Untying the Knot: How Child Support and Alimony Affect Couples' Decisions and Welfare

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Motivation

- Over 25% of marriages are divorced in the first 15 years
  (in the US, UK, France, Germany, Denmark, ...)
- Marital breakdown $\rightarrow$ severe financial consequences, especially for couples with very unequal incomes
- Post-marital maintenance: regular mandated transfers between ex-spouses typically: alimony, child support

Research Question

- Active political debates and reforms in the last decade
  (e.g. several U.S. states, Germany, France, UK)

- Trade-off
  - pro 1: insurance for the lower earner/ ex-spouse taking children
  - pro 2: efficient household specialization (but makes insurance more necessary)
  - con: distortion of divorcees' labor supply incentives

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How should maintenance payments be designed?

What I Do

- Dynamic model of married/divorced couples' decisions
  - Divorce: non-cooperation, linked by maintenance
  - Marriage: limited commitment, maintenance payments $\rightarrow$ outside options $\rightarrow$ divorce rates, hh bargaining, hh specialization

- Estimation: use rich Danish register data + time use data
  (maintenance payments, marital histories, children, child custody, work hours, wages, housework hours...)

- Use estimated model to
  1. simulate counterfactual policies
  2. find welfare maximizing maintenance policy
  3. compare to first best scenario

Maintenance Payments - Denmark

Child support: payed from non-custodial to custodial parent

$$g(\widetilde{\mathrm{I}}, n)$$

$\widetilde{\mathrm{I}}$: non-custodial parent's labor income

n: no. of children (younger than 18 years)

g: increasing in both arguments

Alimony: payed from higher earner to lower earner (for up to 10 years)

$$\tau \cdot (\mathrm{I}_h - \mathrm{I}_\ell)$$

I_h: higher earner's labor income

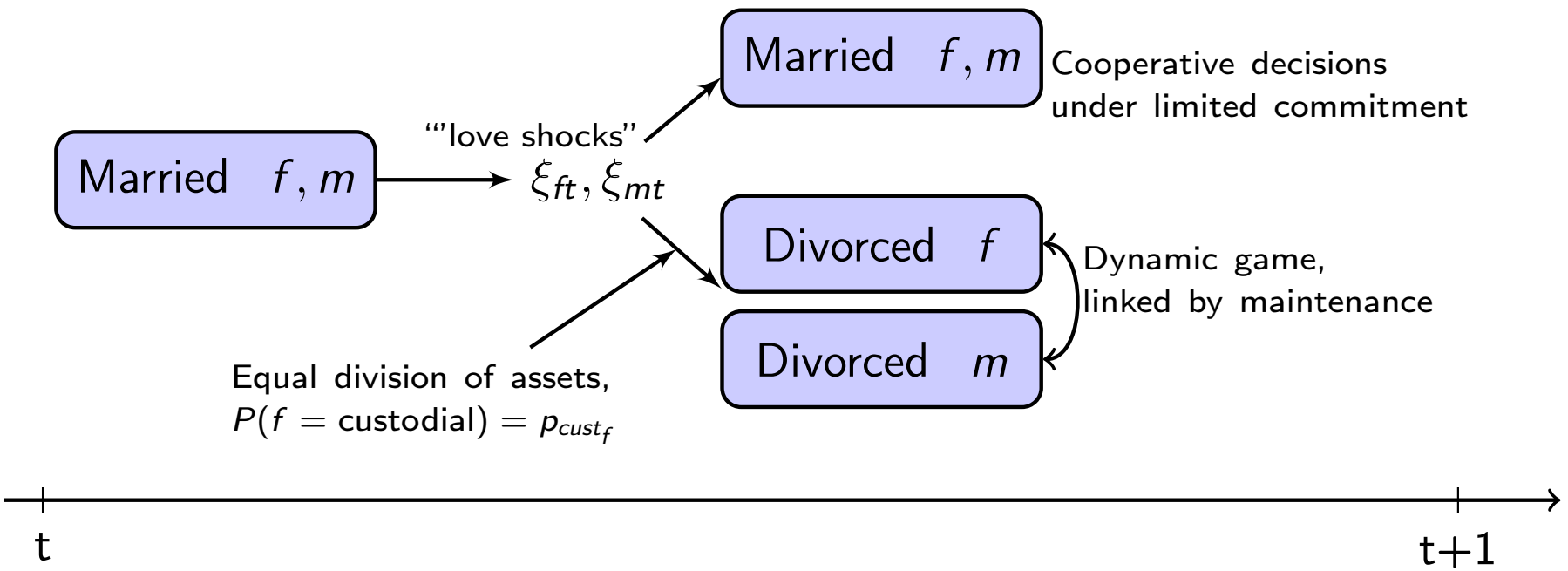
I_ℓ: lower earner's labor income

- Payments respond to income changes
- Register data: avg. mandated payments $\approx$ avg. observed payments
- Compliance with these payments is much higher than, e.g., in the US

