

Are marriage-related taxes and Social Security benefits holding back female labor supply?

Margherita Borella¹ Mariacristina De Nardi² Fang Yang³

¹University of Torino and CERP

²University of Minnesota, Federal Reserve Bank of Minneapolis, CEPR, and NBER

³Louisiana State University

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 - Labor supply of men
 - Savings
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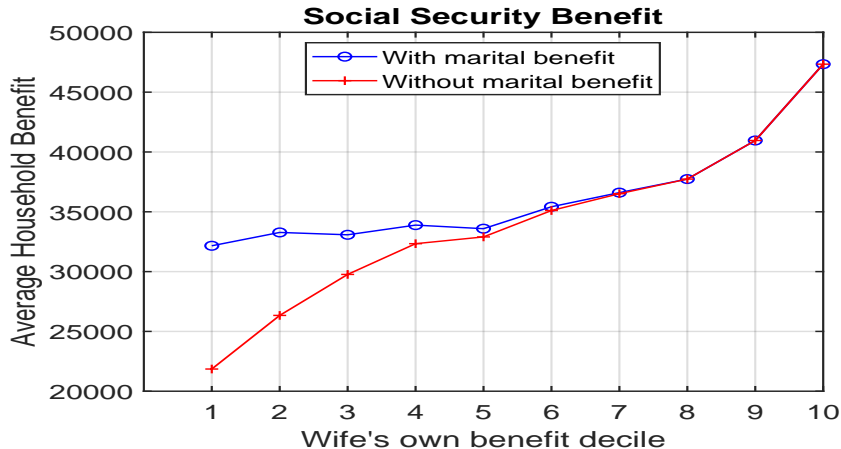
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- Question: how do marriage-related policies affect
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- Labor supply of married women has been changing over time. Are these provisions still holding back female labor supply?
 - Two cohorts (1945 cohort and 1955 birth cohorts)

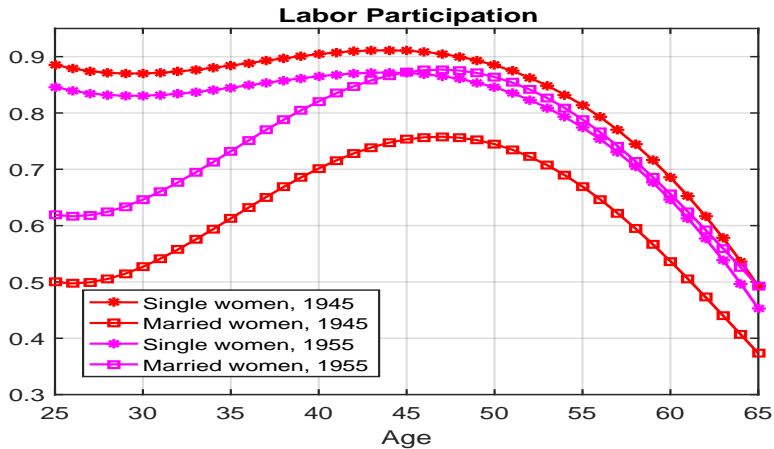
Why might they matter? Marginal tax rate for women



Why might they matter? Social Security benefits



Participation for women, 1945 and 1955 cohorts



Approach

- Develop a rich life-cycle model with single and married people
- Partial equilibrium, cohort level analysis

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- Estimate model on both cohorts using the Method of Simulated moments (MSM)
- Counterfactuals: eliminate marriage-related provisions

Model key features

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 - Tax treatment of married and single people + tax progressivity
 - Social Security payments with survival and spousal benefits
 - Old-age means-tested transfer programs

Wages

- Functions of
 - Age
 - Human capital, measured as average past earnings
 - Wage shocks which follow an AR(1) that depends on gender

Marriage and divorce

- Marriage
 - Probability of marrying: function of age, gender, and wage shock
 - Conditional on getting married, probability of meeting with a partner with a certain wage shock depends on your wage shock
- Divorce probability: function of age and wage shocks of both spouses

Children

- Exogenous fertility
- Number and age structure of children depends on maternal age and marital status
- Time costs of raising children
- Monetary costs of raising children

Health risks (after age 66)

- Age, gender, marital status, and current health affect evolution of
 - Health
 - Medical expenses
 - Survival

Two-step estimation strategy

- First step inputs for each cohort
 - Fix some parameters to calibrated or estimated values (externally to model)
 - Estimate from data directly (taxes, demographics, wage risk, health risk, human capital accumulation function...)

