Same-Sex Couples and Parental Earnings Dynamics

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United States™ Census Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov

Parental Earnings Dynamics/Child Penalty /Motherhood Penalty (Daddy Bonus?)

- How do earnings and employment change after a child joins the household?

Budig & Hodges (2010)
Hotchkiss, Pitts, & Walker (2011)
Miller (2011)
Staff & Mortimer (2012)
Fox, Han, Ruhm, & Waldfogel (2013)
Rossin-Slater, Ruhm, & Waldfogel (2013)
Angelov, Johansson, & Lindahl (2016)
Juhn & McCue (2016)
Byker (2016)
Herr (2016)
Pilkauskas, Waldfogel, & Brooks-Gunn (2016)
Lundborg, Plug, & Rasmussen (2017)
Yu & Ko (2017)
Cools, Markussen, & Strom (2017)

Lu, Wang, & Han (2017)
Hotchkiss, Pitts, Walker (2017)
Juhn & McCue (2017)
Lubotsky & Qureshi (2018)
Albrecht, Bronson, Thourisie, & Vroman (2018)
Butikofer, Jensen, & Salvanes (2018)
Nicoletti, Salvanes, & Tominey (2018)
Neumeier, Sorenson, & Webber (2018)
Jee, Misra, & Murray-Close (2018)
Killewald & Zhuo (2019)
Kleven, Landais, Posch, Steinhauer, & Zweimuller (2019)
Kleven, Landais, Sogaard (2019)

Sieppi & Pehkonen (2019)
Combet & Oesch (2019)
Patnaik (2019)
Muller, Hiekel, & Liefbroer (2020)
Lutter & Schoeder (2020)
Musick, Bea, & Gonalons-Pons (2020)
Chung, Downs, Sandler, & Sienkiewicz (n.p)
Andresen & Nix (n.p)
Stearns (n.p.)
To (n.p.)
Laun & Wallenius (2021)
Costa-Font & Fleche (2020)
Kuziemko, Pan, Shen, Washington (n.p)
Monti, Reeder, & Stinson (2020)

Hotz, Johansson, & Karimi (n.p.)
Moberg (n.p)
Gonalons-Pons, Schwartz, & Musick (n.p)
Bhalotra, Clarke, Muhlrad, & Palme (n.p.)
Sin, Dasgupta, & Pacheco (n.p.)
Aaronson, Dehejia, Pop-Eleches, Samii & Schulze (2021)
Gallen (n.p.)
Sandler & Szembrot (n.p.)
Kuka & Shenhav (n.p.)
Aguilar-Gomez, Arceo-Gomez, & Toledo (n.p.)
Kleven, Landais, & Sogaard (n.p.)
Murray, Sandler, & Staiger (n.p.)

This paper: Same-Sex Couples

- Gender norms seem to be an important driver of labor market choices post-birth for different sex couples
  - Will be different for same-sex couples

- Our contributions:
  - United States
  - Male same sex couples

Data

- American Community Survey (ACS) Data 2013-2019
  - Household heads, spouses, and unmarried partners with children
- Longitudinal Employer Household Dynamics (LEHD) 2014 Snapshot
  - Quarterly earnings as reported by employers to state unemployment insurance agencies
- Census-Numident
  - Name, sex, and date of birth from Social Security
- Tax Returns – IRS 1040 data
  - Date when the child is first claimed on the tax return

Treatment = Birth of the First Child

- Measurement issues
  - Date of birth is not necessarily equivalent to the date the child enters the household for adopted children
- Our approach
  - Start with Numident date of birth
  - Use the year first claimed as a dependent on IRS 1040 data, if later than Numident date of birth
  - Augment with ACS date of birth for those missing Numident/IRS information

Same-Sex and Different-Sex Couples

- We identify same-sex and different-sex couples based on their sex and partnership status when interviewed in the ACS
  - Individuals who are separated, divorced, or widowed at the time of the survey are not included
- We want to compare different-sex couples who we think are similar to same-sex couples in their employment and family decisions
  - Inverse propensity score weights, predicted using observable characteristics of couples

Comparable Divisions within Household

- Primary earners earn at least 10% more than their partner
- Secondary earners earn at least 10% less than their partner
- Equal earners earn within 10% of each other

Pairings and Sample Sizes

Different-Sex Couples	
Male Primary Earners Female Secondary Earners	808,000 647,000
Female Primary Earners Male Secondary Earners	523,000 357,000
Male Equal Earners Female Equal Earners	108,000 108,000

Same-Sex Couples	
Male Primary Earners Male Secondary Earners	2,000 1,300
Female Primary Earners Female Secondary Earners	5,500 4,000
Male Equal Earners	300
Female Equal Earners	800