Model Overview I

- Life cycle model, two interacting decision makers f and m
- Married in $t = 1$, may endogenously divorce in $1 < t < T$

Choices:	consumption	c_{ft}, c_{mt}	assets	A_t, A_{ft}, A_{mt}	divorce	D_t
	work hours	h_{ft}, h_{mt}	housework	q_{ft}, q_{mt}	leisure	ℓ_{ft}, ℓ_{mt}



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- benefit from home-good Q_t, produced from time inputs q_{ft}, q_{mt}
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- Limited commitment model: bargaining weights shift over time
- Endogenous divorce if re-bargaining cannot restore marriage

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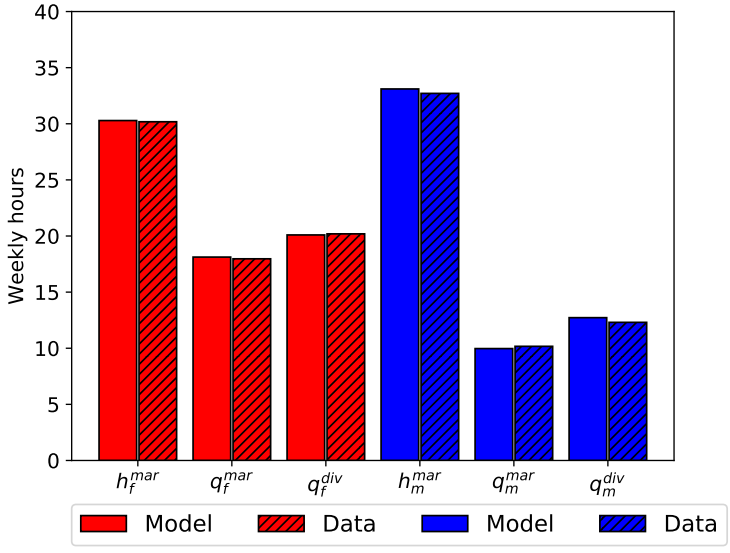
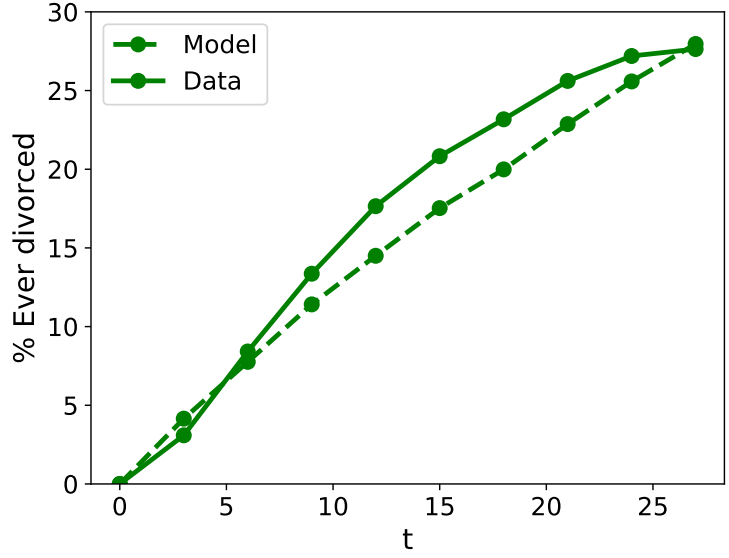
- Estimation: simulated method of moments

  $\rightarrow$ target empirical patterns related to labor supply, housework, divorce and consumption

