possible capital-gains tax; early withdrawal penalties on pensions may apply.
- **Ongoing obligations**: Child support and (where applicable) alimony reduce disposable income for the payer while increasing administrative costs.
- **Benefit losses**: Loss of spousal health coverage or survivor benefits tied to pensions and life insurance.

Interpreting rate changes as exogeous Income Shocks

- For mortgage-holding households, a policy-rate hike raises monthly payments almost immediately - functionally identical to a negative disposable-income shock.
- Norway is an especially well-suited setting:
  - **Pass-through**: Both mortgage and deposit rates react strongly to policy-rate changes (Juelsrud, Nordal and Winje 2020).
  - **Floating rates**: About 90-95 percent of mortgages carry floating rates.

Why policy rate *shocks*?

- Monetary-policy surprises are orthogonal to individual job loss or earnings decisions, giving a cleaner quasi-experiment than most labor-market shocks.
- Household exposure is predetermined and exogenous to both the monetary-policy surprise and the divorce hazard.
- **Heterogeneous exposure**
  - *Net debtors*: face a direct hit to after-tax income.
  - *Net creditors*: may gain (higher deposit rates).
  - *Fixed-rate borrowers*: largely insulated in the short run.

What we do: Data

- Extract the population of married Norwegians aged 20-40 in 2005, and track them until 2018 (source: microdata.no)
- 411,000 individuals
  - Marital status
  - Individual wage and household income
  - Number for children
  - Age
  - Years married
  - Interest rate exposure: Dept minus bank deposit
- Monetary policy shocks (sudden shifts in disposable income)
- Interact the monetary policy shocks with the households' interest rate exposure

Institutional Timing of Divorce in Norway

- Couples must file for **legal separation** with the local county governor (*Statsforvalteren*).
- Mandatory **one-year waiting period** before divorce is final.
- Processing time: 3 weeks if both apply; appr. 5 weeks if only one spouse applies.[1]
- **Outcome variable**: first transition from *married* to *separated*, the decision most likely affected by contemporaneous economic shocks.

[1] https://www.statsforvalteren.no

Exogenous Income Shocks

- Annualised series of high-frequency **monetary-policy surprises** from Holm et al. (JPE, 2021).
- Treat shocks as *transient liquidity hits*: policy-rate hikes (cuts) reduce (raise) disposable income for households with floating-rate debt.
- Identification: interact shock with *net interest exposure* to obtain household-specific cash-flow changes.
- Net Interest Exposure (NIE) = Debt - Bank Deposits

Summary stats

Table 1 Summary Statistics

Variable	Mean	Std. Dev.	Count	1%	25%	50%	75%	99%
Net Interest Exp.	1.1371	1.4105	5,907,372	-1.02	0.0060	0.776	1.79	6.91
Policy shocks	0.1829	0.4026	5,907,372	-0.51	-0.11	0.195	0.64	0.70
Policy shocks positive	0.2764	0.2879	5,907,372	0	0	0.195	0.64	0.70
Separation indicator	0.0180	0.1331	5,485,414	0	0	0	0	1
Number of Children	1.6692	1.1035	5,907,372	0	1	2	2	4
Wage (individual-level)	0.3992	0.3045	5,907,372	0	0.189	0.381	0.548	1.51
Income (household-level)	0.5877	0.3787	5,136,177	0.0163	0.368	0.499	0.6930	2.48
Age	40.4927	5.9641	5,907,372	26	36	41	45	52
Years Married	19.0233	5.4346	5,907,372	3	16	19	23	27