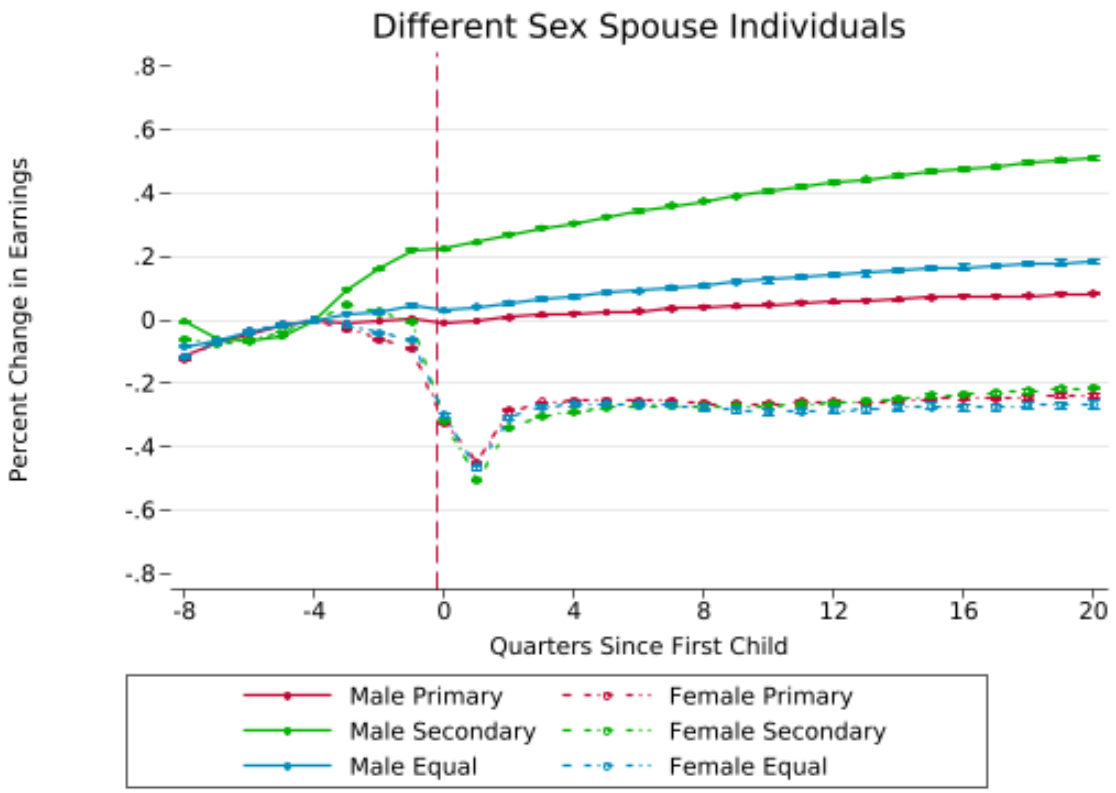
Methodology

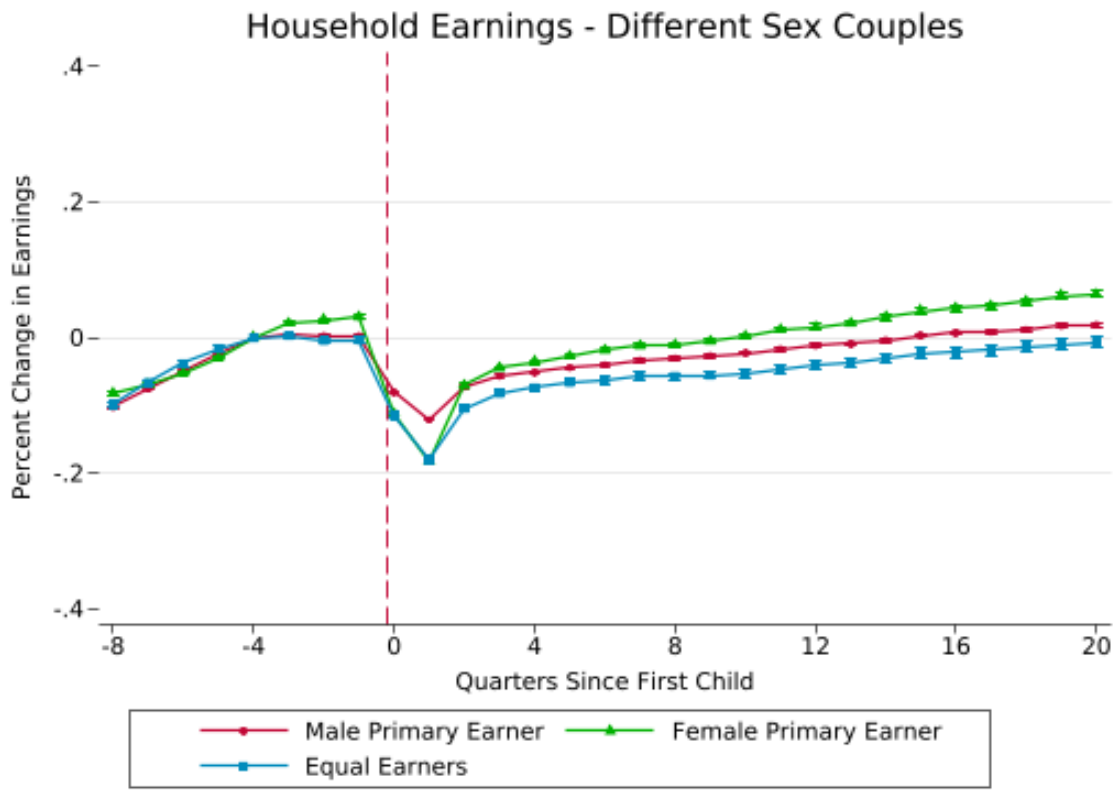
We estimate the following equation

$$Y_{it} = \sum_{d=-8}^{20} \beta_d (t - birthqtr_i = d) + \gamma_i + \delta_t + \varepsilon_{it}$$

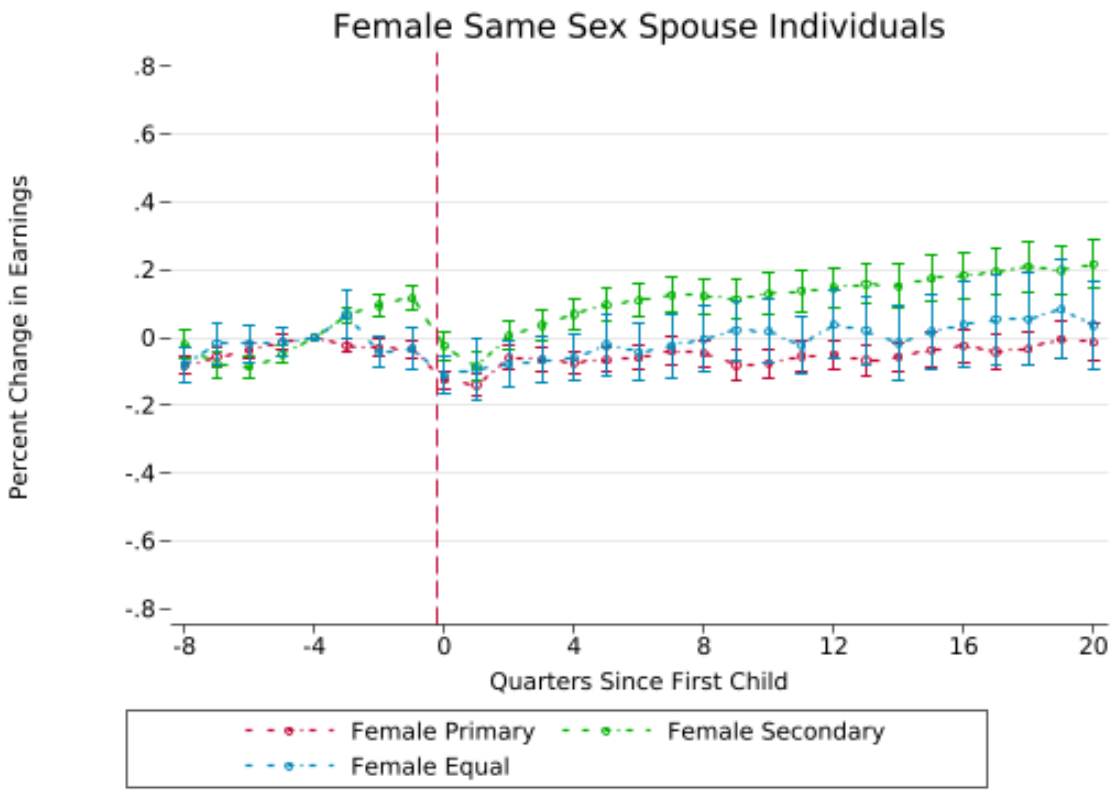
- $(t - birthqtr_i = d)$ is the distance, in quarters, from the birth of the first child
  - quarter $t = -4$ is excluded
- γ_i and δ_t are individual and calendar time fixed effects
- Y_{it} is the dependent variable: quarterly earnings
- We present results in percentage change terms

