Can you do the dishes?
Intra-household time use, division of labor and fertility

Andrea Mattia

Bank of Italy

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Women do more housework than men

- **Relevant long-term consequences for women and society**
  [Goldin (2014), Carta *et al.* (2023), Doepke *et al.* (2023)]
  1. lower labor market participation
  2. less access to jobs that reward flexibility
  3. might decrease total fertility

Women do more housework than men

- Relevant long-term consequences for women and society
- **Practical, efficiency, external, long-run and personal factors**
  [Becker (1981), Chiappori (1997), Mazzocco (2007), Baker *et al.* (2008), Adda *et al.* (2017), Lise & Yamada (2018), Kleven *et al.* (2019), Ciasullo & Uccioli (2024)]
  1. competing uses of time in housework, formal work and leisure
  2. comparative advantage
  3. gender wage gap, nursery schools
  4. unilateral divorce, unemployment and motherhood penalties
  5. taste for tidiness, traditional gender norms

Women do more housework than men

- Relevant long-term consequences for women and society
- Practical, efficiency, external, long-run and personal factors
- **Data scarcity and difficulty disentangling unobservables**

What I do in the paper

- **4 stylised facts using restricted-access ISTAT time use data**
  1. marriage implies housework specialization for women
  2. wife's employment does not imply more male housework
  3. mothers do more housework and less formal work
  4. employment strongly correlates with housework time difference

What I do in the paper

- 4 stylised facts using restricted-access ISTAT time use data
- **Life-cycle model of intra-household time use**
  1. marriage, employment, fertility and time use
  2. consumption is produced through formal work and housework
  3. heterogeneity in productivity, gender values and tidiness taste
  4. environment calibrated to Italy (Europe extension using HETUS)

What I do in the paper

- 4 stylised facts using restricted-access ISTAT time use data
- Life-cycle model of intra-household time use
- **Counterfactuals**
  1. gender-specific taxation (i.e. no gender wage gap)
  2. perfect availability of free nursery schools
  3. no traditional gender values
  4. men have the same home-productivity as women

Preview of results

1. To rationalize gender difference in housework, men should be about 1/4 as home-productive as women
2. Strong complementarity between men's home productivity, fertility and female employment
3. No gender gap with free and available nursery schools increases fertility to 2.47 (+92.1%) but married women's employment only to 0.63 (+11.6%)
4. Also making men as productive as women, and removing traditional gender values increases fertility to 2.41 (+87%) and married women's employment to 0.96 (+71.3%)

Roadmap

1. Descriptive evidence and stylised facts
2. Life-cycle model of intra-household time use
3. Counterfactuals and policy implications

Roadmap

1. **Descriptive evidence and stylised facts**
2. Life-cycle model of intra-household time use
3. Counterfactuals and policy implications

ISTAT "Multiscopo sulle famiglie: uso del tempo"

- Restricted-access cross-section 2002, 2008, 2013 (2023 out soon)
- Nationally (and regional) representative sample
- Whole day diary of activities in 10-minute intervals
- Questions about tidiness taste and traditional gender norms
- Restrict to prime-age (25-63), non-student, non-retired, able-bodied

Employment rate by gender and marital status

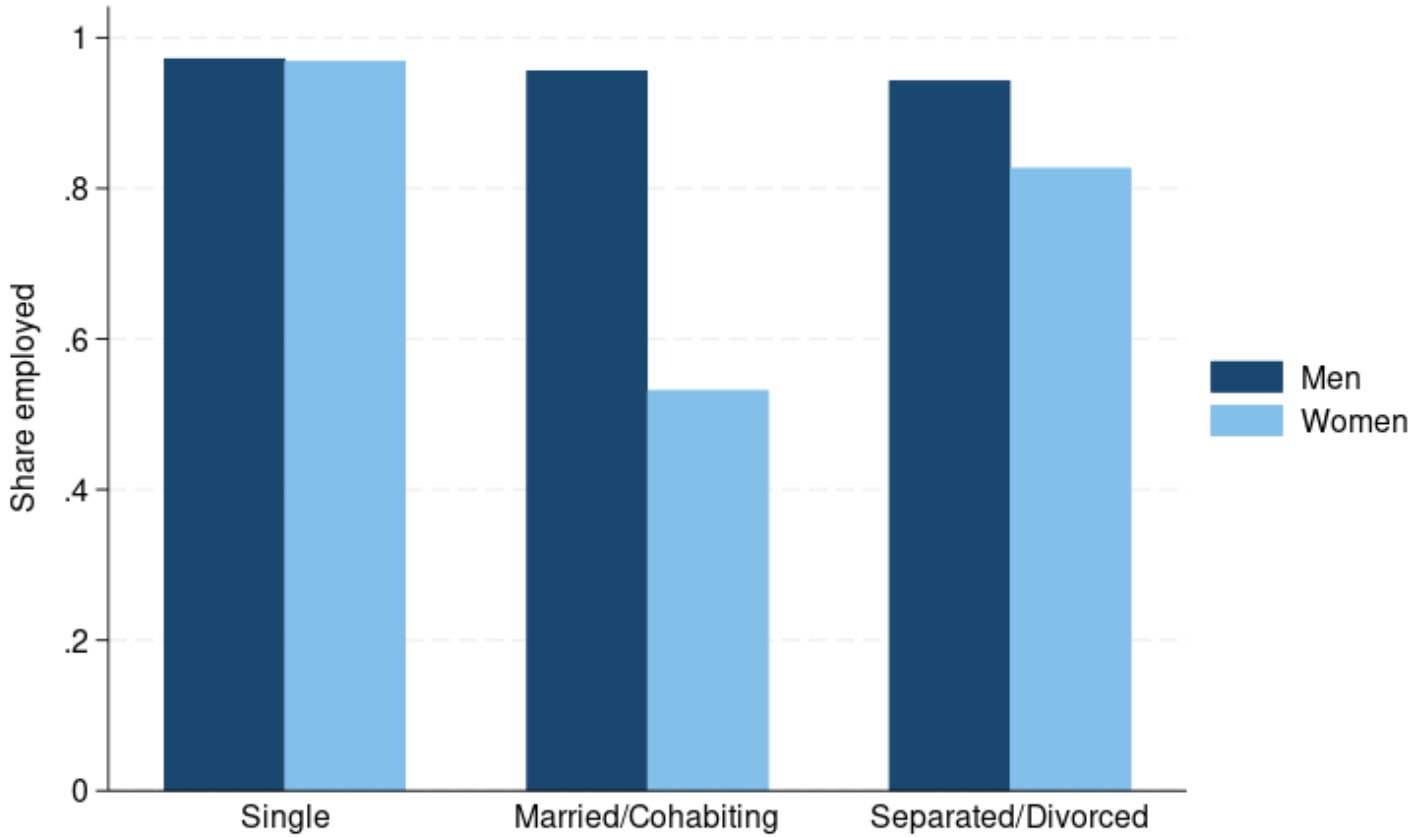

Figure 1: *To reflect the simplifications made in the structural model, this figure further excludes multi-generational households (about 6% of households), re-married households (about 1% of households), single people with children (about 1.8%), people physically unable to work (about 2.5%), men working part-time (about 5.2% of men).*

Housework by spouses' gender and employment

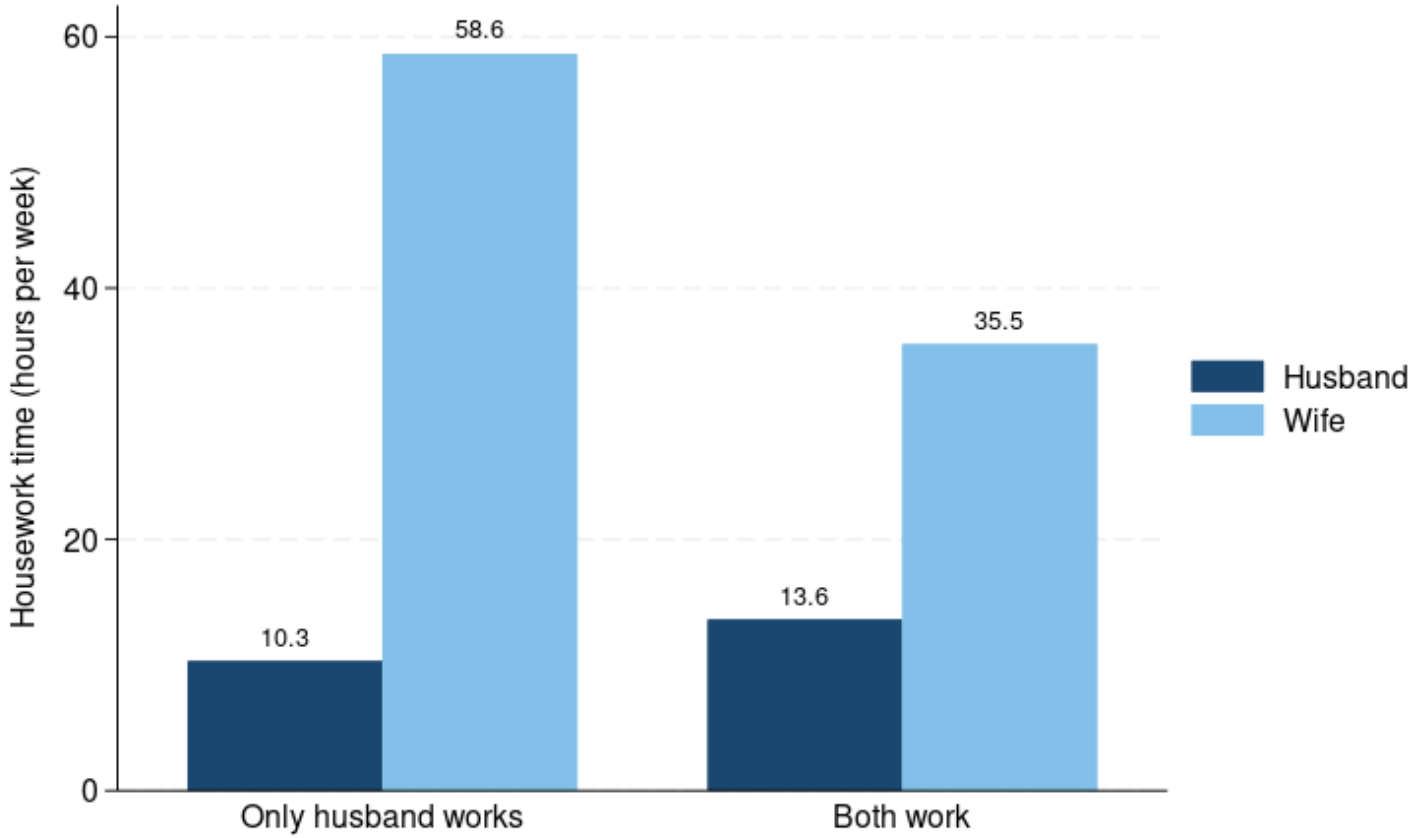

Figure 2: *To reflect the simplifications made in the structural model, this figure further excludes multi-generational households (about 6% of households), people physically unable to work, students or military (about 1.8%), single people who already have kids (about 1.8%), and people living off own or family's wealth (about 1.6%).*

Leisure by spouses' gender and employment

Housework by spouses' gender and parenthood

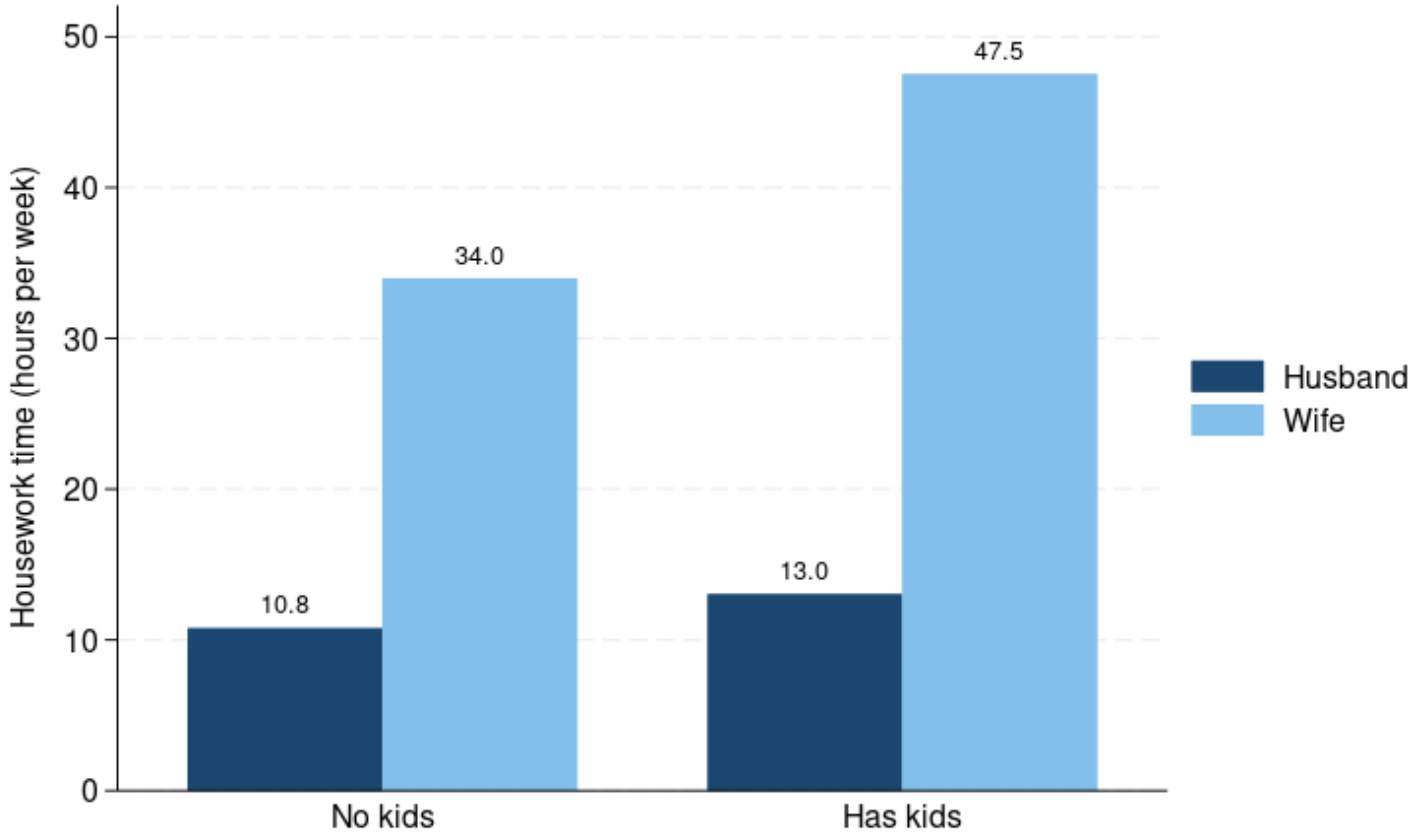

Figure 3: *To reflect the simplifications made in the structural model, this figure further excludes multi-generational households (about 6% of households), people physically unable to work, students or military (about 1.8%), single people who already have kids (about 1.8%), and people living off own or family's wealth (about 1.6%).*

