

HOW MUCH DOES SOCIAL SECURITY OFFSET THE MOTHERHOOD PENALTY?

BY MATTHEW S. RUTLEDGE, ALICE ZULKARNAIN, AND SARA ELLEN KING*

Introduction

When women become mothers, their labor market income often takes a substantial hit. This “motherhood earnings penalty” becomes even larger with each additional child and permanently reduces earnings throughout mothers’ worklives.¹ Previous studies have linked the penalty to mothers’ reduced educational attainment, more time out of the workforce, higher job search costs, and poor job matches.²

What remains unanswered is the extent to which the penalty impacts women’s retirement income. This *brief*, based on a recent study, answers part of this question by looking at how Social Security provisions address the motherhood penalty.³

The discussion proceeds as follows. The first section explains how Social Security can impact the motherhood earnings penalty and reduce retirement income shortfalls for mothers. The second section lays out the data and methodology for this analysis. The third section finds that Social Security offsets a substantial portion of the earnings penalty. The final section concludes that – despite the equalizing role played by Social Security – a motherhood earnings penalty will remain without policy intervention, such as earnings credits for caregivers.

How Social Security Can Help Mothers

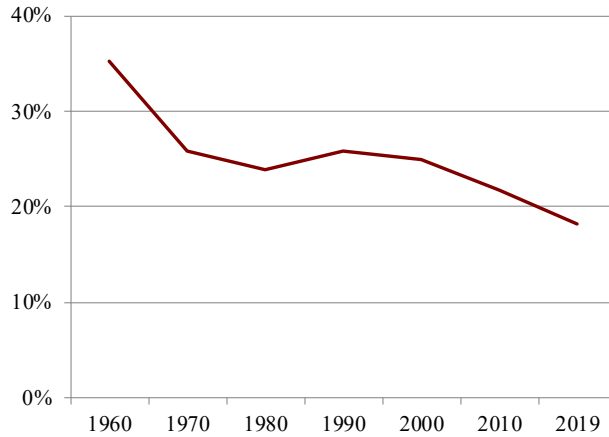
Social Security’s retired worker benefits are based on an individual’s average career earnings. Because mothers tend to earn less than other women, they stand to gain from Social Security’s progressive benefit formula, which replaces a higher share of pre-retirement earnings for lower earners.⁴

Social Security also includes a spousal benefit: anyone married for the required 10 years receives the higher of her own worker benefit or one-half of her spouse’s benefit.⁵ The spousal benefit was designed to compensate stay-at-home wives who missed out on accumulating a meaningful history in paid work.

In recent generations, women’s labor force participation and earnings have increased, so more women get Social Security benefits solely on their own earnings record.⁶ Moreover, as marriage rates have decreased and divorce rates have increased, fewer women meet the 10-year marriage threshold.⁷ As a result of these trends, the share of women receiving a spousal benefit has plummeted from 35 percent in 1960 to 18 percent in 2019 (see Figure 1 on the next page).

* Matthew S. Rutledge is an associate professor of the practice of economics at Boston College and a research fellow at the Center for Retirement Research at Boston College (CRR). Alice Zulkarnain is a research economist with the CPB Netherlands Bureau for Economic Policy Analysis and a former research economist at the CRR. Sara Ellen King is a graduate student at the University of Maryland and a former research associate at the CRR.

FIGURE 1. PERCENTAGE OF WOMEN SOCIAL SECURITY BENEFICIARIES AGES 62+ WHO GET A SPOUSAL BENEFIT, 1960-2019



Note: Includes women receiving either a full or partial spousal benefit.

Source: Authors' calculations from U.S. Social Security Administration (2021).

Recent cohorts of mothers, therefore, are less likely to receive this potential source of redistribution in their retirement income.

