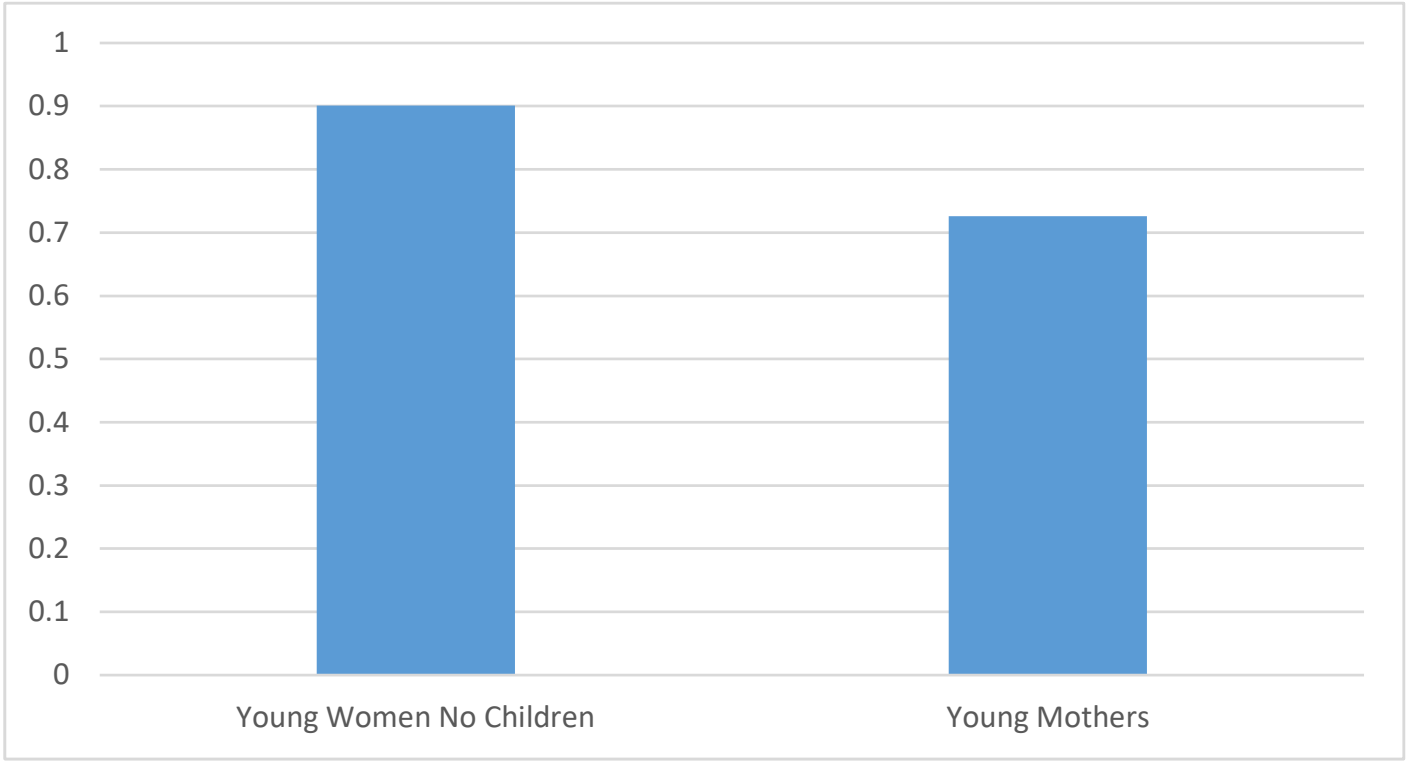
Globalization, Gender, and the Family

Wolfgang Keller and Hâle Utar

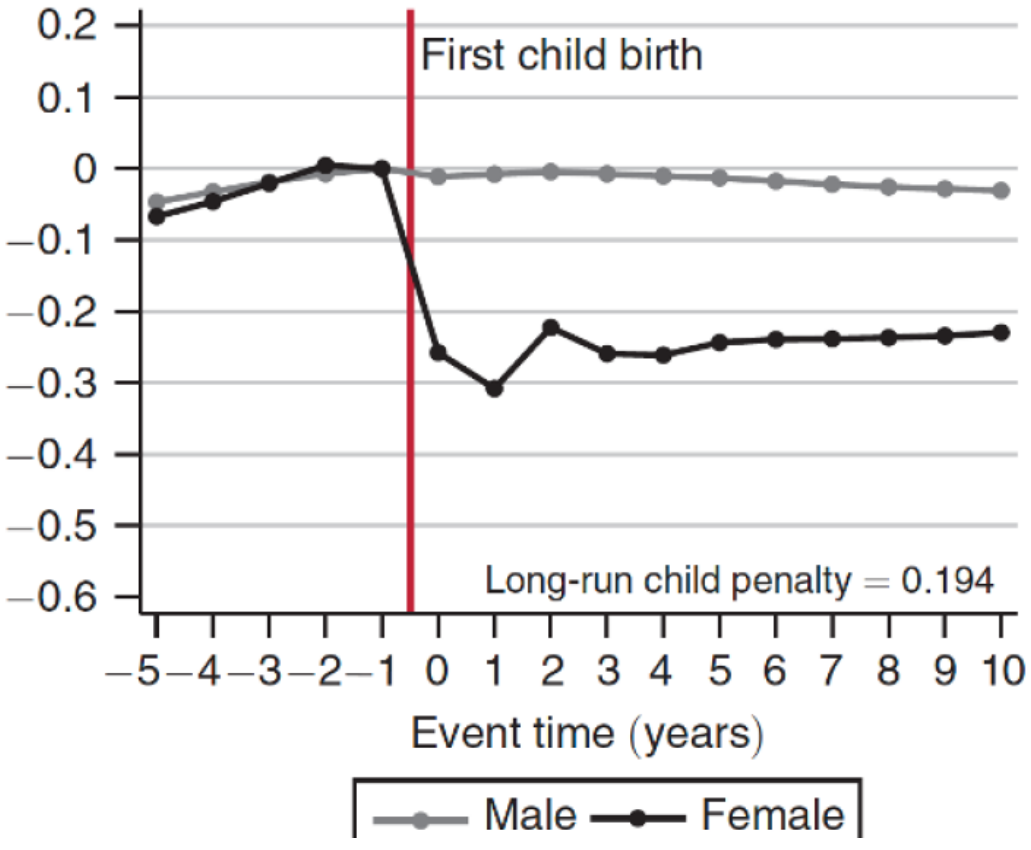
NBER Summer Institute
Gender in the Economy
July 25, 2020

Women's Wage Relative to Men: Children



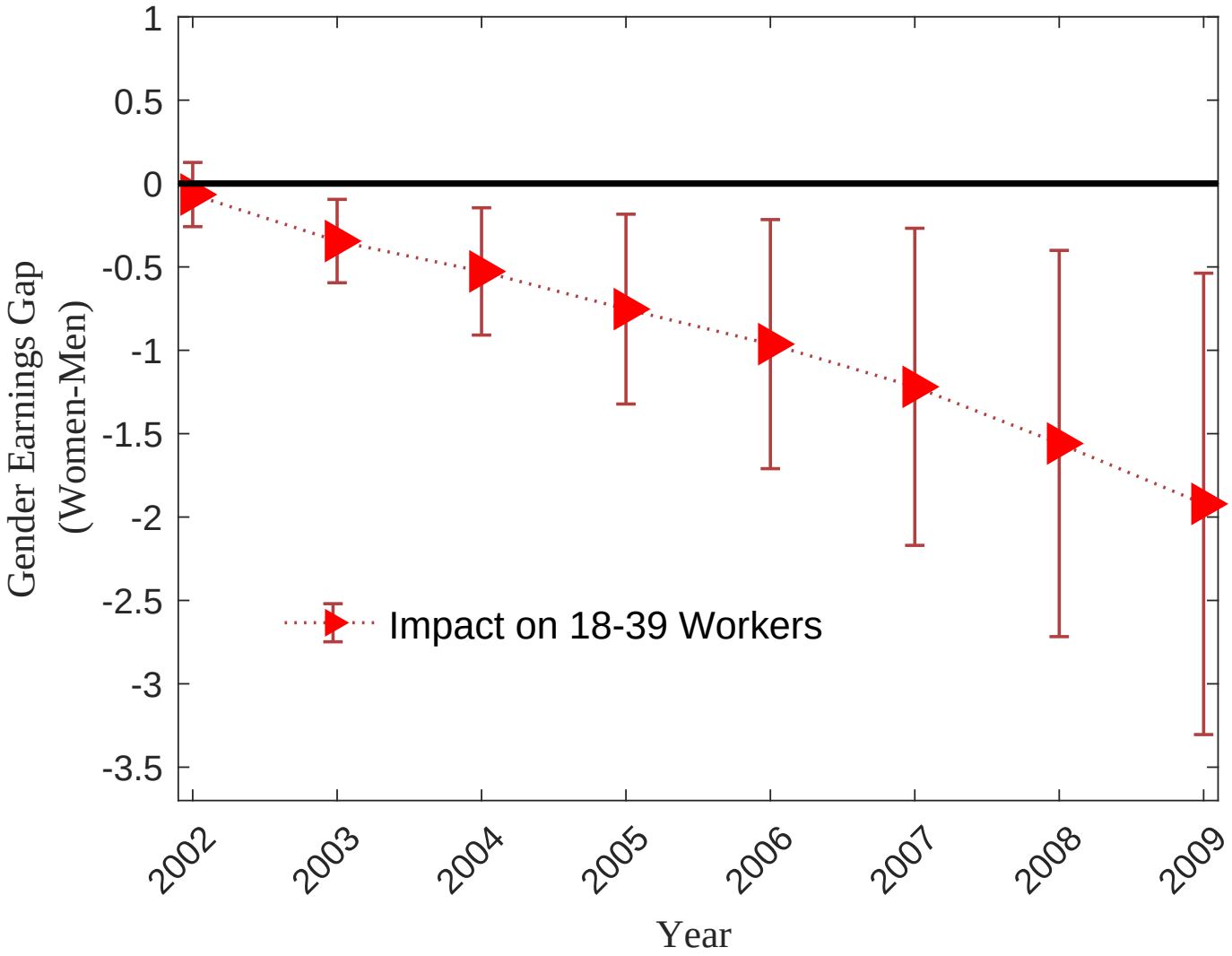
Source: US, 1991; Goldin (2014), Waldfogel (1998)

Dynamics of Child Penalty – "Even in Denmark"



Source: Kleven, Landais, Sogaard 2019; New York Times 2018

The Missing Earnings of Young Women

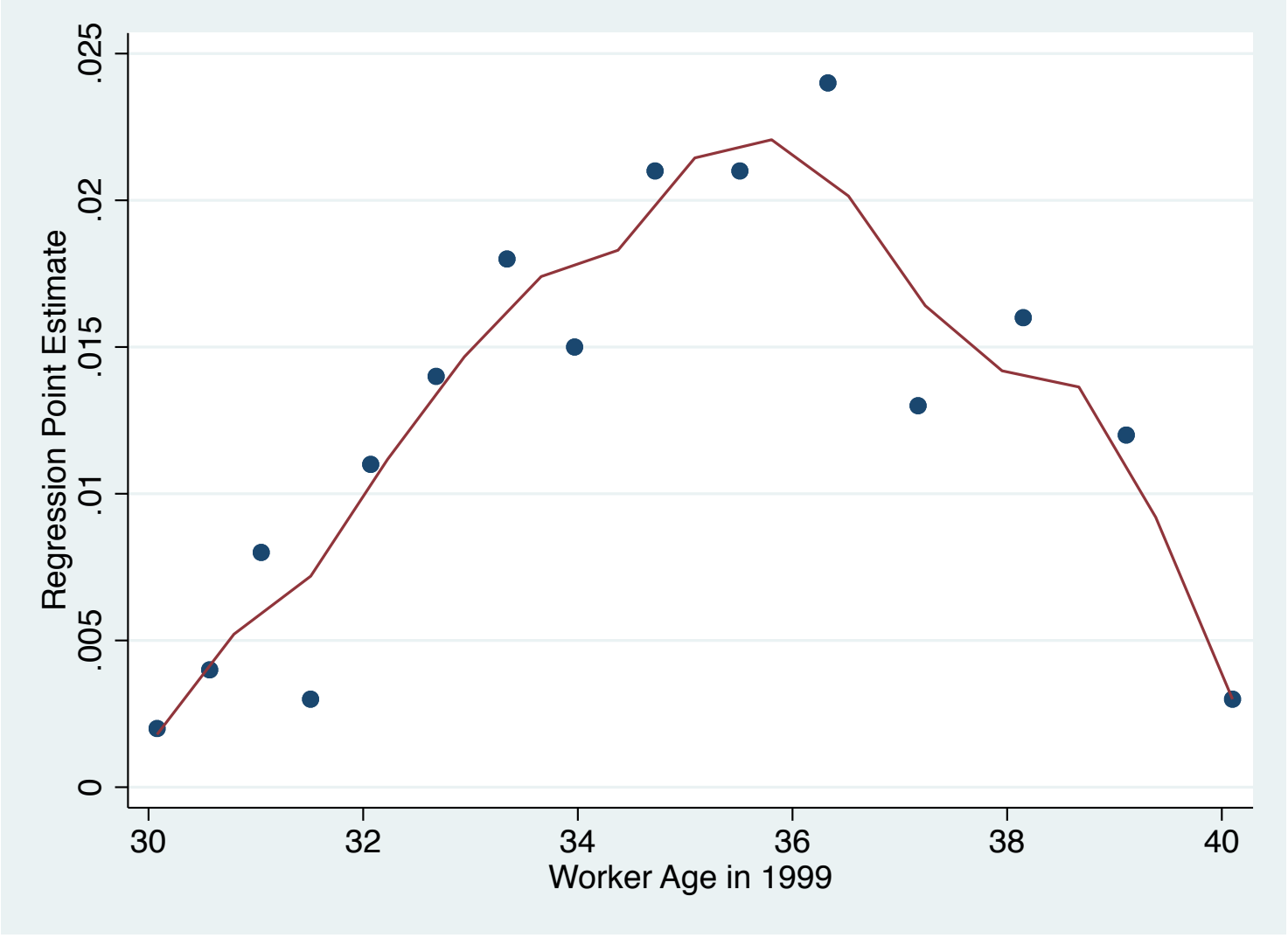


- Import Competition Effect: 2 x annual pre-shock earnings over 8 years

Gender Adjustment to Labor Shock and the Biological Clock

- Plausibly exog. labor demand shock
  - Can rule out child penalty b/o career planning, selection
- Labor mkt-family margin in a unified individual-level analysis of trade adjustment
  - men and women's labor market outcomes
  - household formation/dissolution and fertility
- Biological fertility clock
  - true for women across jobs, occupations, educations

Fertility Response ↑ as Biological Clock Runs Out



- Highest gender differential in fertility is for 39 yrs old
  - the shock hits in 2002

Data and approach : overview

- Administrative data from Denmark
  - Population register: all **births**, **marriages**, **divorces**
  - Matched employee-employer data (1.6m workers)
- Worker-level, longitudinal analysis, covering 1999-2009
  - **cohort analysis** prevent endogenous re-sorting
  - **panel structure** control for unobservable individual characteristics
- **Causal** impact of labor market shock (China)
  - **natural-experimental** setting
  - The **entire Danish labor force** using IV

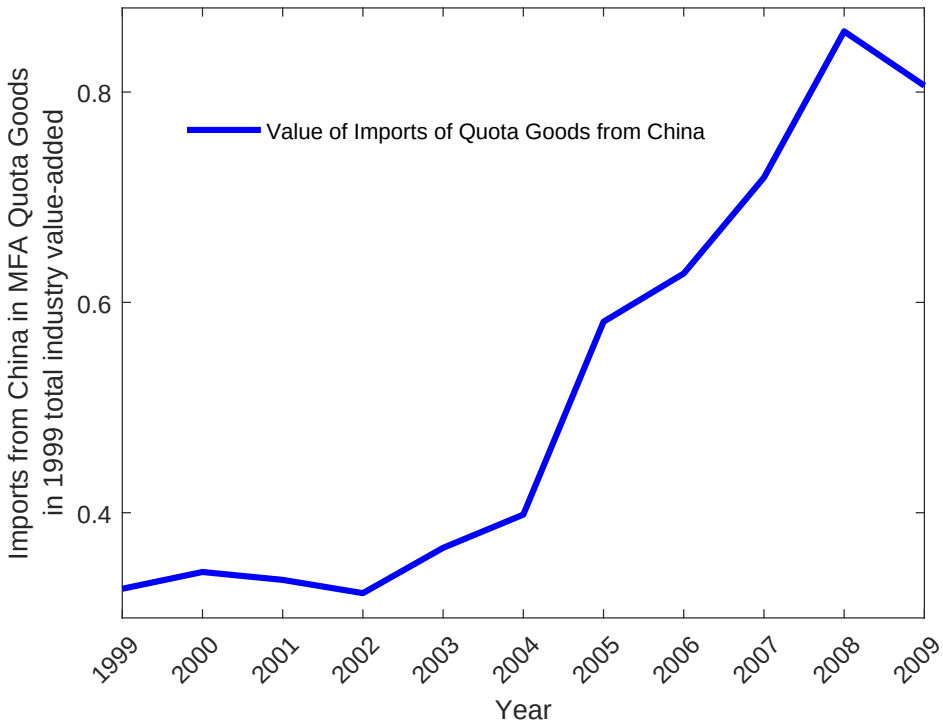
- Estimation Framework
  1. Removal of Multi-fiber Arrangement (MFA) quotas for China as an experiment
  2. Instrumental variable strategy w/ entire private sector workers

Import Shock– Removal of Import Quotas

- The Multi-fiber arrangement (MFA)
  - Governed world trade in textile and clothing (T&C) since 1974
  - Negotiated at EC/EU level, Denmark not a major player
- Phase out Agreement under WTO in 1995
- China, not in WTO, benefited from Jan 2002, after joining WTO

Import Shock– Removal of Import Quotas

- The Multi-fiber arrangement (MFA)
  - Governed world trade in textile and clothing (T&C) since 1974
  - Negotiated at EC/EU level, Denmark not a major player
- Phase out Agreement under WTO in 1995
- China, not in WTO, benefited from Jan 2002, after joining WTO

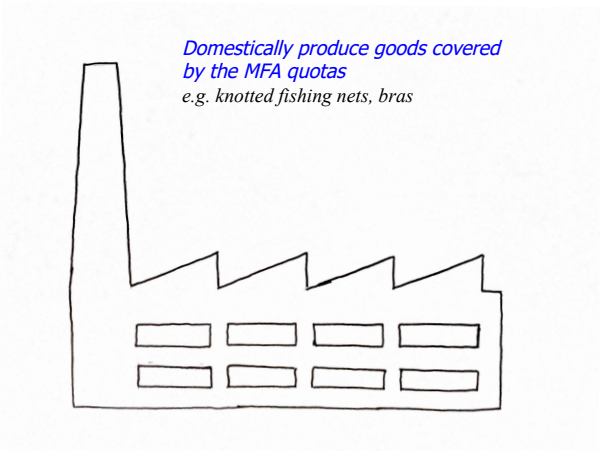


▸ More

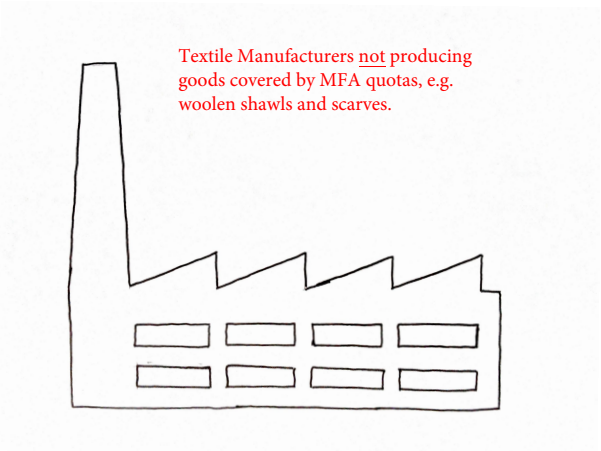
Identifying Trade's Causal Effect in Quasi-Experiment

- Match import quotas with 8-digit products

- Identify **firms** w/ **domestic production** in quota goods, **in 1999** (before the shock)