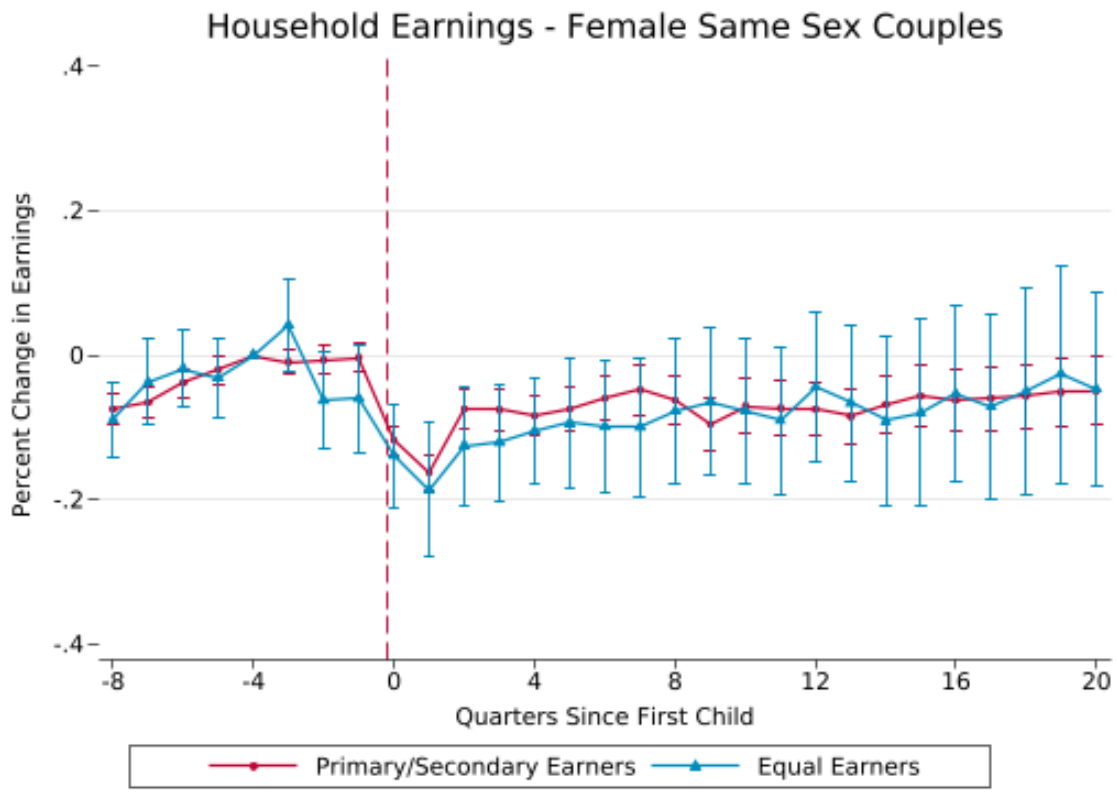
Different-Sex Couples



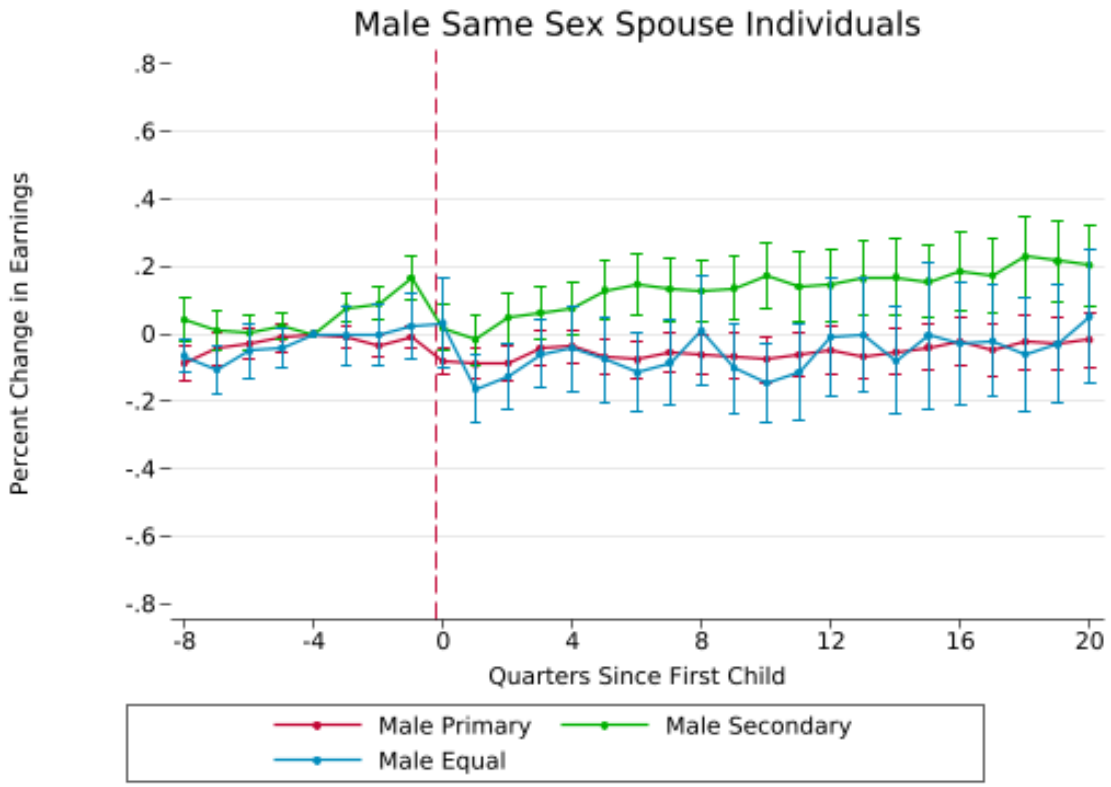


Female Same-Sex Couples





Male Same-Sex Couples



Summary of Results so Far

- Among different-sex couples, men have higher earnings after the entrance of their first child into the household, while women have lower earnings
  - This is the case for primary, secondary, and equal earners (though male secondary earners see the largest increase in earnings after childbirth)
- In contrast, among same-sex couples, secondary earners' earnings increase after the entrance of the child while primary earners' earnings fall slightly
  - Suggests an equalization of earnings between the partners
  - This is the case both for males and females

Next Steps

- Intensive/Extensive margin analysis
- Simple model of substitutes versus complements in household labor, with changes at time of childbirth
- Validate identification of same-sex couples using Numident

Appendix

Methodology – Additional Details

We calculate inverse propensity weights in the following way:

- First predict same-sex-status using observable characteristics of the couples
  - Max age, gap in age, max education in years, gap in education, race and whether race is different, whether both are Hispanic, marital status, gap in prebirth earnings, and max household earnings