Data and Methodology

To determine how much Social Security impacts the motherhood earnings penalty, the analysis uses a sample from the *Health and Retirement Study* (HRS) for 1992-2014, linked to administrative records from the U.S. Social Security Administration that contain women's earnings histories.⁸

Analyzing Social Security's effect on the earnings penalty requires comparing the career average earnings of mothers and childless women to their Social Security benefits.⁹ For earnings, the measure is Average Indexed Monthly Earnings (AIME), which is used to calculate the Social Security benefit. The AIME is the average of the woman's top 35 years of earnings (wage-adjusted), divided by 12 to convert to a monthly figure.¹⁰

The next step is to determine the size of each woman's potential Social Security benefit: she receives the larger of her own worker benefit or the spousal benefit. The analysis assumes the woman claims at age 62, so her benefit is reduced for early claiming.

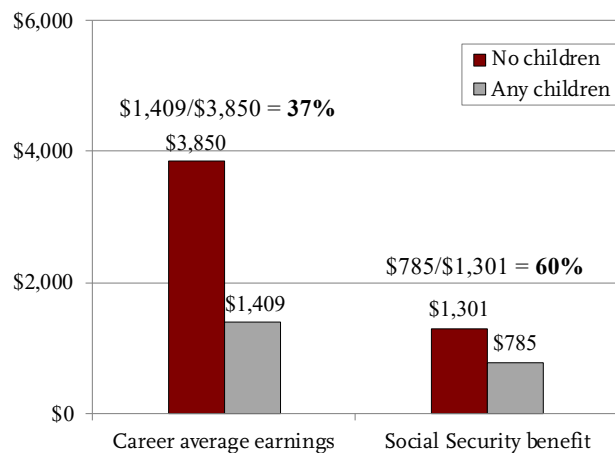
How Much Social Security Offsets the Motherhood Penalty

The motherhood penalty can take two forms. One is the difference between childless women and mothers. The other is the extra loss of earnings that mothers may experience for having additional children, which requires limiting the analysis to mothers only.

Childless Women vs. Mothers

Not surprisingly, women who never have children earn much more over their careers than women with children. For childless women, median earnings are \$3,850 per month, compared to \$1,409 for women with children, so mothers only earn 37 percent as much as childless women (see Figure 2).

FIGURE 2. WOMEN'S MONTHLY EARNINGS AND SOCIAL SECURITY BENEFITS, BY MOTHERHOOD STATUS, IN 2014 DOLLARS



Source: Authors' calculations from the *Health and Retirement Study* (HRS) (1992-2014).

The difference in Social Security income, however, is much smaller. For childless women, the median Social Security benefit is \$1,301 per month, while mothers receive \$785 per month, or 60 percent of the amount received by childless women. These findings indicate that the program offsets a substantial portion of the motherhood earnings penalty.

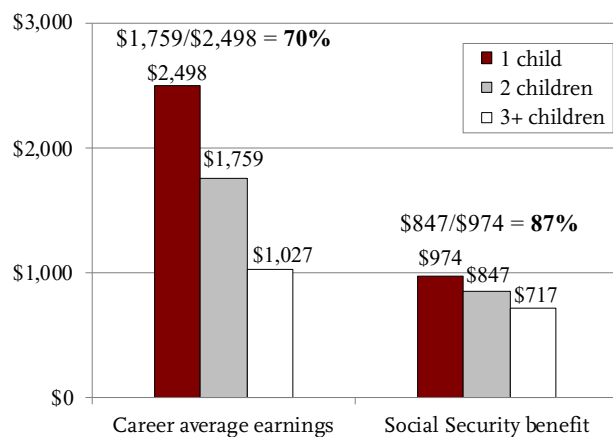
Of course, in addition to motherhood, other personal characteristics of women could account for differences in earnings, such as marital status, race, health, religiosity, family background, and education. The results from regression analysis that control for such differences similarly find that Social Security offsets a significant portion of the earnings penalty.¹¹

Even after controlling for these factors, unobservable differences between women may still exist. For example, among women with the same educational attainment, those with better earnings prospects may decide not to have children, which would make the difference in earnings between childless women and mothers seem larger than it would be if the decision to become a mother was more random. Thus, the results should not be interpreted as entirely causal.

