

Online Appendix: Occupational Inflexibility and Women's Employment During the Transition to Parenthood

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Appendix Note 1: Occupation-specific Wage Returns to Longer Work Hours

Using ACS data on workers ages 18–64, we estimate the following regression:

$$\begin{aligned} & \ln(\text{annualEarnings}_{it}) \\ &= \beta_0 + \beta_1 \ln(\text{annualWeeksWorked})_i + \beta_2 \ln(\text{weeklyWorkHours})_i \\ &+ \beta_j \sum_{j=1}^J \text{occupation}_i + \beta_k \sum_{k=1}^K \text{occupation} * \ln(\text{weeklyHours})_i + \beta_l \sum_{l=1}^L X_i \\ &+ e_i \end{aligned}$$

, where $\beta_2 \ln(\text{weeklyWorkHours})$ is the main effect of log weekly work hours on log annual earnings, and $\beta_k \sum_{k=1}^K \text{occupation} * \ln(\text{weeklyHours})$ captures variation across occupations in the extent to which longer work hours are associated with higher wages. In addition, the model includes main effects of each occupation, the log of annual weeks worked, and a set of individual-level control variables. Control variable include gender, educational attainment (less than high school, high school, some college, college graduate, and graduate or professional degree), race and ethnicity (non-Hispanic white, non-Hispanic black, non-Hispanic Asian, Hispanic, and non-Hispanic other race), and age and age squared. We sum terms for the main effects of weekly work hours to occupational interactions with weekly hours to derive a measure of the occupation-specific association between weekly work hours and wages.

Figure A1, Panel 1: Sensitivity of Occupational Share 40+ Hour Work Week Results to Pre-Birth Occupation Selection Approach



Source: SIPP 2004 and 2008 panels

Figure A1, Panel 2: Sensitivity of Occupational Work Hour Wage Premium Results to Pre-Birth Occupation Selection Approach



Source: SIPP 2004 and 2008 panels

Table A1: Mean Occupational Work Hour Inflexibility Measures by Major Occupational Categories and OLS Regressions of Occupational Characteristics on Work Hour Inflexibility

	(1) Share 40+ Weekly Work Hours	(2) Work Hour Wage Premium
Panel 1: Work Hour Inflexibility by Major Occ. Categories		
<i>Major Occupation Category</i>		
Management, Professional, and Related Occupations	0.797	0.846
Service Occupations	0.597	0.811
Sales and Office Occupations	0.742	0.921
Construction, Extraction, and Maintenance Occupations	0.868	0.721
Production, Transportation, and Material Moving Occupations	0.836	0.817
Military Occupations	0.960	0.241
Panel 2: Occ. Characteristics on Work Hour Inflexibility		
<i>Occupational Characteristics</i>		
Share Unionized	-0.033 (0.05)	-0.403 (0.07)***
Share Hourly Workers	-0.185 (0.04)***	0.025 (0.06)
Share Government Workers	0.042 (0.03)	0.087 (0.05)
Share Self-Employed	-0.154 (0.04)***	-0.367 (0.06)***
Share Receives Overtime, Tips, or Commission	0.161(0.06)**	-0.022 (0.09)
Mean Years of Education	-0.085 (0.01)***	0.037 (0.01)***
Mean Log Hourly Wage	0.442 (0.02)***	-0.138 (0.04)***
Share Unemployed	-0.425 (0.18)*	0.806 (0.28)**
Constant	0.737 (0.10)***	0.765 (0.15)***

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed tests). Robust standard errors in parentheses.

N occupations in Panel 1 is 541. N occupations in Panel 2 is 533.

Source (Panel 1): American Community Survey (2004–2013)

Source (Panel 2): American Community Survey (2004–2013) and Current Population Survey (2004–2013)

Table A2: Regressions of Parental Status and Pre-Birth Occupational Work Hour Inflexibility on Employment: Full Set of Parameter Estimates, Fixed Effects Linear Probability Models