- Use inverse of predicted probability as the weight associated with each individual
  - Individuals in same-sex couples get weight of $\frac{1}{pscore}$
  - Individuals in different-sex couples get weight of $\frac{1}{1-pscore}$
- We combine these inverse propensity weights with ACS sample weights to form the final weights used in our regressions

Literature – Additional Details

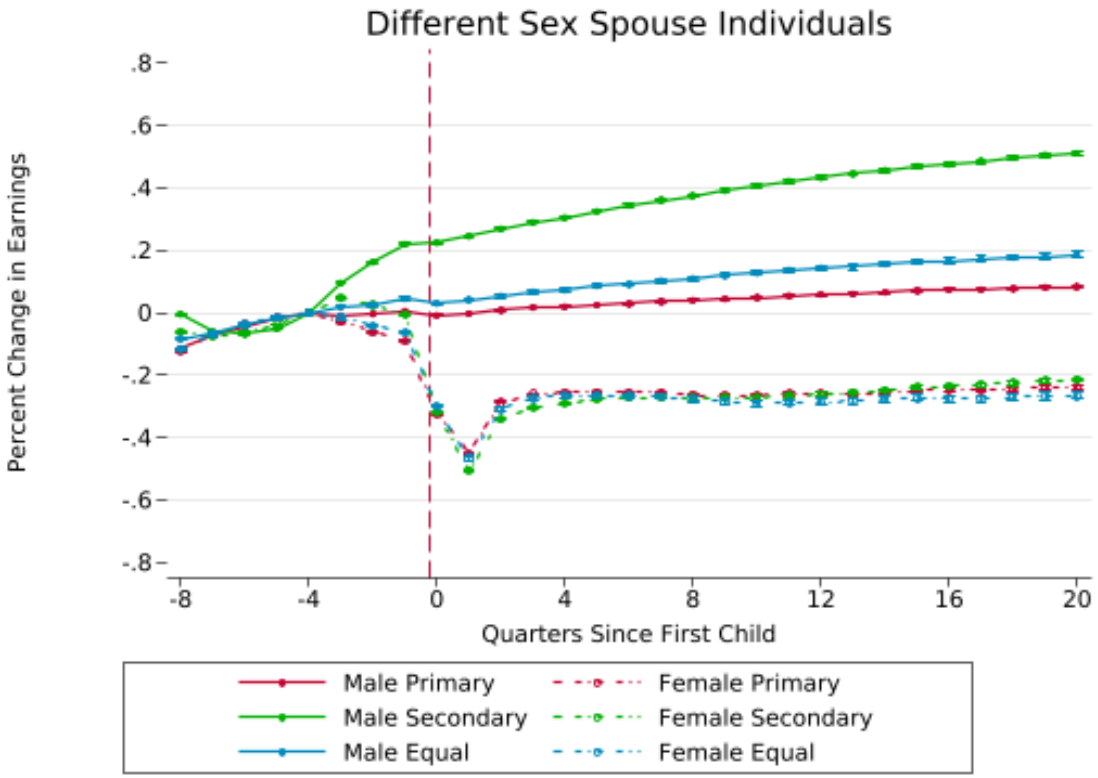
- Female Same-Sex Couples & Kids
  - Moberg (2016) – Sweden
    - Compares the effect of parenthood on the spousal income gaps among lesbian and different-sex couples, finding that the income gap is smaller five years after childbirth for lesbian couples compared to different-sex couples
  - Rosenbaum (2019) – Denmark
    - Finds a smaller child penalty among lesbian couples compared to different-sex mothers
  - Andresen & Nix (2022) – Norway
    - Using a simple household model, they find that the child penalty experienced by women in different-sex couples is explained in large part by gender norms and preferences for child care
- Adoption
  - Kleven, Landais, Sogaard (2020) – Denmark
    - Compare child penalties in biological and adoptive families, finding no long-term difference