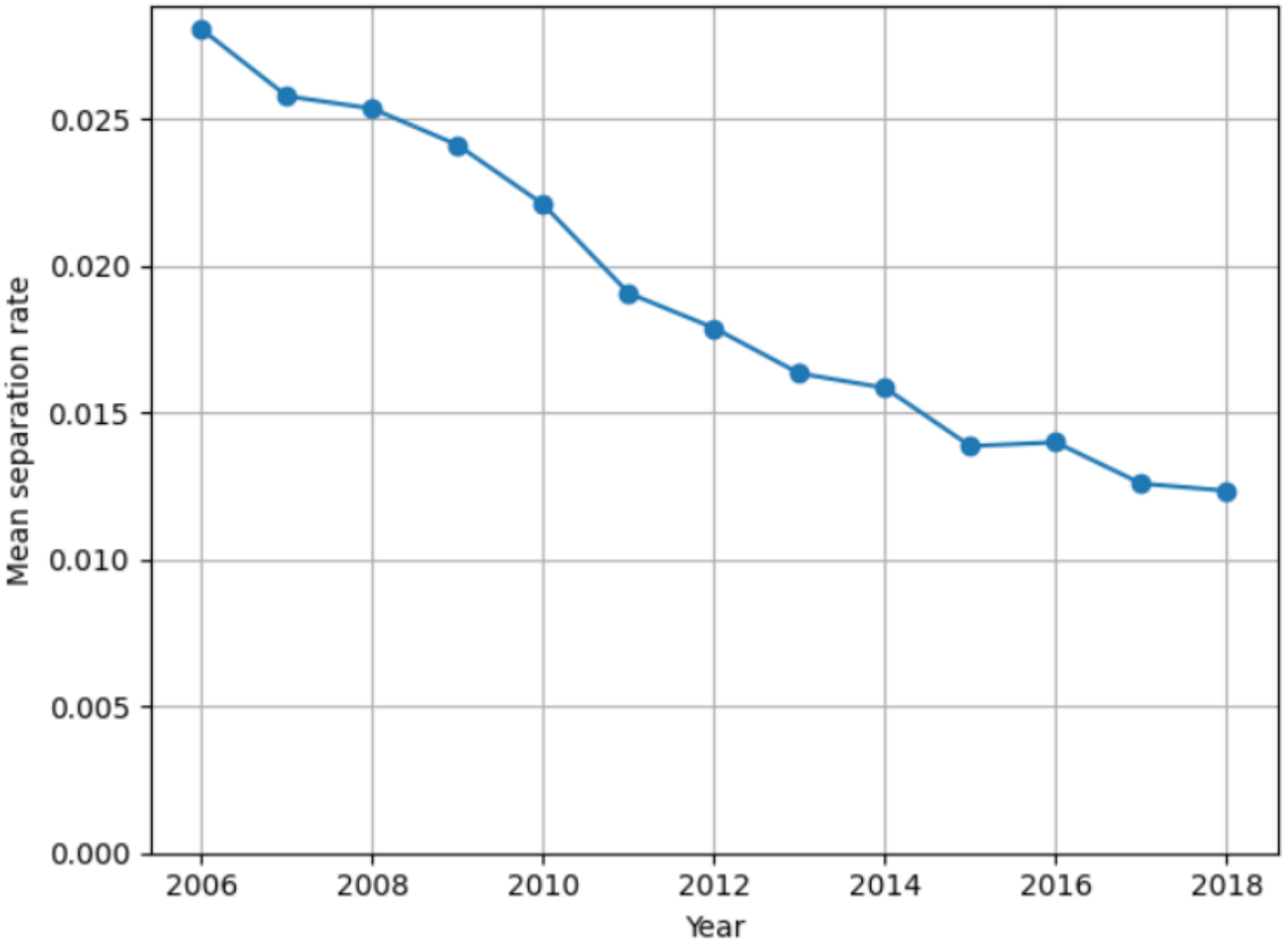

Figure: Separation rate over time