	(1) Mothers	(2) Fathers	(3) Childless Women: Placebo	(4) Mothers: Pre-Pregnancy
Parent	0.001 (0.10)	0.043 (0.06)	-0.037 (0.03)	0.126 (0.11)
Occ. Share 40+ Weekly Work Hours x Parent	-0.180 (0.07)**	-0.034 (0.05)	-0.029 (0.02)	-0.060 (0.09)
Occ. Weekly Work Hour Wage Premium x Parent	-0.142 (0.05)**	-0.007 (0.02)	-0.016 (0.02)	0.034 (0.07)
Occ. Mean Log Hourly Wages x Parent	0.072 (0.04)	-0.006 (0.02)	0.020 (0.02)	-0.025 (0.05)
Occ. Mean Years of Education x Parent	0.002 (0.01)	0.002 (0.00)	0.001 (0.00)	-0.000 (0.01)
Occ. Share Unemployed x Parent	-0.352 (0.40)	-0.079 (0.22)	-0.062 (0.13)	-0.923 (0.57)
Year 2005	-0.032 (0.01)**	-0.008 (0.01)	-0.013 (0.00)***	0.017 (0.02)
Year 2006	-0.028 (0.01)	-0.010 (0.01)	-0.007 (0.01)	0.040 (0.03)
Year 2007	-0.037 (0.02)	-0.002 (0.01)	-0.008 (0.01)	
Year 2008	0.110 (0.03)***	0.022 (0.02)	0.024 (0.01)*	-0.003 (0.04)
Year 2009	0.049 (0.02)*	-0.000 (0.02)	-0.006 (0.01)	-0.007 (0.04)
Year 2010	0.037 (0.02)	-0.012 (0.01)	-0.024 (0.01)**	0.006 (0.03)
Year 2011	0.021 (0.02)	0.003 (0.01)	-0.026 (0.01)***	-0.005 (0.03)
Year 2012	0.008 (0.01)	0.000 (0.01)	-0.017 (0.00)***	
Age	-0.005 (0.00)	-0.001 (0.00)	-0.003 (0.00)*	0.002 (0.01)
Enrolled in School	-0.056 (0.01)***	-0.070 (0.01)***	-0.106 (0.00)***	-0.099 (0.02)***
Log Other Household Income	-0.003 (0.00)	-0.001 (0.00)	-0.001 (0.00)	-0.005 (0.00)
West Region	0.098 (0.07)	-0.056 (0.05)	0.028 (0.03)	0.071 (0.08)
Midwest Region	0.164 (0.07)*	0.044 (0.04)	0.027 (0.03)	0.101 (0.12)
Northeast Region	0.118 (0.07)	0.070 (0.06)	-0.027 (0.03)	-0.160 (0.08)*
Higher Order Births	-0.066 (0.02)***	-0.009 (0.01)		
Unpartnered	0.006 (0.02)	-0.005 (0.02)	0.014 (0.01)*	0.000 (0.02)
Partner Not Working	0.016 (0.02)	-0.009 (0.01)	-0.021 (0.01)*	-0.013 (0.03)
Partner Works Part-Time	0.042 (0.01)**	0.005 (0.01)	0.011 (0.01)	-0.011 (0.02)
Partner Overworks	-0.027 (0.01)**	0.000 (0.01)	0.002 (0.00)	0.006 (0.01)
Married	-0.019 (0.02)	0.010 (0.01)	-0.010 (0.01)	-0.010 (0.02)
Constant	0.951 (0.14)***	0.977 (0.06)***	1.009 (0.05)***	0.917 (0.16)***
Number of Individuals	2,239	1,667	16,878	813
Person-Month Observations	77,912	54,281	439,312	18,968

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$ (two-tailed tests). Robust standard errors in parentheses. All models include individual fixed effects.

Source: SIPP 2004 and 2008 panels.

Table A3: Regressions of Parental Status and Alternative Pre-Birth Occupational Work Hour Inflexibility Measures on Women’s Employment, Fixed Effects Linear Probability Models

Panel 1: Occupational Work Hour Prevalence Thresholds	
Share ≤ 20 Weekly Work Hours x Mother	0.376 (0.13)**
Share ≤ 25 Weekly Work Hours x Mother	0.300 (0.10)**
Share ≤ 30 Weekly Work Hours x Mother	0.219 (0.08)**
Share ≤ 35 Weekly Work Hours x Mother	0.194 (0.07)**
Share ≥ 40 Weekly Work Hours x Mother	-0.182 (0.06)**
Share ≥ 45 Weekly Work Hours x Mother	-0.030 (0.07)
Share ≥ 50 Weekly Work Hours x Mother	-0.035 (0.08)
Share ≥ 55 Weekly Work Hours x Mother	-0.105 (0.14)
Share ≥ 60 Weekly Work Hours x Mother	-0.165 (0.17)
Panel 2: Occupational Work Hour Percentiles	
25 th Percentile of Weekly Work Hours x Mother	-0.006 (0.00)***
50 th Percentile of Weekly Work Hours x Mother	-0.006 (0.00)*
75 th Percentile of Weekly Work Hours x Mother	-0.001 (0.00)
Panel 3: Occupational Mean and Standard Deviation of Work Hours	
Mean Weekly Work Hours x Mother	-0.007 (0.00)**
Standard Deviation of Weekly Work Hours x Mother	0.008 (0.00)†
Panel 4: Occupational Measures Using Only Male Workers	
Share 40+ Weekly Work Hours (Male Workers) x Mother	-0.190 (0.08)*
Work Hour Wage Premium (Male Workers) x Mother	-0.068 (0.03)*
Panel 5: Occupational Gender Composition Control	
Share Female x Mother	0.012 (0.05)
Share 40+ Weekly Work Hours x Mother	-0.174 (0.07)*
Work Hour Wage Premium x Mother	-0.144 (0.06)*
Number of Individuals	2,239
Person-Month Observations	77,912