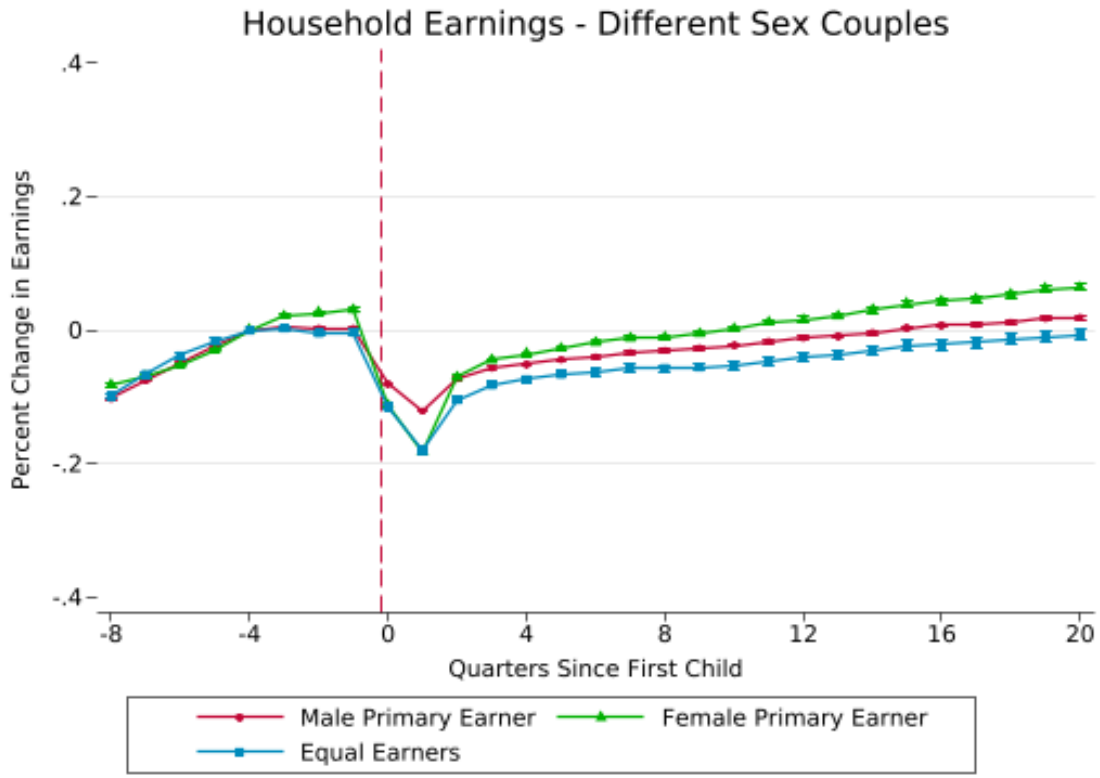
Empirical Results – Additional Details

- The following slides show results without inverse propensity score weighting
  - The results are very robust to the use of the weights

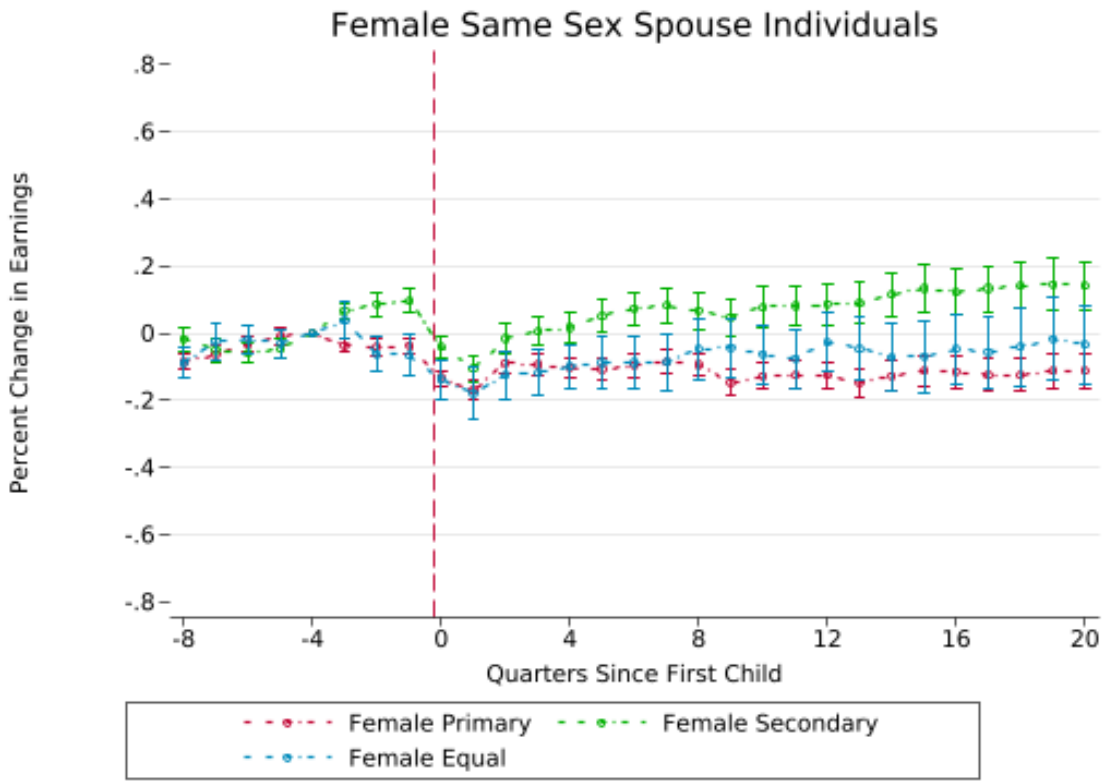
- We also include results for unmarried individuals with and without inverse propensity weights