Exposed Workers
4,743



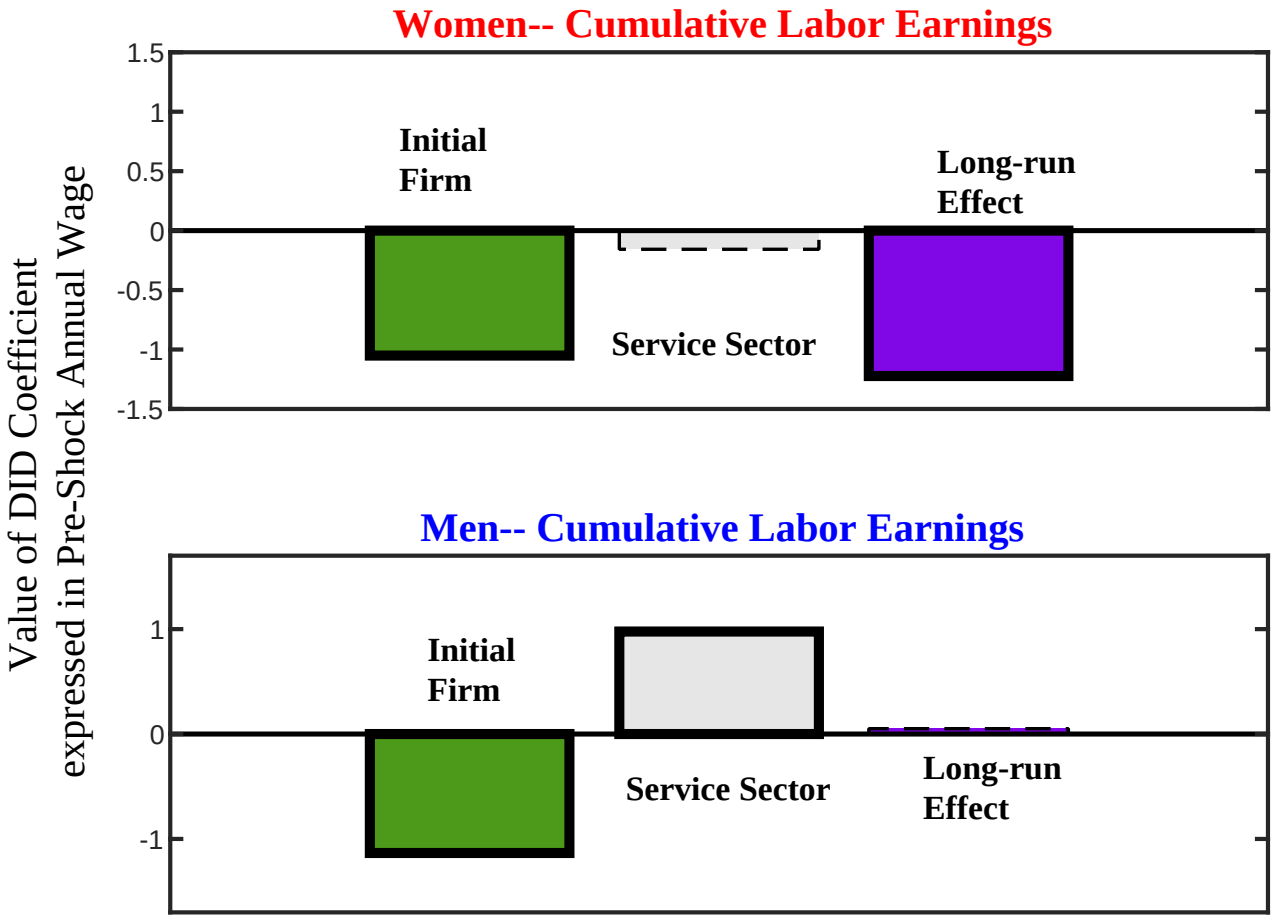
Control Workers
5,255

- Control for worker FEs / detailed pre-shock worker characteristics
  $\Rightarrow$ **Workers differ only in their exposure to exogenous import shock**

▸ TreatmentControl ▸ by Gender ▸ IndDest ▸ By Gender and Marital Status ▸ Quotas ▸ QuotaFirm

Labor Market Outcomes: Men vs Women –Earnings

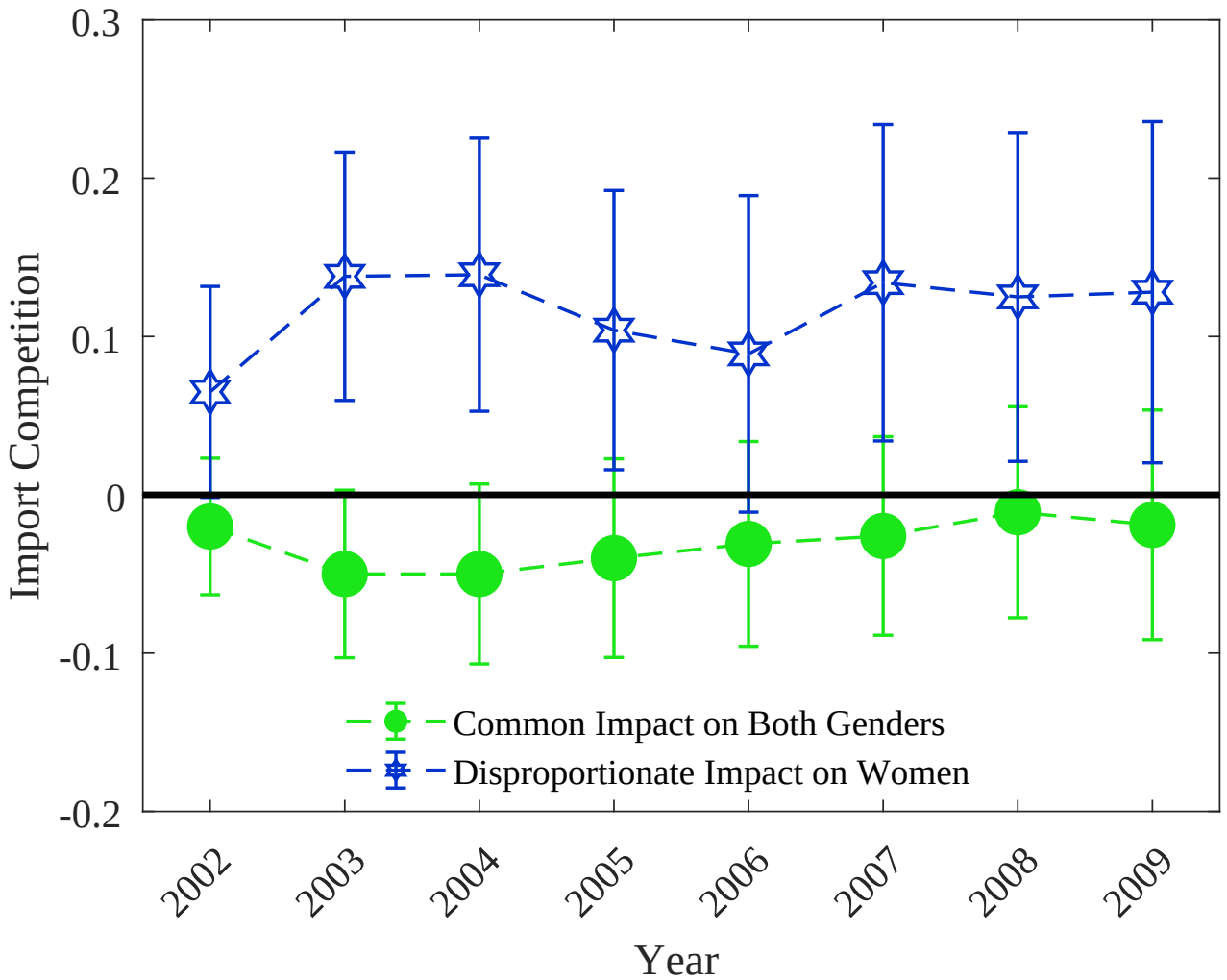
$$X_{i\tau} = \beta_0 + \beta_1 \underbrace{CompExp_i * PostLib_\tau}_{\text{ImpComp}} + \tau + i + \epsilon_{i\tau}, \quad \tau = pre(99-01), post(02-09) \ .$$



Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

Import Competition and Newborn Children

- Single, fertile age sample

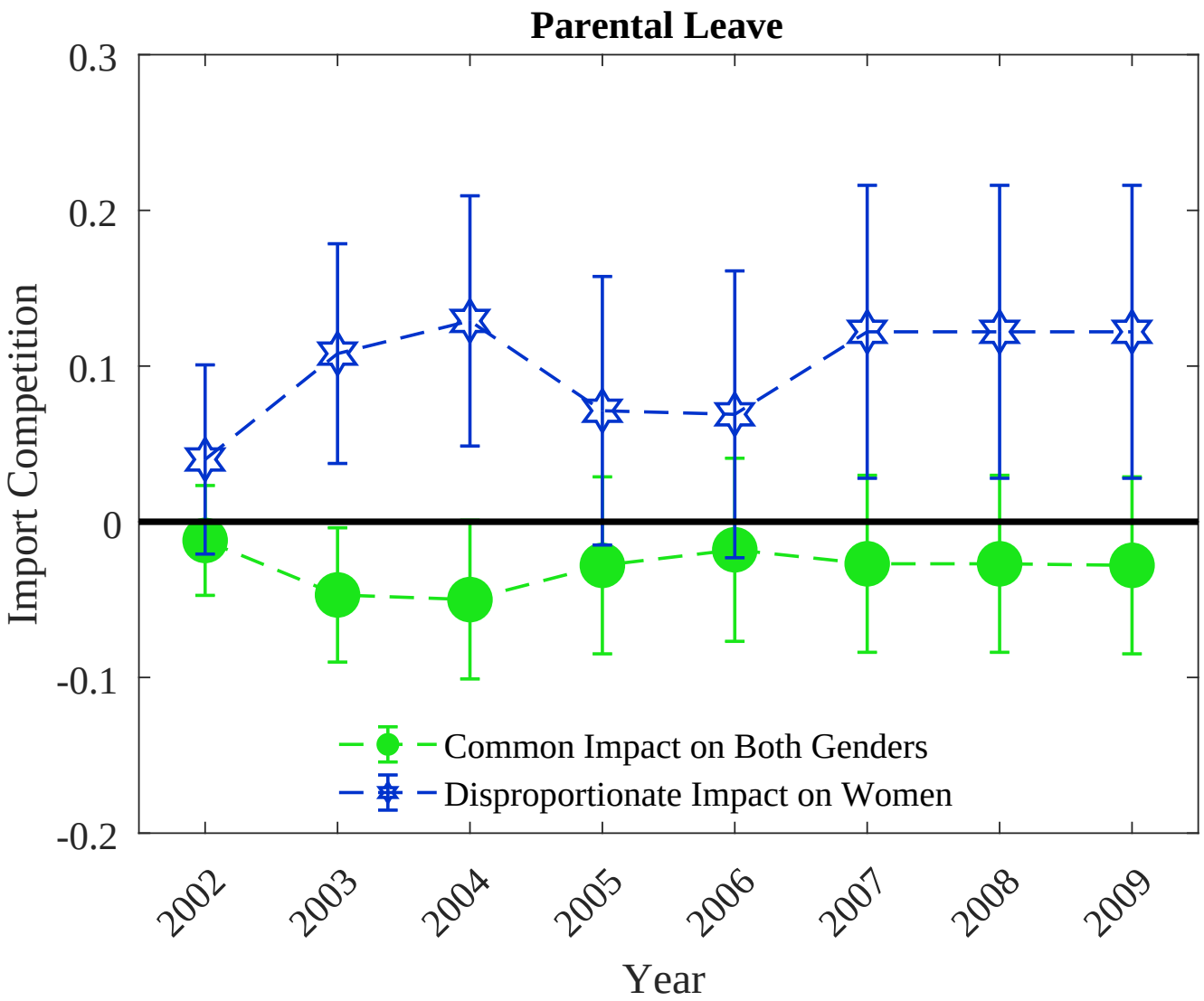


Worker + Time + Female x Time FEs. Shown is 95% confidence interval. SEs are clustered at the firm-level.

▸ PreTrends ▸ RegressionTable

Import Competition and Parental Leave Take

- Single, fertile age sample



Worker + Time + Female x Time FEs. Shown is 95% confidence interval. SEs are clustered at the firm-level.

▸ RegressionTable

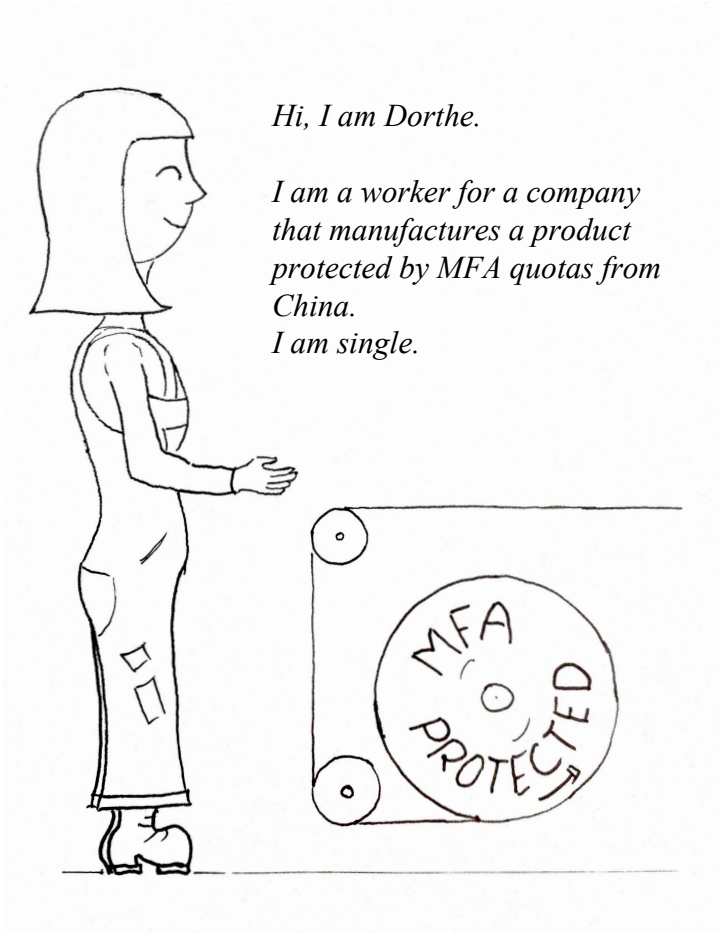
Import Competition and Marriage Decisions

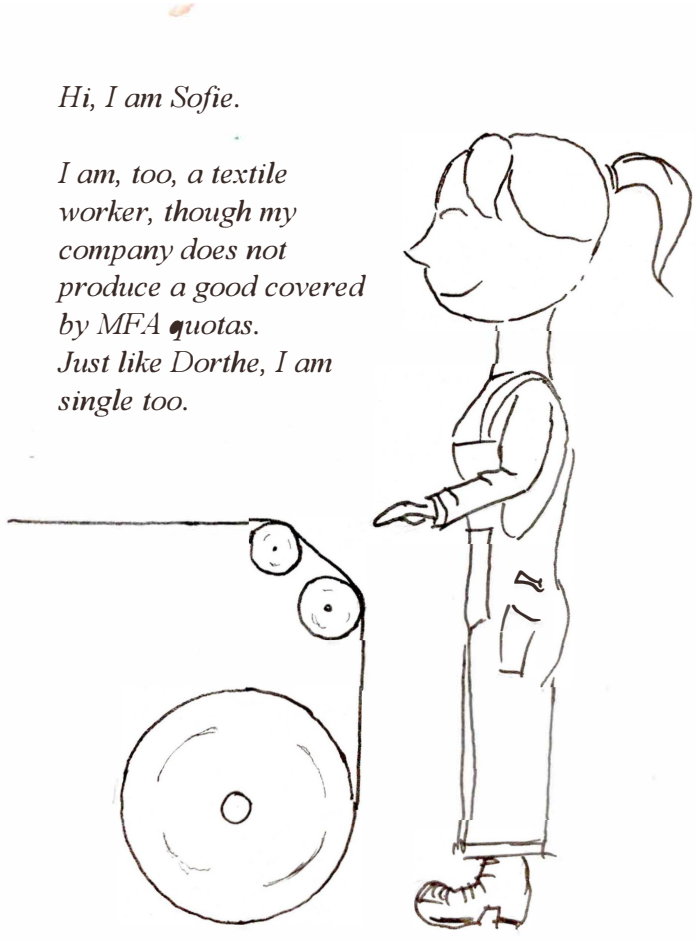
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender	All	Men	Women	All	Men	Women	All	Men	Women
Sample		*Not married*			*Fertile Age* (18 – 39)			*Single*	
ImpComp	-0.019	-0.019	0.058**	-0.012	-0.012	0.080**	-0.026	-0.026	0.094**
	(0.027)	(0.027)	(0.03)	(0.034)	(0.034)	(0.037)	(0.033)	(0.033)	(0.042)
ImpComp x Female	**0.077****			**0.092****			**0.119****		
	(0.036)			(0.046)			(0.051)		
Observations	8,216	3,876	4340	5,784	2,808	2,976	3,160	1,708	1,452
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time	✓			✓			✓		

Notes: Unmarried in 1999. Robust s.e. clustered at firm in parentheses.

- Import competition ↑ the probability of marriage 30% for women
- especially single, fertile age (18-39) women

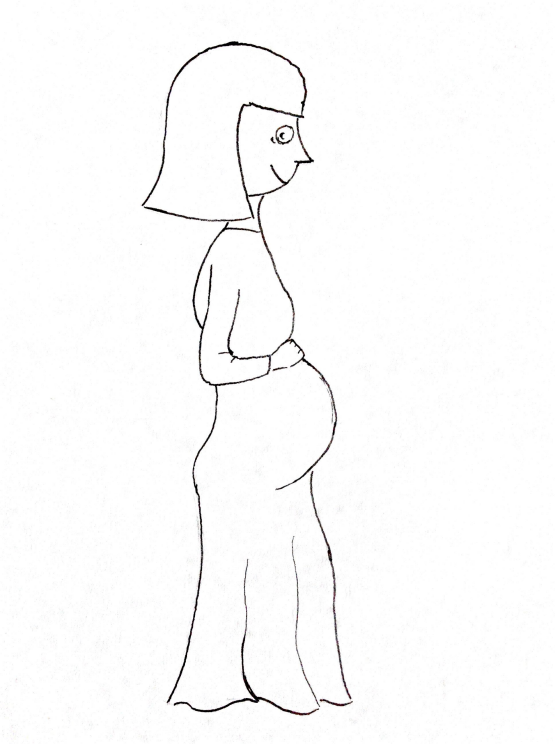
Year 1999, somewhere in Denmark...





▸ Fem Occs

After MFA quotas were removed for China...



By 2009, Dorthe (Treated) has **12 pp** *higher chance of giving birth,* **8pp** *higher chance of taking a parental leave,* **8.4 pp** *higher chance of getting married in comparison to Sofie*

Import Competition and Divorce Decisions

Gender	(1) All	(2) All	(3) Men	(4) Women	(5) All	(6) All	(7) Men	(8) Women
						Fertile Age (18 – 39)		
ImpComp	-0.030***	-0.021	-0.021	-0.040***	-0.057***	-0.024	-0.024	-0.086***
	(0.009)	(0.014)	(0.014)	(0.011)	(0.018)	(0.026)	(0.026)	(0.022)
ImpComp x Female		-0.019				-0.062*		
		(0.017)				(0.032)		
Observations	11,780	11,780	4,934	6,846	4,634	4,634	1,840	2,794
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time		✓				✓		

Notes: Married in 1999. Robust s.e. clustered at firm in parentheses.

