Same-Sex Couples and Parental Earnings Dynamics

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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, & Tomin`y (2018)
  Neumeier, Sorenson, & Webber (2018)
  Jee, Misra, & Murray-Close (2018)
  Killeveland & Zhuo (2019)
  Kleven, Landais, Posch, Steinhauler, & 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 & Sembrot (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

<table>
<thead>
<tr>
<th>Different-Sex Couples</th>
<th>Same-Sex Couples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Primary Earners</td>
<td>Female Secondary Earners</td>
</tr>
<tr>
<td>Female Primary Earners</td>
<td>Male Secondary Earners</td>
</tr>
<tr>
<td>Male Equal Earners</td>
<td>Female Equal Earners</td>
</tr>
</tbody>
</table>

| Male Primary Earners | Male Secondary Earners | 2,000 | 1,300 |
| Female Primary Earners | Female Secondary Earners | 5,500 | 4,000 |
| Male Equal Earners | Female Equal Earners | 300 | 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
• \(\gamma_i\) and \(\delta_t\) 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

Different Sex Spouse Individuals

Household Earnings - Different Sex Couples
Female Same-Sex Couples

Female Same Sex Spouse Individuals

Household Earnings - Female Same Sex Couples

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Male Same-Sex Couples

Male Same Sex Spouse Individuals

Household Earnings - Male Same Sex Couples

Percent Change in Earnings vs. Quarters Since First Child

-8 -4 0 4 8 12 16 20

Male Primary  Male Secondary  Male Equal

Primary/Secondary Earners  Equal Earners

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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

Different Sex Spouse Individuals

Household Earnings - Different Sex Couples

Percent Change in Earnings

Quarters Since First Child

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Female Same-Sex Couples – No Propensity Weights

Female Same Sex Spouse Individuals

Household Earnings - Female Same Sex Couples

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Male Same-Sex Couples – No Propensity Weights

Male Same Sex Spouse Individuals

Household Earnings - Male Same Sex Couples

Percent Change in Earnings

Quarters Since First Child

-8 -4 0 4 8 12 16 20

-0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8

Male Primary  Male Secondary  Male Equal

Primary/Secondary Earners  Equal Earners
Unmarried

Without Propensity Weights

With Propensity Weights

Percent Change in Earnings

Quarters Since First Child

Male
Female