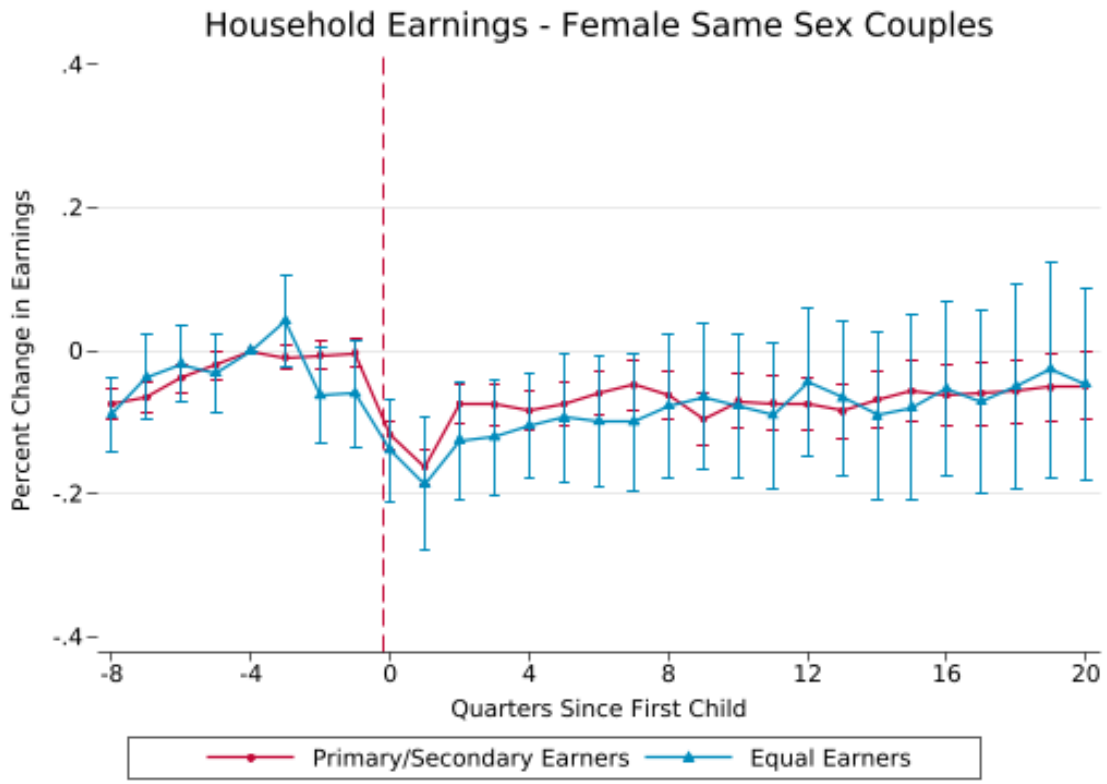
Different-Sex Couples – No Propensity Weights