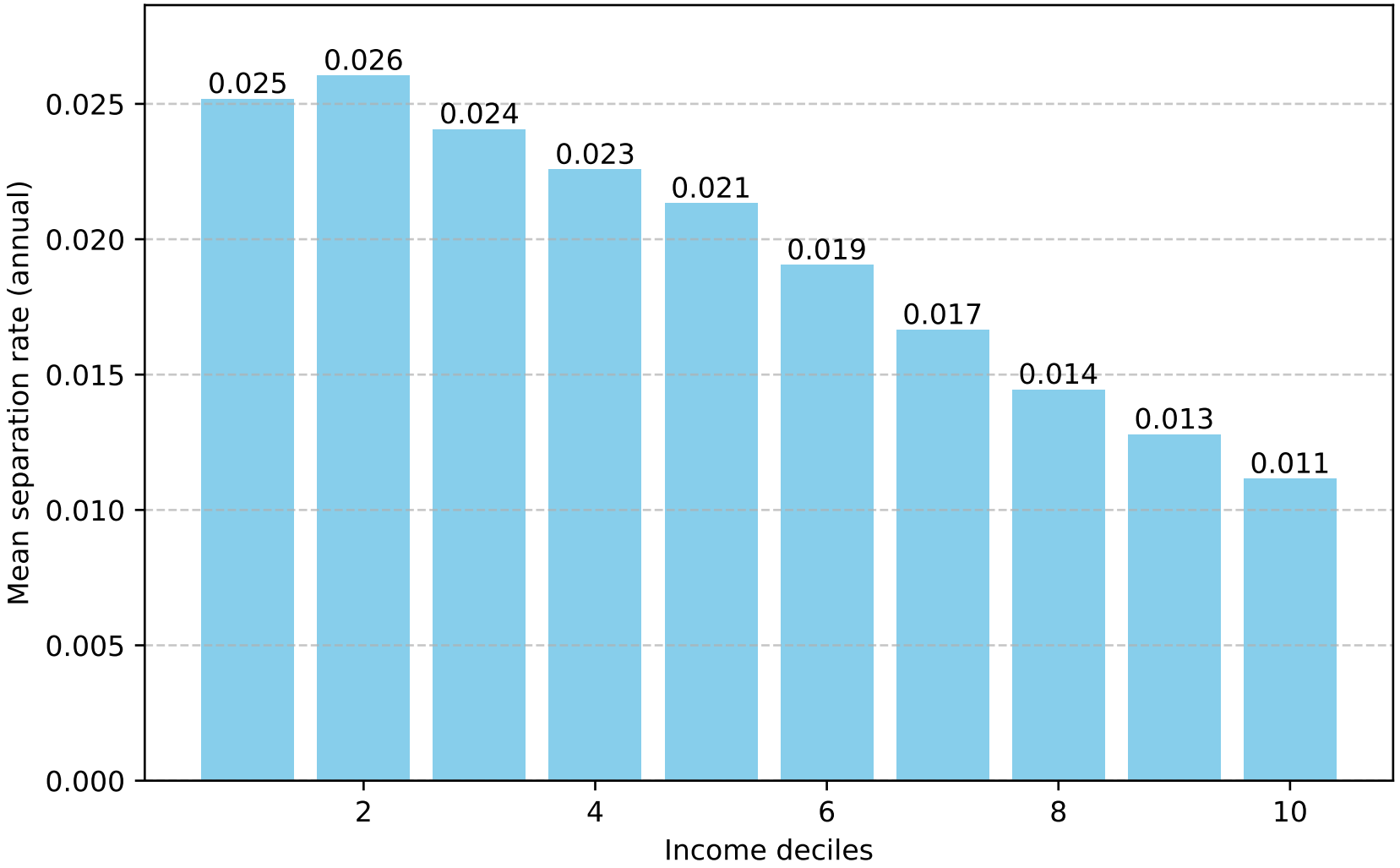

Figure: Separation rates by income decile