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$ (two-tailed tests). Robust standard errors in parentheses. Each row in panels 1 and 3 represents a parameter estimate from a separate model. Rows in panels 2, 4, and 5 are from combined models that include each measure listed. All models include individual fixed effects and control for occupation mean years of education, occupation mean log hourly wages, occupation mean unemployment, calendar year fixed effects, logged income of other household members, age, school enrollment, region, number of higher order births, partnership status and partner work hours (unpartnered, partner not employed, partner works part-time, partner works full-time, and partner overworks), and marital status.

Source: SIPP 2004 and 2008 panels.

Table A4: Regressions of Years Relative to Birth and Pre-Birth Occupational Characteristics on Employment, Fixed Effects Linear Probability Models

	(1)	(2)
	Mothers	Fathers
<i>Years Relative to First Birth (ref = Pre-Birth)</i>		
Year 1 Post-Birth	-0.048 (0.10)	-0.015 (0.06)
Year 2 Post-Birth	0.054 (0.14)	-0.034 (0.08)
Year 3 Post-Birth	0.081 (0.17)	-0.018 (0.13)
<i>Occupational Share 40+ Weekly Work Hours x Years Post-Birth</i>		
Share 40+ Weekly Work Hours x Year 1 Post-Birth	-0.148 (0.07)*	-0.017 (0.05)
Share 40+ Weekly Work Hours x Year 2 Post-Birth	-0.214 (0.08)*	-0.020 (0.06)
Share 40+ Weekly Work Hours x Year 3 Post-Birth	-0.201 (0.11)†	-0.009 (0.11)
<i>F-test: All Share 40+ Hours/Week Variables</i>	<i>p</i> = .0595	<i>p</i> = .9823
<i>Occupational Work Hours Wage Premium x Years Post-Birth</i>		
Weekly Work Hour Wage Premium x Year 1 Post-Birth	-0.092 (0.05)†	-0.003 (0.02)
Weekly Work Hour Wage Premium x Year 2 Post-Birth	-0.197 (0.08)**	-0.010 (0.03)
Weekly Work Hour Wage Premium x Year 3 Post-Birth	-0.265 (0.08)**	0.004 (0.04)
<i>F-test: All Work Hour Wage Premium Variables</i>	<i>p</i> = .0121	<i>p</i> = .9686
Number of Individuals	2,239	1,667
Person-Month Observations	77,912	54,281

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$ (two-tailed tests). Robust standard errors in parentheses. All models include individual fixed effects and control for higher order births, occupation mean years of education, occupation mean log hourly wages, occupation mean unemployment, calendar year fixed effects, logged income of other household members, age, school enrollment, region, partnership status and partner employment (unpartnered, partner not employed, partner works part-time, partner works full-time, and partner overworks), and marital status.

Source: SIPP 2004 and 2008 panels.

Table A5: Assessing Sensitivity of Results to Alternative Approaches to Measuring and Modeling Mothers' Employment

	Fixed Effects	Fixed Effects	Multinomial Logit Model (RRR)		Random Effects	Fixed Effects
	LPM	LPM	Part-Time vs.	Full-Time vs.	Logit Model	Logit Model
	Out of the	Employment (No	Part-Time vs.	Full-Time vs.	(AME)	(AME)
	Labor Force	Self-Employed)	Not Employed	Not Employed	Employment	Employment
	(1)	(2)	(3)	(4)	(5)	(6)
Mother	0.032 (0.10)	-0.118 (0.11)	0.691 (0.60)	0.913 (0.75)	0.051 (0.07)	0.077 (0.046)
Occ. Share 40+ Weekly Work Hours x Mother	0.122 (0.06)*	-0.128 (0.06)*	0.113 (0.06)*** ^b	0.327 (0.16)*	-0.116 (0.04)**	-0.132 (0.06)*
Occ. Weekly Work Hour Wage Premium x Mother	0.128 (0.05)*	-0.127 (0.03)*	0.343 (0.18)*	0.248 (0.13)**	-0.086 (0.04)*	-0.083 (0.04)*
Number of Individuals	2,239	2,239	2,239	2,239	2,239	979
Person-Month Observations	77,912	77,912	77,900	77,900	77,912	34,664

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed tests). Robust standard errors in parentheses.

^a Test of differences across coefficients is statistically significant at $p < 0.05$ level (two-tailed tests).

^b Test of differences across outcome contrasts is statistically significant at the $p < 0.05$ level (two-tailed tests).