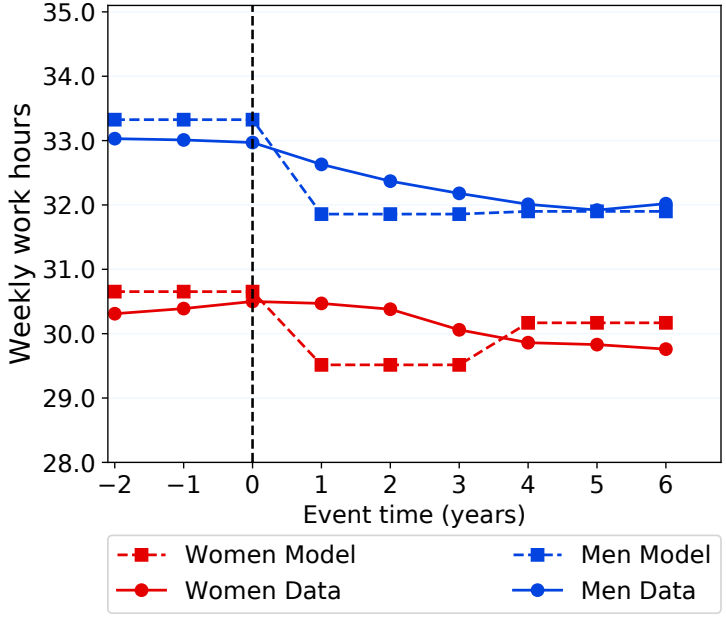
Weekly work and housework hours



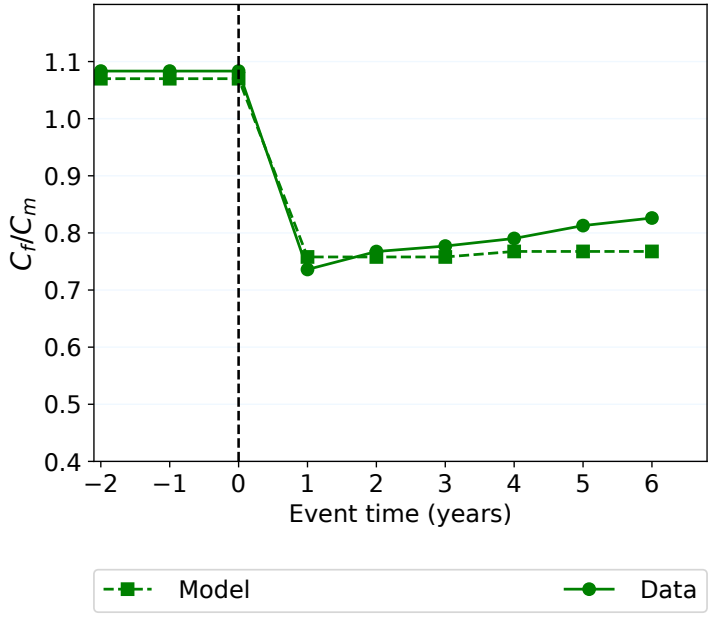
% ever divorced



Work hours around divorce



Relative consumpt. around divorce

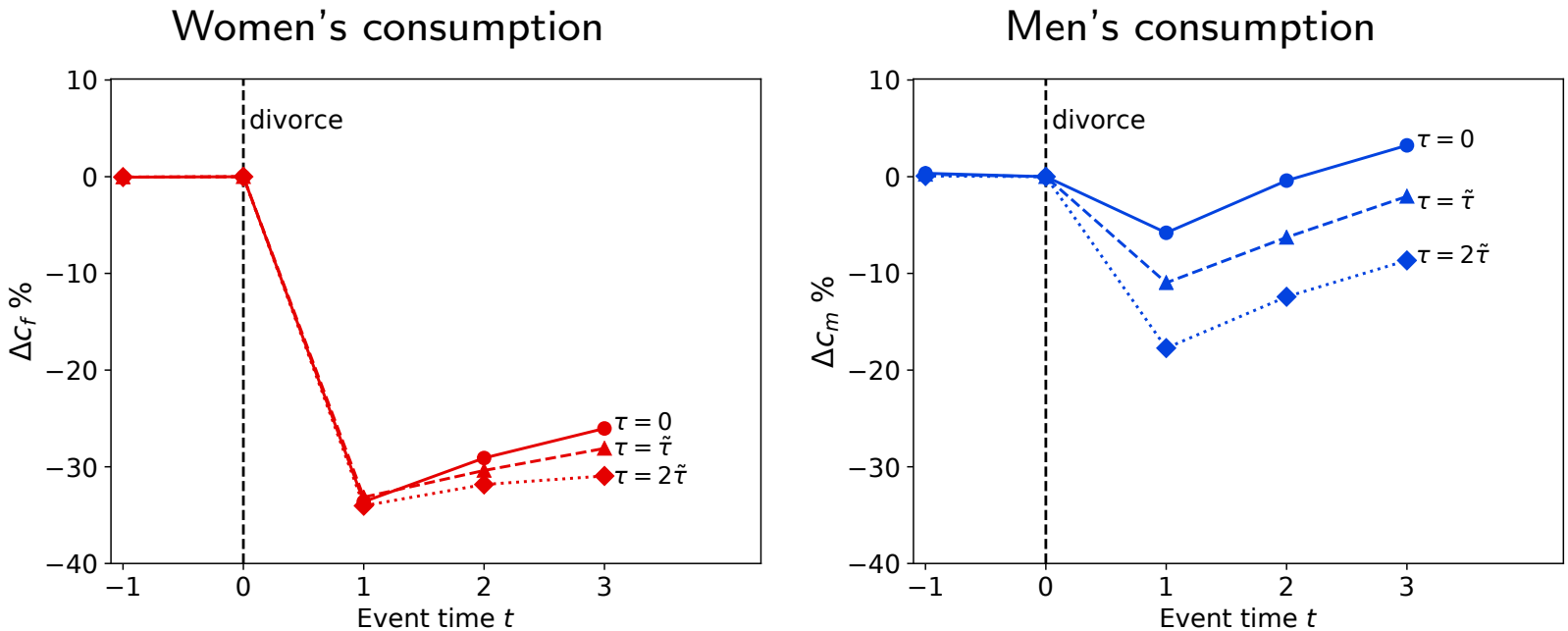


Results - Summary

- Simulate changes in alimony/ child support, for $N = 20,000$ couples
- **Alimony:** $\tau \cdot (w_m h_m - w_f h_f)$
  if the ex-wife is the lower earner
- **Child support:** $n^{b_n} \cdot (b_0 + b_1 w_m h_m + b_2 (w_m h_m - w_f h_f))$
  if the ex-wife is the custodial parent