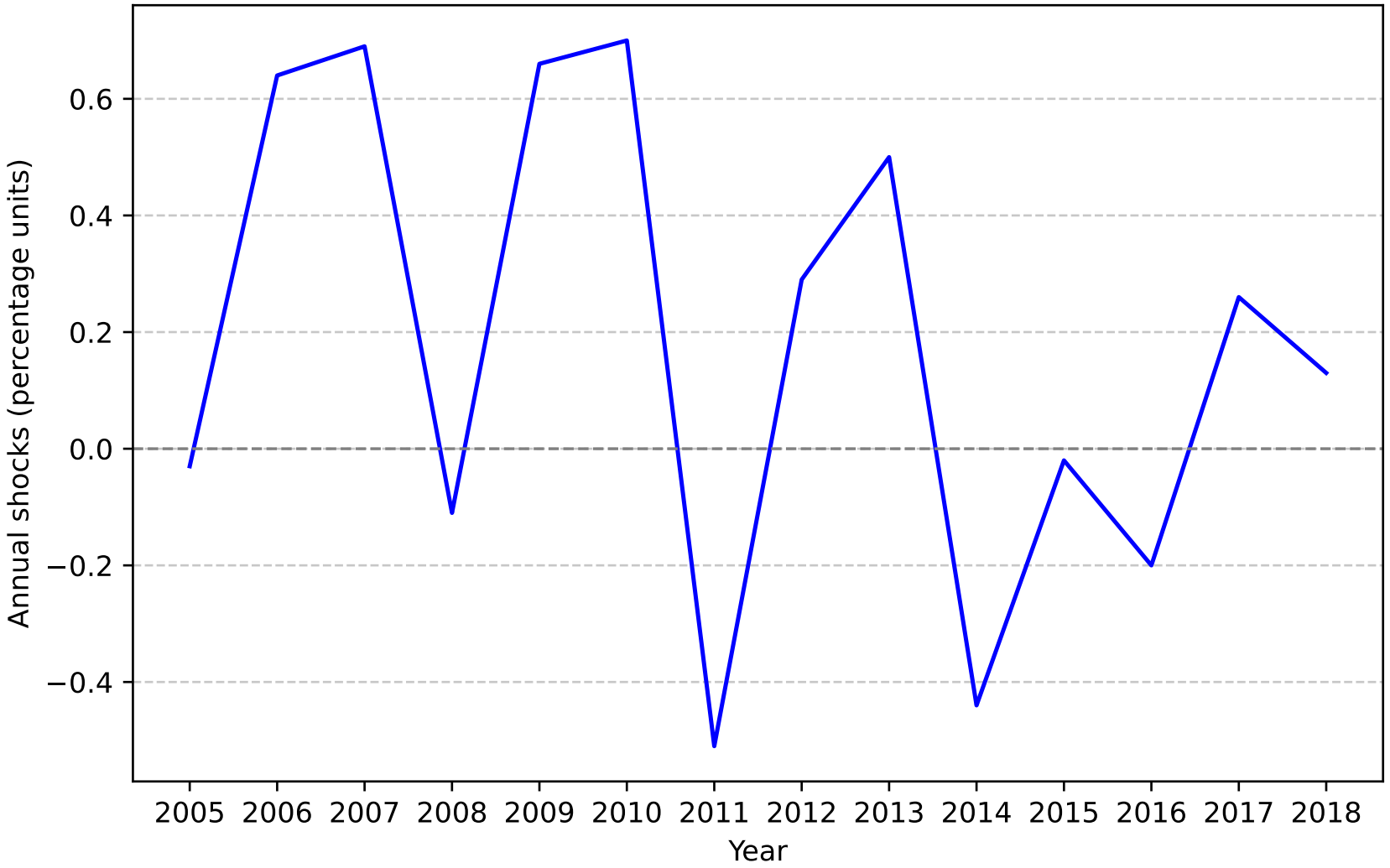

Figure: Monetary policy shocks, 2005-2018 (Holm et al., 2021)