- Import competition causes ↑ **50%** lower divorce likelihood
  - Driven by women ↑ **74%**
  - Especially younger women (18-39)

▸ Alternative Age Limits ▸ Probit

Family Adjustment comes in Adjustment to Hardship

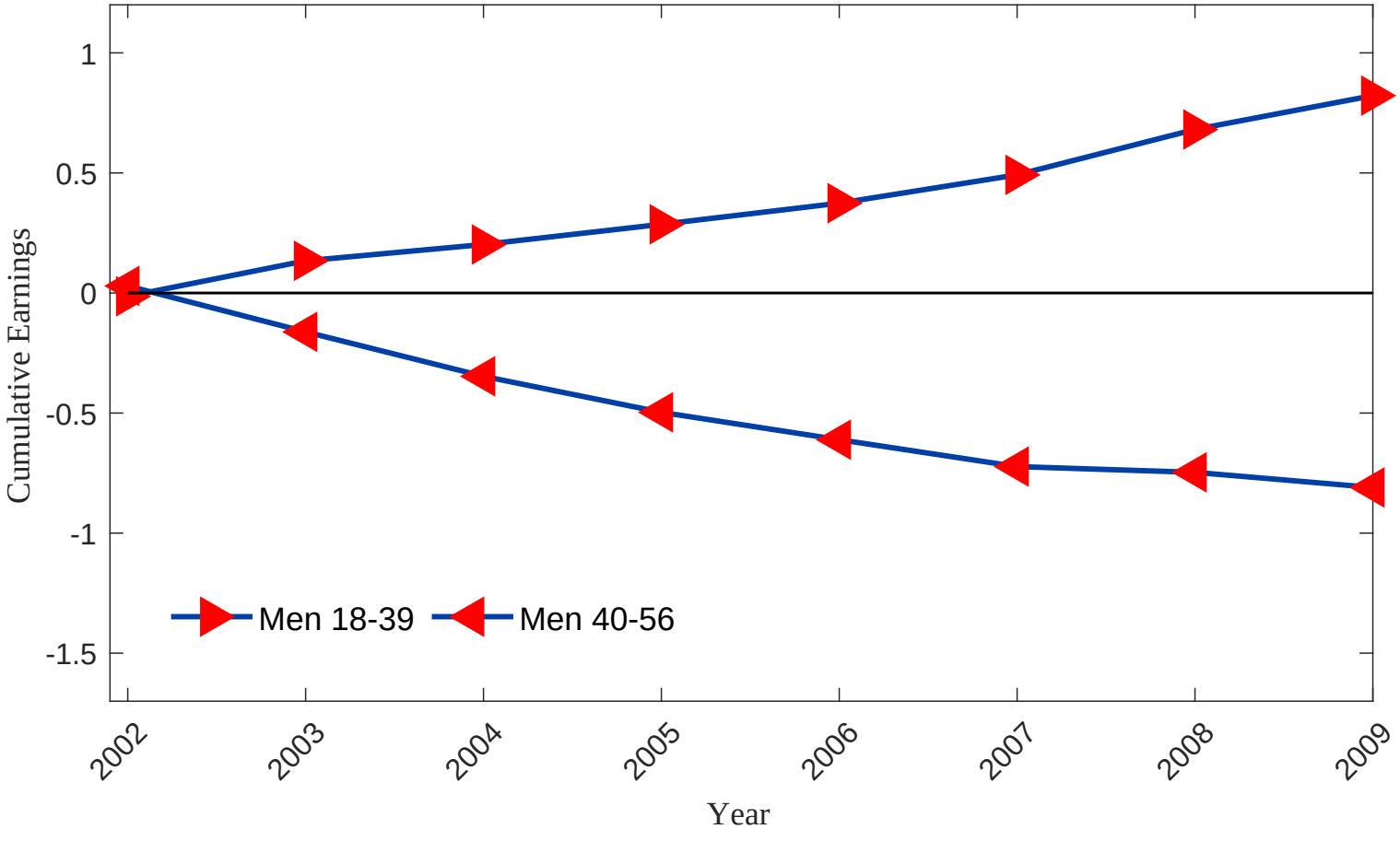
	Birth		Parental Leave		Marriage	
	(1) **Women**	(2) **Men**	(3) **Women**	(4) **Men**	(5) **Women**	(6) **Women**
Any Labor Market Position	**0.077****	0.053	**0.067***	0.044	**0.058****	-0.019
	(0.037)	(0.035)	(0.037)	(0.028)	(0.029)	(0.027)
At the Initial Job	0.007	0.008	0.008	0.023	0.000	-0.037
	(0.025)	(0.028)	(0.028)	(0.022)	(0.018)	(0.021)
After Leaving Initial Job	**0.093*****	0.039	**0.099*****	0.013	**0.057**	0.018
	(0.031)	(0.029)	(0.033)	(0.023)	(0.022)	(0.022)
Of which:						

Family Adjustment comes in Adjustment to Hardship

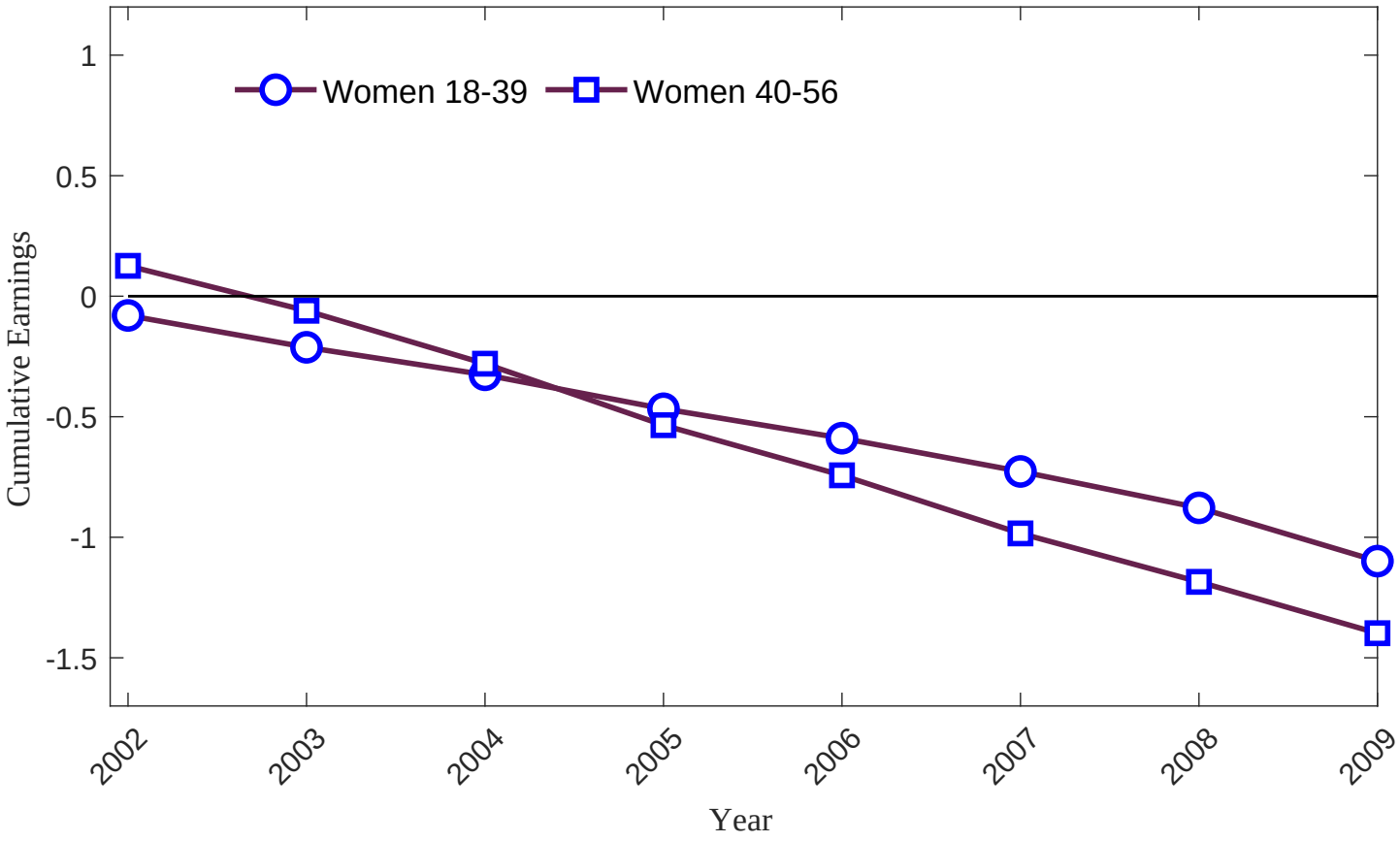
	Birth		Parental Leave		Marriage	
	(1) **Women**	(2) **Men**	(3) **Women**	(4) **Men**	(5) **Women**	(6) **Women**
Any Labor Market Position	**0.077****	0.053	**0.067***	0.044	**0.058****	-0.019
	(0.037)	(0.035)	(0.037)	(0.028)	(0.029)	(0.027)
At the Initial Job	0.007	0.008	0.008	0.023	0.000	-0.037
	(0.025)	(0.028)	(0.028)	(0.022)	(0.018)	(0.021)
After Leaving Initial Job	**0.093*****	0.039	**0.099*****	0.013	**0.057**	0.018
	(0.031)	(0.029)	(0.033)	(0.023)	(0.022)	(0.022)
Of which:						
Out of Labor Force	**0.041****	0.001	**0.034****	-0.004	**0.014***	0.002
	(0.017)	(0.007)	(0.016)	(0.003)	(0.008)	(0.005)

Notes: Each cell gives DiD results for "ImpComp" separate regressions. Worker, Time FEs.

Trade Adjustment Costs: Young vs Old

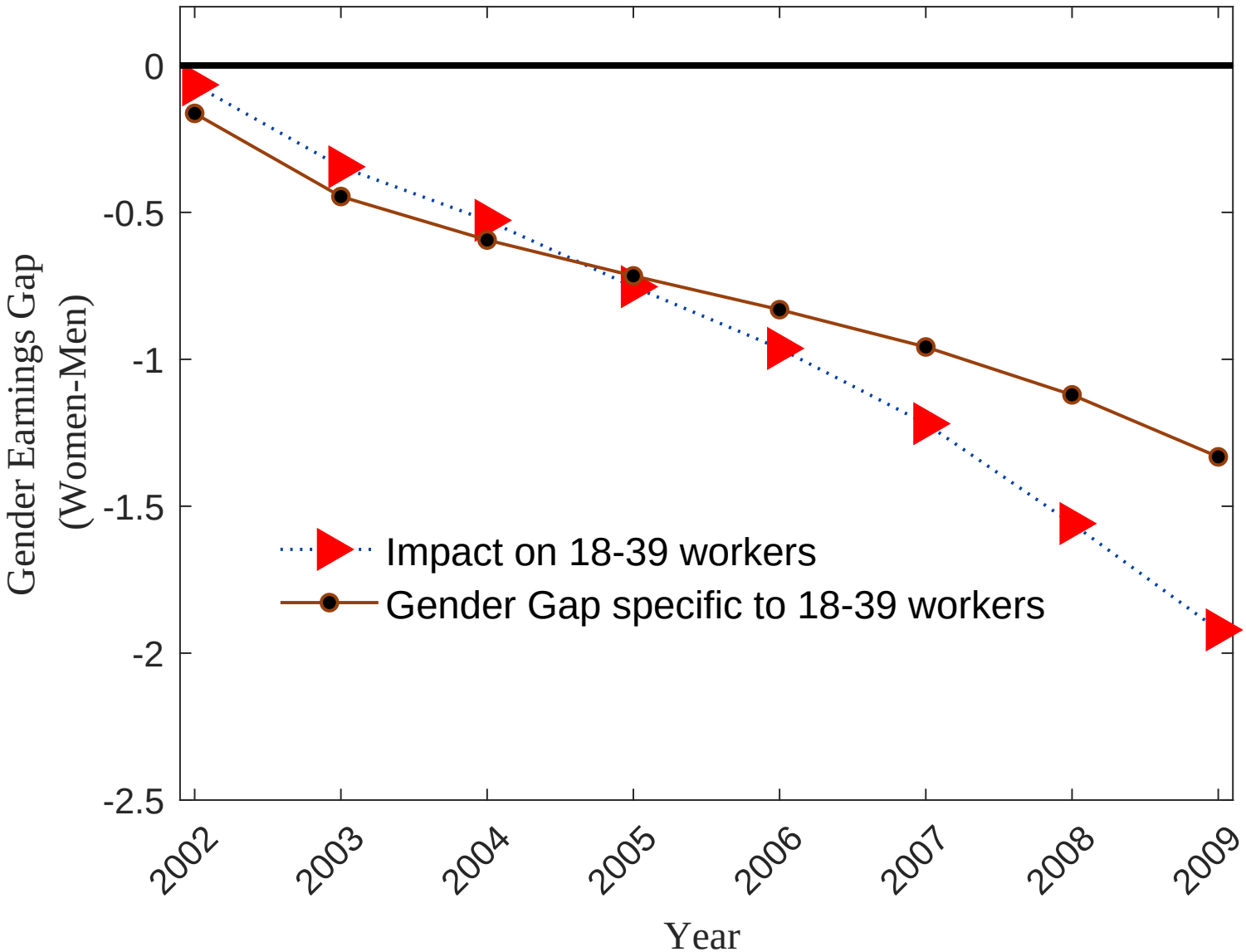


No advantage of being young, if women



Missing Earnings of Young Women

Gender earnings gap due to trade accrued only when young (18-39)



- Are the effects generalizable?
  - Yes, we confirmed with the entire private sector workers using IV
    ▸ More
- Women, more than men, adjust their family life. Why?
  - Biological differences between men and women or '**biological clock**' ?
    ▸ Heterogeneity ▸ Age
  - The shock initially affects women more? No. ▸ More
    ▸ Stage Of Life
  - Social policies? Yes ▸ More
    - Income effect is muted by the social policies
    - Opportunity cost effect $>$ Income effect for women
  - Gender roles? Yes ▸ more
    - Men and women act similarly both in the labor mkt but also in family when they are older

- Estimation Framework
  1. A Quasi-Experiment
  2. Instrumental variable strategy w/ economy-wide data

Estimation Equation

$$Outcome_i^{2000-2009} = \alpha_0 + \alpha_1 \Delta IP_i^{CH} + \alpha_2 \Delta IP_i^{CH} xFemale + Z_i^W + Z_i^F + Z_i^P + \epsilon_i,$$

- initial (**1999**) characteristics of full-time private sector workers:

Worker Z^W

gender, age, gender x age, immigration status

children (linear +square), education level

marital/partner status, homosex.

hourly wage

unemployment history

labor market experience

Union membership, UI membership

Two-digit Occupation FEs

Firm Z^F

avg. hourly wage

firm size

separation rate

Business Line Z^F

skill-intensity (college share) at 6-digit NACE

employment pre-trends, 1993-1999 at 6-digit NACE

Two-digit (NACE) industry FEs

Partner Z^P

age, salary, citizenship

spouse has a higher salary

age difference$\geq$ +10

manufacturing, same 6-digit product line

exposure to import competition

Economy-Wide Results: Labor Market Outcomes

	(1) Earnings	(2) Earnings 1999 Job	(3) Hours	(4) Hours 1999 Job	(5) Unem-ployment	(6) Personal Income
ΔIMP_i	2.946	-10.220*	0.968	-8.401*	10.070*	3.171
	(2.713)	(5.66)	(1.575)	(4.711)	(5.253)	(2.158)
ΔIMP_i x Female	-13.050**	1.035	-8.038**	0.531	18.530**	2.455
	(6.055)	(2.495)	(3.518)	(1.946)	(8.835)	(6.546)
Observations	1,651,774	1,651,777	1,642,413	1,642,413	1,651.77	1,651,757
Two dig. industry FE	✓	✓	✓	✓	✓	✓
Two dig. occupation FE	✓	✓	✓	✓	✓	✓
Worker, firm, partner charac.	✓	✓	✓	✓	✓	✓
S-W F-stat (ΔIMP_i)	13.45	13.45	13.44	13.44	13.45	13.45
S-W F-stat (ΔIMP_ix Female)	14.90	14.90	14.93	14.93	14.90	14.90
Hansen J-stat	0.898	3.106	0.609	2.649	0.754	1.217
Hansen J P-value	0.638	0.212	0.737	0.266	0.686	0.544
No. of Clusters	761	761	761	761	761	761

- Women incur larger long-run losses in the lab mkt.
- Import comp causes displacement from manufacturing sector

Economy-Wide Results: Family Responses

	(1) Birth	(2) Parental Leave	(3) Marriage	(4) Divorce
ΔIMP_i	-0.190*	-0.293**	0.073	-0.025
	(0.103)	(0.122)	(0.115)	(0.076)
ΔIMP_i x Female	0.314***	0.116	0.451***	
	(0.092)	(0.102)	(0.108)	
Wife's ΔIMP_i				-0.142***
				(0.047)
Observations	903,629	903,629	757,302	478,354
Sample	Age 18-39	Age 18-39	Unmarried	Married Men
Two dig. industry FE	✓	✓	✓	✓
Two dig. occupation FE	✓	✓	✓	✓
Worker, firm, partner charac.	✓	✓	✓	✓
SW F-stat (ΔIMP_i)	12.79	12.79	13.02	9.95
SW F-stat (ΔIMP_ix Female)	15.08	15.08	14.41	-
SW F-stat (Spouse's ΔIMP_i)	15.08	15.08	14.41	806.44
Hansen J	3.781	0.83	1.634	7.962
Hansen J P-value	0.151	0.66	0.442	0.093
No. of Clust	756	756	757	752

Fertility Response ↑ as Biological Clock Runs Out

Estimation on rolling age cohort sample. Horizontal axis shows the average age of the sample. Worker + Time FEs.

Heterogeneous Fertility Effects among Women

- Fertility impact ↑ w/ higher cost of re-establishing careers
  1. greater time commitment (e.g. top-ranked professionals)
  2. loss of specific human capital (e.g. machine operators)

	(1) Education	(2) Within Firm Job Ranking	(3)	(4) Occupation	(5)
ΔIMP_i	-0.067	-0.031	-0.031	0.006	-0.097
	(0.118)	(0.117)	(0.117)	(0.122)	(0.136)
ΔIMP_i x College	0.356***				
	(0.129)				
ΔIMP_i x Top Ranked Positions		0.782**			
		(0.308)			
ΔIMP_i x Professionals			0.913**		
			(0.461)		
ΔIMP_i x Office Clerks				-0.055	
				(0.115)	
ΔIMP_i x Machine Operator					0.424*
					(0.252)
Observations	398,530	398,530	398,530	398,530	398,530

2SLS estimation results among women who, initially, are between 18-39 years old. Industry, Occupation FEs and other individual controls.

Fertility Response and Women's Age

- the **biological clock** matter more for women
  - closer to the end than for women who are far away from it

	(1) Birth	(2) Parental Leave	(3) Log Number of Births	(4) Log Number Par'Leave Days
ΔIMP_i	-1.399**	-1.665**	-2.069***	-11.380***
	(0.563)	(0.674)	(0.773)	(4.268)
ΔIMP_i x Age	0.044**	0.050**	0.067***	0.345**
	(0.018)	(0.021)	(0.025)	(0.136)
Observations	398,530	398,530	398,530	398,530

2SLS estimation results among women who, initially, are between 18-39 years old. Industry, Occupation FEs and other individual controls.

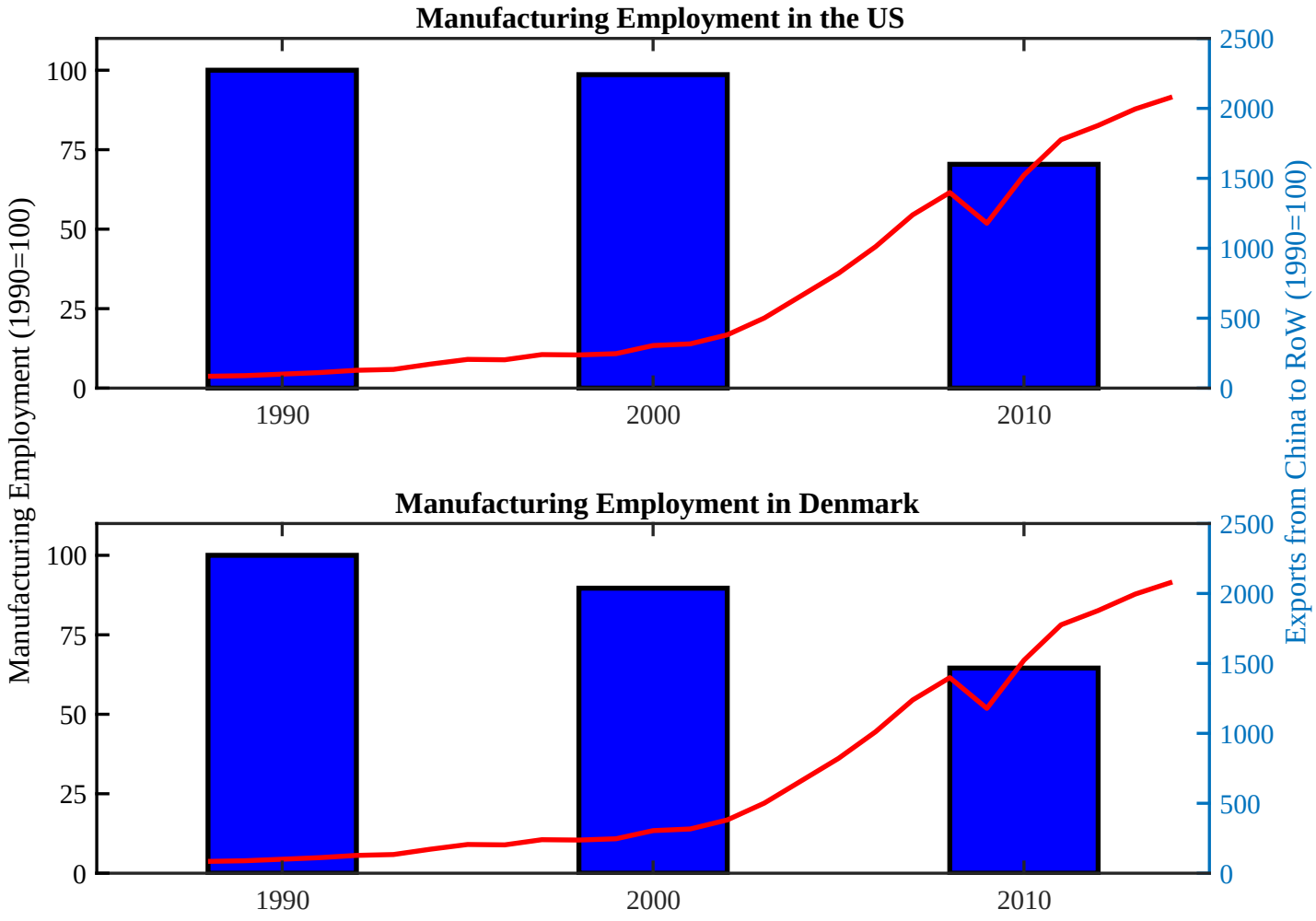
Conclusion

- **Family-labor mkt margin**: globalization affects gender inequality
  - Same lab mkt shock moves women more towards family
    - Import competition: Fertility ↑ Marriage ↑ Divorce rate ↓
  - Adjustment costs in lab mkt higher for women
- Why? **Biological clock** → higher reservation value to stay in lab mkt
  - Given shock, cannot have both kids and career
- Evidence: **gender differential** is
  - Age dependent & higher close to end of biological clock
  - Highest for women needing to invest most for new career
- Relevant for other LM shocks than globalization (Covid-19?)