Leisure by spouses' gender and parenthood

What correlates with housework time difference

- Contributions of covariates in hours per week (baseline=33):
  - Husband's employment (up to +20)
  - Wife's employment (up to -34)
  - Presence of children (over +3 for each child)
  - Traditional gender values (about +3 each for husband and wife)
  - Taste for tidy house (+5 only if wife has this taste)
  - Absence of nursery school in presence of child under 3 (only +3, weakly significant)

What correlates with housework time difference (table)

Recap of stylised facts

1. Marriage $\Longrightarrow$ housework specialization for women (-40pp empl.)
2. Wife's employment $\not\Longrightarrow$ more male housework (-10h wife's leisure)
3. Mothers do +10h housework and less formal work; no effect on men
4. Employment accounts for 50-100% baseline housework time difference

Roadmap

1. Descriptive evidence and stylised facts
2. **Life-cycle model of intra-household time use**
3. Counterfactuals and policy implications

Model framework

1. Husband and wife have different work and home productivity
2. Formal work and housework produce a consumption good
3. Consumption and leisure give utility
4. Dynamic choice of employment, marriage/divorce and fertility
5. Part-time, full-time and over-time options
6. Household follows the collective model (Chiappori (1992))

Key features built into the model

- Wage penalty for unemployment or less hour-demanding careers
- Risk of divorce because of limited commitment
- Each child increases both utility and expenditure
- Nursery school fee if both parents work
- Married households benefit from economies of scale
- Work contracts have fixed hours
- Utility penalty if work against own or husband's traditional values
- Taste for tidiness increases home productivity

Period utility function specification

$$U = S_1 \cdot [\theta u_H + (1-\theta) u_W]$$
$$u_j = \eta_j C^{\gamma_1} L_j^{1-\gamma_1} \qquad j = H, W$$
$$C = S_2 \cdot \Omega^{\gamma_2} Y^{1-\gamma_2}$$
$$\Omega = \left(\pi_H (h_H^{home})^{1-\gamma_3} + \pi_W (h_W^{home})^{1-\gamma_3} \right)^{\frac{1}{1-\gamma_3}}$$
$$Y = w_H h_H^{work} + w_W h_W^{work}$$

where: Equations specification

- S_1, S_2 scaling factors, function of children, love shock and traditional values
- θ is the husband's Pareto weight in the collective model
- η_j is each spouse's consumption share, with $\eta_H = \eta$, and $\eta_W = 1 - \eta$
- wage w_j is a function of age, education, gender gap, previous unemployment
- $\gamma_1, \gamma_2, \gamma_3$ govern input and substitution patterns Kernel density of wife's housework and leisure

Closed-form solutions

- h_W^{home}, h_H^{home} and η as functions of parameters $\gamma_1, \gamma_2, \gamma_3, \theta, \pi_H, \pi_W$ and total hours available after work T_H, T_W Solution expressions
- Conditional on employment choices:

$$R = \frac{h_H^{home}}{h_W^{home}} = \left(\frac{1-\theta}{\theta}\right)^{\frac{1}{\gamma_3(1-\gamma_1)}} \left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}$$

  hence:

  - Husband more barganing power: $\theta \uparrow \Longrightarrow R \downarrow$
  - Husband more home productive: $\pi_H \uparrow \Longrightarrow R \uparrow$

- Value functions: Divorced Married Fertility Single

Identification and estimation

- 21 parameters to be estimated out of 34 moments
- Two environmental factors help identification:
  1. Fixed hour duration of full-time and part-time contracts
  2. Cost and availability of nursery schools
- Targeted moments include female employment and housework hours by education level, marital status, fertility, tidiness and traditional values preferences.

Estimated parameters

Main result: men are about 1/4 as home-productive as women

Description	Value
Gender wage gap (π^g)	0.0742
Wage penalty in low-paying career (π^μ)	0.2100
Over-time wage premium in high-paying career (π^{OT})	0.2726
Education premium (π^e)	0.3352
Age wage premium (π^a)	0.0300
Economies of scale of marriage (s_M)	0.1500
Expenditure increase for each child (s_{K_2})	0.0930
Traditional gender values penalty (s_G)	0.0521
Utility exponent of consumption (γ_1)	0.7499
Exponent of home production (γ_2)	0.2469
Substitutability between spouses' housework time (γ_3)	0.4904
Men high home productivity (π_{H_1})	0.3411
Men low home productivity (π_{H_2})	0.1901
Home productivity bonus for tidiness (π_O)	0.0501

Calibrated parameters

Fit of targeted moments

- Very good fit, on average within 10% of targeted moments
- Plots of moments fit for:
  1. Demographics — Fertility; Share with 3 kids; Share divorced and never married women
  2. Employment — Female by marital status; Male by parenthood status; Part-time; Over-time; Female by education; Female by traditional values
  3. Housework time — Women; Men; By tidiness taste; By male home productivity; When only husband works; When both work

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    1. gender-specific taxation (i.e. no gender wage gap)
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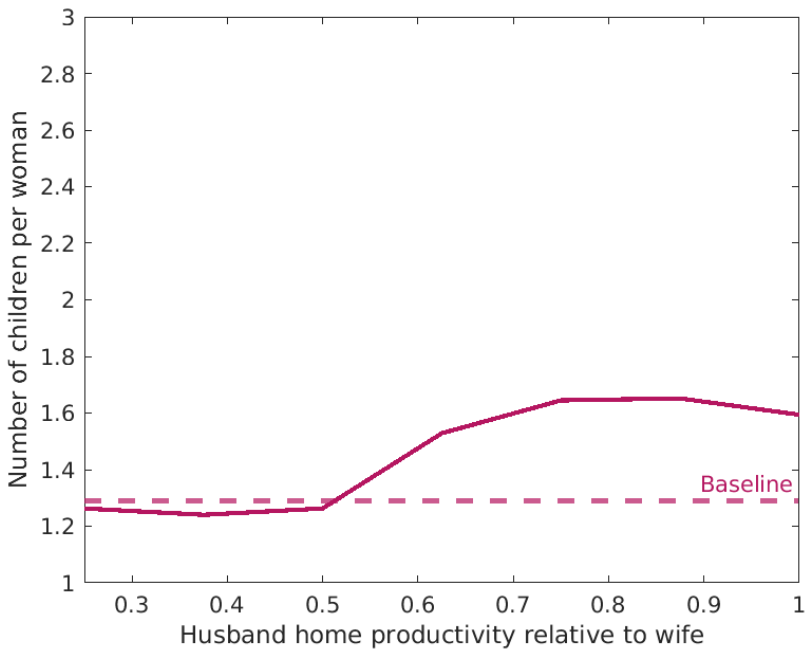
    4. men have the same home-productivity as women

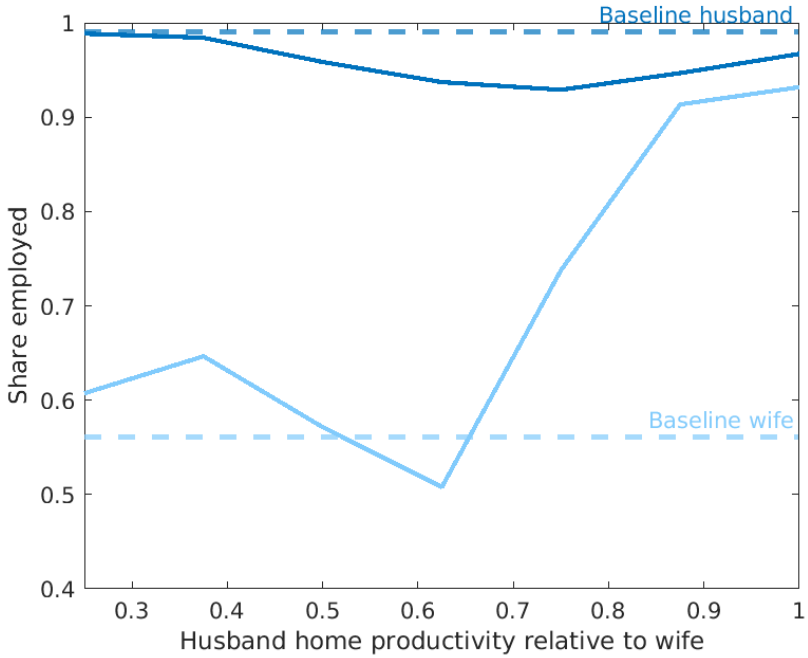
Gender-specific taxation (no gender wage gap)

Without changes to husband's home productivity:

- fertility decreases to 1.27 children per woman (-2%)
- married female employment increases to 0.61 (+8.8%)



(a) Fertility

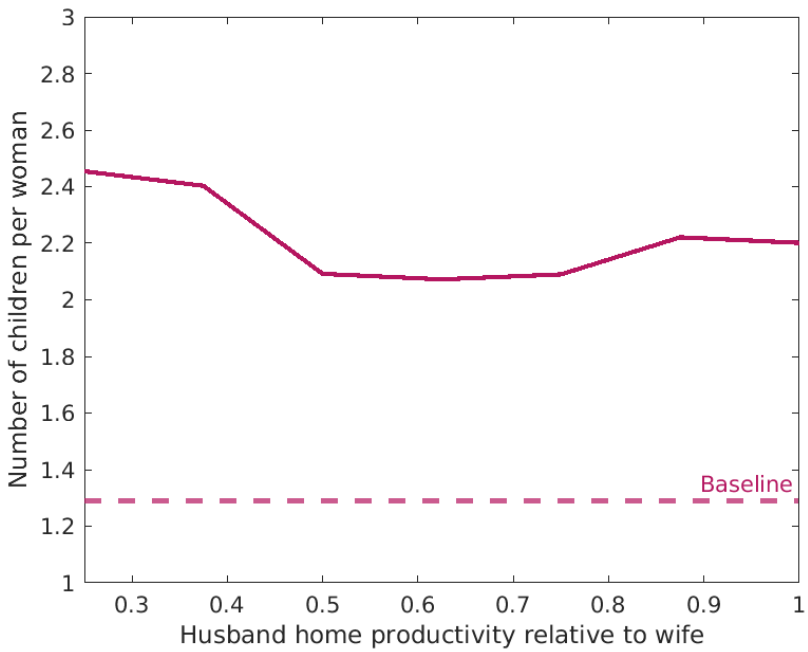


(b) Husband and wife employment

Perfectly available free nursery schools

Without changes to husband's home productivity:

- fertility increases to 2.45 children per woman (+90.4%)
- married female employment decreases to 0.55 (-1.3%)



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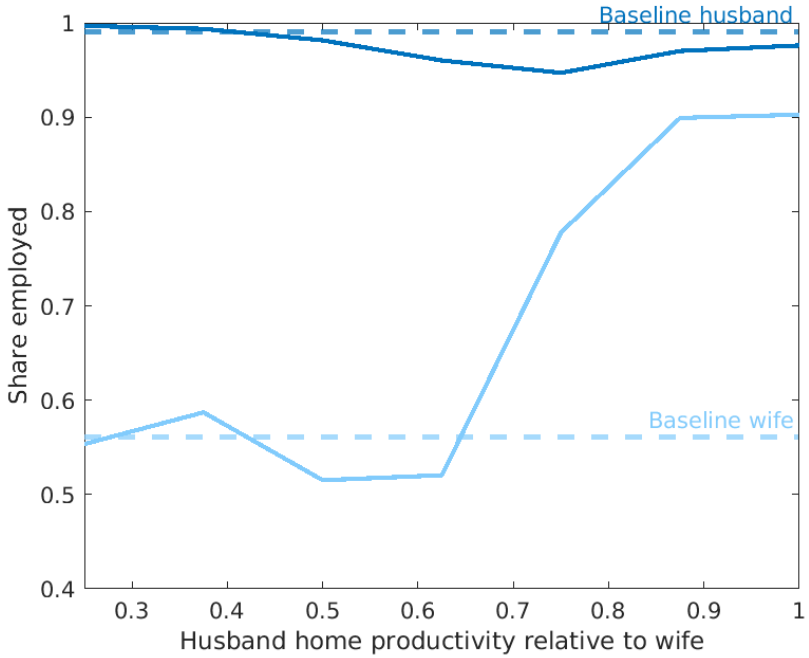
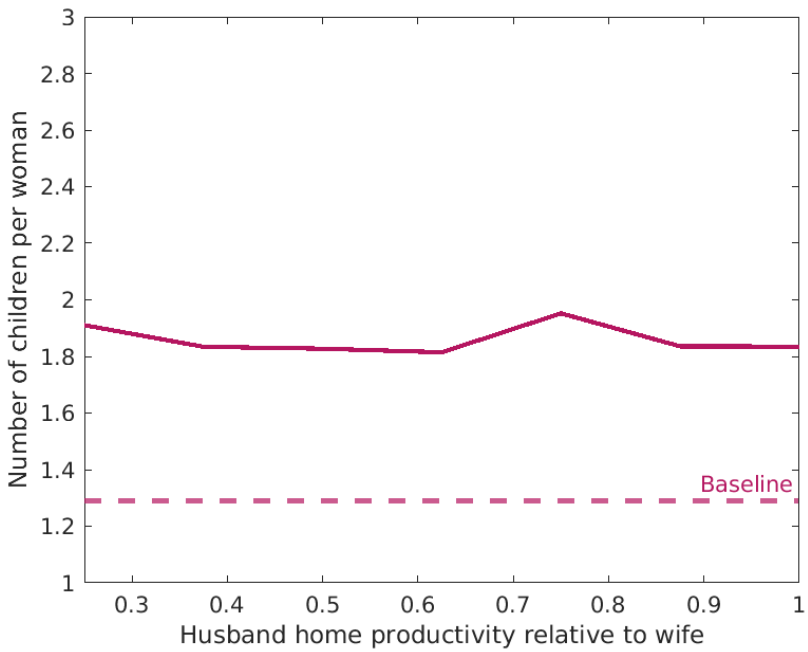


(b) Husband and wife employment

Nobody has traditional gender values

Without changes to husband's home productivity:

- fertility increases to 1.91 children per woman (+48.2%)
- married female employment increases to 0.62 (+11.5%)