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 - Estimate other parameters matching data targets for 1945 cohort
- Second step, 1955 cohort
 - Fix preference parameters and use rest of parameters to match data targets for 1955 cohort

Model estimates

- Model fits well profiles of
 - Participation of single and married men and women by age
 - Hours worked by workers of single and married men and women by age
 - Savings of single and married couples by age

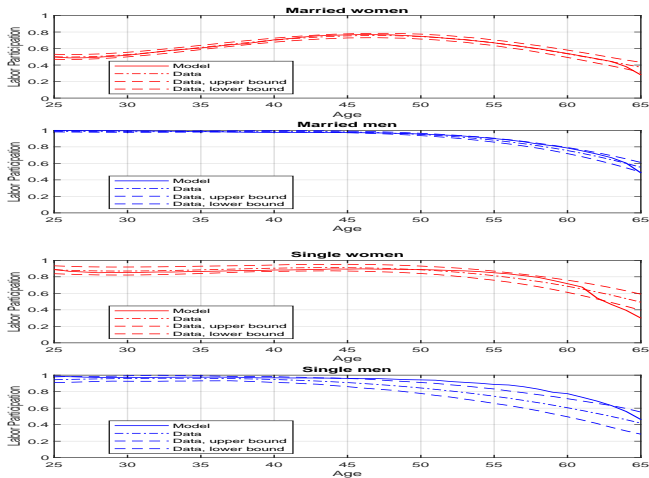
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- Married women work much less than married men due to:
 - Lower wage (lower initial human capital, wage reduction for raising young kids)
 - Less available time due to home production
 - Marriage-related policies

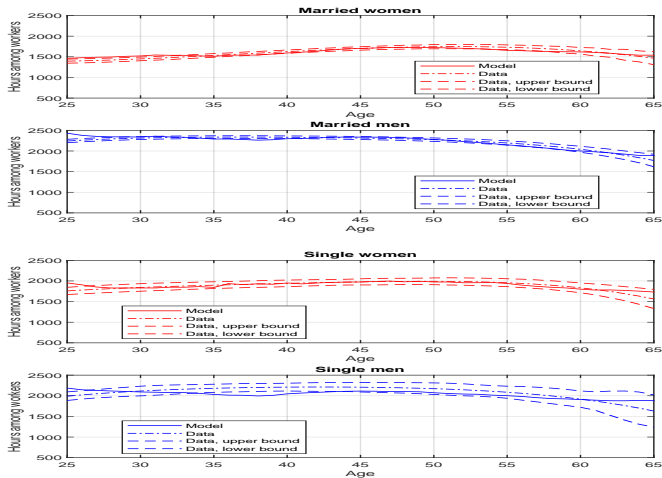
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- **Model also implies empirically plausible elasticities of labor supply** (intensive and extensive) for single and married men and women by age