1. The revenue share of MFA quota products of firms as exposure ▸ Here
2. Timing of the shock? 2002 versus 2005 ▸ Here
3. China's share in 2002 quota goods ▸ Here
4. Technological factors ▸ Occupation x Time ▸ RTI x Time
5. Female occupations in the textile sample ▸ No
6. ▸ China vs EEC
7. Worker characteristics by gender and age ▸ Women ▸ All
8. Evolution of the fertility differential during the pre-sample ▸ Here
9. Probit Analysis of Family Outcomes ▸ Birth
10. Unemployment in the service sector ▸ Unemployment

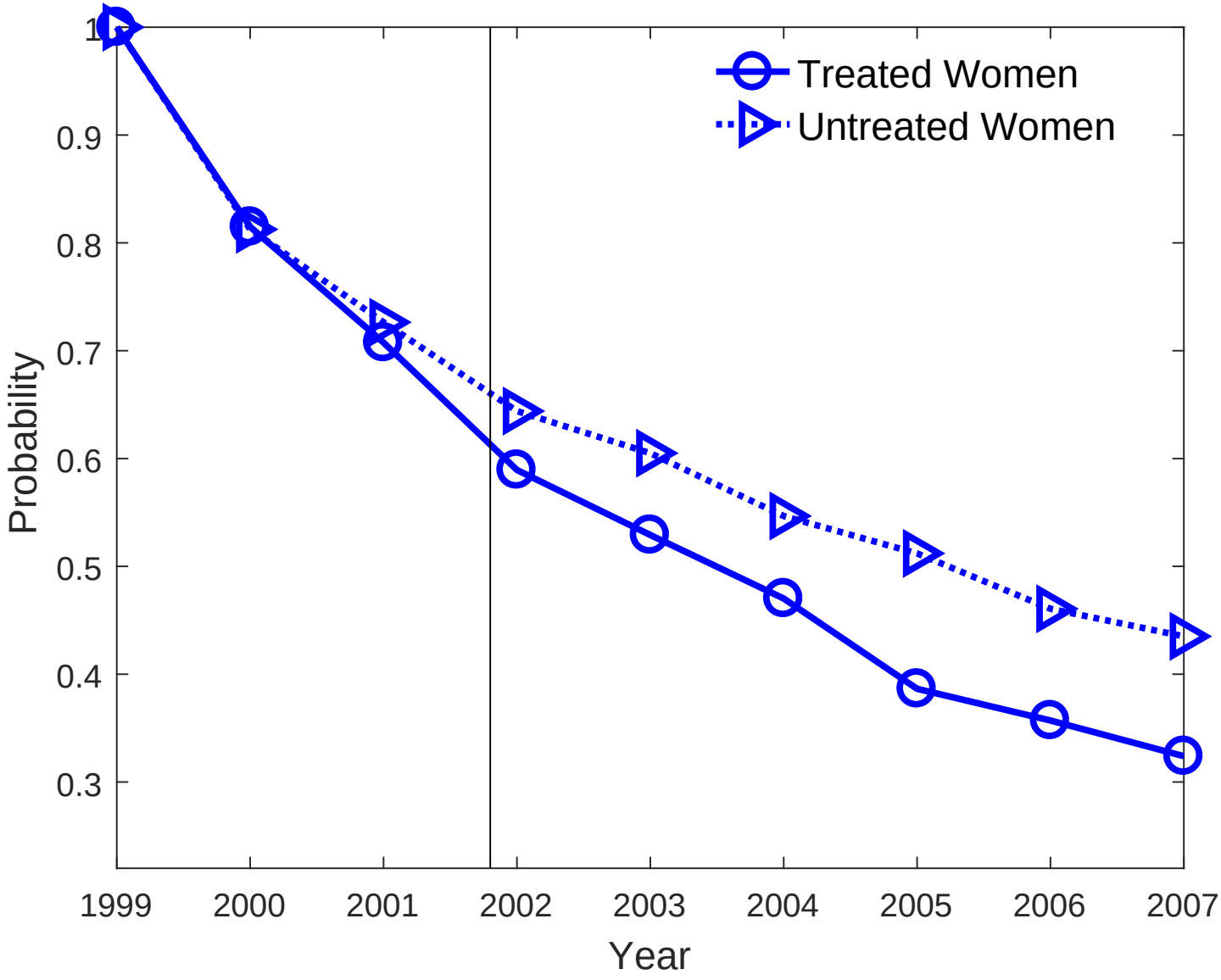
10. Characteristics of workers - ▸ EW
11. EW Heterogeneity ▸ Results
12. Labor Market Outcomes among the Fertile Age in the EW sample ▸ Results
13. Becker ▸ Link
14. JD ▸ Link
15. ▸ Agg. Family Trends

↓ in manufacturing jobs and ↑ in Chinese exports



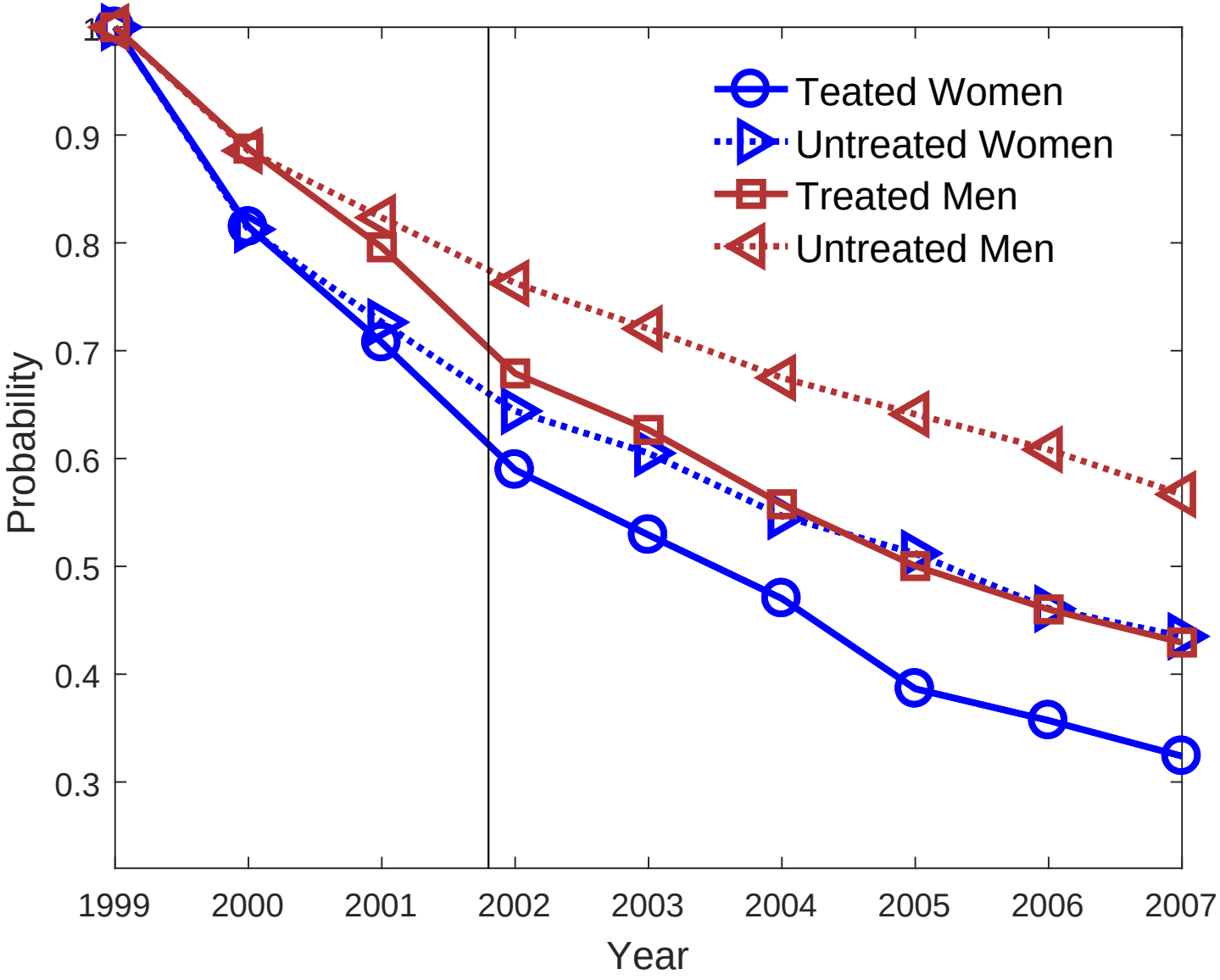
Data: Likelihood of Staying in the Manufacturing

Female Workers



Data: Likelihood of Staying in the Manufacturing

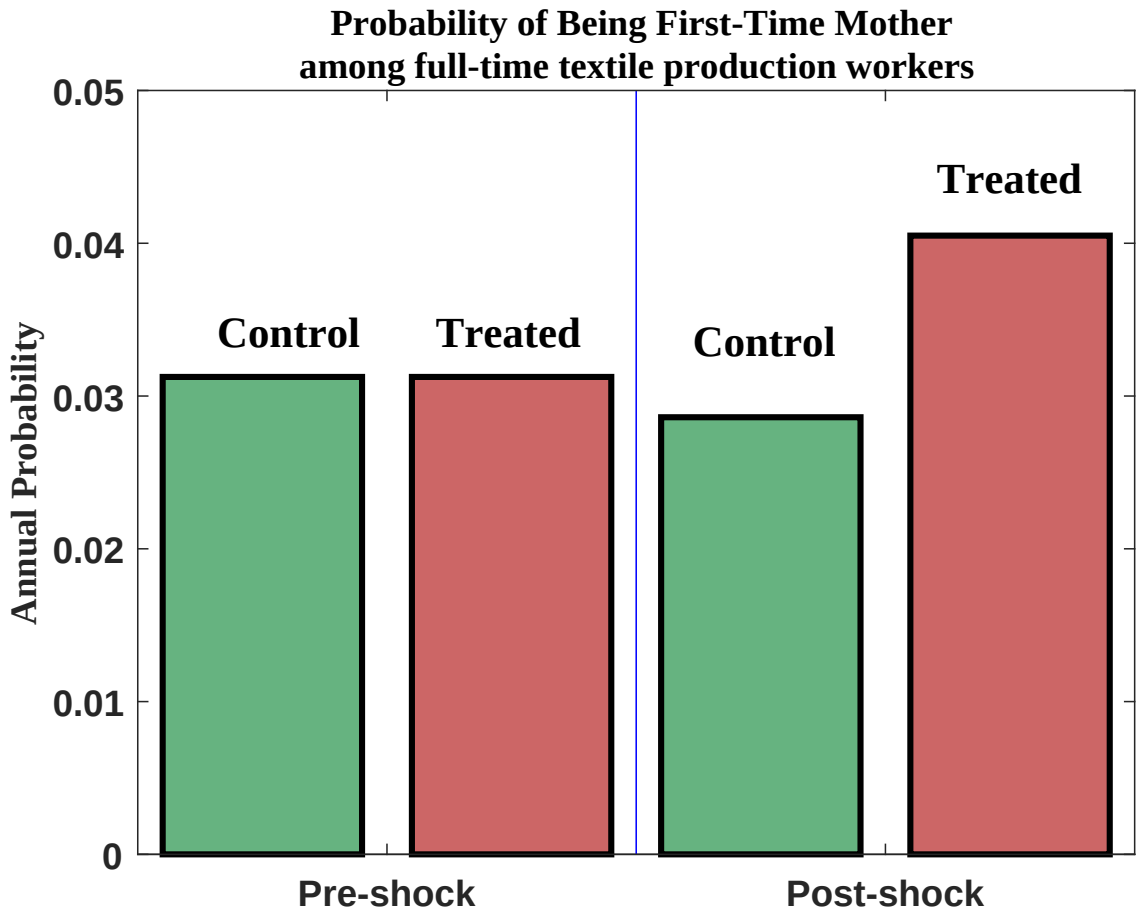
Female and Male Workers



Being a first-time mother– full-time production workers

$$FirstTimeMother_{is} = \alpha_0 + \alpha_1 CompExp_i * PostLib_s + \alpha_2 PostLib_s + \alpha_3 CompExp_i + \Lambda_i + \epsilon_{is}$$

- α_1 : Exposure to imp comp raises prob to be first-time mother by 40%



▸ Return

Spells of *Productive* Unemployment

- Dep. var. Marriage and Birth events in years w/ **unemployment**

Sample	**Women**	**Men**	**Women**
Dep. Var.	Marriage	Marriage	Birth
Import Comp from China	0.139**	-0.054**	0.101***
	(0.071)	(0.027)	(0.036)
Partner's Import Comp	-0.055*	0.029**	-0.036***
	(0.030)	(0.015)	(0.012)
Worker Characteristics	yes	yes	yes
Employer Characteristics	yes	yes	yes
Product Line Characteristics	yes	yes	yes
Partner's Characteristics	yes	yes	yes
N	369,720	439,956	450,752

- Women turn unemployment spells into productive spells in terms of hh work

▸ More

Family Responses to Trade Exposure across Labor Market Positions

	Birth		Parental Leave		Marriage		Divorce	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Women	Men	Women	Men	Women	Men	Women	Men
Any Labor Market Position	0.077**	0.053	0.067*	0.044	0.058**	-0.019	-0.040***	-0.021
	(0.037)	(0.035)	(0.037)	(0.028)	(0.029)	(0.027)	(0.011)	(0.014)
At the Initial Job	0.007	0.008	0.008	0.023	0.000	-0.037	-0.014**	-0.013
	(0.025)	(0.028)	(0.028)	(0.022)	(0.018)	(0.021)	(0.006)	(0.010)
After Leaving the Initial Job	0.093***	0.039	0.099***	0.013	0.057	0.018	-0.026***	-0.008
	(0.031)	(0.029)	(0.033)	(0.023)	(0.022)	(0.022)	(0.010)	(0.012)
Of which:								
Unemployed	0.005	-0.011	0.020	-0.007	-0.001	-0.004	-0.004	-0.003
	(0.006)	(0.007)	(0.013)	(0.004)	(0.005)	(0.004)	(0.003)	(0.004)
Out of Labor Force	0.041**	0.001	0.034**	-0.004	0.014*	0.002	-0.006	0.002
	(0.017)	(0.007)	(0.016)	(0.003)	(0.008)	(0.005)	(0.003)	(0.004)

The opportunity cost of having and raising children

	Maternity Leave	Unemployment followed by Maternity Leave	Maternity Leave followed by Unemployment
Import Comp from China	0.185**	0.108*	-0.017
	(0.094)	(0.057)	(0.031)
N	472,649	472,649	472,649
Clusters	749	749	749

- Import competition does not lead to maternity leave from exposed firms
- Import competition $\Longrightarrow$ unemployment $\Longrightarrow$ maternity leave

▸ More

Treatment and Control Groups

Pre-shock (1999) characteristics of workers in exposed and control group

Variables	Treated N = 4,743 Mean	Untreated N = 5,255 Mean	Diff.	t-stat
Age	39.206	39.228	-0.022	-0.111
Immigrant	0.053	0.076	-0.023	-4.607
Labor Market Experience	14.912	14.491	0.421	3.694
Log Annual Earnings	12.165	12.154	0.011	0.843
Married	0.604	0.576	0.028	2.802
No of Children	1.448	1.480	-0.032	-1.387
Birth Event	0.040	0.045	-0.004	-1.099
Parental Leave Take	0.053	0.050	0.003	0.687
College Educated	0.130	0.107	0.023	3.580
Vocational Educated	0.361	0.360	0.001	0.127
Machine Operator	0.353	0.359	-0.007	-0.685
Manager	0.059	0.052	0.008	1.680

▸ Return

Pre-shock characteristics of female workers

Return

	Treated Mean	**Control** Mean	Diff	t-stat
Panel A. Women	N=3,067	N=2,521		
Age	39.29	39.22	0.07	0.26
Hourly Wage	134.88	134.23	0.65	0.55

Pre-shock characteristics of female workers

Return

	Treated Mean	**Control** Mean	Diff	t-stat
Panel A. Women	N=3,067	N=2,521		
Age	39.29	39.22	0.07	0.26
Hourly Wage	134.88	134.23	0.65	0.55
Panel B. Married Women	N=1,889	N=1,533		
Age	42.18	41.90	0.28	0.91
Hourly Wage	136.02	135.11	0.91	0.59

Pre-shock characteristics of female workers

Return

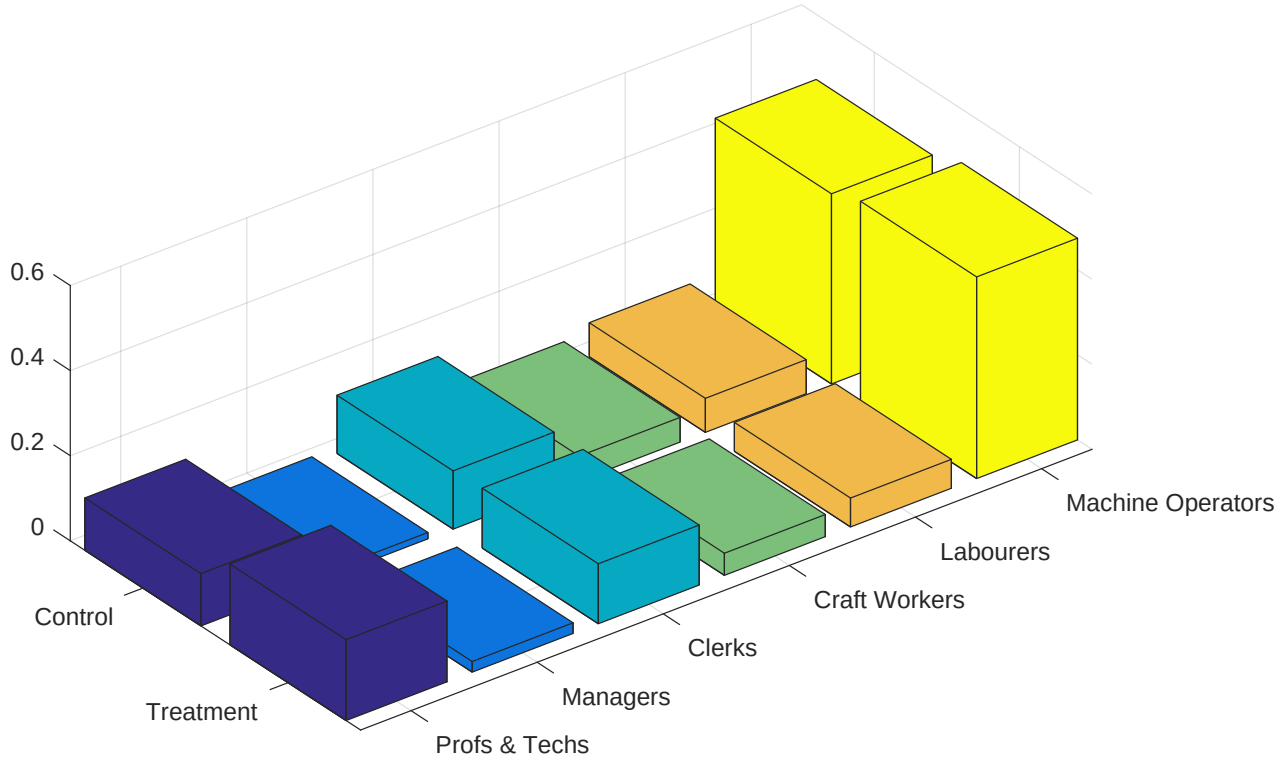
	Treated Mean	**Control** Mean	Diff	t-stat
Panel A. Women	N=3,067	N=2,521		
Age	39.29	39.22	0.07	0.26
Hourly Wage	134.88	134.23	0.65	0.55
Panel B. Married Women	N=1,889	N=1,533		
Age	42.18	41.90	0.28	0.91
Hourly Wage	136.02	135.11	0.91	0.59
Panel C. Unmarried Women	N=1,178	N=988		
Age	34.66	35.06	-0.40	-0.91
Hourly Wage	133.05	132.87	0.19	0.11