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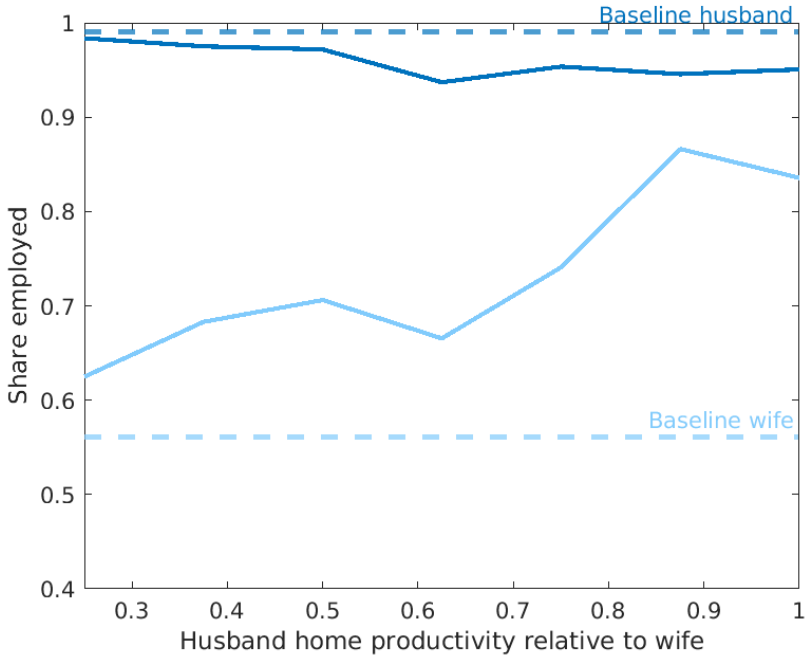
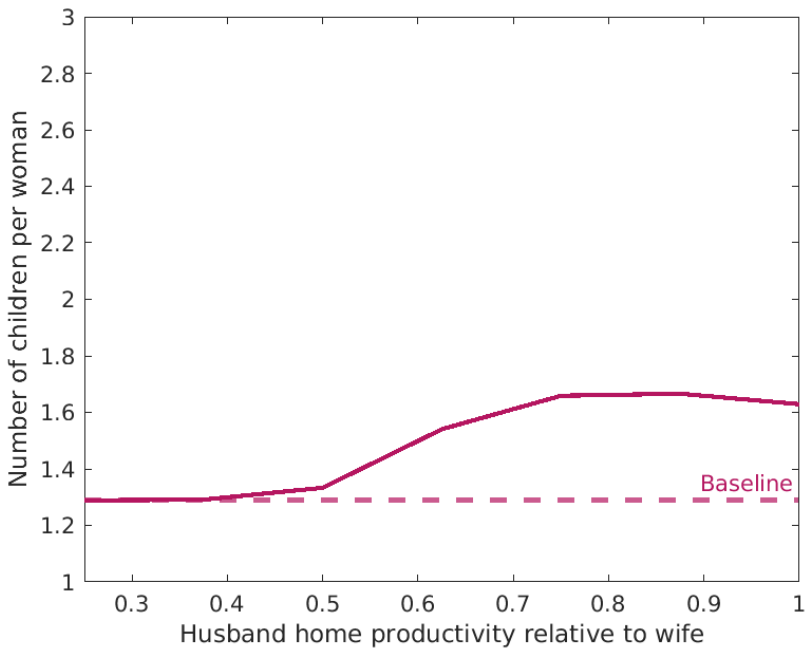


(b) Husband and wife employment

Men become as home-productive as women

Changes to husband's home productivity alone:

- are relevant in increasing fertility and female employment together
- can almost close the married employment gender gap



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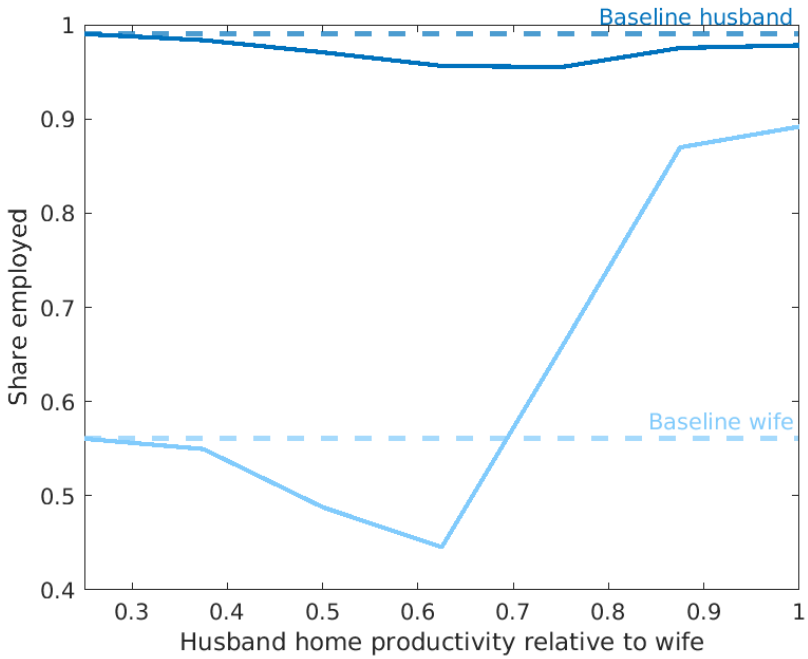
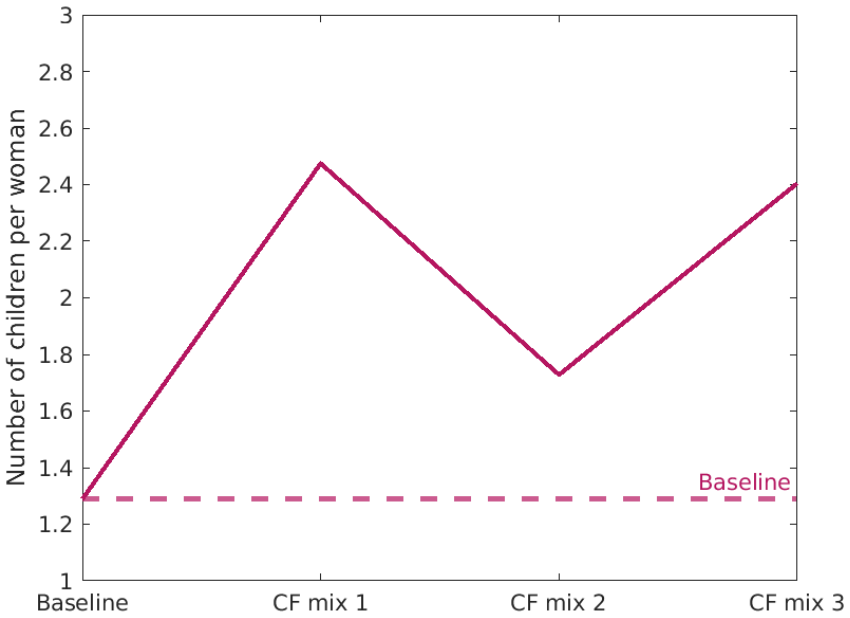


(b) Husband and wife employment

Combinations of previous counterfactuals

1. No gender wage gap and perfectly available free nursery schools: fertility +92.1%; wife employment +11.6%
2. 0.5x gender wage gap, nursery school fees and traditional values penalty; 2x available nursery schools, male home productivity 2/3: fertility +34.1%; wife employment +2.5%
3. No gender wage gap, no traditional values, perfectly available free nursery schools and man as home-productive as women: fertility +87%; wife employment +71.3%



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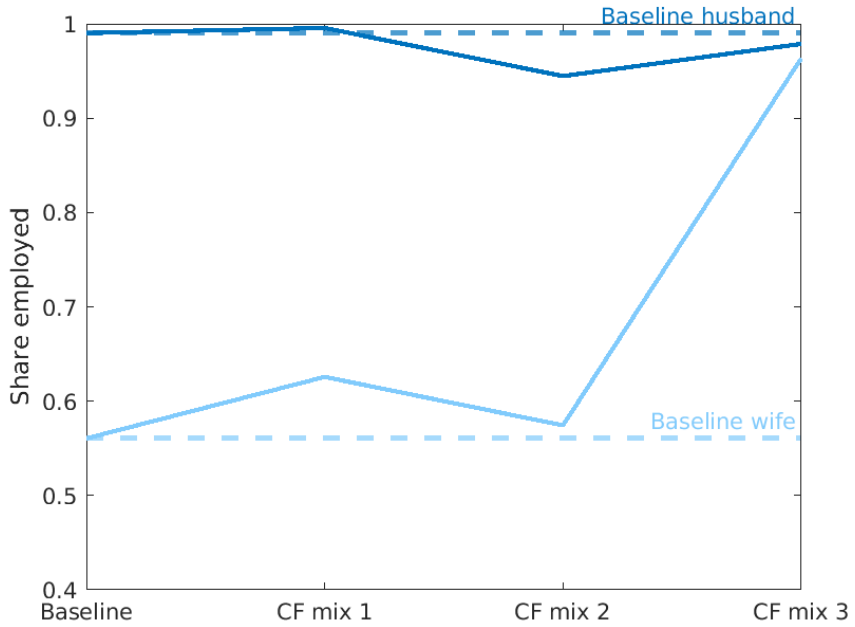
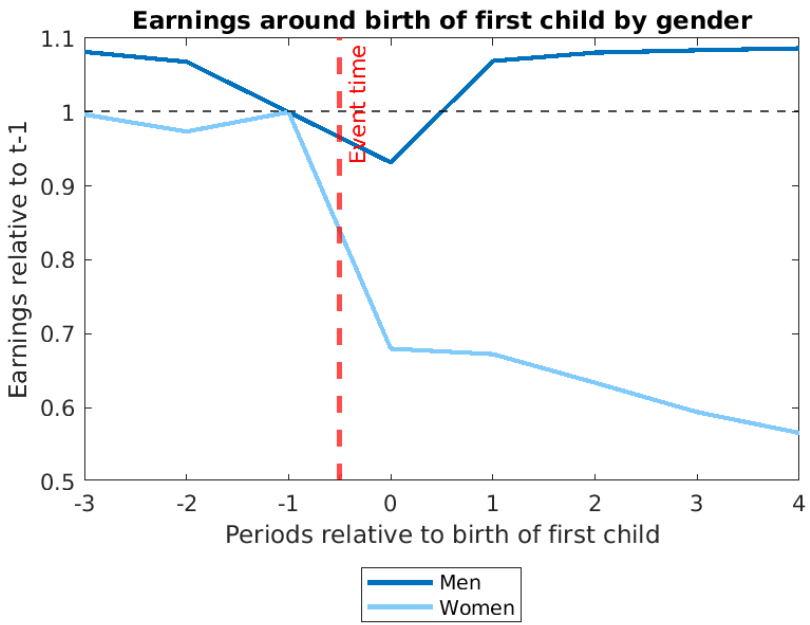


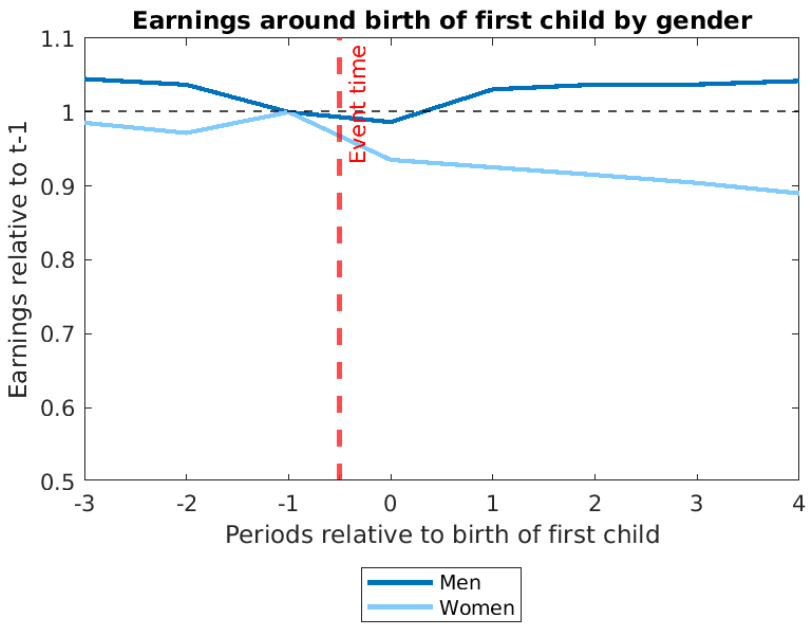
(b) Husband and wife employment

Child penalty after first birth

Gender differences in housework productivity account for about 70% of the child penalty



(a) Baseline



(b) Men as home productive as women

Concluding remarks

- Gender difference in home productivity is the most important determinants of housework time disparity
- Strong complementarity that affects fertility and employment:
  1. not addressing home productivity stifles other policies
  2. challenging to find root causes but huge payoff
- Sizable increases in fertility and female employment are feasible

Thank you for your attention!
Comments and suggestions are very welcome :)
andrea.mattia@bancaditalia.it

Leisure by spouses' gender and parenthood

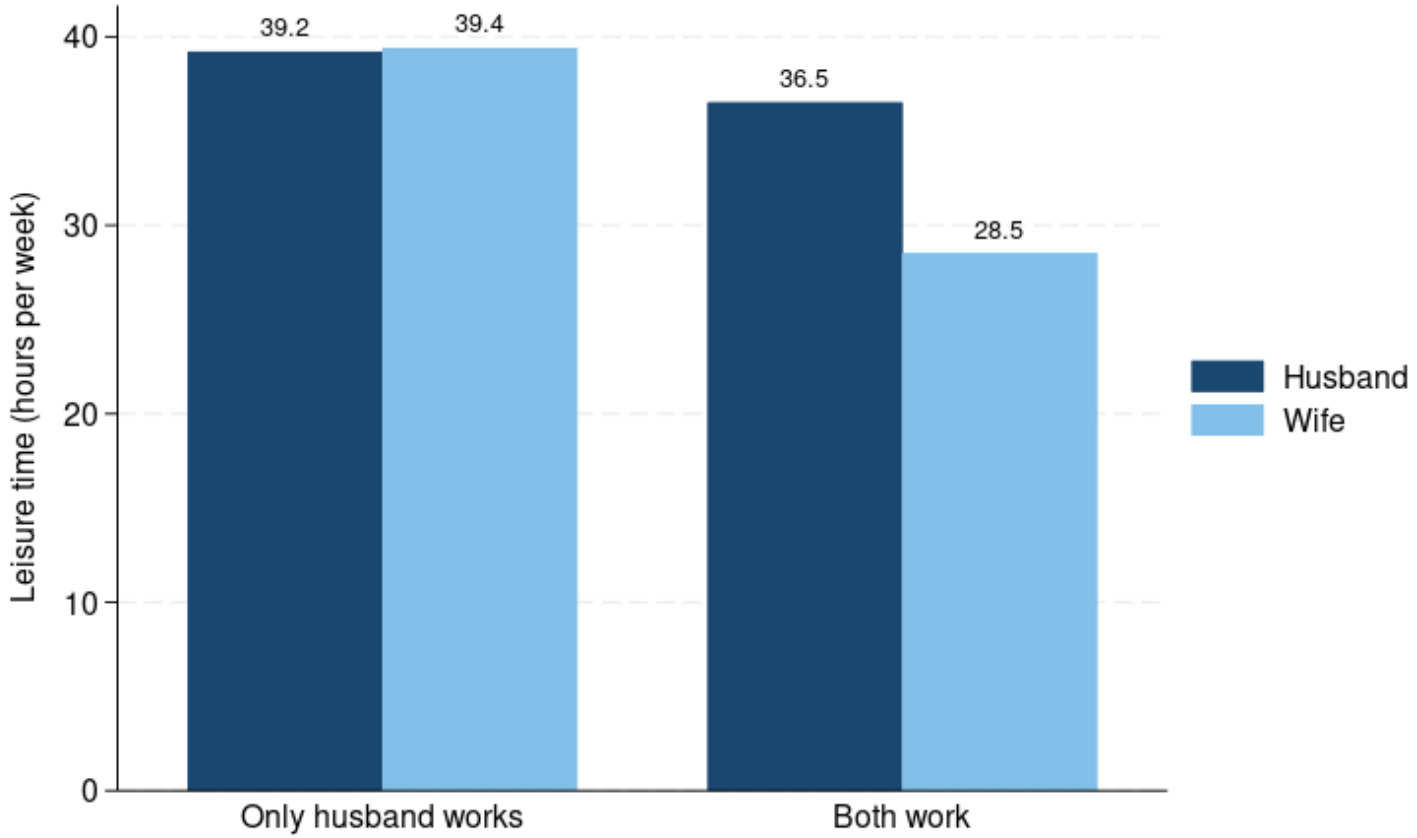


Figure 4: *To reflect the simplifications made in the structural model, this figure further excludes multi-generational households (about 6% of households), people physically unable to work, students or military (about 1.8%), single people who already have kids (about 1.8%), and people living off own or family's wealth (about 1.6%).*