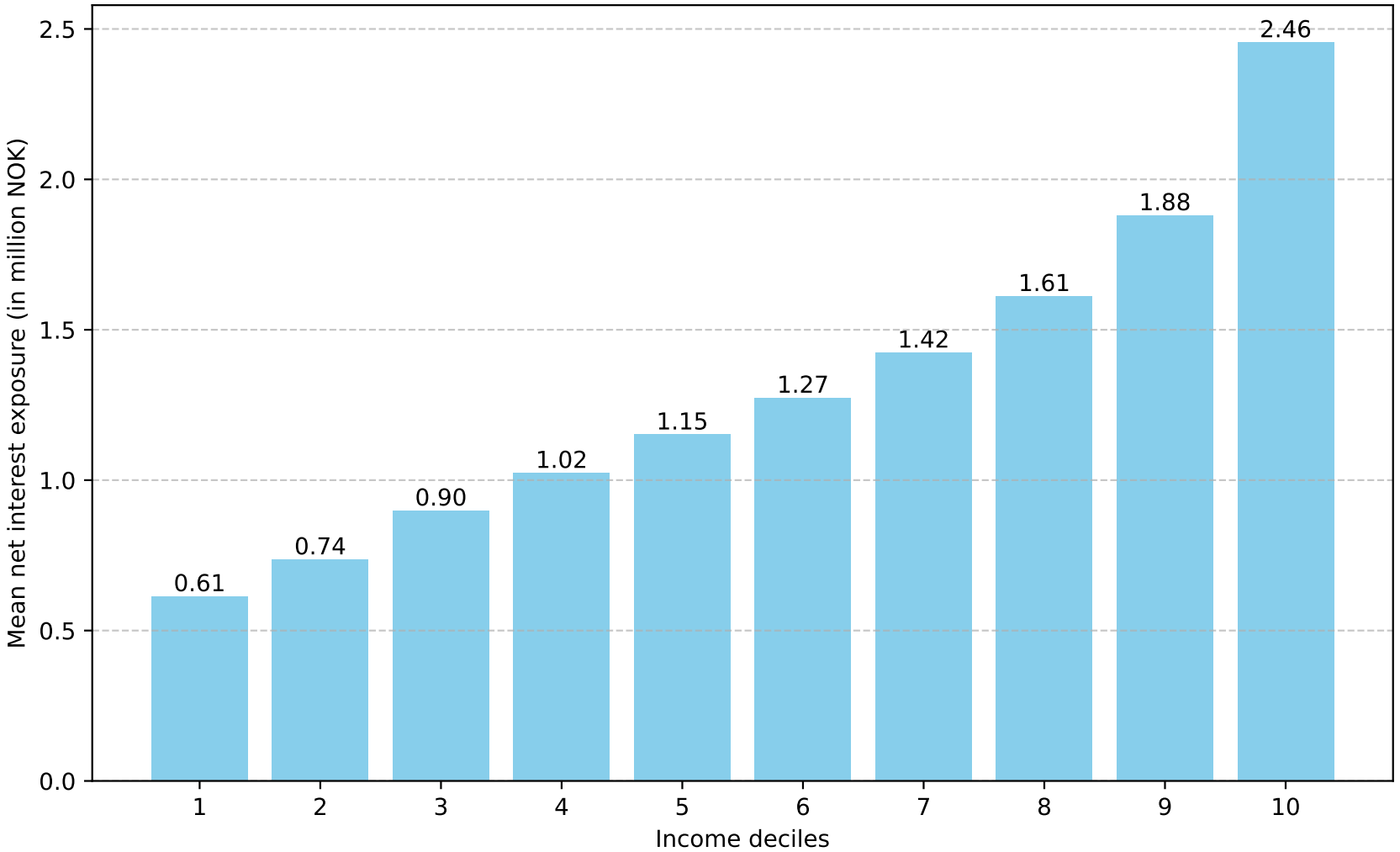

Figure: Interest exposure by income decile

Empirical Specification: Individual-level panel regression

$$\text{Separation}_{it} = \beta_1 \text{Shock}_t + \beta_2 \text{NIE}_{it} + \beta_3 (\text{Shock}_t \times \text{NIE}_{it}) + \boldsymbol{\gamma}' \mathbf{X}_{it} + \alpha_i + \delta_t + \varepsilon_{it}$$

Where $\mathbf{X}_{it}$ includes: Years married, Individual wage, Total household income, Number of children

Fixed effects and error term: individual and year fixed effects. Error term is clustered on the couple-level