Pre-shock characteristics by gender and marital status

Return

	Treated Mean	Untreated Mean	Diff	t-stat
Panel A. Women	N=3,067	N=2,521		
Age	39.29	39.22	0.07	0.26
Hourly Wage	134.88	134.23	0.65	0.55
Panel B. Married Women	N=1,889	N=1,533		
Age	42.18	41.90	0.28	0.91
Hourly Wage	136.02	135.11	0.91	0.59
Panel C. Unmarried Women	N=1,178	N=988		
Age	34.66	35.06	-0.40	-0.91
Hourly Wage	133.05	132.87	0.19	0.11
Panel D. Men	N=1,672	N=2,730		
Age	39.08	39.24	-0.16	-0.53
Hourly Wage	189.53	181.64	7.89	2.66
Panel E. Married Men	N=974	N=1,492		
Age	43.01	43.16	-0.15	-0.44
Hourly Wage	206.98	193.55	13.44	3.04
Panel F. Unmarried Men	N=698	N=1,238		
Age	33.60	34.52	-0.53	-2.07
Hourly Wage	165.17	167.28	-2.11	-0.60

Occupation of female workers



▸ Return

▸ Return Dorthe

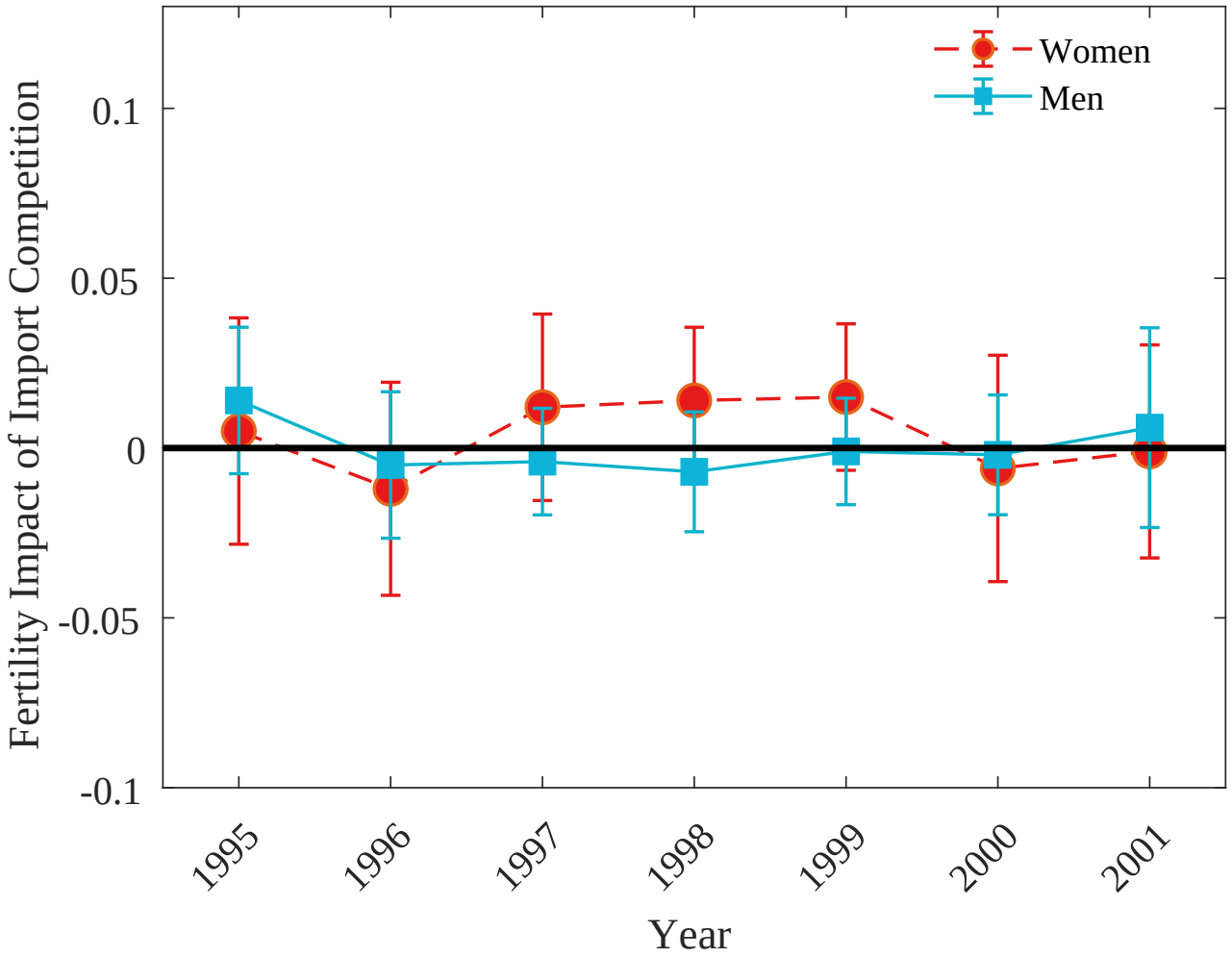
Characteristics by Gender

Pre-shock (1999) characteristics of workers in exposed and control group

	Women		Men	
	Treat.	**Control**	**Treat.**	**Control**
Age	39.28	39.21	39.07	39.24
Earnings (log)	12.05	11.94	12.38	12.35
Married	0.62	0.61	0.58	0.55
No. of children	1.51	1.55	1.34	1.42
College	0.13	0.10	0.13	0.11
Vocational	0.31	0.32	0.46	0.40
Manager	0.03	0.02	0.12	0.09
Office Workers	0.14	0.14	0.08	0.03
N	3,069	2,524	1,674	2,731

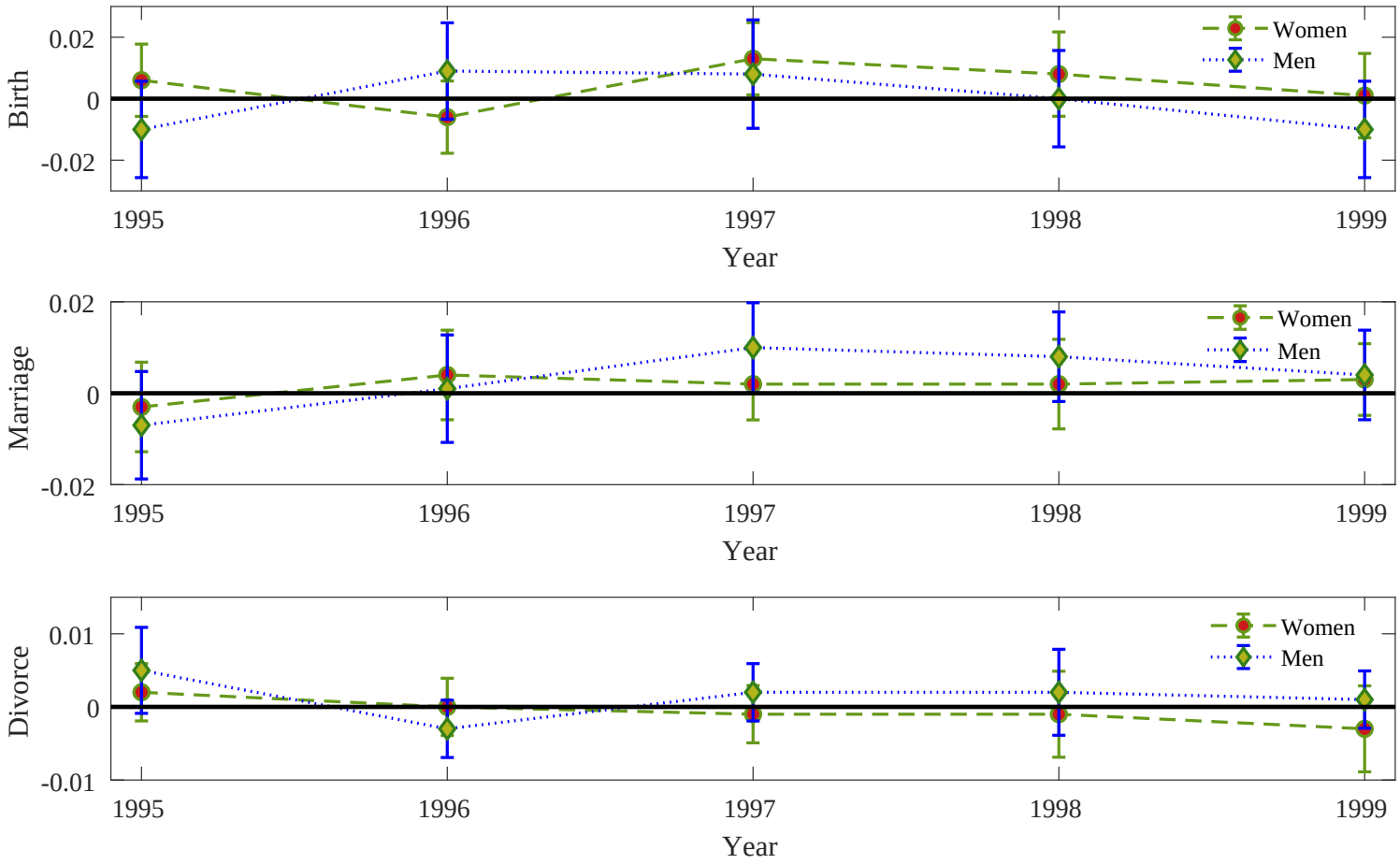
Return

The Evolution of the Pre-Sample Annual Fertility Effect



▸ Return

Family Activities in the Pre-Sample Period by Gender



Potential Pre-Trends Using Annual Data

	(1) Earnings	(2) Income	(3) Hours	(4) Hourly Wage	(5) Unemp-loyment	(6) Divorce	(7) Marriage	(8) Birth
Exposure x Y95	0.004	0.009	0.012	-0.010	-0.014	0.003*	-0.005	-0.002
	(0.017)	(0.012)	(0.011)	(0.009)	(0.088)	(0.002)	(0.004)	(0.005)
Exposure x Y96	0.002	0.008	0.000	-0.006	0.039	-0.001	0.003	-0.001
	(0.019)	(0.015)	(0.012)	(0.010)	(0.100)	(0.002)	(0.004)	(0.005)
Exposure x Y97	0.011	-0.001	0.011	-0.006	-0.020	0.001	0.005*	0.011*
	(0.025)	(0.018)	(0.013)	(0.010)	(0.084)	(0.002)	(0.003)	(0.005)
Exposure x Y98	0.005	-0.004	0.002	0.002	-0.029	0.001	0.005	0.003
	(0.026)	(0.021)	(0.013)	(0.014)	(0.101)	(0.002)	(0.004)	(0.006)
Exposure x Y99	0.024	0.011	0.003	0.004	0.080	0.000	0.003	-0.002
	(0.032)	(0.025)	(0.016)	(0.014)	(0.093)	(0.002)	(0.003)	(0.005)
N	84,227	84,227	80,548	80,548	84,227	84,227	84,227	84,227
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓

Falsification Test

- Potential pre-trends? **Sample Period: 1990-1999**

$$\ln X_{is} = \delta_0 + \delta_1 Exposure_{i,99} * Post95_s + \delta_i + \tau_s + \epsilon_{is},$$

$$Post95_t = 1 \text{ if } t >= 1995$$

Dep. Var. (in logs)	Earnings	Personal Income	Hours Worked	Hourly Wage	Unemployed Time
Men					
$Exposure_{i,99} * Post95_s$	0.009	0.019	-0.009	0.017	-0.085
	(0.033)	(0.028)	(0.014)	(0.020)	(0.107)
N	8,248	8,248	7,964	7,964	8,248
Women					
$Exposure_{i,99} * Post95_s$	0.013	-0.012	0.015	-0.002	-0.052
	(0.028)	(0.025)	(0.015)	(0.014)	(0.117)
N	10,374	10,374	9,850	9,850	10,374

Return

Placebo Test

- Potential pre-trends? **Sample Period: 1990-1999**

$$X_{is} = \delta_0 + \delta_1 Exposure_{i,99} * Post95_s + \delta_i + \tau_s + \epsilon_{is},$$

$$Post95_s = 1 \text{ if } if \ \ year >= 1995$$

Dep. Var.	Earnings	Personal Income	Divorce	Marriage	Birth
Men					
$Exposure_{i,99} * Post95_s$	**0.003**	**0.009**	**0.003**	**0.013**	**0.006**
	(0.024)	(0.019)	(0.007)	(0.014)	(0.018)
N	8,550	8,542	8,550	8,550	8,550
Women					
$Exposure_{i,99} * Post95_s$	**0.024**	**-0.007**	**-0.003**	**0.012**	**0.017**
	(0.027)	(0.013)	(0.006)	(0.013)	(0.016)
N	10,954	10,946	10,954	10,954	10,954

▸ More

Placebo Test

Triple DiD

Dep. Var.	Earnings	Personal Income	Divorce	Marriage	Birth
Sample: Married Workers as of 1999					
$Exposure_{i,99} * Post95_s$	**-0.014**	**0.020**	**0.003**	**0.029**	**0.005**
	(0.032)	(0.025)	(0.007)	(0.023)	(0.027)
$Exposure_{i,99} * Post95_s * \mathbf{Woman_i}$	**0.042**	**-0.028**	**-0.002**	**-0.017**	**0.007**
	(0.039)	(0.025)	(0.008)	(0.029)	(0.034)
N	11,548	11,548	11,548	11,548	11,548

Placebo Test

Triple DiD

Dep. Var.	Earnings	Personal Income	Divorce	Marriage	Birth
Sample: Married Workers as of 1999					
$Exposure_{i,99} * Post95_s$	**-0.014**	**0.020**	**0.003**	**0.029**	**0.005**
	(0.032)	(0.025)	(0.007)	(0.023)	(0.027)
$Exposure_{i,99} * Post95_s *$ **Woman$_i$**	**0.042**	**-0.028**	**-0.002**	**-0.017**	**0.007**
	(0.039)	(0.025)	(0.008)	(0.029)	(0.034)
N	11,548	11,548	11,548	11,548	11,548
Sample: Unmarried Workers as of 1999					
$Exposure_{i,99} * Post95_s$	**0.042**	**0.010**	**0.006**	**-0.011**	**0.014**
	(0.032)	(0.021)	(0.013)	(0.009)	(0.020)
$Exposure_{i,99} * Post95_s *$ **Woman$_i$**	**-0.021**	**-0.012**	**-0.012**	**0.022**	**0.012**
	(0.054)	(0.023)	(0.019)	0.014	0.031
N	7,956	7,940	7,956	7,956	7,956

1 Labor Market Outcomes: DID with individual FEs, 1999-2009

$$X_{i\tau} = \beta_0 + \beta_1 \underbrace{Exposure_i * PostLib_\tau}_{\text{ImpComp}} + i + \tau + \epsilon_{i\tau}$$

- $Exposure_i = 1$ if worker i is employed in a firm in 1999 that domestically produced a quota product
-

$$PostLib_\tau = 0 \quad \text{if 1999-2001}$$
$$PostLib_\tau = 1 \quad \text{if 2002-2009}$$

worker FEs

period FEs

▸ Pre-Trends

1 Labor Market Outcomes: DID with individual FEs, 1999-2009

$$X_{i\tau} = \beta_0 + \beta_1 \underbrace{Exposure_i * PostLib_\tau}_{\text{ImpComp}} + i + \tau + \epsilon_{i\tau}$$

- $Exposure_i = 1$ if worker i is employed in a firm in 1999 that domestically produced a quota product
-

$PostLib_\tau = 0$ if 1999-2001

$PostLib_\tau = 1$ if 2002-2009

i: *worker FEs*

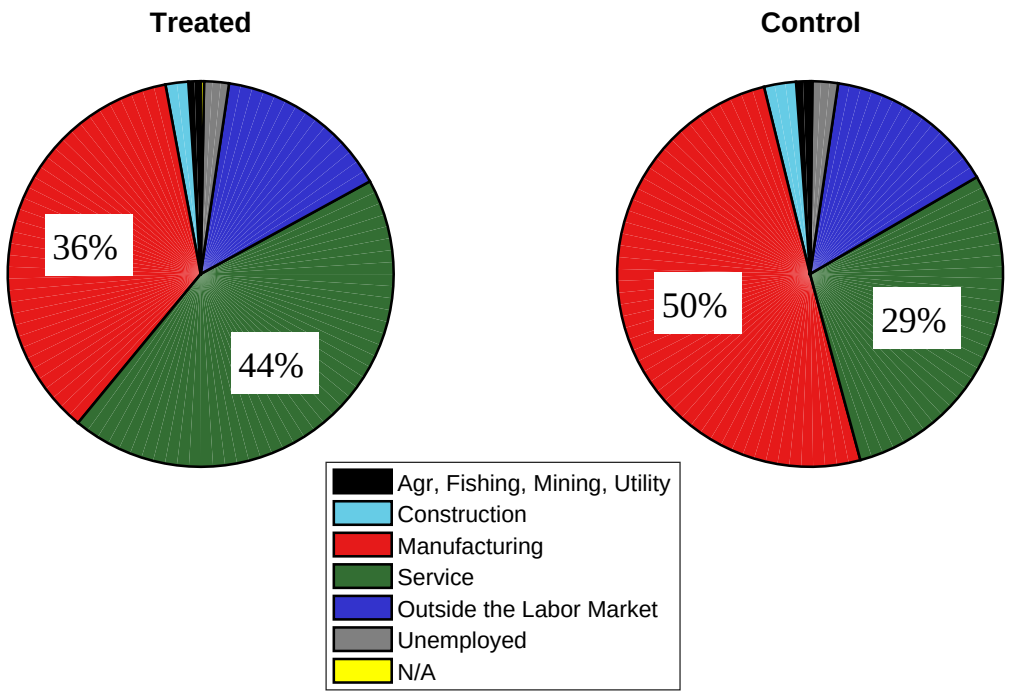
τ: *period FEs*

2 Gender Differences: Triple DID

$$X_{i\tau} = \alpha_0 + \alpha_1 ImpComp_{i\tau} + \alpha_2 ImpComp_{i\tau} \times Female_i + \\ + \alpha_4 Post_\tau \times Female_i + i + \tau + \nu_{is},$$

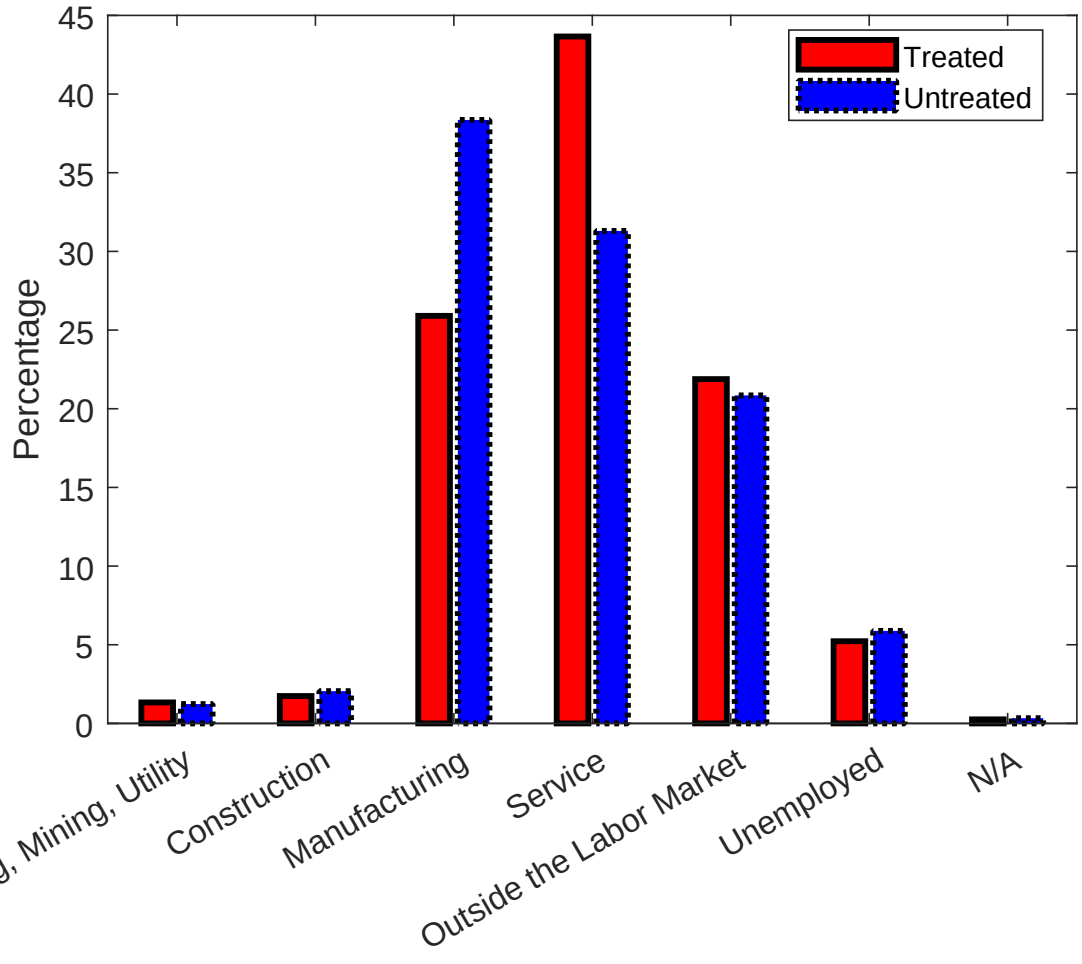
▸ Pre-Trends

Workers' Positions in 2007



Return

Workers' Positions in 2009



The 2002 versus 2005 Quota Removals: Firm-level Evidence

- Many MFA Quota 2002 (MFAQ2) and 2005 (MFAQ5) firms overlapped!
- Significant employment response to both of the removals!