Back

Leisure by spouses' gender and parenthood

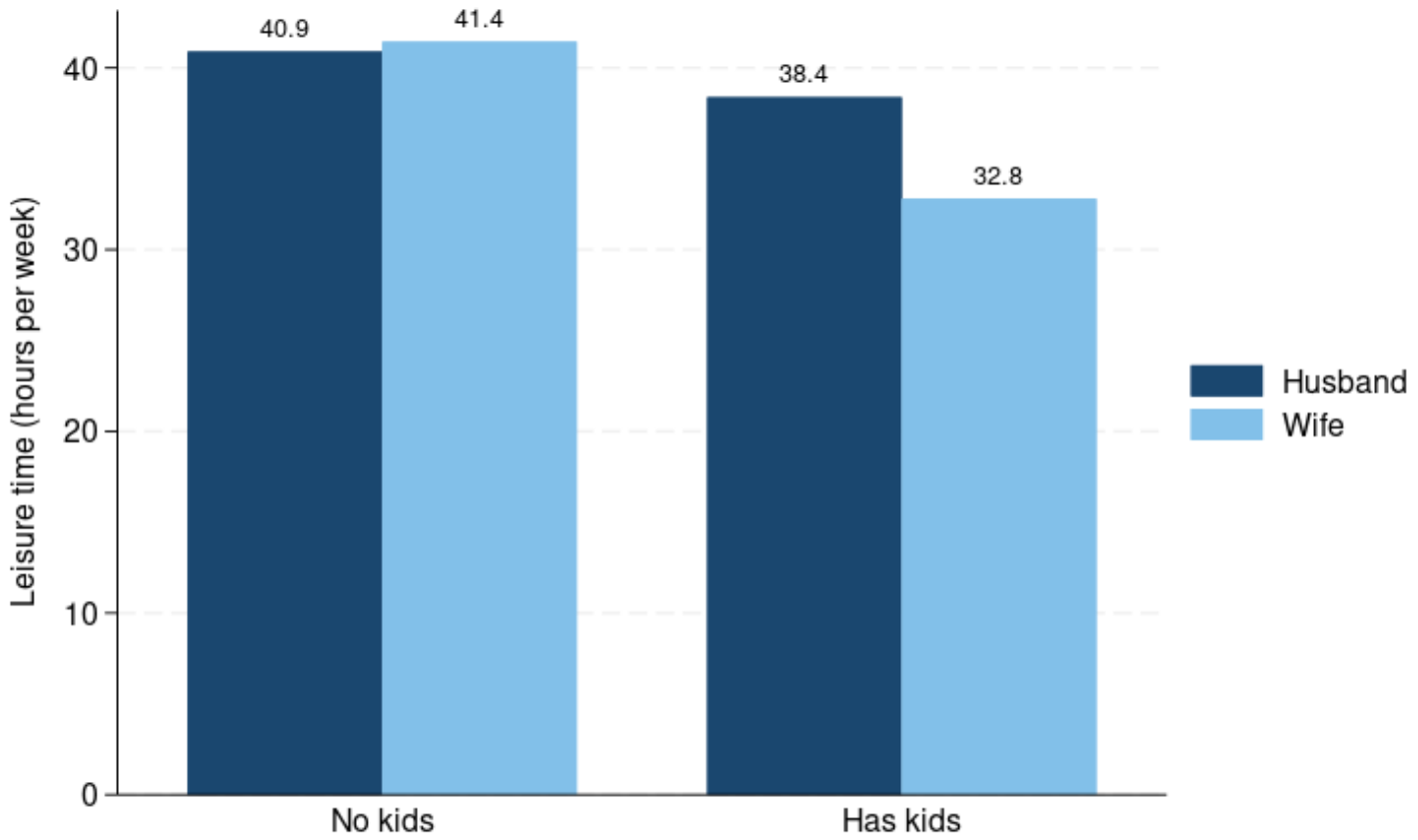


Figure 5: *To reflect the simplifications made in the structural model, this figure further excludes multi-generational households (about 6% of households), people physically unable to work, students or military (about 1.8%), single people who already have kids (about 1.8%), and people living off own or family's wealth (about 1.6%).*

Back

What correlates with housework time difference (1)

	Dep: Housework time difference (hours/week)	
	Coefficient value	Standard error
Employment:		
Husband part-time	8.40	(2.42)
Husband full-time	14.92***	(1.61)
Husband over-time	20.26***	(1.67)
Wife part-time	-19.15***	(0.86)
Wife full-time	-27.13***	(0.66)
Wife over-time	-33.80***	(1.23)
Children:		
1 child	5.75***	(0.75)
2 children	8.36***	(0.77)
3 or more children	10.68***	(1.10)
Any child below age 3, no nursery	3.02***	(1.15)
Baseline	32.95	
Observations	15,552	
Adjusted R^2	0.3642	

Controls for year FE, region FE and household head's age.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Back

What correlates with housework time difference (2)

	Dep: Housework time difference (hours/week)	
	Coefficient value	Standard error
Has traditional gender values:		
Husband	3.36***	(1.27)
Wife	3.01**	(1.31)
Cares about tidy house:		
Husband	1.07	(1.75)
Wife	4.94**	(2.22)
Thinks men home-productive as women:		
Husband	-1.75	(1.17)
Wife	-0.18	(1.18)
Unmarried couple	-2.12	(1.93)
Baseline	30.14	
Observations	4,574	
Adjusted R^2	0.3794	

Controls for year FE, region FE and household head's age.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

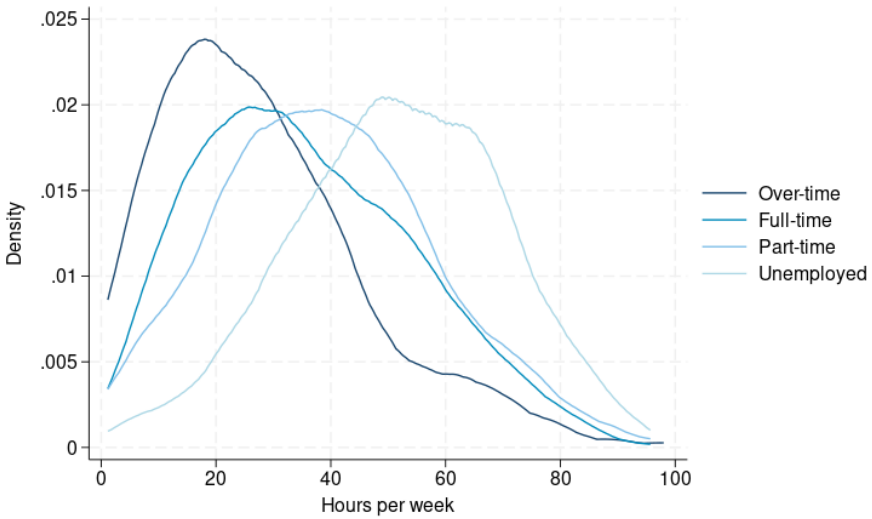
Back

Specifications

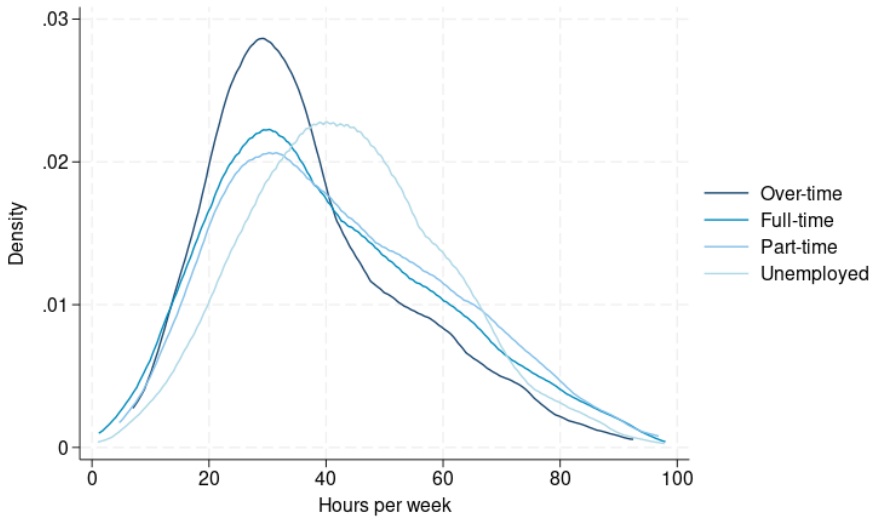
- $S_1 = (1 + s_{K_1} \cdot K)(1 - s_G)(1 + s_L)$, where:
  - s_{K_1} premium for each kid K
  - s_G penalty for working traditional against gender values, 0 otherwise
  - s_L love shock, with $s_L = s_{L,previous} + \varepsilon_L$ and $\varepsilon_L \sim N(0, \sigma_L)$
- $S_2 = (1 + s_M)(1 - s_{K_2} \cdot K)$, where:
  - s_{K_2} expenditure increase for each kid K
  - s_M economies of scale of marriage, 0 if single
- $w_j = (1 + \pi^e e_j)(1 + \pi^a a_j)(1 - \pi^\mu \mu_j)(1 + \pi^N N) \cdot w_{base}$, $j = H, W$, where:
  - π^e premium for each education level e_j
  - π^a premium for each age level a_j
  - π^μ penalty if ever unemployed, or π^{OT} premium if over-time
  - π^N wage cut to pay nursery school fee N
  - π^g gender gap additional penalty if woman
  - w_{base} normalized to 1 without loss of generality

Back

Kernel density of wife's housework and leisure time



(a) Housework time



(b) Leisure time

Back

Closed-form solutions

$$h_W = \frac{\frac{\gamma_1\gamma_2}{1-\gamma_1(1-\gamma_2)}\left[\left(\frac{\theta}{1-\theta}\right)^{\frac{1}{1-\gamma_1}} T_H + T_W\right]}{1+\left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}\left(\frac{1-\theta}{\theta}\right)^{\frac{1-\gamma_3}{\gamma_3(1-\gamma_1)}}}$$

$$h_H = \frac{\frac{\gamma_1\gamma_2}{1-\gamma_1(1-\gamma_2)}\left(\frac{1-\theta}{\theta}\right)^{\frac{1}{\gamma_3(1-\gamma_1)}}\left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}\left[\left(\frac{\theta}{1-\theta}\right)^{\frac{1}{1-\gamma_1}} T_H + T_W\right]}{1+\left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}\left(\frac{1-\theta}{\theta}\right)^{\frac{1-\gamma_3}{\gamma_3(1-\gamma_1)}}}$$

$$\eta = \frac{\left[1+\frac{1-\gamma_1}{1-\gamma_1(1-\gamma_2)}\left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}\left(\frac{1-\theta}{\theta}\right)^{\frac{1-\gamma_3}{\gamma_3(1-\gamma_1)}}\right] T_H - \frac{\gamma_1\gamma_2}{1-\gamma_1(1-\gamma_2)}\left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}\left(\frac{1-\theta}{\theta}\right)^{\frac{1}{\gamma_3(1-\gamma_1)}} T_W}{\frac{1-\gamma_1}{1-\gamma_1(1-\gamma_2)}\left(1+\left(\frac{\pi_H}{\pi_W}\right)^{\frac{1}{\gamma_3}}\left(\frac{1-\theta}{\theta}\right)^{\frac{1-\gamma_3}{\gamma_3(1-\gamma_1)}}\right)\left[T_H+\left(\frac{1-\theta}{\theta}\right)^{\frac{1}{1-\gamma_1}} T_W\right]}$$

Back

Divorced problem

$$V_j^{div}(e_j, \mu_j) = \max_{h_j^{\mathcal{W}}} \tilde{V}_j^{div}(e_j, \mu_j, h_j^{\mathcal{W}})$$

where:

$$\tilde{V}_j^{div}(e_j, \mu_j = 1, h_j^{OT}) = u_j(e_j, 1, h_j^{OT}) + \beta \mathbb{E} V_j^{div'}(e_j', \mu_j' = 1)$$
$$\tilde{V}_j^{div}(e_j, \mu_j = 1, h_j^{FT}) = u_j(e_j, 1, h_j^{FT}) + \beta[\beta_\mu \mathbb{E} V_j^{div'}(e_j', \mu_j' = 0) + (1 - \beta_\mu)\mathbb{E} V_j^{div'}(e_j', \mu_j' = 1)]$$
$$\tilde{V}_j^{div}(e_j, \mu_j = 1, h_j^{PT}) = u_j(e_j, 1, h_j^{PT}) + \beta \mathbb{E} V_j^{div'}(e_j', \mu_j' = 0)$$
$$\tilde{V}_j^{div}(e_j, \mu_j = 1, h_j^{U}) = u_j(e_j, 1, h_j^{U}) + \beta \mathbb{E} V_j^{div'}(e_j', \mu_j' = -1)$$

and the cases for $\mu_j = 0$ and $\mu_j = -1$ follow similarly.