Robust standard errors in parentheses. All models control for number of higher order births, occupation mean years of education, occupation mean log hourly wages, occupation mean unemployment, calendar year fixed effects, log other household income, age, whether currently enrolled in school, region, combined partnership status and partner work hours (unpartnered, partner not working, partner works part-time, partner works full-time, and partner overworks), and marital status. Multinomial logit model results in columns 3 and 4 also adjust for whether individual worked part-time (vs. full-time) at pre-birth work observation.

Source: SIPP 2004 and 2008 panels.

Table A6: Assessing Sensitivity of Results to Interactions between Parenthood and Conventional Individual-Level Predictors of Maternal Employment, Fixed Effects Linear Probability Models

	(1) Mothers	(2) Fathers
<i>Parental Status</i>		
Parent	-0.099 (0.12)	0.029 (0.07)
<i>Occupational Work Hour Inflexibility x Parental Status</i>		
Share 40+ Weekly Work Hours x Parent	-0.192 (0.07)**	-0.016 (0.05)
Weekly Work Hour Wage Premium x Parent	-0.141 (0.05)**	-0.005 (0.02)
<i>Occupational Controls x Parental Status</i>		
Mean Log Hourly Wages x Parent	0.055 (0.04)	-0.009 (0.02)
Mean Years of Education x Parent	0.003 (0.01)	0.001 (0.00)
Share Unemployed x Parent	-0.464 (0.42)	-0.214 (0.20)
<i>Time-Invariant Individual Controls x Parental Status</i>		
Pre-birth Less than High School Education x Parent	-0.002 (0.04)	-0.005 (0.03)
Pre-birth High School Education x Parent	0.032 (0.03)	-0.006 (0.01)
Pre-birth Some College Education x Parent	-0.002 (0.02)	-0.005 (0.01)
Pre-birth Log Hourly Wage x Parent	0.028 (0.01)*	0.006 (0.01)
Pre-birth Log Hourly Missing x Parent	0.044 (0.04)	0.153 (0.04)***
Pre-Birth Full-time Work Hours x Parent	0.038 (0.02)	0.004 (0.02)
Pre-Birth Job Tenure x Parent	0.002 (0.00)	-0.001 (0.00)
Pre-Birth Job Tenure Missing x Parent	-0.048 (0.02)*	-0.014 (0.01)
Non-Hispanic Black x Parent	0.029 (0.03)	0.004 (0.03)
Hispanic x Parent	-0.018 (0.03)	0.043 (0.01)**
Non-Hispanic Asian x Parent	-0.015 (0.03)	0.010 (0.01)
Non-Hispanic Other Race x Parent	0.006 (0.05)	0.044 (0.04)
Age < 20 at Birth x Parent	0.132 (0.04)**	-0.068 (0.11)
Age 20–24 at Birth x Parent	0.064 (0.03)*	0.012 (0.02)
Age 25–29 at Birth x Parent	0.024 (0.02)	-0.000 (0.01)
Age 30–34 at Birth x Parent	0.019 (0.02)	-0.004 (0.01)
<i>Time-Varying Individual Controls</i>		
Year 2005	-0.037 (0.01)***	-0.010 (0.01)
Year 2006	-0.035 (0.01)*	-0.011 (0.01)
Year 2007	-0.043 (0.02)*	-0.003 (0.01)
Year 2008	0.103 (0.03)***	0.020 (0.02)
Year 2009	0.041 (0.02)	-0.003 (0.02)
Year 2010	0.030 (0.02)	-0.014 (0.01)
Year 2011	0.016 (0.02)	0.001 (0.01)
Year 2012	0.005 (0.01)	-0.001 (0.01)
Age	-0.004 (0.00)	-0.001 (0.00)
Enrolled in School	-0.057 (0.01)***	-0.069 (0.01)***
Log Other Household Income	-0.003 (0.00)	-0.001 (0.00)
West Region	0.107 (0.07)	-0.052 (0.05)
Midwest Region	0.173 (0.07)*	0.043 (0.04)
Northeast Region	0.123 (0.07)	0.072 (0.06)
Higher Order Births	-0.065 (0.02)***	-0.007 (0.01)
Partner Not Working	0.008 (0.03)	-0.012 (0.02)
Partner Works Part-Time	0.046 (0.02)*	0.003 (0.02)
Partner Works Full-Time	-0.009 (0.02)	-0.001 (0.02)
Partner Overworks	-0.040 (0.02)*	0.000 (0.02)
Married	-0.016 (0.02)	0.011 (0.01)
Constant	0.944 (0.14)***	0.983 (0.07)***
Number of Individuals	2,239	1,667
Person-Month Observations	77,912	54,281

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed tests). Robust standard errors in parentheses.

Source: SIPP 2004 and 2008 panels.