	(1) Sales	(2) Value Added	(3) Employ-ment	(4) FTE	(5) Employees w/ High School Education	(6) Employees w/ Tex. Production Education
MFAQ2×Post2002	-0.075	-0.081	-0.123***	-0.146**	-0.164***	-0.201***
	(0.064)	(0.061)	(0.059)	(0.057)	(0.053)	(0.046)
MFAQ5×Post2005	-0.158***	-0.187***	-0.081	-0.125**	-0.152***	-0.049
	(0.059)	(0.067)	(0.054)	(0.059)	(0.046)	(0.037)
Firm FEs	✓	✓	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓	✓	✓
N	4,555	4,536	4,503	4,545	4134	4,134

Note: All variables in log. FTE: full-time equivalent number of employees.

▸ Return

Continuous Treatment

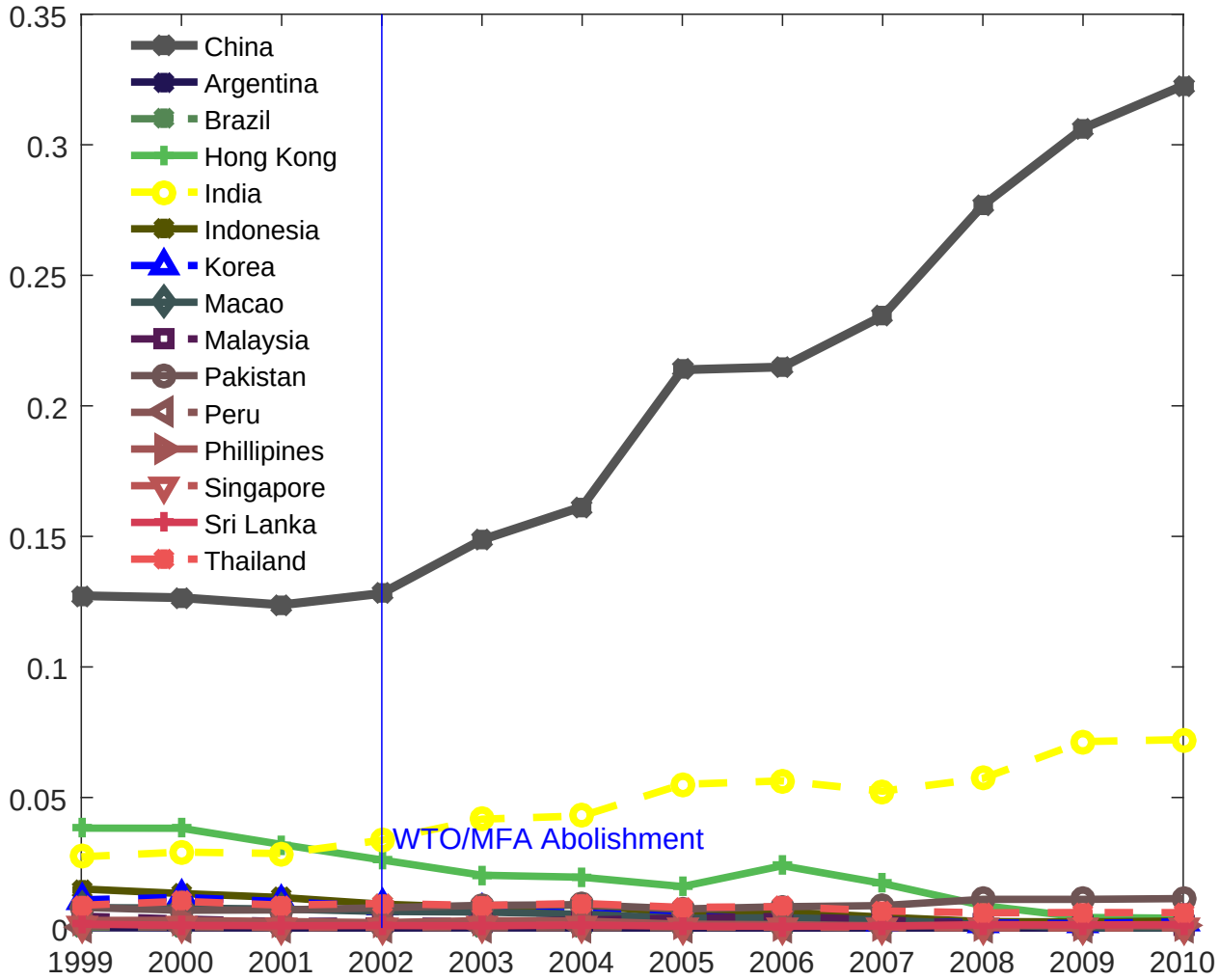
- Exposure: Revenue Share of MFA Quota Products as of 1999

Gender	(1)	(2) **Women**	(3) Men	(4)	(5) Women	(6) Men	(7)	(8) Women	(9) Men
Dep Var.	Birth	Birth	Birth	ParL	ParL	ParL	Marriage	Marriage	Marriage
PostxRevShare	-0.139	0.302**	-0.139	-0.151	0.346**	-0.151	-0.228**	0.193	-0.228**
	(0.119)	(0.145)	(0.119)	(0.097)	(0.134)	(0.097)	(0.111)	(0.145)	(0.111)
PostxRevSharexFemale	**0.441****			**0.497*****			**0.421****		
	(0.189)			(0.165)			(0.179)		
Observations	3,160	1,452	1,708	3,160	1,452	1,708	3,160	1,452	1,708
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time FE	✓			✓			✓		

▸ Return

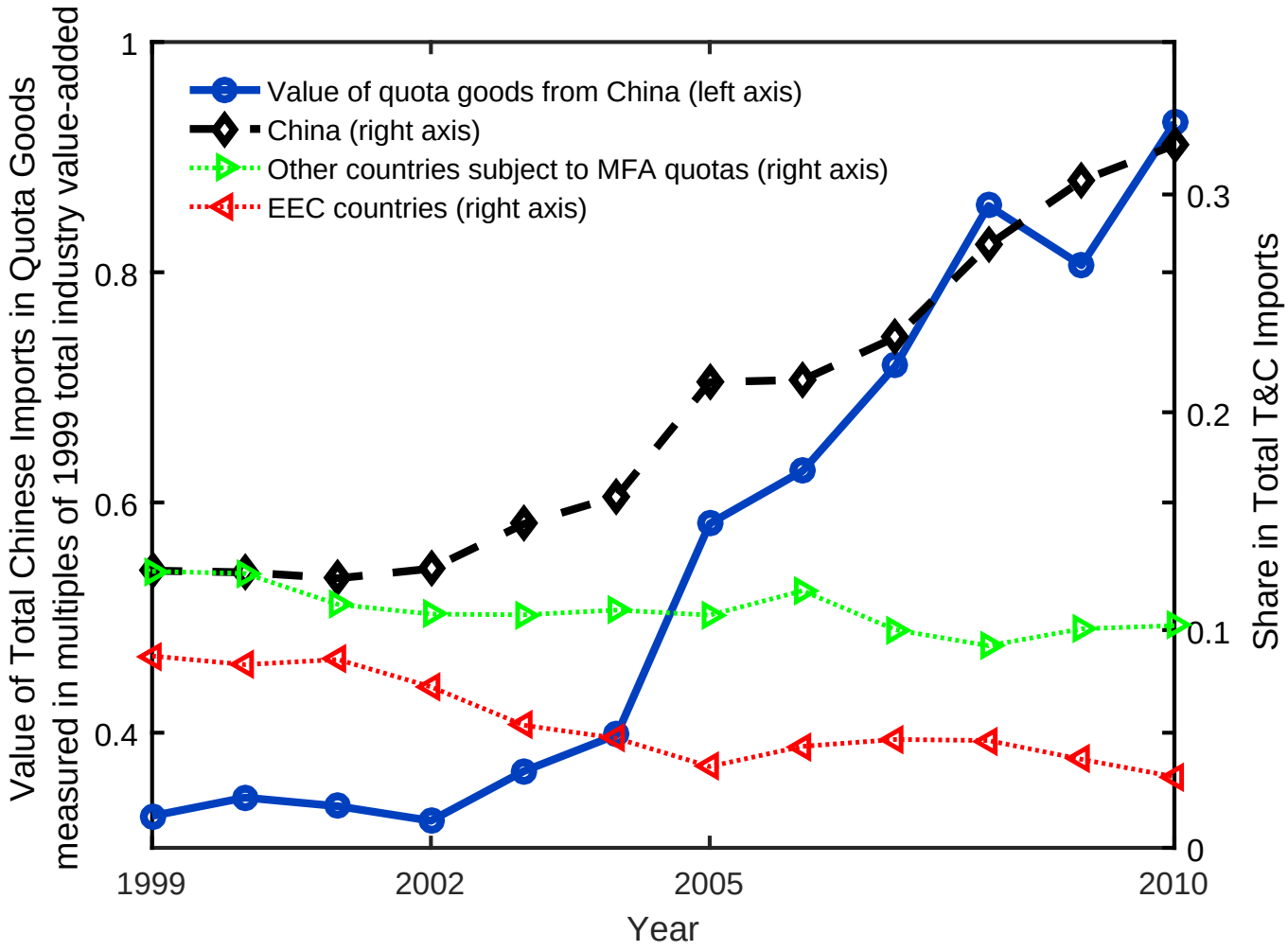
Import Shock–Removal of MFA Quotas

- China's Import Share in Denmark's Textile Industry



▸ Return

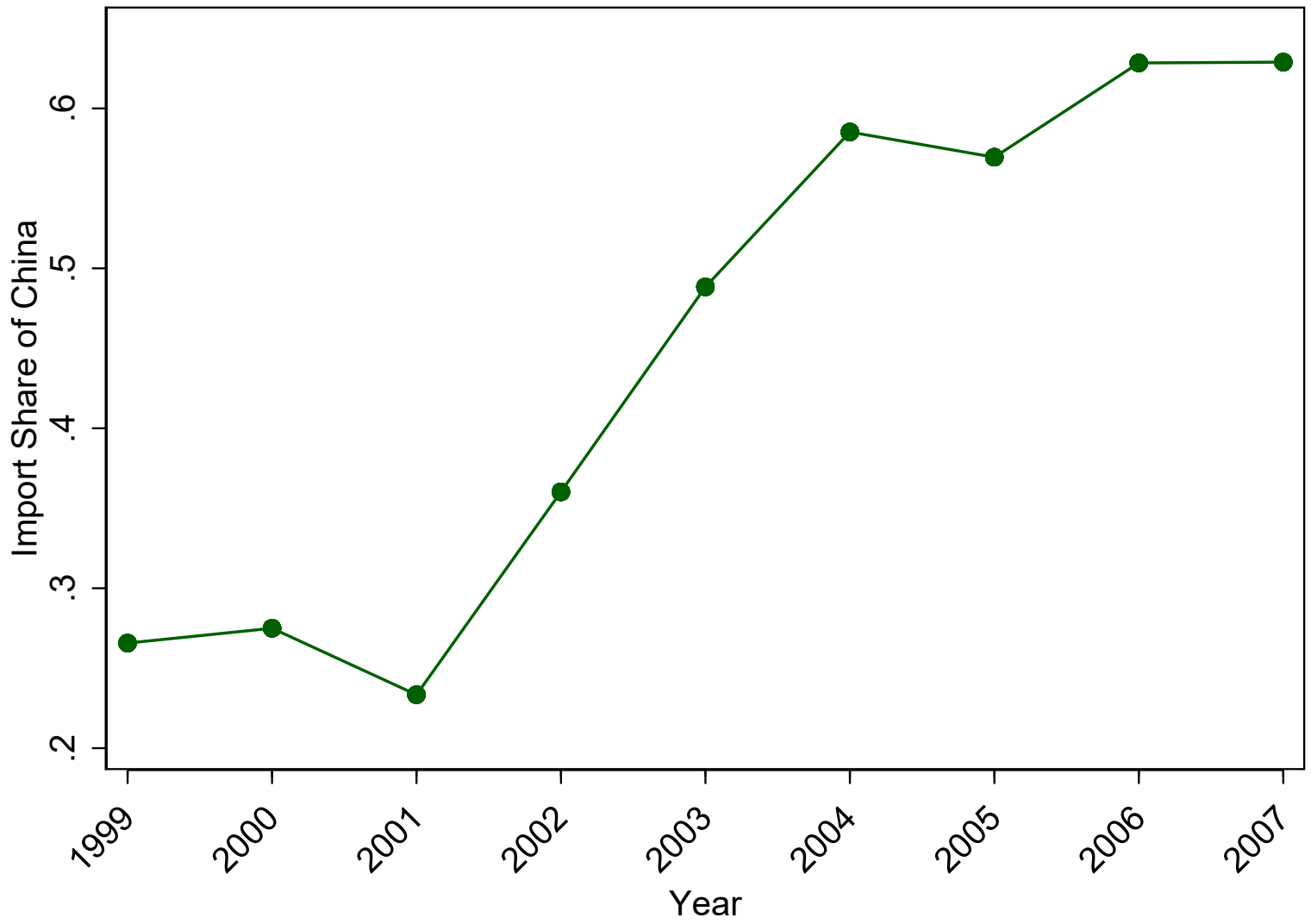
Import from Eastern European Countries



▸ Return

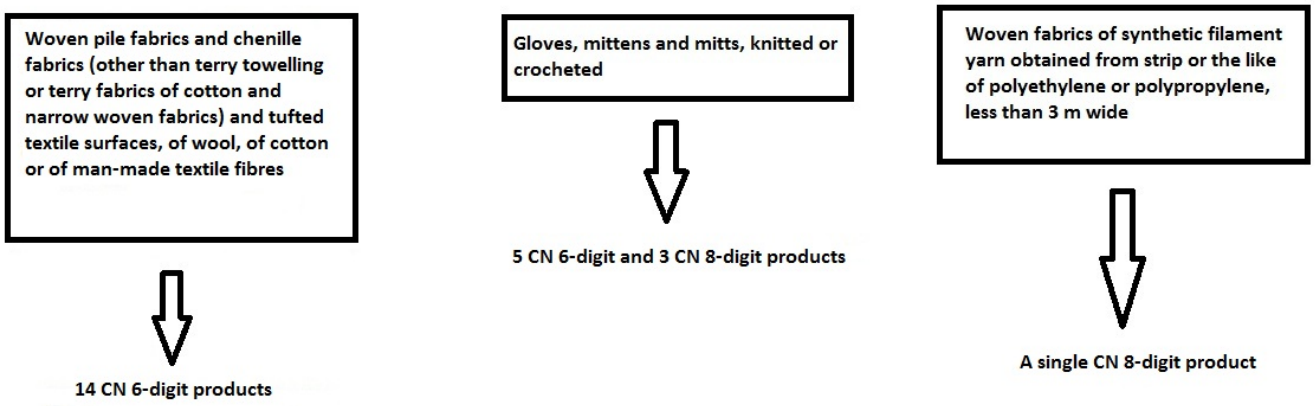
Share of China in 2002 Quota Goods

▸ Return ▸ Return



MFA Quotas

- The quotas have varying degrees of coverage in terms of CN products.



- Quotas do NOT cover technologically or materially homogeneous group of products. e.g.

Quota	**Non-Quota**
Shawls and scarves of silk or silk waste	Shawls and scarves of wool and fine animal hair
Brasseries of all types of textile material	Corsellettes of all types of textile materials
Knotted netting of twine, cordage or rope	Twine, cordage, ropes and cables

▸ Return

Allowing for Differential Time Trends across Occupations

Return

	(1) Earnings	(2) Earnings 1999 Job	(3) Birth Event	(4) Parental Leave	(5) Marriage	(6) Divorce
Imp Comp	-0.180	-1.213***	-0.021	-0.028	-0.031	-0.020
	(0.391)	(0.366)	(0.039)	(0.031)	(0.028)	(0.014)
ImpComp x Female	-0.874*	0.144	0.127**	0.123**	0.096***	-0.020
	(0.479)	(0.274)	(0.057)	(0.049)	(0.035)	(0.017)
Occupation x Time FEs	✓	✓	✓	✓	✓	✓
Female x Time FEs	✓	✓	✓	✓	✓	✓
Worker FEs	✓	✓	✓	✓	✓	✓
Time FEs	✓	✓	✓	✓	✓	✓
N	19,526	19,526	3,160	3,160	8,216	11,780

- Even when we attribute all occupation-time variation to tech change, the results are robust!

Routine Technical Intensity of Occupations

Return

	(1) Earnings	(2) Earnings 1999 Job	(3) Birth Event	(4) Parental Leave	(5) Marriage	(6) Divorce
Imp Comp	0.306	-1.239***	-0.028	-0.028	-0.037	-0.016
	(0.470)	(0.384)	(0.042)	(0.035)	(0.030)	(0.016)
ImpComp x Female	-1.166**	0.102	0.144**	0.143**	0.097**	-0.024
	(0.545)	(0.290)	(0.064)	(0.056)	(0.039)	(0.019)
RTI x Time FEs	✓	✓	✓	✓	✓	✓
Female x Time FEs	✓	✓	✓	✓	✓	✓
Worker FEs	✓	✓	✓	✓	✓	✓
Time FEs	✓	✓	✓	✓	✓	✓
N	16,552	16,552	2,468	2,468	6,752	10,196

- Results are robust even when we attribute all occupation-time variation to tech

Fertility– Import Competition and Newborn Children

Dep. var. Birth Event

	(1)	(2)	(3)	(4)	(5)
Gender	All	All	All	**Men**	**Women**
Sample			Not married		
ImpComp	0.022	**0.061****	0.053	**0.053**	**0.077****
	(0.029)	(0.026)	(0.035)	(0.035)	(0.037)
ImpComp x Female	**0.008**		**0.024**		
	(0.034)		(0.05)		
Observations	10,418	5,784	5,784	2,808	2,976
Worker FE	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓
Female x Time FE	✓		✓		

Note: Fertile age workers. Robust s.e. clustered at firm level.

- Import competition ↑ the probability of birth **20% among unmarried workers**

▸ Back ▸ FirstTimeMother

Fertility– Import Competition and Newborn Children

Dep. var. Birth Event

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gender	All	All	All	Men	Women	All	Men	Women
Sample		Not married				Single		
ImpComp	0.022	**0.061****	0.053	**0.053**	**0.077****	-0.019	**-0.019**	**0.109*****
	(0.029)	(0.026)	(0.035)	(0.035)	(0.037)	(0.037)	(0.037)	(0.041)
ImpComp x Female	**0.008**		**0.024**			**0.128****		
	(0.034)		(0.05)			(0.055)		
Observations	10,418	5,784	5,784	2,808	2,976	3,160	1,708	1,452
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time FE	✓		✓			✓		

Note: Fertile age workers. Robust s.e. clustered at firm level.

- Import competition ↑ the probability of birth **20% among unmarried workers**
- Unmarried women: ↑ (23%), **Single women ↑ (48%)**

▸ Back ▸ FirstTimeMother

Fertility– Import Competition and Birth Events

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender	All	All	All	Men	Women	All	All	Men	Women
		Not married				Single (Not Married and Not Co-habiting)			
ImpComp	0.04	0.164**	0.137	0.156	0.208*	0.162	0.021	-0.079	0.411**
	(0.081)	(0.077)	(0.094)	(0.11)	(0.111)	(0.121)	(0.141)	(0.177)	(0.167)
Marg. Effect	0.013	0.058	0.048	0.053	0.075	0.042	0.054	-0.018	0.117
ImpComp x Female	0.031		0.035				0.247*		
	(0.082)		(0.101)				(0.133)		
Marg. Effect	0.01		0.012				0.067		
Observations	9,864	5,749	5,749	2,779	2,970	3,144	3,144	1,695	1,449
Worker, firm, partner vars	✓	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs Prob	0.278	0.31	0.31	0.29	0.328	0.21	0.21	0.194	0.228
Pseudo R-Sq	0.092	0.09	0.09	0.086	0.1	0.166	0.168	0.165	0.185

▸ Return

Fertility– Import Competition and **Parental Leave**

Dep. var. Parental Leave Take

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gender	All	All	All	Men	Women	All	Men	Women
Sample			Not married				Single	
ImpComp	0.035	**0.059****	0.044	**0.044**	**0.067***	-0.028	**-0.028**	**0.095****
	(0.023)	(0.023)	(0.028)	(0.028)	(0.037)	(0.030)	(0.030)	(0.039)
ImpComp x Female	0.0001		**0.023**			**0.122****		
	(0.029)		(0.046)			(0.048)		
Observations	10,418	5,784	5,784	2,808	2,976	3,160	1,708	1,452
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time FE	✓		✓			✓		

Note: Fertile age workers. Robust s.e. clustered at firm level.