Back

Married problem

$$V_j^{mar}(\Xi_j, K_j) = \max\{\tilde{V}_j^{mar}(\Xi_j, K_j), \quad V_j^{div}(e_j, \mu_j, K_j)\}$$

and the value of staying married has the form:

$$\tilde{V}_j^{mar}(\Xi_j, K_j) = (1 - \alpha_j \alpha_{j'}) \cdot \tilde{V}_j^{mar,NF}(\Xi_j, K_j) + \alpha_j \alpha_{j'} \cdot \tilde{V}_j^{mar,F}(\Xi_j, K_j)$$

$$\alpha_j = \mathbb{1}[\tilde{V}_j^{mar,F}(\Xi_j, K_j) > \tilde{V}_j^{mar,NF}(\Xi_j, K_j)]$$

$$\alpha_{j'} = \mathbb{1}[\tilde{V}_{j'}^{mar,F}(\Xi_{j'}, K_{j'}) > \tilde{V}_{j'}^{mar,NF}(\Xi_{j'}, K_{j'})]$$

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Fertility problem

The married problem NF when not having children is:

$$\tilde{V}_j^{mar,NF}(\Xi_j, K_j) = u_j(\Xi_j(\hat{h}_j^{\mathcal{W}}, \hat{h}_{j'}^{\mathcal{W}}, \hat{\theta}_j), K_j) + \beta \mathbb{E} V_j^{mar}(\Xi_j'(\hat{h}_j^{\mathcal{W}}, \hat{h}_{j'}^{\mathcal{W}}, \hat{\theta}), K_j)\}$$

$$(\hat{h}_j^{\mathcal{W}}, \hat{h}_{j'}^{\mathcal{W}}, \hat{\theta}_j) = \underset{h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}, \theta_j}{\text{argmax}} \{\sum_j \theta_j [u_j(\Xi_j(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}), K_j) + \beta \mathbb{E} \tilde{V}_j^{mar}(\Xi_j'(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}), K_j)]\}$$

$$\text{s.t. } u_j(\Xi_j(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}), K_j) + \beta \mathbb{E} \tilde{V}_j^{mar}(\Xi_j'(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}), K_j) \geq V_j^{div}(e_j, \mu_j, K_j)$$

The married problem F when having children is:

$$\tilde{V}_j^{mar,F}(\Xi_j, K_j) = u_j(\Xi_j(\hat{h}_j^{\mathcal{W}}, \hat{h}_{j'}^{\mathcal{W}}, \hat{\theta}_j, \hat{\Phi^N}), K_j + 1) + \beta \mathbb{E} V_j^{mar}(\Xi_j'(\hat{h}_j^{\mathcal{W}}, \hat{h}_{j'}^{\mathcal{W}}, \hat{\theta}, \hat{\Phi^N}), K_j + 1)\}$$

$$(\hat{h}_j^{\mathcal{W}}, \hat{h}_{j'}^{\mathcal{W}}, \hat{\theta}_j, \hat{\Phi^N}) = \underset{h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}, \theta_j, \Phi^N}{\text{argmax}} \{\sum_j \theta_j [u_j(\Xi_j(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}, \Phi^N), K_j + 1) + \beta \mathbb{E} \tilde{V}_j^{mar}(\Xi_j'(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}, \Phi^N), K_j + 1)]\}$$

$$\text{s.t. } u_j(\Xi_j(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}, \Phi^N), K_j + 1) + \beta \mathbb{E} \tilde{V}_j^{mar}(\Xi_j'(h_j^{\mathcal{W}}, h_{j'}^{\mathcal{W}}, \Phi^N), K_j + 1) \geq V_j^{div}(e_j, \mu_j, K_j + 1)$$

$$\text{s.t. } H_j + H_{j'} = 2 \cdot H^{max} - H^N(1 - \Phi^N)$$

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Single problem

$$V_j^{sin}(\Xi_j) = \max\{\tilde{V}_j^{sin}(e_j, \mu_j), \quad \tilde{V}_j^{mar}(\Xi_j(\hat{\theta}_{j,0}), K_j = 0),\}$$

where the initial Pareto weight maximizes the marriage surplus:

$$\hat{\theta}_{j,0} = \underset{\theta}{\text{argmax}}\, \Sigma(\theta)$$

$$\Sigma(\theta) = (\tilde{V}_H^{mar}(\Xi_H(\theta), 0) - \tilde{V}_H^{sin}(e_H, \mu_H))^{\lambda} \cdot (\tilde{V}_W^{mar}(\Xi_W(1-\theta), 0) - \tilde{V}_W^{sin}(e_W, \mu_W))^{1-\lambda}$$

and the nested single problem is:

$$\tilde{V}_j^{sin}(e_j, \mu_j) = \max_{h_j^{\mathcal{W}}} \left(u(e_j, \mu_j, h_j^{\mathcal{W}}) + \beta \mathbb{E}\, V_j^{sin}(\Xi_j(h_j^{\mathcal{W}})) \right)$$

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Calibrated parameters

Description	Source	Value
Average nursery school fee as family income share (π^N)	National average	0.1
Nursery school availability chance	National average	0.22
Full-time contract hours	National average	40
Part-time contract hours	National average	24
Over-time hours	Time use data	50
Total available weekly hours (H^{max})	Time use data	98
Average childcare hours covered by nursery school (H^N)	Time use data	33
Share men with high home productivity	Time use data	0.38
Share men with traditional gender values	Time use data	0.27
Share men with taste for tidiness	Time use data	0.92
Share men with college education or more	Time use data	0.16
Share men with less than high school education	Time use data	0.41
Share women with traditional gender values	Time use data	0.20
Share women with taste for tidiness	Time use data	0.94
Share women with college education	Time use data	0.20
Share women with less than high school education	Time use data	0.37
Time discount rate (β)	Standard literature	0.98

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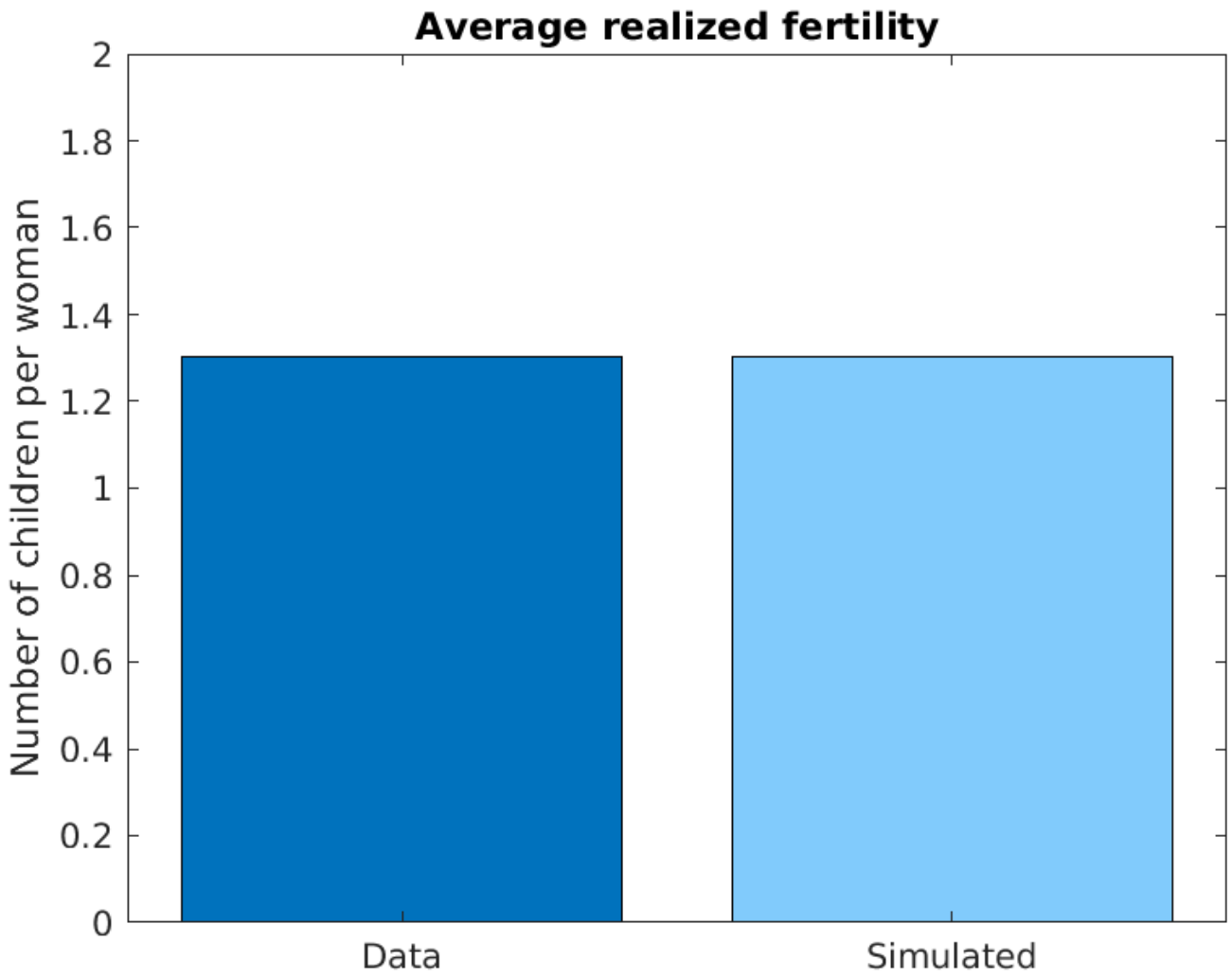
Average realized fertility



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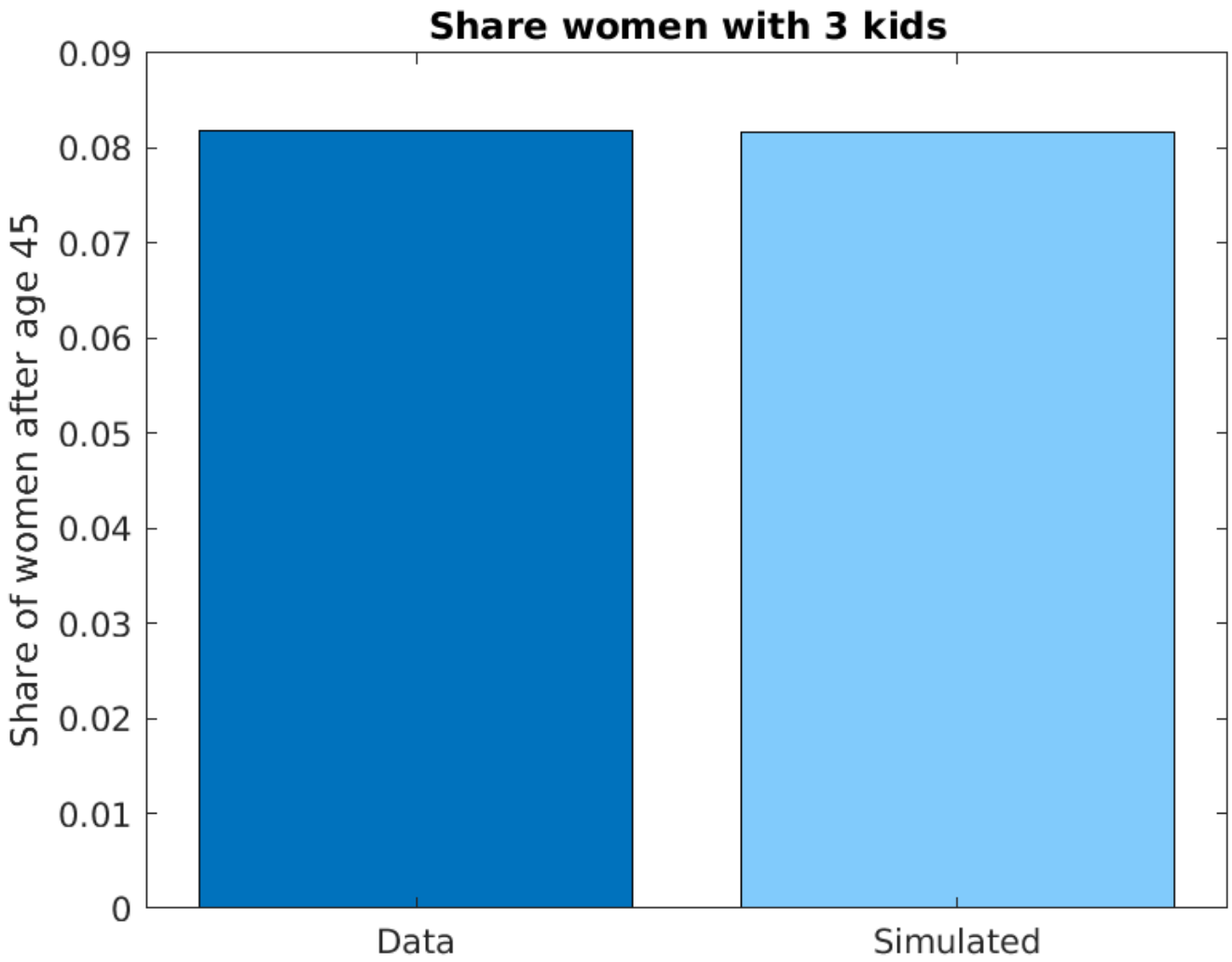
Share women with 3 kids after age 45



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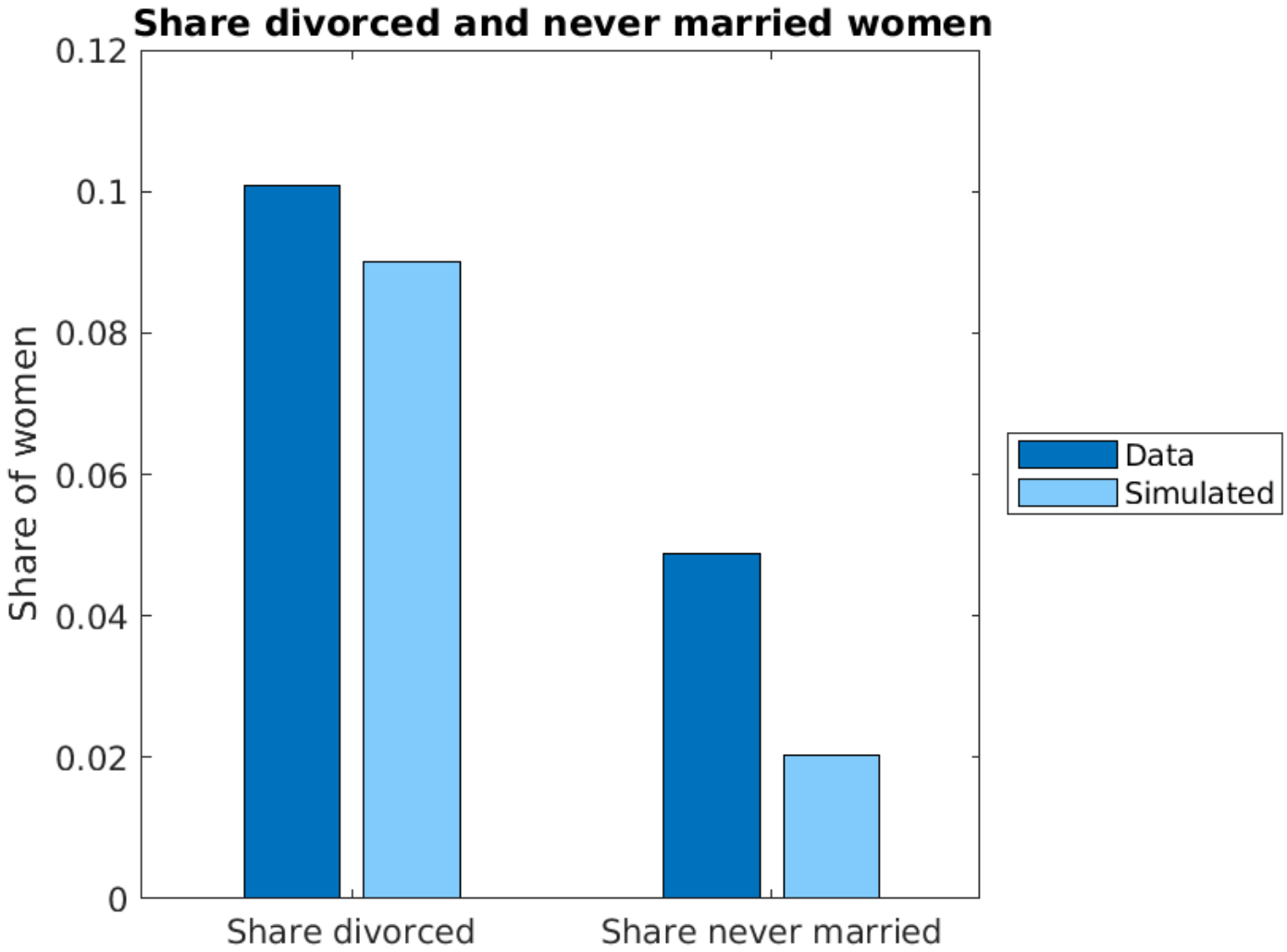
Share divorced and never married women