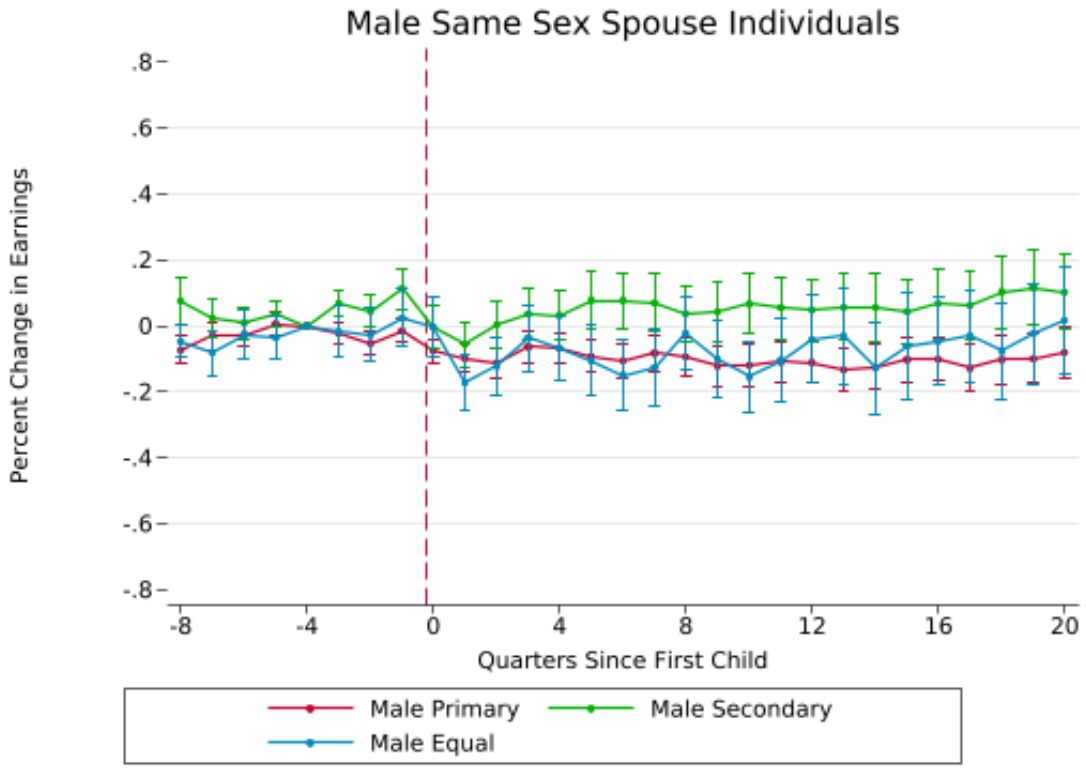


Female Same-Sex Couples – No Propensity Weights



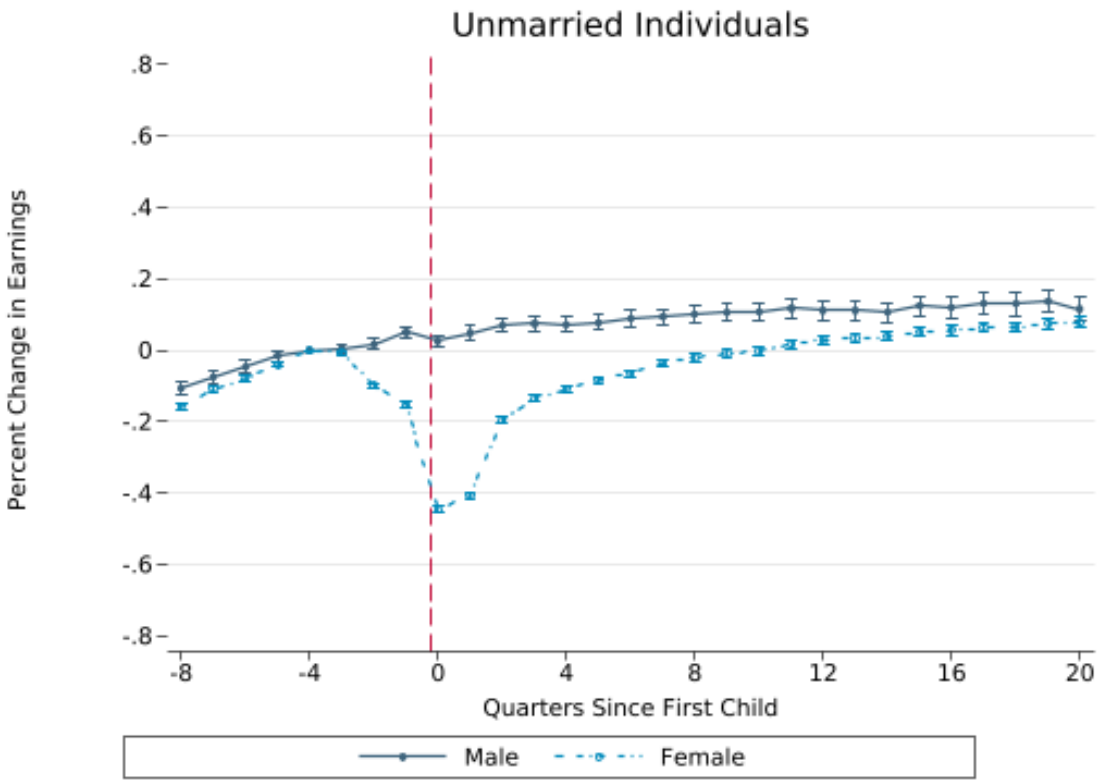


Male Same-Sex Couples – No Propensity Weights



Unmarried

Without Propensity Weights



With Propensity Weights