Alimony Fails to Provide Consumption Insurance

- **Result 1:** Increasing alimony (τ) or the dependence of child support on the income gap (b_2) *fails* to provide consumption insurance



- Reason: severe labor supply disincentives for divorced women and men
- Mechanism: incentives to reduce work hours for strategic considerations

Welfare Maximizing Policy

- **Result 2:** Under utilitarian welfare, the welfare maximizing policy involves
  - Increasing the lump sum component of child support
  - Increasing the slope of child support in the payer's income
  - Making child support convex in the number of children (rather than concave)
  - Reducing alimony payments

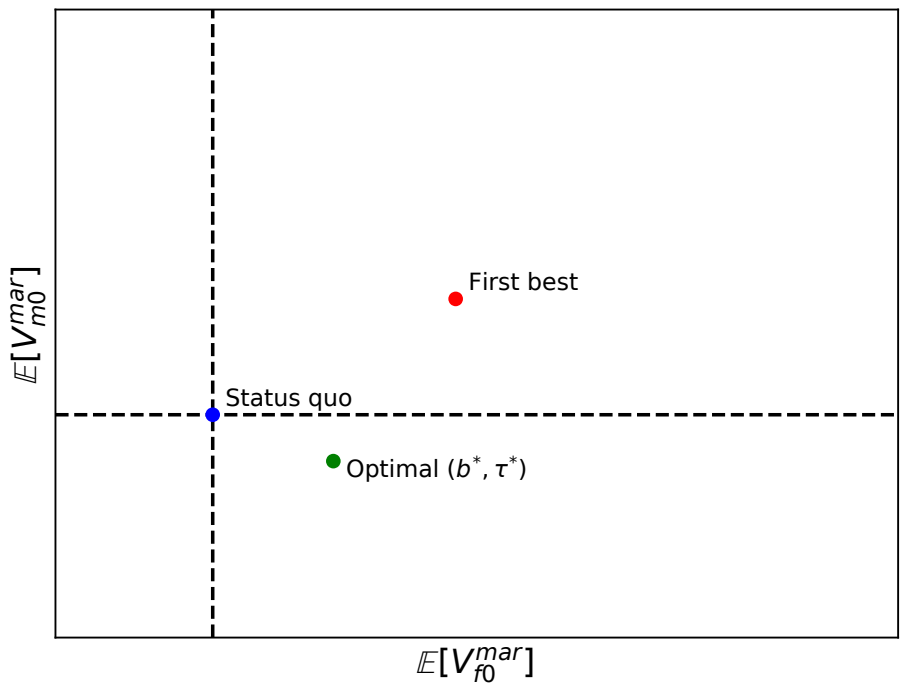
$$b_0^*, b_1^*, b_2^*, b_n^*, \tau^* = \arg\max_{b,\tau} \mathbb{E}\left[V_{f0}^{mar}\right] + \mathbb{E}\left[V_{m0}^{mar}\right]$$

$$(b_0^*, b_1^*, b_2^*, b_n^*, \tau^*) = (1.44\tilde{b}_0,\ 1.18\tilde{b}_1,\ 0.002,\ 1.34\tilde{b}_n,\ 0.8\tilde{\tau})$$

where $\tilde{b}_0, \tilde{b}_1, \tilde{b}_n, \tilde{\tau}$ denote the status quo policy parameters

Comparison to First Best

- **Result 3:** Comparison to a hypothetical first best world without frictions
- *Interpretation:* allow couples to make binding commitments/ write perfect dynamic prenups



$\rightarrow$ First best: pareto improvement over status quo

$\rightarrow$ Welfare maximizing policy: women gain, men lose

Conclusion

- First to study child support/ alimony in light of policy trade-off:
  - consumption insurance and hh specialization vs. labor supply disincentives
- Develop dynamic model, that incorporates this trade-off and accounts for strategic interactions in ex-spouses' labor supply choices
- Findings based on the estimated model:
  - Alimony backfires in terms of providing consumption insurance
  - Welfare maximing policy: involves increasing child support/ reducing alimony
  - Comparison to first best: Pareto gains are feasible, but real world policies fail to implement them