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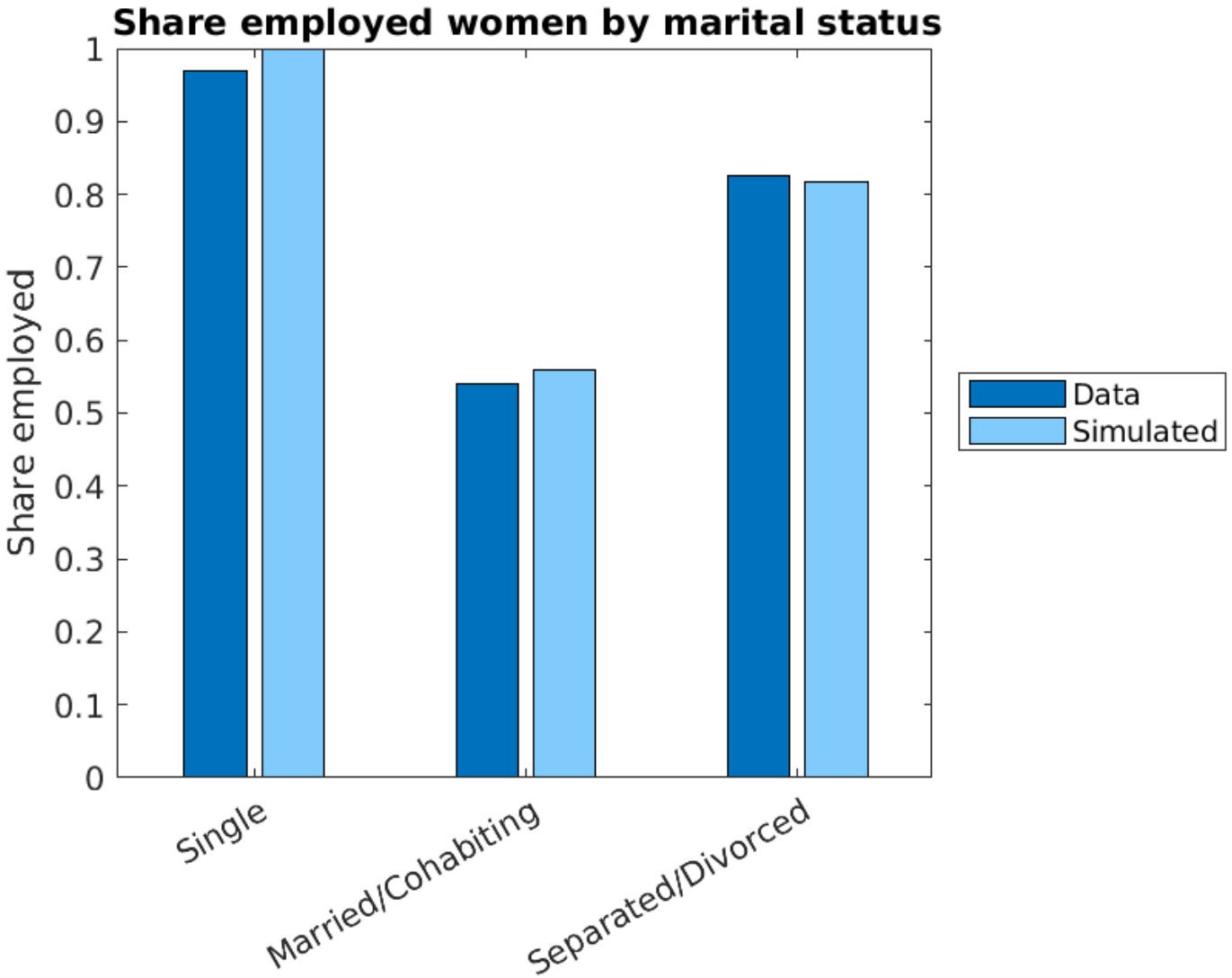
Share employed women by marital status



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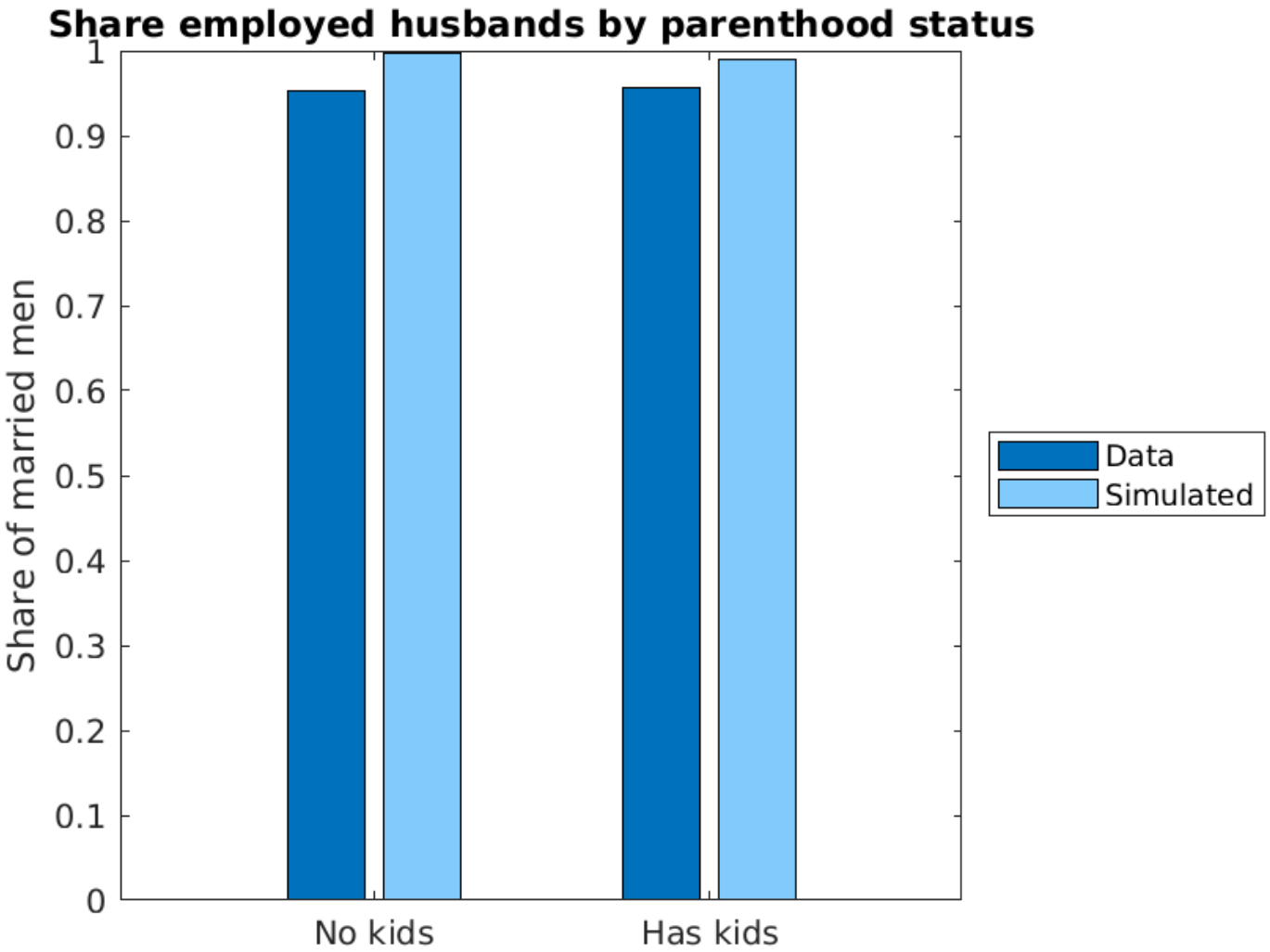
Share employed husbands by parenthood status



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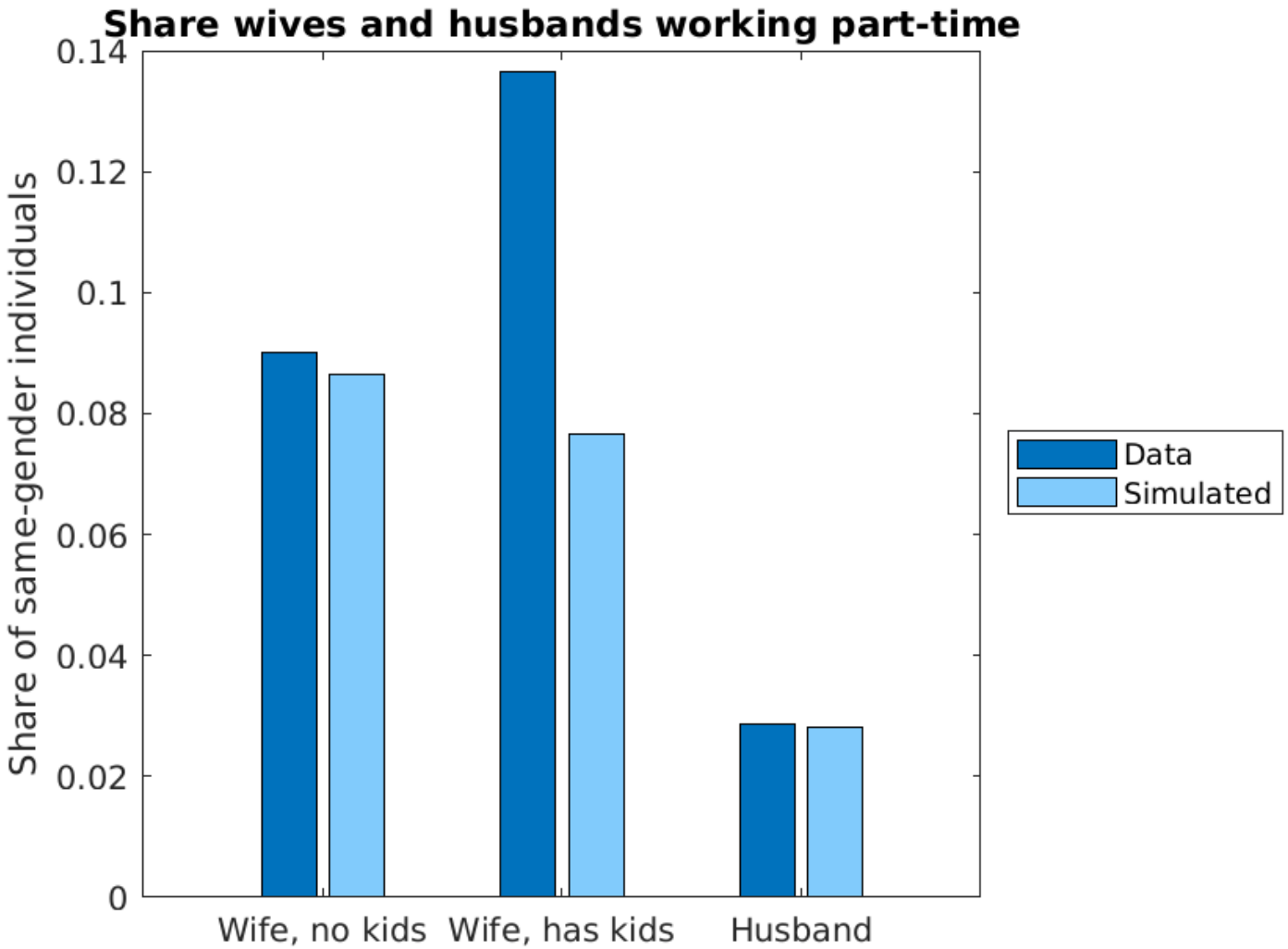
Part-time by gender and parenthood status



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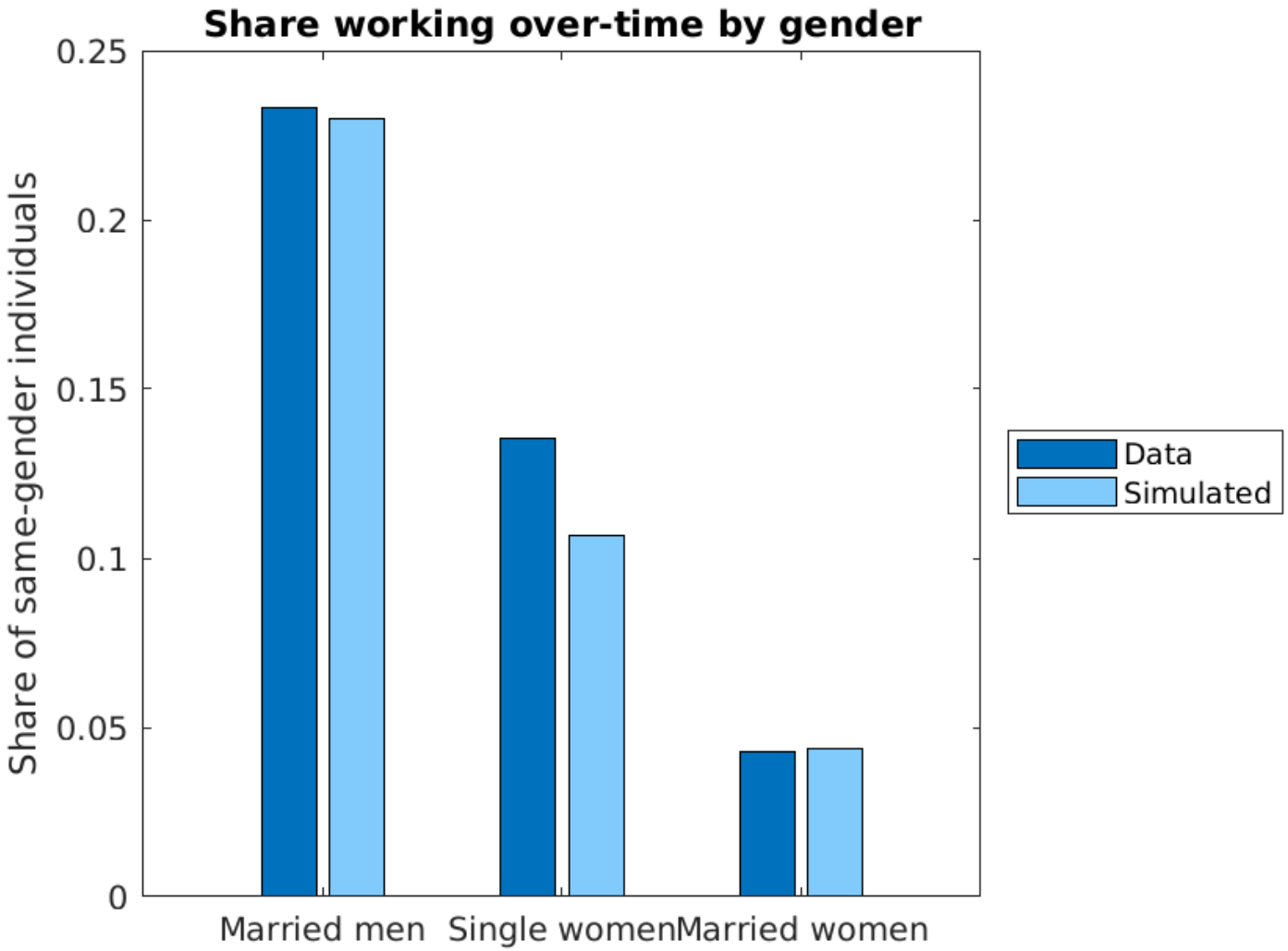
Over-time by gender and marital status