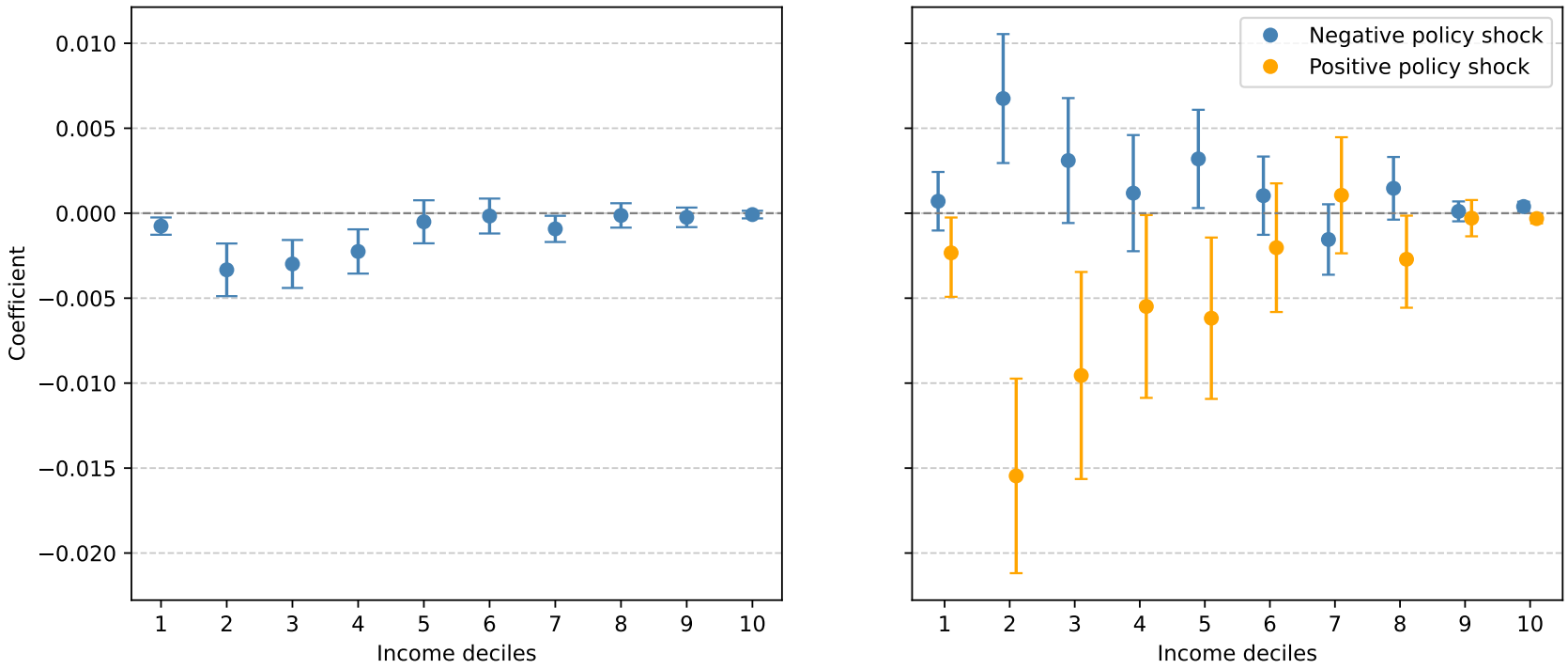

Figure: Baseline

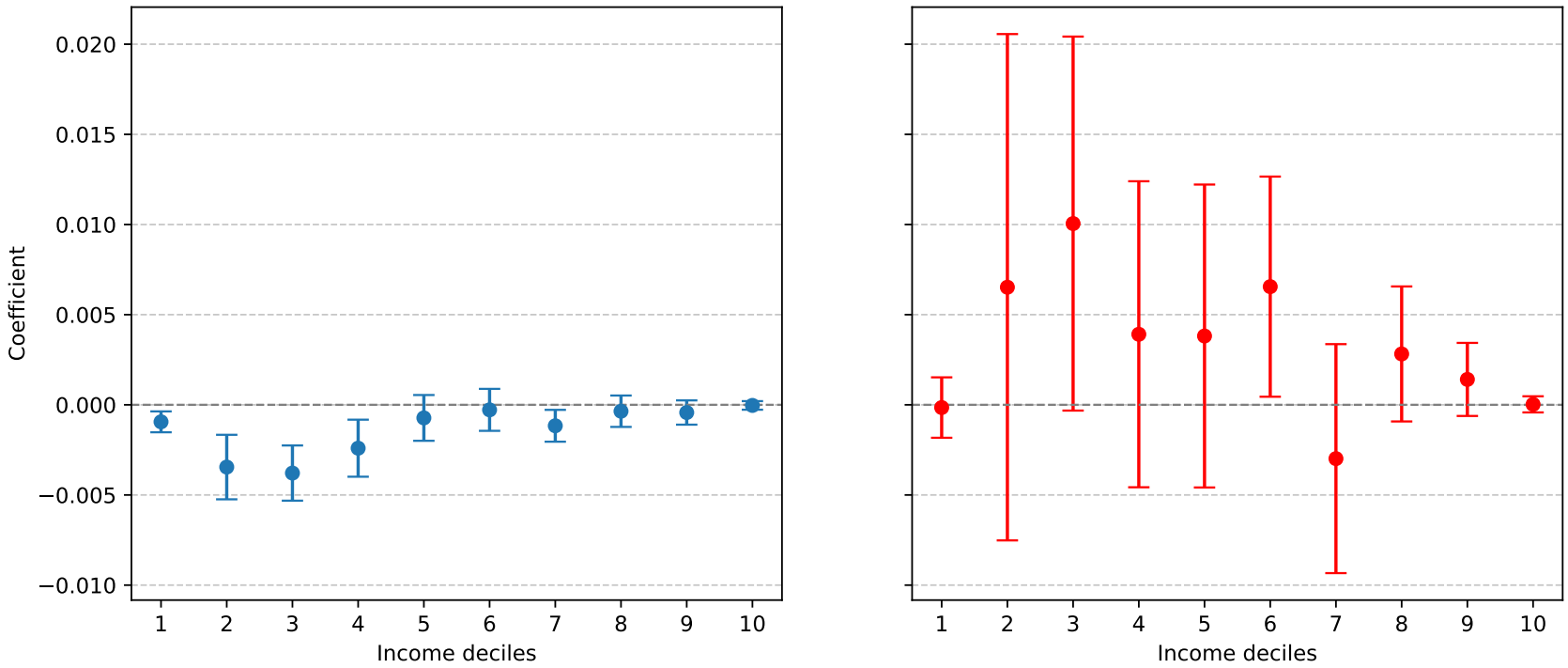

Figure: Net debtors vs net creditors

Main Findings (economic significance)

- Full sample
  - Interest exposure nudges the divorce rate up by about 2 % of the mean.
  - A typical policy shock almost entirely offsets that increase, leaving aggregate divorce essentially unchanged.
- Below-median households
  - One-s.d. higher exposure lowers separations by roughly 6 %.
  - When a policy shock occurs, the decline deepens to about 9 %.
  - In other words, nearly one in ten expected divorces is averted during a tightening episode.
- Upper-income households
  - Estimated effects are below one percentage point of the mean and statistically weak, indicating substantial budget slack.

Why below-median couples respond, but high-income couples do not

Below-median income couples:

- Fixed housing and utility expenses absorb a large fraction of disposable income.
- Even modest increases in debt-service payments push such households against their budget constraint.
- Remaining married allows partners to share these indivisible fixed costs; separation would replicate them for each partner.
- Consequently, an adverse cash-flow shock sharply reduces the incentive to dissolve the marriage.

Above-median income couples:

- Fixed expenses constitute a smaller share of disposable resources.
- Interest-rate shocks can be absorbed without meaningful reductions in discretionary consumption or saving.
- Because the budget constraint is non-binding, the calculus of staying together versus separating remains essentially unchanged.