- Import competition ↑ the probability of taking parental leave 23%
- Single women ↑ 46 %

▸ Probit

Fertility– Import Competition and **Parental Leave**

Dep. var. Parental Leave Take

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gender	All	All	All	Men	Women	All	Men	Women
Sample			Not married				Single	
ImpComp	0.035	**0.059****	0.044	**0.044**	**0.067***	-0.028	**-0.028**	**0.095****
	(0.023)	(0.023)	(0.028)	(0.028)	(0.037)	(0.030)	(0.030)	(0.039)
ImpComp x Female	0.0001		**0.023**			**0.122****		
	(0.029)		(0.046)			(0.048)		
Observations	10,418	5,784	5,784	2,808	2,976	3,160	1,708	1,452
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time FE	✓		✓			✓		

Note: Fertile age workers. Robust s.e. clustered at firm level.

- Import competition ↑ the probability of taking parental leave 23%
- Single women ↑ 46 %

▸ Probit

Fertility– Import Competition and Parental Leave

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All	All	All	Men	Women	All	All	Men	Women
		Not married				Not Married and Not Co-habiting			
ImpComp	0.03	0.148**	0.041	0.165	0.17	0.096	-0.117	-0.187	0.303*
	(0.078)	(0.073)	(0.089)	(0.106)	(0.11)	(0.123)	(0.142)	(0.182)	(0.164)
Marg. Effect	0.009	0.048	0.013	0.045	0.06	0.021	-0.024	-0.029	0.083
ImpCompxFemale	0.051		0.082				0.295**		
	(0.086)		(0.105)				(0.137)		
Marg. Effect	0.015		0.026				0.07		
Observations	9,864	5,749	5,749	2,779	2,970	3,144	3,144	1,695	1,449
Worker, firm, partner vars	✓	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs Prob.	0.241	0.258	0.258	0.193	0.32	0.159	0.159	0.12	0.205
Pseudo R-Sq	0.072	0.062	0.069	0.054	0.07	0.107	0.12	0.107	0.128

▸ Return

Import Competition Increases Marriage Likelihood

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
					Fertile Age		Fertile Age Not married, and not cohabiting		
Gender	All	Men	Women	All	Men	Women	All	Men	Women
ImpComp	-0.059	-0.088	0.188	-0.008	-0.054	0.255**	-0.01	-0.04	0.378*
	(0.094)	(0.112)	(0.114)	(0.108)	(0.129)	(0.13)	(0.16)	(0.186)	(0.229)
Marg. Effect	-0.014	-0.021	0.048	-0.002	-0.015	0.078	-0.002	-0.008	0.084
ImpCompxFemale	0.221***			0.22**			0.343**		
	(0.084)			(0.096)			(0.134)		
Marg. Effect	0.059			0.067			0.078		
Observations	8,166	3,838	4,328	5,749	2,779	2,970	3,144	1,695	1,449
Probit	✓	✓	✓	✓	✓	✓	✓	✓	✓
Worker, firm, partner vars	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs Prob	0.19	0.185	0.194	0.226	0.213	0.238	0.157	0.146	0.17
Pseudo R-Sq	0.097	0.084	0.115	0.081	0.078	0.088	0.147	0.133	0.177

▸ Return

Import Competition Reduces Divorce Likelihood

VARIABLES	(1) All	(2) All	(3) Men	(4) Women	(5) All	(6) All	(7) Men	(8) Women
						Fertile Age		
ImpComp	-0.283***	-0.243*	-0.212	-0.391***	-0.466***	-0.390**	-0.276	-0.681***
	(0.104)	(0.124)	(0.146)	(0.146)	(0.131)	(0.168)	(0.199)	(0.191)
	-0.018	-0.016	-0.016	-0.021	-0.053	-0.045	-0.033	-0.070
ImpCompxFemale		-0.120				-0.192		
		(0.103)				(0.139)		
		-0.008				-0.023		
Observations	10,287	10,287	4,008	6,279	4,115	4,115	1,478	2,637
Worker, firm, partner vars	✓	✓	✓	✓	✓	✓	✓	✓
Sample Prob	0.058	0.058	0.06	0.056	0.098	0.098	0.099	0.098
Pseudo R2	0.173	0.174	0.153	0.195	0.13	0.133	0.134	0.144

▸ Return

Alternative Age Limits

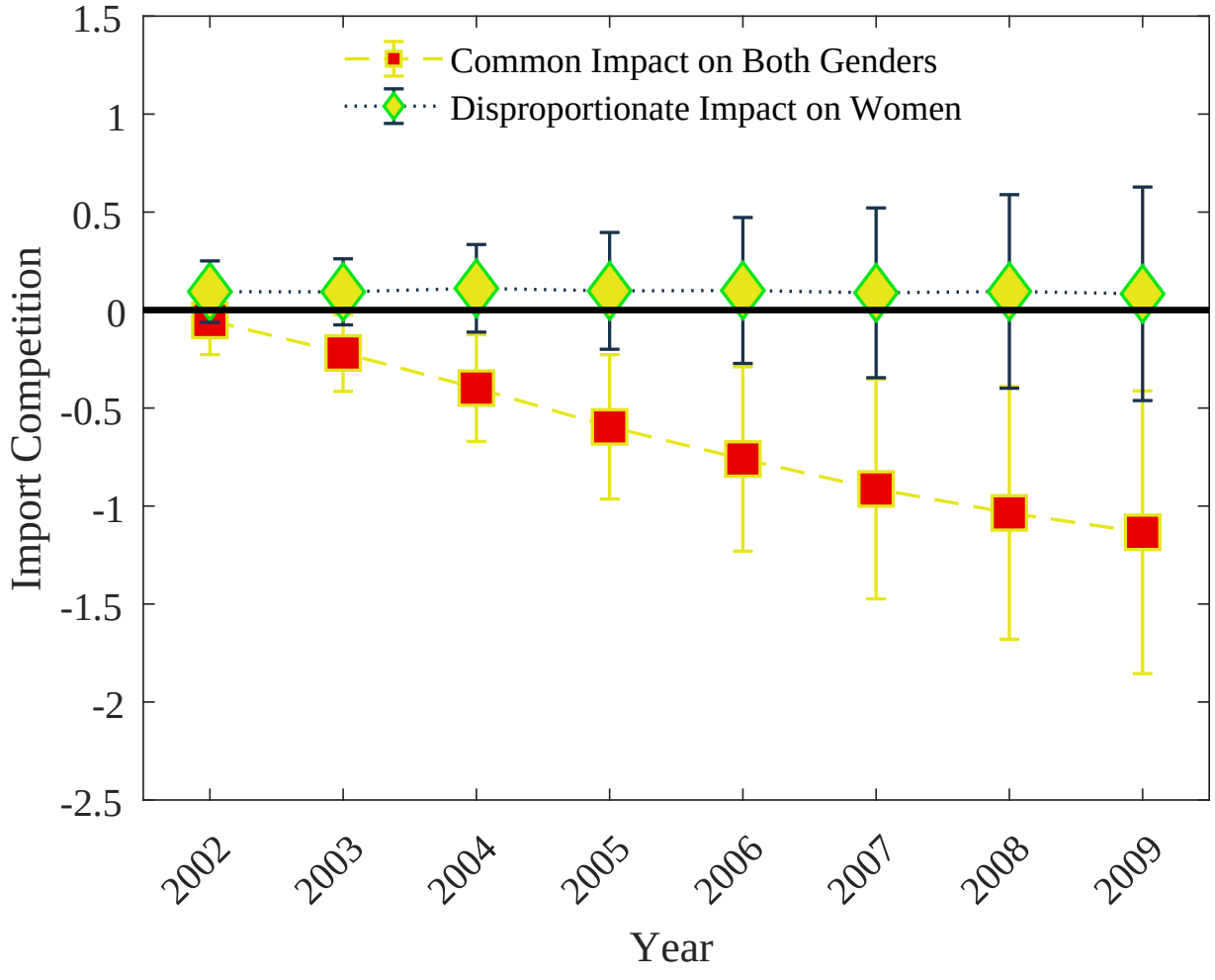
Family Responses for Workers between 20 and 40 Years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Birth		Parental Leave		Marriage		Divorce	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
ImpComp	-0.023	0.104***	-0.023	0.091**	-0.008	0.062*	-0.020	-0.087***
	(0.033)	(0.039)	(0.030)	(0.038)	(-0.033)	(-0.034)	(0.025)	(0.022)
Worker FEs	Y	Y	Y	Y	Y	Y	Y	Y
Time FEs	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,680	1,466	1,680	1,466	2,802	3,020	2,002	2,964
R-squared	0.597	0.586	0.592	0.611	0.436	0.414	0.490	0.500

Sample in columns (1) to (4) is single, in columns (5) and (6) unmarried, and in columns (7) and (8) married workers, all as of 1999.

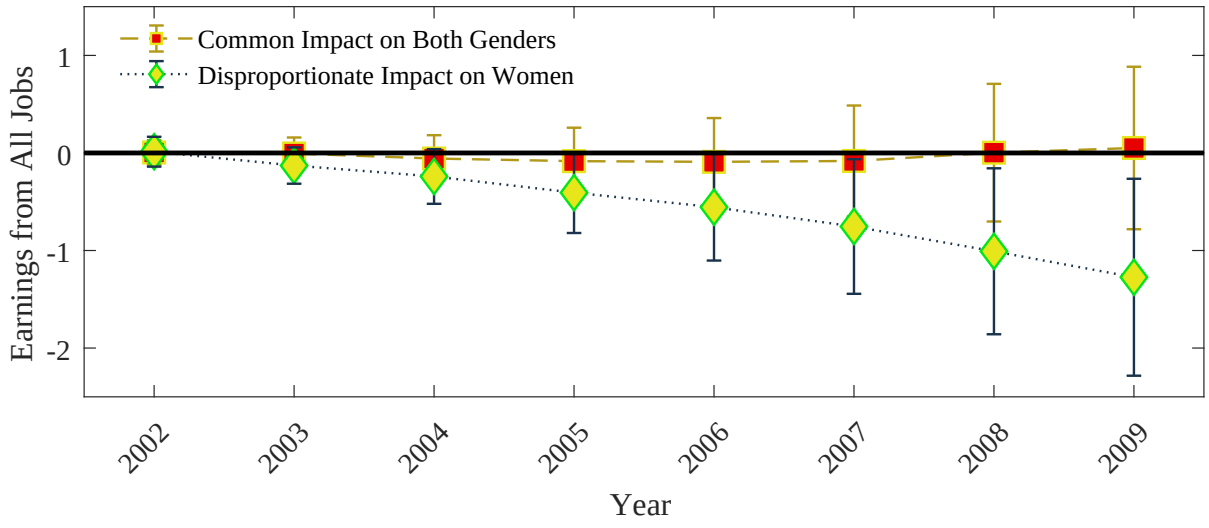
▸ Return

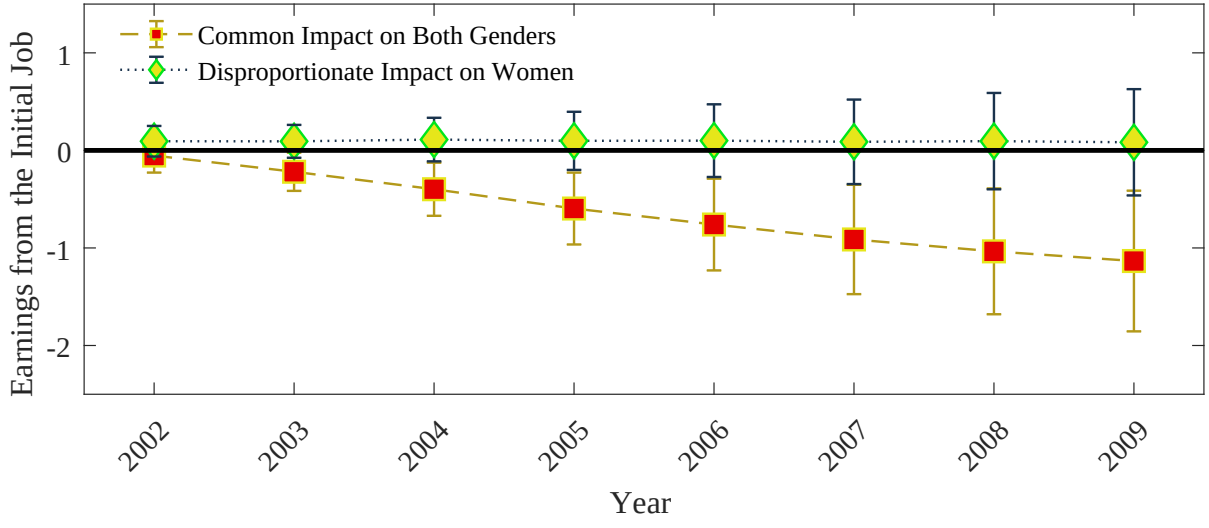
Gender Difference –Earnings from the Initial (Exposed) Firms



▸ Return

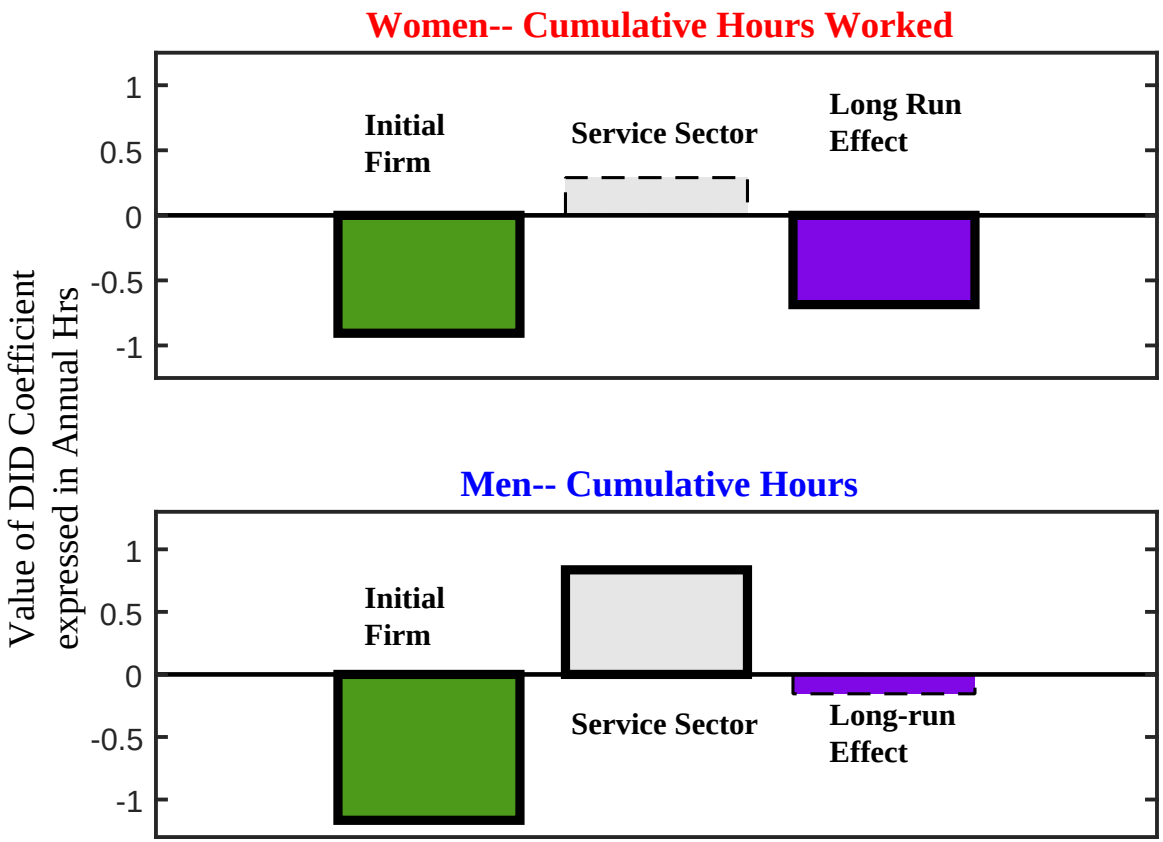
Gender Difference –Earnings from all jobs





Hours Worked: Men vs Women

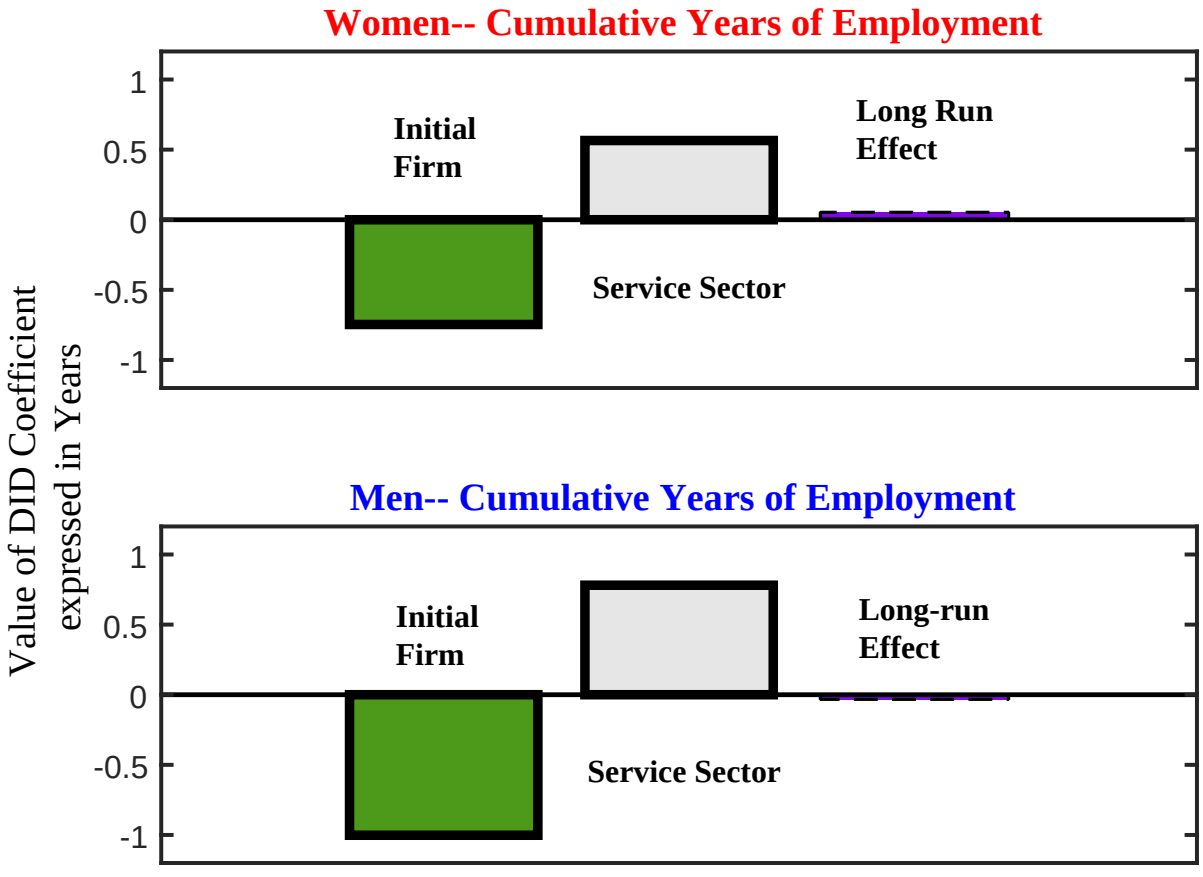
$$X_{i\tau} = \beta_0 + \beta_1 CompExp_i * PostLib_\tau + \tau + i + \epsilon_{i\tau}, \quad \tau = pre, post \ .$$



Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

▸ more ▸ Back

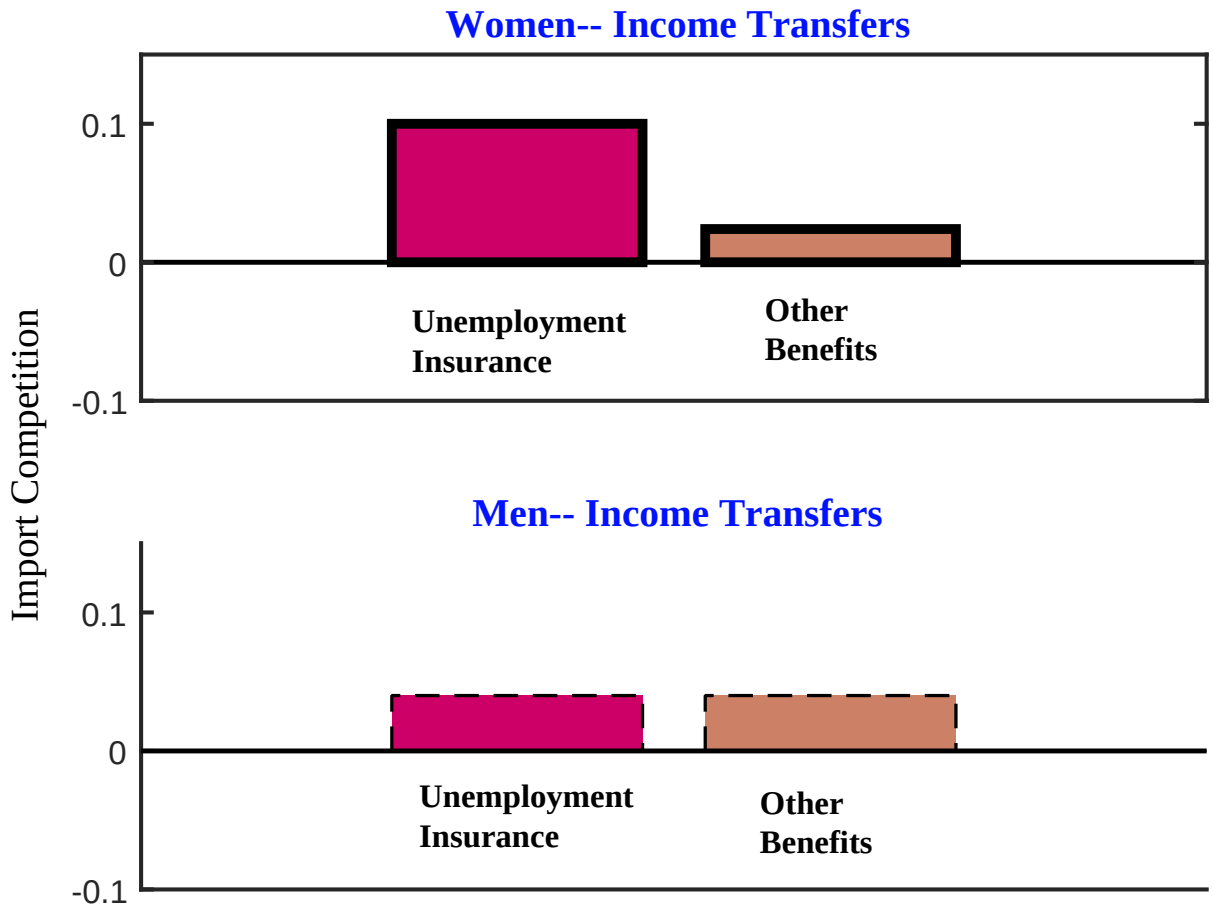
Employment: Men vs Women



Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

▸ Return

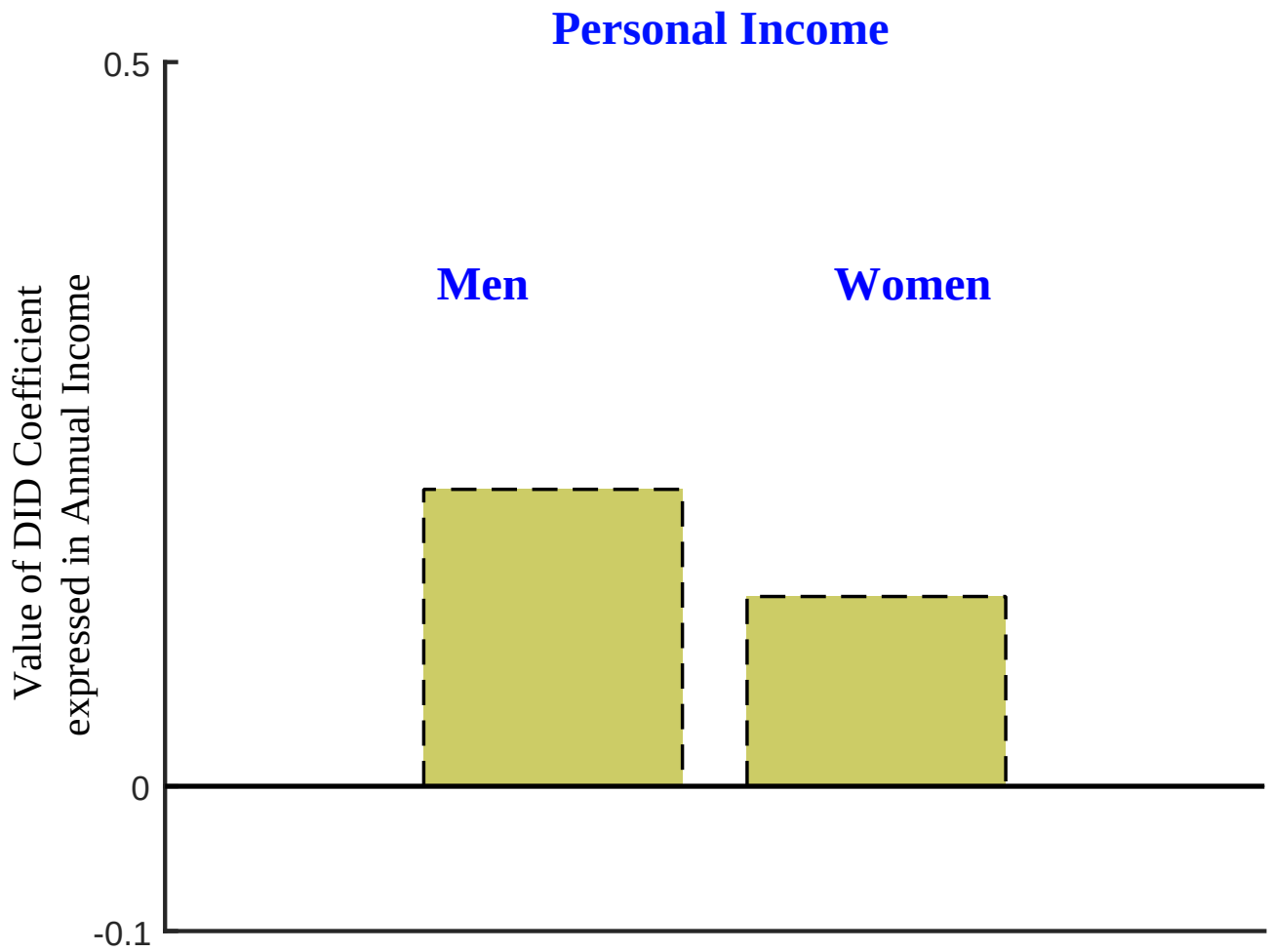
Income Transfers



Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

▸ Return

Personal Income



Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

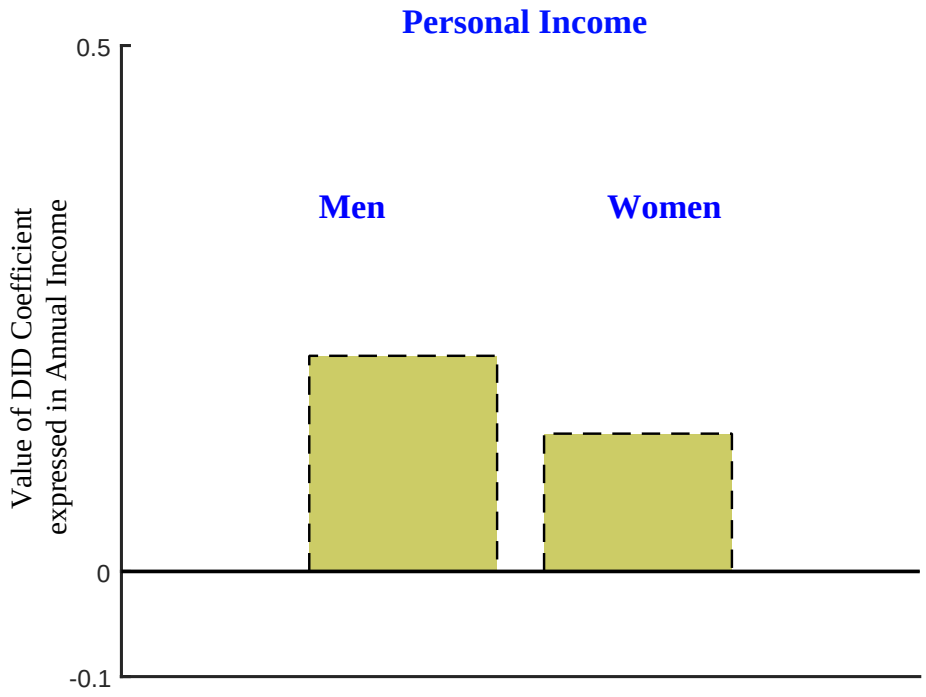
Return

Unemployment in the Service Sector

Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

▸ Return

Income



Robust SEs are clustered for initial firm.
Solid borders of bars indicate statistical significance.

▸ Income Transfers ▸ Return

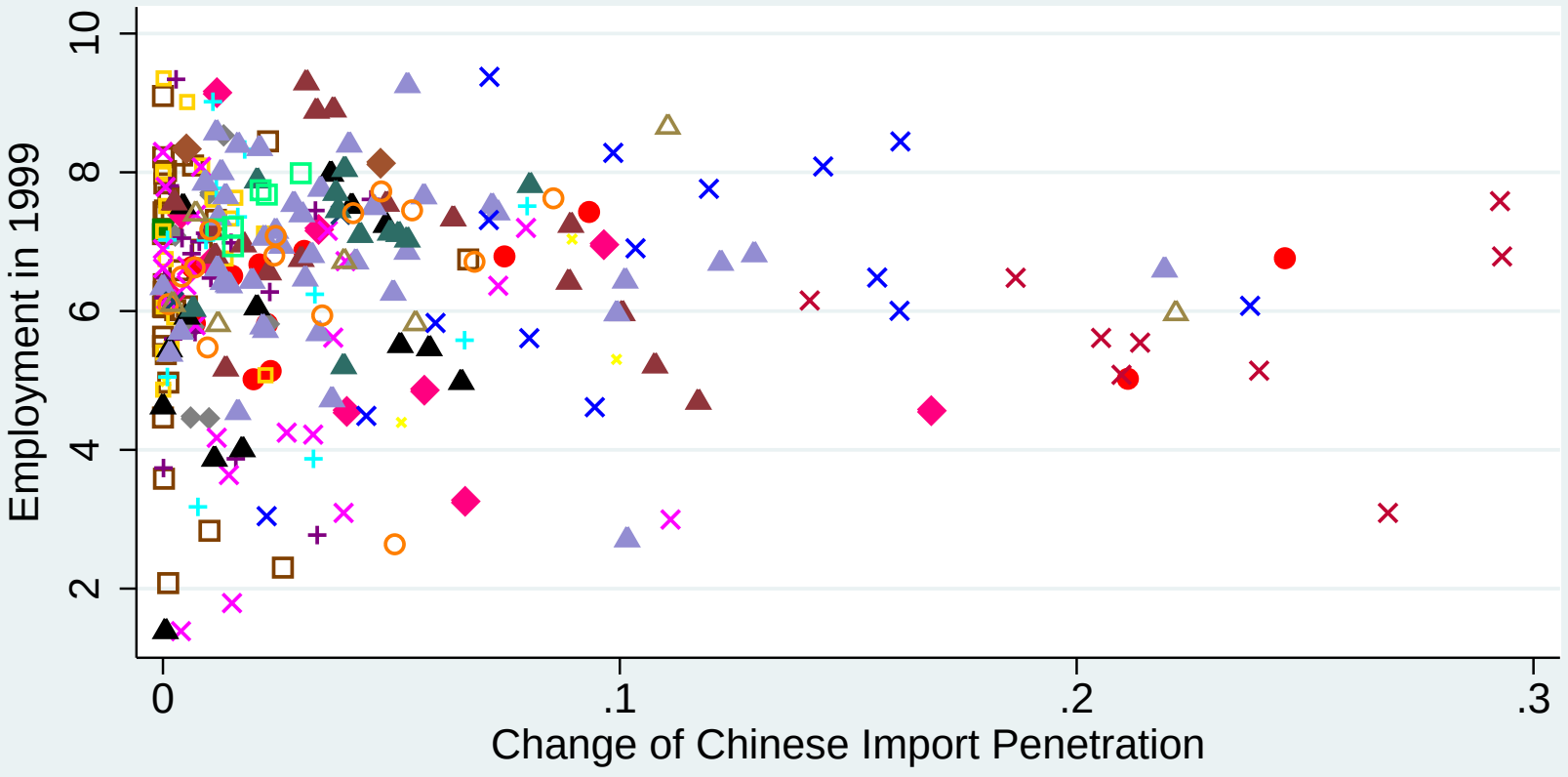
Earnings Differential by Age and Stage of Life

Sample	(1) All	(2) **Fertile Age**	(3) **Not Fertile** Age	(4) Married	(5) Not Married
Panel A. Dependent Variable: Earnings from all employment					
ImpComp	0.051	0.822	-0.919***	-0.491	0.906
	(0.425)	(0.599)	(0.352)	(0.457)	(0.608)
ImpComp x Female	-1.274**	**-1.921****	**-0.483**	-0.508	-2.440**
	(0.515)	(0.841)	(0.464)	(0.545)	(0.966)
Panel B. Dependent Variable: Earnings from employment at the 1999 firm					
ImpComp	-1.134***	-0.876**	-1.423***	-1.421***	-0.784**
	(0.368)	(0.380)	(0.418)	(0.418)	(0.365)
ImpComp x Female	0.083	**-0.009**	**0.198**	0.331	-0.215
	(0.278)	(0.292)	(0.369)	(0.336)	(0.318)
For both panels:					
Observations	19,526	10,234	9,292	11,490	8,036
Worker FE	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓
Female x Time FE	✓	✓	✓	✓	✓

▸ Back

Δ in Chinese Import Penetration over the sample period

More



Worker Characteristics in Economy-wide Sample

			Men		Women	
	Mean	SD	Mean	SD	Mean	SD
	N=1,651,774		N=915,702		N=736,072	
Age	38.194	9.868	38.039	10.051	38.387	9.632
Immigrant	0.041	0.199	0.044	0.206	0.038	0.190
Labor Market Experience	14.440	5.807	14.498	5.898	14.368	5.691
Married	0.543	0.498	0.521	0.500	0.570	0.495
Number of Children	1.337	1.152	1.264	1.179	1.428	1.112
Log Earnings	12.255	0.669	12.362	0.665	12.128	0.626
College	0.280	0.449	0.246	0.431	0.322	0.467
Vocational Educated	0.411	0.492	0.437	0.496	0.380	0.485
Birth Event	0.046	0.208	0.048	0.215	0.042	0.201
Divorce Event	0.008	0.088	0.007	0.085	0.008	0.092
Marriage Event	0.026	0.159	0.026	0.158	0.026	0.160
Managers	0.037	0.188	0.051	0.219	0.020	0.139
Professionals	0.143	0.350	0.147	0.354	0.138	0.345
Office Workers	0.129	0.335	0.059	0.235	0.216	0.412
Machine Operators	0.056	0.230	0.061	0.240	0.049	0.217

Import Shock

- $$\Delta IP_j^{CH} = \frac{\Delta M_j^{CH}}{C_{j,1999}} = \frac{M_{j,2009}^{CH} - M_{j,1999}^{CH}}{C_{j,1999}}$$

  ΔM_j^{CH} Δ in imports originating from China

  $C_{j,1999}$ consumption in worker i's six-digit product line (j) of employment in initial year, 1999

- Instruments
  1. imports to other high-income countries (US, Japan, Australia, ..)
  2. trade costs measures as of 1996
     - distance-based
     - distribution channels

- Identification assumption: China's export growth driven by her productivity growth and falling trade barriers

▸ Return

Heterogeneous Fertility Effects among Women

	(1)	(2)	(3) Education	(4) Within Firm Job Ranking	(5)	(6)	(7) Occupations	(8)
ΔIMP_i	-0.309	0.063	-0.067	-0.031	-0.031	0.006	0.009	-0.097
	(0.215)	(0.146)	(0.118)	(0.117)	(0.117)	(0.122)	(0.119)	(0.136)
ΔIMP_i x Have a child	0.511*							
	(0.297)							
ΔIMP_i x Have a partner		-0.135						
		(0.146)						
ΔIMP_i x College			0.356***					
			(0.129)					
ΔIMP_i x Top Ranked Positions				0.782**				
				(0.308)				
ΔIMP_i x Professionals					0.913**			
					(0.461)			
ΔIMP_i x Office Clerks						-0.055		
						(0.115)		
ΔIMP_i x Service Occupations							-0.841**	
							(0.364)	
ΔIMP_i x Machine Operator								0.424*
								(0.252)
ΔIMP_i x Earnings 4th Quartile								
ΔIMP_i x Earnings 3rd Quartile								
ΔIMP_i x Earnings 2nd Quartile								
Observations	398,530	398,530	398,530	398,530	398,530	398,530	398,530	398,530
Hansen J statistic	1.248	1.184	0.807	0.772	0.734	0.932	1.054	0.609
Hansen J Pval	0.536	0.553	0.668	0.68	0.693	0.627	0.59	0.737

Labor Market Adjustment of the Fertile Age

Panel A	(1) Earnings	(2) Earnings Initial 6-dig Ind	(3) Employment	(4) Employment Initial 6-dig Ind
ΔIMP_i	1.613	-12.310*	-0.542	-8.650**
	(3.612)	(6.572)	(0.748)	(4.250)
ΔIMP_ixFemale	-13.080*	1.305	-3.177**	0.808
	(7.426)	(3.015)	(1.452)	(1.995)
Panel B.	Years in Manufacturing	Years in Service Sector	Outside Labor Mkt	Unemployment
ΔIMP_i	-5.423	6.143***	0.174	9.118*
	(3.578)	(3.121)	(0.341)	(4.659)
ΔIMP_ixFemale	-6.743***	2.109	1.188*	16.570*
	(1.938)	(1.805)	(0.673)	(9.449)

Notes: Sample is all fertile-age workers (between 18 and 39 years old in 1999, N = 903,629). 2SLS results. The full vector of controls + Industry and Occupation FEs.

Labor Market Adjustment of the Fertile Age

Panel A	(1) Birth	(2) log No. of Births	(3) Parental Leave	(4) Marriage
ΔIMP_i	-0.190*	-0.173	-0.293**	-0.053
	(0.103)	(0.114)	(0.122)	(0.094)
ΔIMP_ixFemale	0.314***	0.307***	0.116	0.495***
	(0.092)	(0.090)	(0.102)	(0.099)
Panel B.	Earnings Initial Occupation	Earnings Different Occupation	Employment Same Occupation	Employment Diff Occupation
ΔIMP_i	-0.555	2.167	-2.078	1.536
	(4.710)	(5.364)	(3.381)	(3.158)
ΔIMP_ixFemale	-14.820*	1.735	-10.030**	6.856**
	(6.572)	(2.940)	(3.904)	(2.677)

Notes: Sample is all fertile-age workers (between 18 and 39 years old in 1999, N = 903,629). 2SLS results. The full vector of controls + Industry and Occupation FEs.

The Role of Job Displacement

	(1) Birth	(2) Birth	(3) ParL	(4) ParL	(5) Marriage	(6) Marriage	(7) Divorce	(8) Divorce	(9) Earn'gs	(10) Earn'gs
	JD	**MFA**	**JD**	**MFA**	**JD**	**MFA**	**JD**	**MFA**	**JD**	**MFA**
ImpComp	-0.219***	-0.019	-0.106***	-0.028	-0.113***	-0.012	0.071	-0.024	-3.490***	0.051
	(0.043)	(0.037)	(0.034)	(0.030)	(0.041)	(0.034)	(0.071)	(0.026)	(0.341)	(0.425)
ImpComp x Female	0.130*	0.128*	0.072	0.122**	0.119**	0.092**	-0.022	-0.062*	-0.448	-1.274**
	(0.070)	(0.055)	(0.059)	(0.048)	(0.057)	(0.046)	(0.076)	(0.032)	(0.455)	(0.515)
Observations	3,160	3,160	3,160	3,160	5,784	5,784	4,634	4,634	19,526	19,526
Worker FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Time FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Female x Time	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Conditioning on unemployment → overestimates the negative earnings effect

JD approach : income effect > substitution effect

▸ Return

Dep. Var. Cumulative unemployment spells

- Women

Import Competition (ΔIP^{CH})	**191.672*** **	232.222***	156.665**	169.037**
	(71.936)	(88.870)	(74.718)	(67.555)
ΔIP^{CH}*Married		-67.515		
		(50.743)		
ΔIP^{CH}*w/ Kid			46.406*	
			(24.235)	
ΔIP^{CH}*Single w/ Kid				112.615**
				(56.032)

- Men

Import Competition (ΔIP^{CH})	**74.504****	94.890**	97.508**	73.227**
	(36.009)	(40.799)	(41.115)	(35.877)
ΔIP^{CH}*Married		-38.431*		
		(20.083)		
ΔIP^{CH}*w/ Kid			-36.170**	
			(17.922)	
ΔIP^{CH}*Single w/ Kid				8.772
				(14.730)

- Gender roles do play a role:
  - Having a kid hinders women's adjustment to the shock, but not men's.

Return

Globalization: a hand in Δ of the family-market balance?

Return