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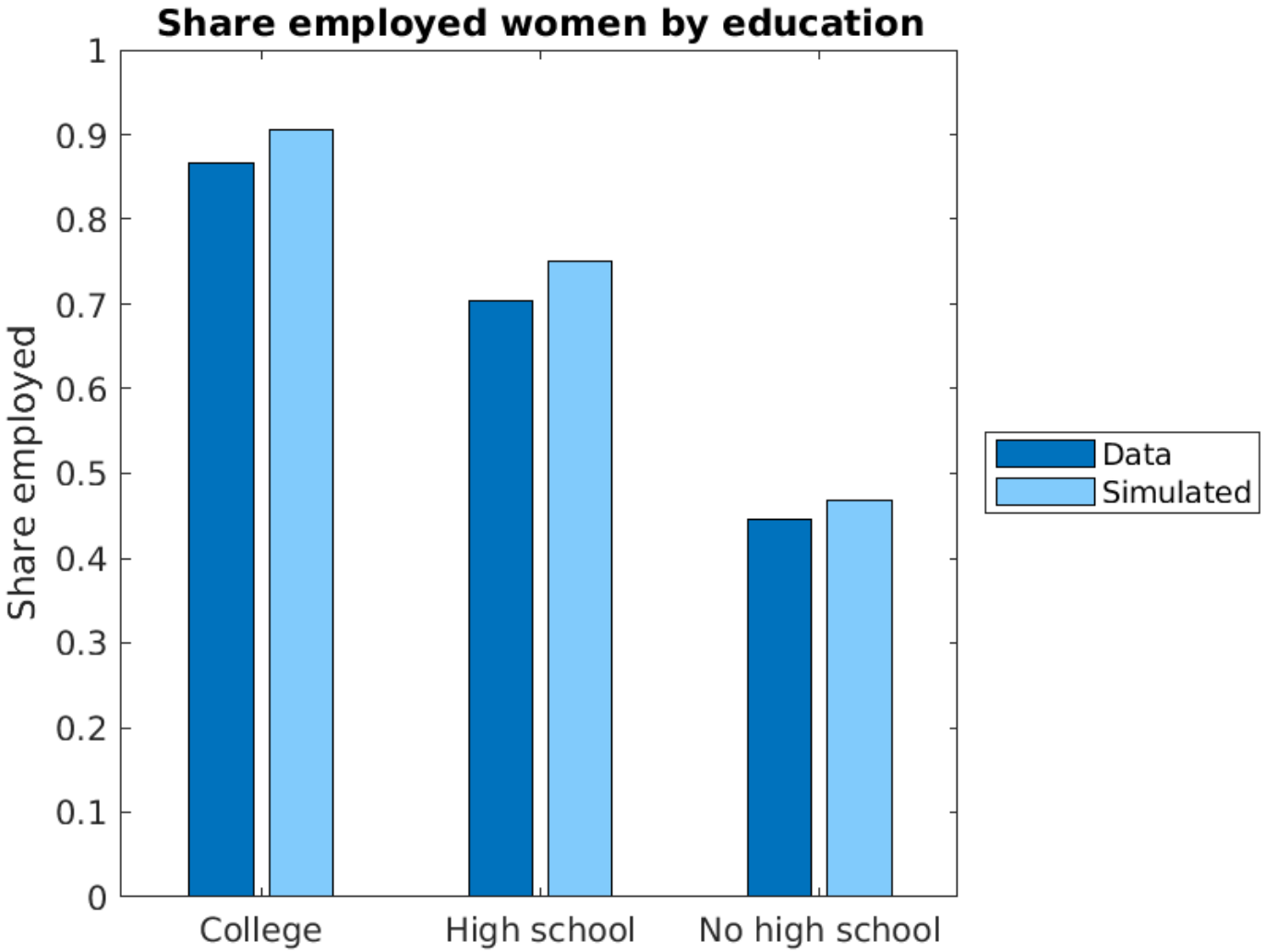
Share employed women by education level



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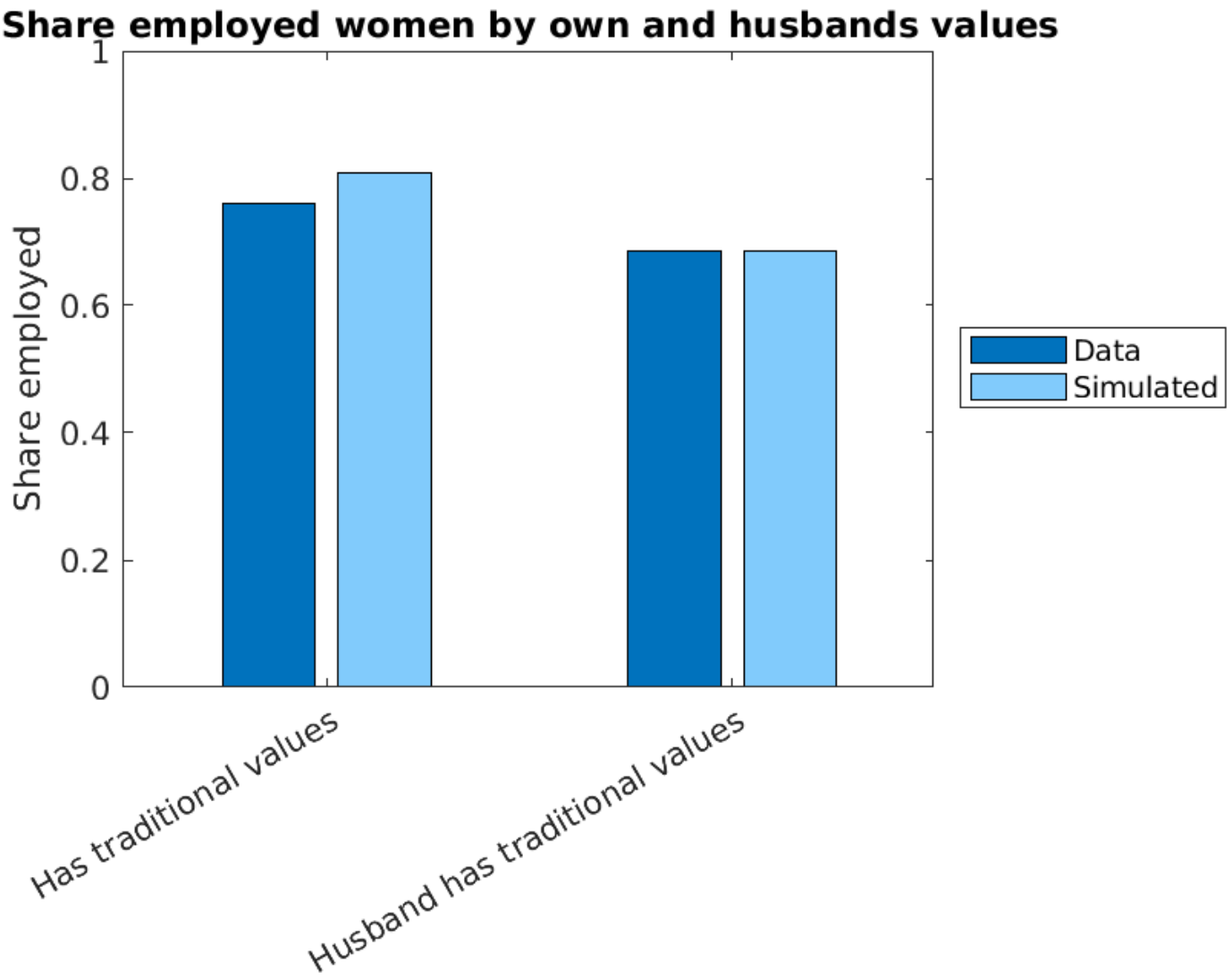
Share employed women by traditional gender values



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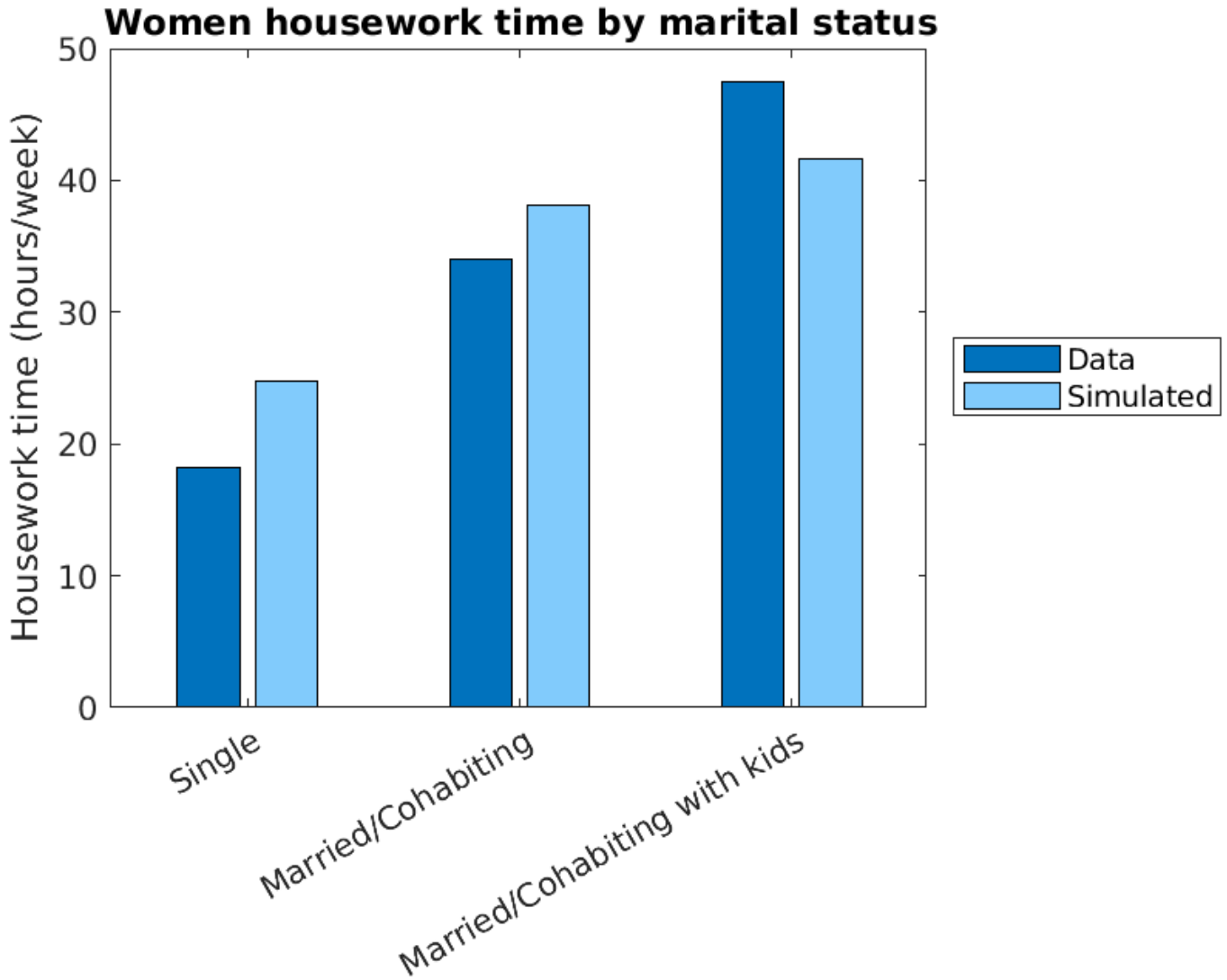
Women housework time by marital status and kids



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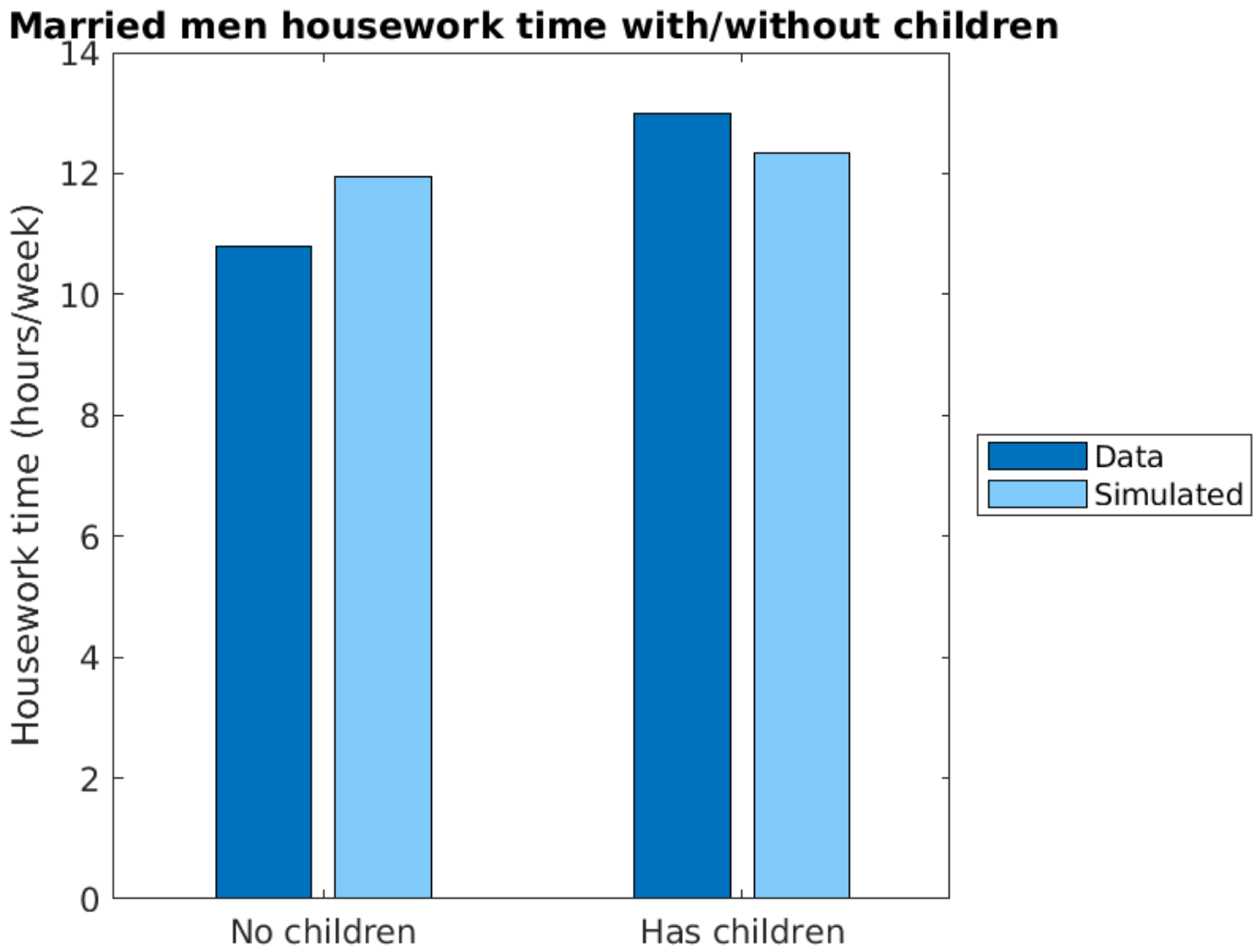
Men housework time by parenthood status