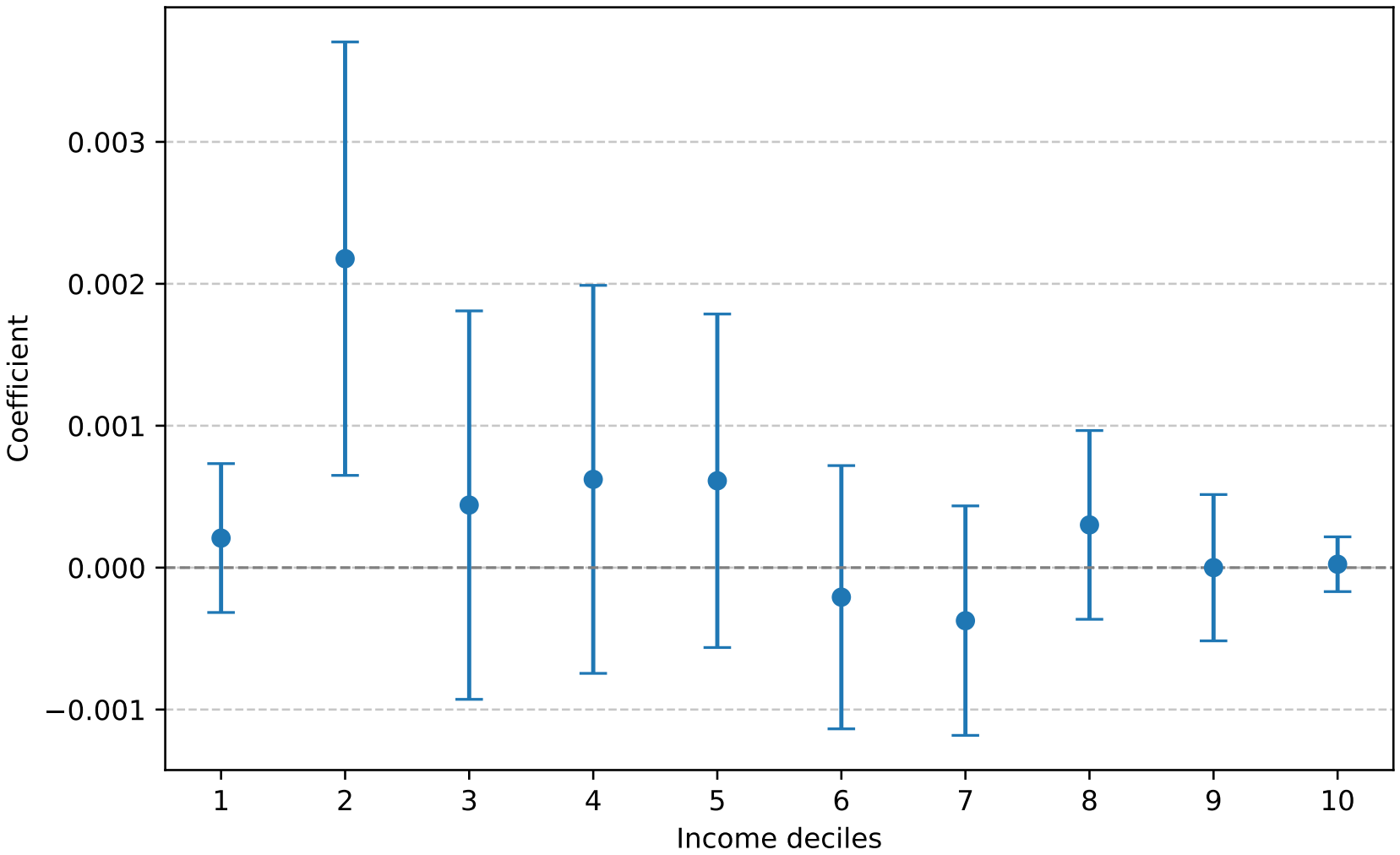

Figure: Placebo policy rate shocks

Conclusion

- We find new evidence linking exogenous income shocks to marital stability
- Novelty includes utilizing exogenous bi-directional income shocks and documenting asymmetric effects
- More work needed on heterogeneity, mechanisms, robustness etc.

Regression Results

Dep. var.: Separation indicator	(1) All	(2) Low income	(3) High income
Net interest exposure	0.000342***	−0.001425***	0.000670***
	(0.000087)	(0.000230)	(0.000121)
Net interest exposure × Policy shock	−0.000724***	−0.001760***	−0.000198
	(0.000116)	(0.000204)	(0.000145)
Years married	0.000158	−0.000452*	−0.000338*
	(0.000180)	(0.000193)	(0.000162)
Wage (individual)	0.005971***	0.003980***	0.003177***
	(0.000471)	(0.000814)	(0.000400)
Income (household)	−0.000349***	0.008782***	−0.000116
	(0.000099)	(0.001787)	(0.000088)
Nr. of children	−0.016955***	−0.019617***	−0.016433***
	(0.000542)	(0.000666)	(0.000420)
Observations	4,776,140	2,286,976	2,489,154
Individuals	411,596	342,024	320,681
Ind. & Year FE	Yes	Yes	Yes

Notes: Standard errors in parentheses. $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

How Big Are the Effects? 75th vs. 99th NIE

Impact = beta (-0.003333) $\times$ NIE $\times$ s.d. shock (0.41)

- 75th percentile exposure: NIE = 1.79
  Impact = -0.003333 $\times$ 1.79 $\times$ 0.41 = -0.00245 (–0.25 pp) $\rightarrow$
  Roughly a 14% drop relative to the 1.8
- 99th percentile exposure: NIE = 6.91
  Impact = -0.003333 $\times$ 6.91 $\times$ 0.41 = -0.00944 (–0.94 pp) $\rightarrow$
  Almost a 50% reduction in separations.

Effect size for 2nd lowest income decile; s.d. shock is 0.41 pp.
Effects scale linearly with exposure, so households at the top of the debt distribution experience markedly stronger "stay married" incentives when a rate hike hits.