The Motherhood Penalty Per Child

Even among mothers, each additional child is associated with lower career earnings. For example, median earnings for mothers with one child are \$2,498 per month, while mothers with two children earn \$1,759 per month, so mothers with two children have 70 percent as much as mothers with one child (see Figure 3).

FIGURE 3. MOTHERS' MONTHLY EARNINGS AND SOCIAL SECURITY BENEFITS, BY NUMBER OF CHILDREN, IN 2014 DOLLARS



Source: Authors' calculations from the HRS (1992-2014).

As before, Social Security offsets a substantial portion of the per-child motherhood penalty. For example, the median Social Security benefit for mothers with one child is \$974 per month vs. \$847 per month for mothers with two children, so mothers with two children receive 87 percent of the benefit of those with one child. These results are nearly identical when comparing mothers with two children to mothers with three or more children. And, again, regression analysis that controls for differences in personal characteristics confirms these findings.

While the results suggest that Social Security substantially offsets the motherhood penalty, it does not erase the whole amount. Moreover, this analysis examines only Social Security income. Higher career earnings also tend to translate to more retirement savings in 401(k)s, so looking at all sources of retirement income would likely widen the difference.

Conclusion

Even as women have ramped up their involvement in the labor force, the earnings penalty for mothers remains substantial. Social Security is able to offset a significant amount of the penalty by the time mothers reach retirement through two separate channels: the progressive design of worker benefits and the availability of spousal benefits.

While Social Security will continue to play a role in reducing disparities between childless women and mothers in retirement, a motherhood penalty will remain. And factors such as different levels of 401(k) saving are likely to aggravate the disparities.

In recent years, though, policymakers seem to be more attuned to the motherhood penalty. In part to address mothers' short-term loss of earnings, the American Rescue Plan Act temporarily expanded the child tax credit. To address mothers' retirement income gap, legislators have also proposed the Social Security Caregiver Credit Act, which would give caregivers credit for lost earnings when calculating retirement benefits; this proposal was also part of the Social Security reform plan outlined during President Biden's campaign.¹²

Endnotes

- 1 See, for example, Avellar and Smock (2003).
- 2 Budig and England (2001); Lundberg and Rose (2002); Wilde, Batchelder, and Ellwood (2010); Miller (2011; 2013); and Herr (2016).
- 3 Rutledge, Zulkarnain, and King (2017).
- 4 See Rutledge (2018) for a review of the literature on Social Security's progressivity. That review includes Bosworth and Burke (2014), which, like the paper summarized in this *brief*, compares the inequality in lifetime earnings to the inequality in Social Security income.
- 5 Technically, the spousal benefit "tops off" the benefit that lower-earning spouses earn based on their own record, but the result is the same. Divorced people are also eligible for spousal benefits on their ex-spouse's earnings record if the marriage lasted at least 10 years.
- 6 Wu et al. (2013).
- 7 Munnell, Sanzenbacher, and King (2017).
- 8 The sample consists of women ages 50 and older, who were born in 1931-1959. The analysis focuses only on Social Security retirement benefits, so it excludes women who ever received disability benefits. The sample also excludes widows, who usually receive a survivor benefit (which is unrelated to their own earnings), and women who were married for more than 10 years but divorced before entering the HRS; in that case, their ex-spouses will not be in the data, so the analysis will not be able to determine their potential spousal benefit.
- 9 The analysis focuses on biological children, as the loss of earnings around a birth are the most direct way a mother loses out on earnings. Women who only had stepchildren are excluded from the sample.
- 10 Because the analysis includes women of many different ages and the most common claiming age for women is 62, the AIME is always calculated as of age 61, ignoring earnings at older ages. If the woman is under 61, the AIME is prorated to account for her shorter career. See Rutledge, Zulkarnain, and King (2017) for more details.
- 11 For more details, see Rutledge, Zulkarnain, and King (2017).
- 12 For more on caregiver credits and their effect on Social Security, see Munnell and Eschtruth (2018).