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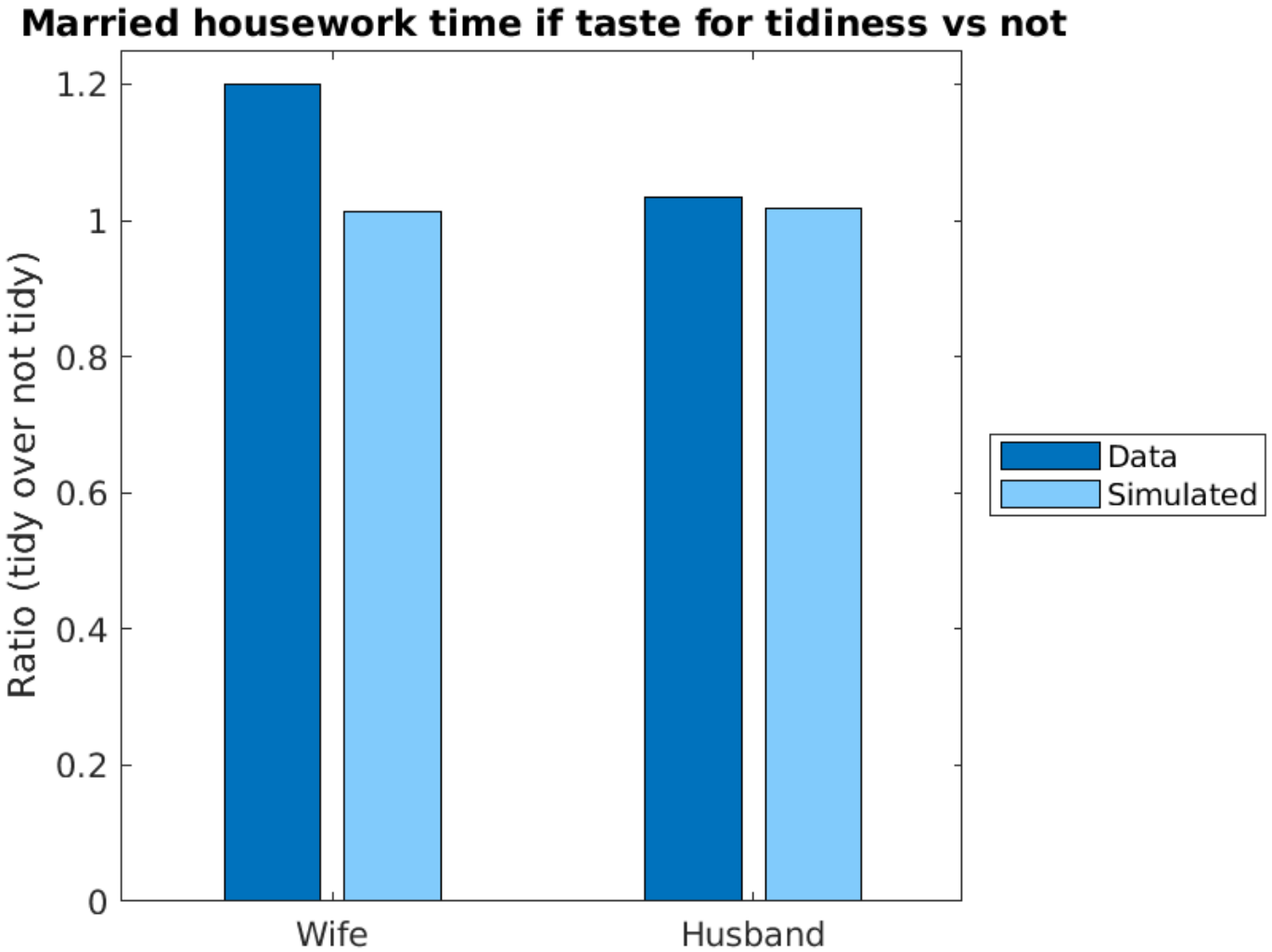
Housework time by gender and tidiness taste



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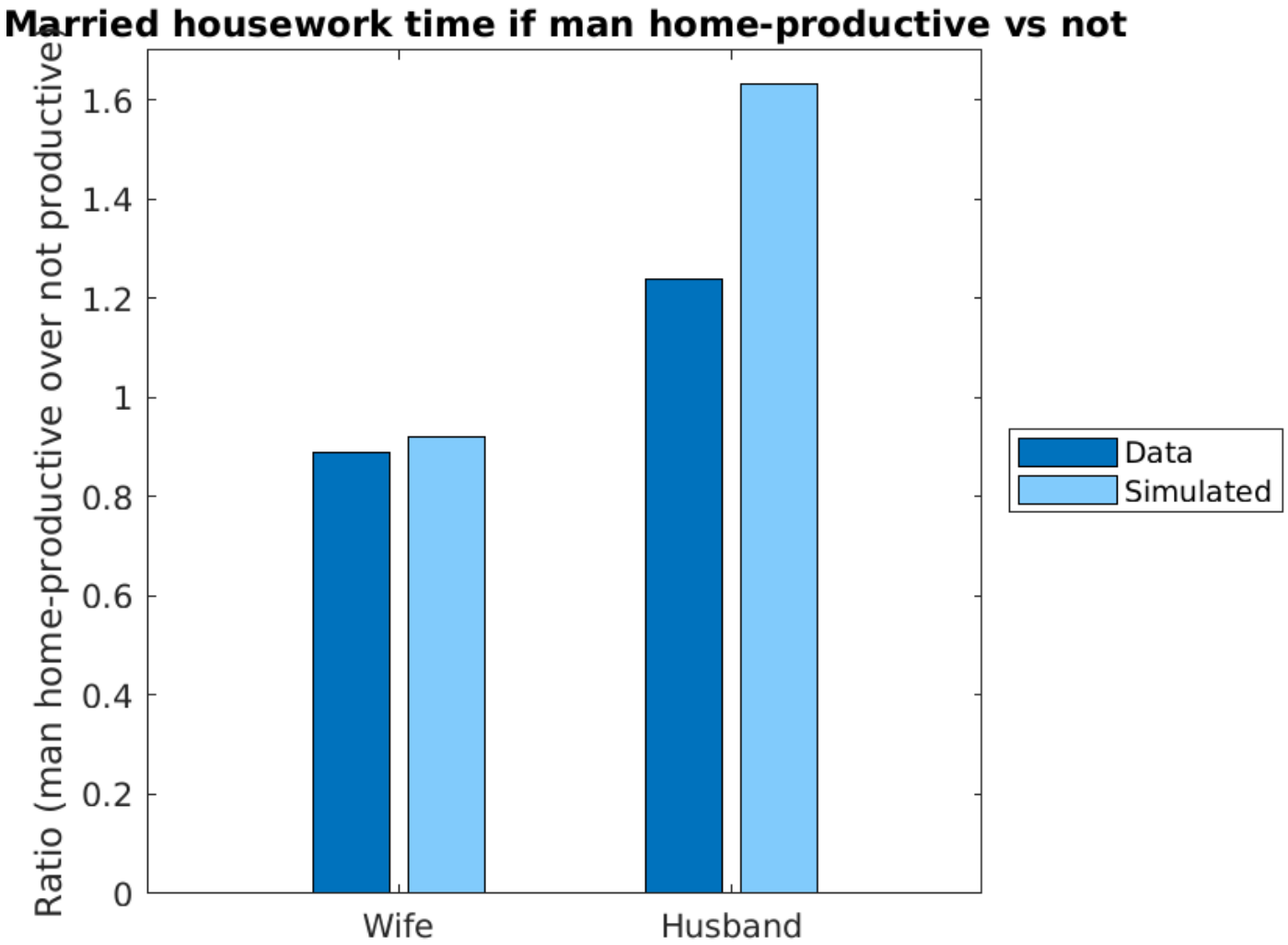
Housework time by male home productivity



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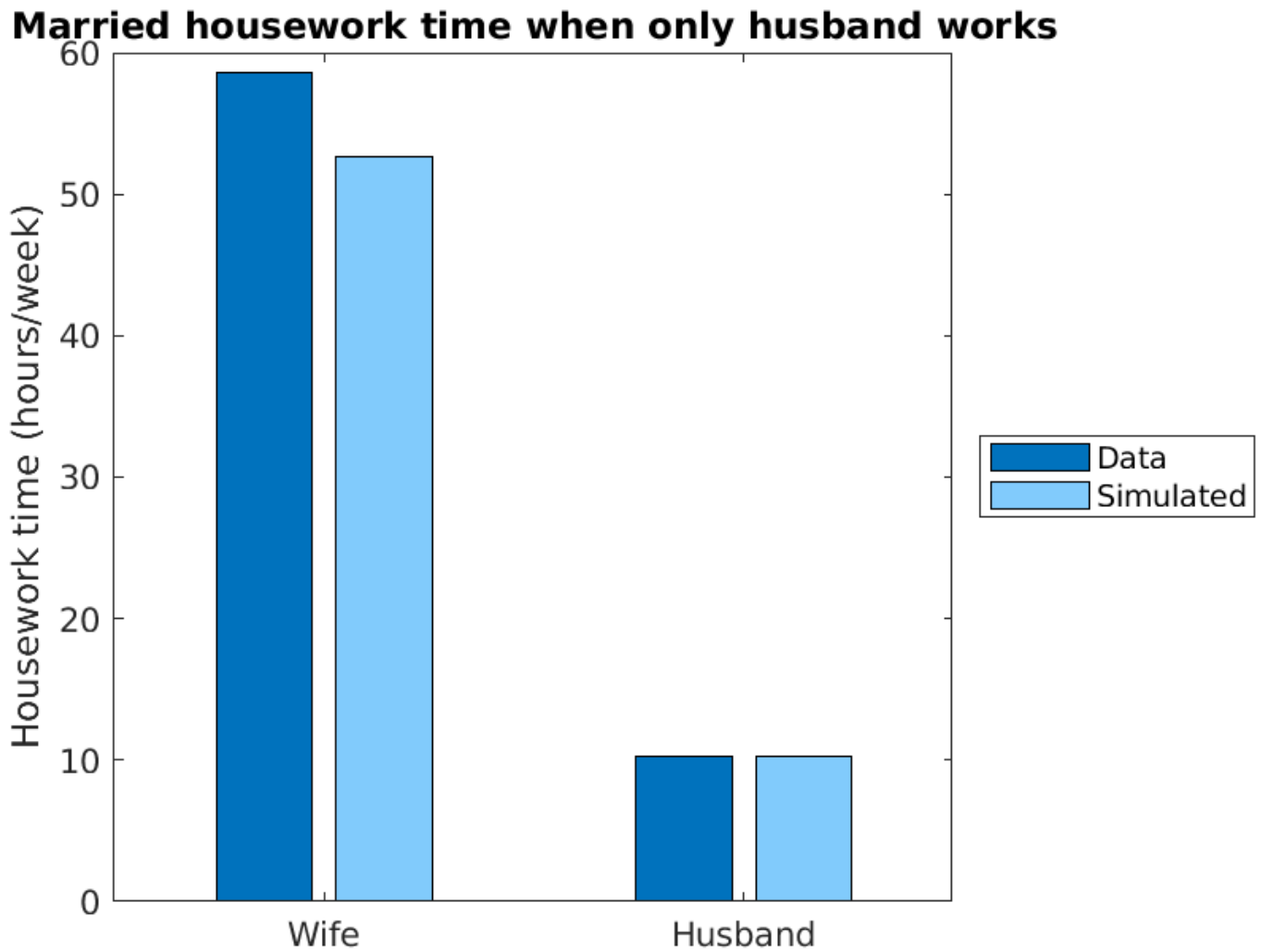
Housework time when only husband works



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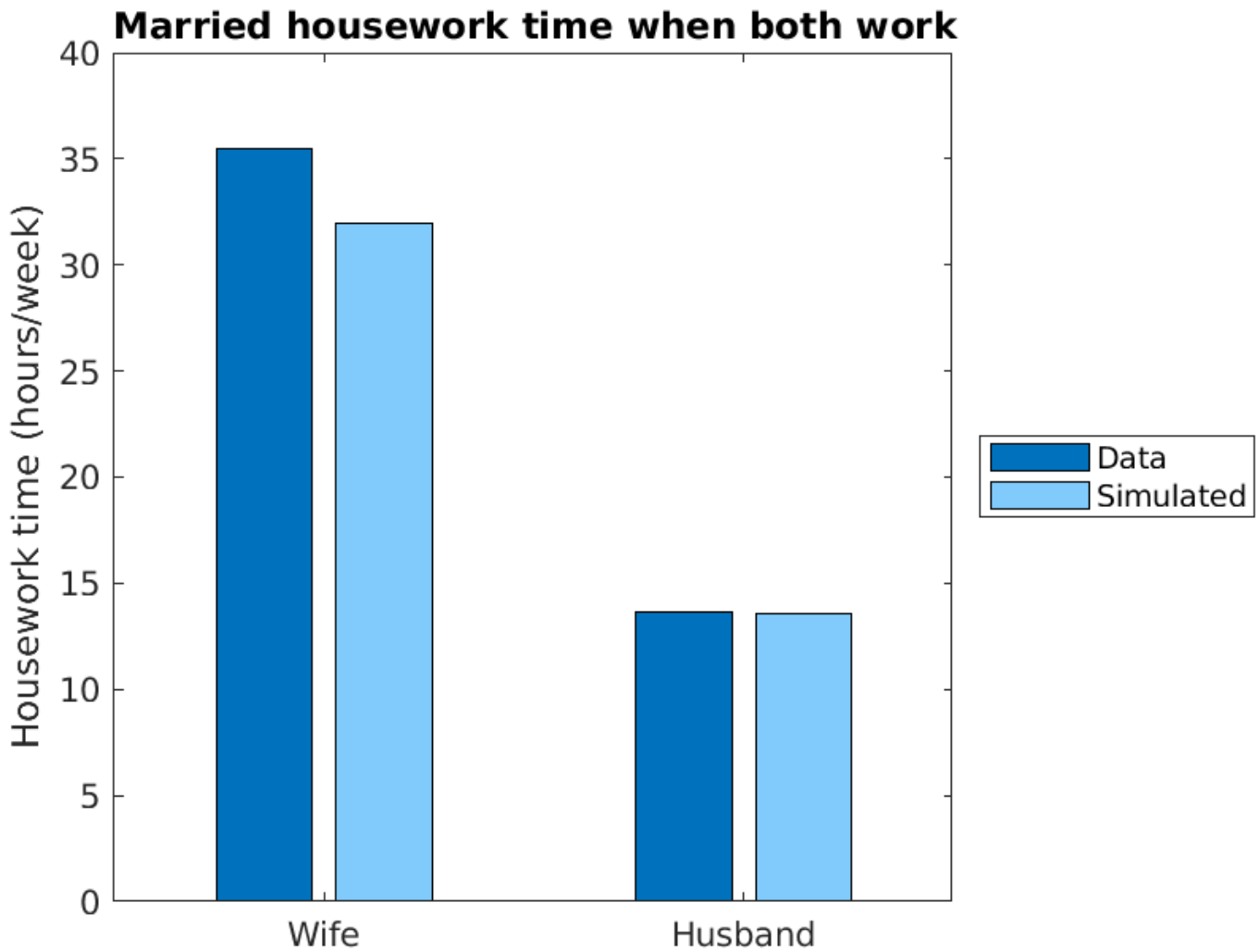
Housework time when both work



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