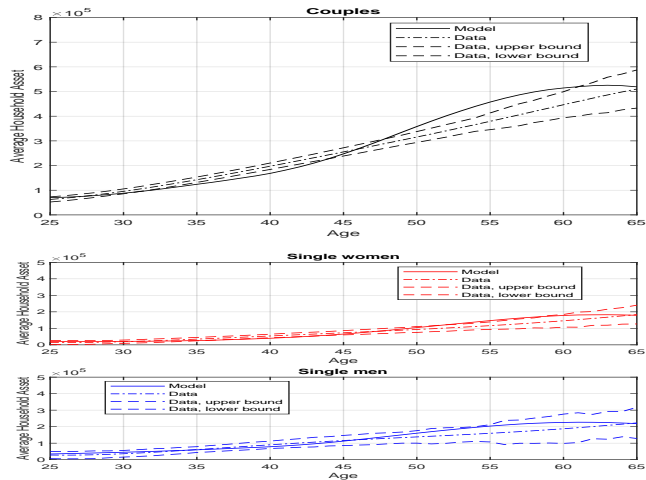
Participation. 1945 cohort



Hours. 1945 cohort



Savings. 1945 cohort

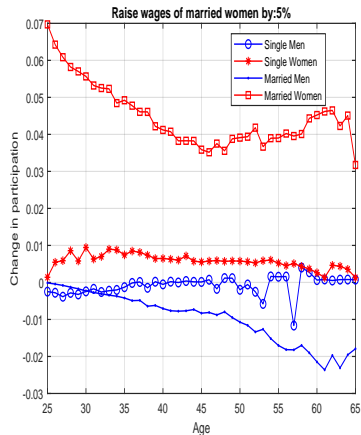
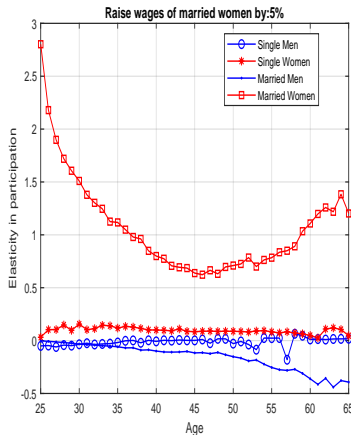


Labor supply elasticity, temporary wage change

	Participation				Hours among workers			
	Married		Single		Married		Single	
	W	M	W	M	W	M	W	M
30	1.0	0.0	0.5	0.2	0.2	0.3	0.4	0.3
40	0.7	0.1	0.4	0.2	0.3	0.5	0.5	0.5
50	0.6	0.2	0.4	0.5	0.5	0.5	0.8	0.5
60	1.1	0.8	1.4	2.0	0.4	0.2	0.5	0.3

Table: Labor supply elasticity, temporary wage change, 1945 cohort

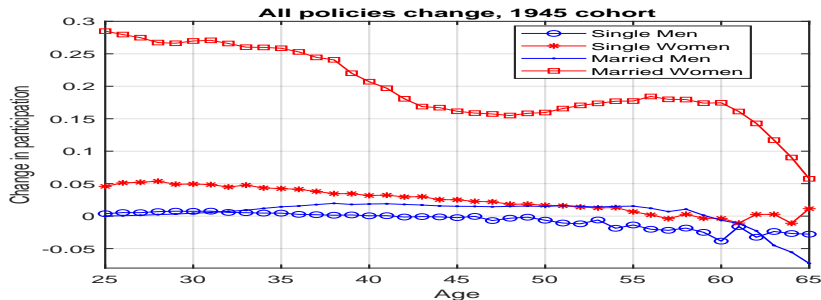
Labor supply elasticity, permanent wage change, 1945 cohort



What are the effects of marriage-related policies?

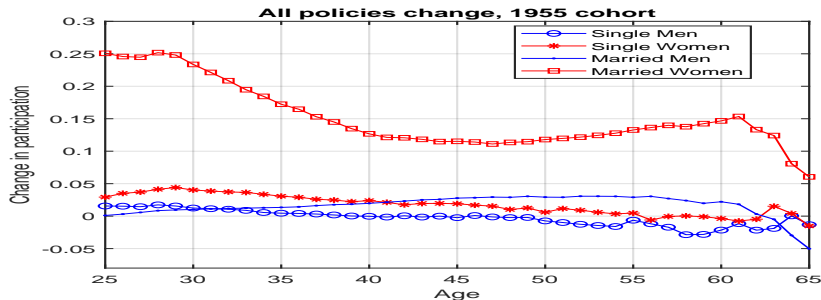
- Remove Social Security spousal and survivor benefits + joint taxation

Remove Social Security benefits + joint tax, 1945 cohort



Percentage asset change	Couples	Single women	Single men
Balanced government budget	20.3%	14.8%	8.8%

Remove Social Security benefits + joint tax, 1955 cohort



% asset change	Couples	Single women	Single men
Balanced government budget	19.7%	14.9%	8.4%

Welfare, remove all marriage-related policies, balanced budget, 1945 cohort

	Winners			Losers		
	Couples	SW	SM	Couples	SW	SM
1945 cohort						
Fraction	98.9	35.8	100.0	1.1	64.2	0.0
Average gain	0.84	0.31	2.24	-0.04	-0.13	0.00

- 1955 cohort: Fewer single women lose (they start with more human capital)

Conclusions

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- Marriage-related provisions reduce
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- Effects are also large for the 1955 cohort, who had much higher labor market participation of married women to start with

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- Retirement stage (t_r to T)
 - Face shocks to health status
 - Medical costs
 - Exogenous probability of death. So people who are married might lose their spouse

Children

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- Number and age structure of children depends on maternal age and marital status
- Time costs of raising children and running households (depend on gender and marital status)
- Monetary costs of raising children
 - Wage reduction on women
 - Consumption cost