References

- Avellar, Sarah and Pamela Smock. 2003. "Has the Price of Motherhood Declined Over Time? A Cross-Cohort Comparison of the Motherhood Wage Penalty." *Journal of Marriage and Family* 65(3): 597-607.
- Bosworth, Barry P. and Kathleen Burke. 2014. "Differential Mortality and Retirement Benefits in the Health and Retirement Study." Working Paper 2014-4. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Budig, Michelle J. and Paula England. 2001. "The Wage Penalty for Motherhood." *American Sociological Review* 66: 204-225.
- Herr, Jane Leber. 2016. "Measuring the Effect of the Timing of First Birth." *Journal of Population Economics* 29(1): 39-72.
- Lundberg, Shelly and Elaina Rose. 2002. "The Effects of Sons and Daughters on Men's Labor Supply and Wages." *Review of Economics and Statistics* 84(2): 251-268.
- Miller, Amalia R. 2013. "Marriage Timing, Motherhood Timing and Women's Wellbeing in Retirement." In *Lifecycle Events and Their Consequences: Job Loss, Family Change, and Declines in Health*, edited by Kenneth A. Couch, Mary C. Daly, and Julie Zissimopoulos, 109-132. Stanford, CA: Stanford University Press.
- Miller, Amalia. 2011. "The Effects of Motherhood Timing on Career Path." *Journal of Population Economics* 24(3): 1071-1100.
- Munnell, Alicia H. and Anqi Chen. 2021. "Pre-COVID Trends in Social Security Claiming." *Issue in Brief* 21-9. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Munnell, Alicia H. and Andrew Eschtruth. 2018. "Modernizing Social Security: Caregiver Credits." *Issue in Brief* 18-15. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Munnell, Alicia H., Geoffrey T. Sanzenbacher, and Sara Ellen King. 2017. "Do Women Still Spend Most of Their Lives Married?" *Issue in Brief* 17-14. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Rutledge, Matthew S. 2018. "How Is the Mortality Gap Affecting Social Security Progressivity?" *Issue in Brief* 18-16. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Rutledge, Matthew S., Alice Zulkarnain, and Sara Ellen King. 2017. "How Much Does Motherhood Cost Women in Social Security Benefits?" Working Paper 2017-14. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- University of Michigan. *Health and Retirement Study, 1992-2014*. Ann Arbor, MI.
- U.S. Social Security Administration. 2021. *Annual Statistical Supplement to the Social Security Bulletin, 2020*. Washington, DC.
- Wilde, Elizabeth Ty, Lily Batchelder, and David T. Ellwood. 2010. "The Mommy Track Divides: The Impact of Childbearing on Wages of Women of Differing Skill Levels." Working Paper 16582. Cambridge, MA: National Bureau of Economic Research.
- Wu, April Yanyuan, Nadia S. Karamcheva, Alicia H. Munnell, and Patrick Purcell. 2013. "How Do the Changing Labor Supply Behavior and Marriage Patterns of Women Affect Social Security Replacement Rates?" Working Paper 2013-16. Chestnut Hill, MA: Center for Retirement Research at Boston College.

CENTER *for*
RETIREMENT
RESEARCH
at BOSTON COLLEGE

About the Center

The mission of the Center for Retirement Research at Boston College is to produce first-class research and educational tools and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center conducts a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception in 1998, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

Affiliated Institutions

The Brookings Institution
Mathematica – Center for Studying Disability Policy
Syracuse University
Urban Institute

Contact Information

Center for Retirement Research
Boston College
Hovey House
140 Commonwealth Avenue
Chestnut Hill, MA 02467-3808
Phone: (617) 552-1762
Fax: (617) 552-0191
E-mail: crr@bc.edu
Website: <https://crr.bc.edu>

© 2021, by Trustees of Boston College, Center for Retirement Research. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that the authors are identified and full credit, including copyright notice, is given to Trustees of Boston College, Center for Retirement Research.

The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement Research Consortium. The opinions and conclusions expressed are solely those of the authors and do not represent the opinions or policy of SSA, any agency of the federal government, or Boston College. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply endorsement, recommendation or favoring by the United States Government or any agency thereof.