Supplemental Appendix to:

"How Work & Marriage Trends Affect Social Security's Family Benefits"

Members of the Social Security Administration's Retirement Research Consortium have conducted other studies addressing family benefit issues that are not discussed in this *brief*. They cover three areas: changing marital and employment patterns; family benefit financial incentives and behavioral responses; and the distributional effects of Social Security family benefits. These studies, along with their abstracts, are listed below.

Changing Marital and Employment Patterns

Meyer, Madonna Harrington, Douglas A. Wolf, and Christine L. Himes. 2006. "Declining Eligibility for Social Security Spouse and Widow Benefits in the United States?" *Research on Aging* 28(2): 240-260.

> Social Security retirement benefits have been noted for their capacity to redistribute benefits from higher to lower lifetime earners. However, two-thirds of older women receive spouse and widow benefits and the distributional impact of those benefits has not been well studied. Spouse and widow benefits are distributed on the basis of marital rather than employment status and generally require recipients to be either currently married or to have had a ten-year marriage. The unprecedented retreat from marriage, particularly among black women, means the distributional impact of these benefits change s dramatically for each cohort that enters old age. This paper uses June 1985, 1990 and 1995 CPS supplement data to trace the decline in marital rates for women for five cohorts. The main question is what proportion of women in each cohort will reach age 62 without a ten-year marriage and thus be ineligible for spouse and widow benefits. We find that the proportion who will not be eligible as spouses or widows is increasing modestly for whites and Hispanics but dramatically for African Americans. The growing race gap in marital rates means that older black women will be particularly unlikely to qualify for these benefits.

Burkhauser, Richard V., Mary C. Daly, Jeff Larrimore, and Joyce Kwok. 2008. "The Transformation in Who is Expected to Work in the United States and How it Changed the Lives of Single Mothers and People with Disabilities." WP 2008-187. Ann Arbor, MI: Michigan Retirement Research Center.

> In the 1990s, social expectations of single mothers shifted towards the notion that most should, could, and would work, if given the proper incentives. This shift in expectations culminated in the passage of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996, commonly known as welfare reform. As a result, ADFC/TANF caseloads fell along with cash transfers to single mothers who did not work. A decade later the earnings and household income of single mothers are significantly higher and moving more in synch with the U.S. economy. In stark contrast and despite espoused goals to the contrary, public policies toward working age men and women with disabilities have remained imbued with the notion that most cannot and thus, would not work, no matter what incentives they faced. As a result, SSDI/SSI expenditures and caseloads have increased and the earnings and household income of

working age men and women with disabilities have fallen, leaving them even further behind the average working age American than they were a decade ago. Using data from the *Current Population Survey* we follow the economic well-being and employment of single mothers and working age men and women with disabilities over the past two major United States business cycles (1982-1993 and 1993-2004) and show that despite the dramatic decline in AFDC/TANF funding, single mothers' economic well-being, labor earnings and employment all have risen substantially. In contrast, despite the dramatic increase in SSDI/SSI funding, the economic wellbeing of working age men and women with disabilities remained stagnant, as their labor earnings and employment plummeted.

Juhn, Chinhui and Kristin McCue. 2010. "Selection and Specialization in the Evolution of Couples' Earnings." NB 10-10. Cambridge MA: NBER Retirement Research Center.

We examine changes across birth cohorts in marriage patterns and the earnings differentials associated with marriage using data from a series of *Survey of Income and Program Participation* panels linked to administrative data on earnings. We find that marriage has become increasingly positively selected on education and earnings potential. Among women, selection into marriage has reversed sign, with the most educated women switching from being the least likely to be married to being the most likely. While men with the highest earnings potential have always been more likely to be married, this relationship has become even more pronounced. Changing selection into marriage is entirely responsible for the observed decline in marriage penalty for women in the cross section. In fixed-effects regressions, the earnings penalty continues to exist even for the most recent cohorts, consistent with specialization after marriage. For men, we find that the marriage premium actually increases for more recent birth cohorts in fixed-effects regressions. Taken literally, this suggests that specialization has become more important. We plan to explore further the robustness of this result by allowing selection to affect not only the level but the growth rate of male earnings.

Juhn, Chinhui and Kristin McCue. 2011. "Marriage, Employment and Inequality of Women's Lifetime Earned Income Evidence from Survey Responses." NB 11-07. Cambridge MA: NBER Retirement Research Center.

Using *Current Population Surveys* and *Survey of Income and Program Participation* data matched to Social Security earnings records, we summarize changes in marital histories for different birth cohorts of women and project the associated changes in women's own lifetime earnings and in spousal earnings. We find that the gap in lifetime earnings between married and single women appears to have essentially closed for less educated women while a small differential still exists for more educated women. The earnings gap across education categories has increased rapidly in terms of women's own lifetime earnings. The level of earnings inequality across education categories is higher when marriage and husbands' earnings are taken into account although the increase is less pronounced. Lifetime earnings of married college educated women diverged most dramatically from those of less educated single women.

Family Benefit Financial Incentives and Behavioral Responses

Gopi Shah Goda, John Shoven, and Sita Nataraj Slavov. 2007. "Social Security and the Timing of Divorce." NB 07-10. Cambridge MA: NBER Retirement Research Center.

> Social Security provides spousal benefits in retirement to secondary workers in married couples based on the primary worker's earnings record. In addition, Social Security pays spousal benefits to divorced secondary workers whose marriages lasted at least ten years. However, if a marriage failed in less than ten years, no spousal benefits are paid. The spousal benefit is particularly valuable to secondary workers in couples where there is a large disparity in earnings between the primary worker and the secondary worker. We examine whether these couples, who have more to gain from extending their marriage to ten years, are more likely to delay marriage to the tenth year relative to a control group. We find that vulnerable couples are slightly more likely to delay divorce from year nine to year ten; however, the effect is statistically insignificant and small in magnitude. While the "cliff"-vesting of retirement benefits for divorced spouses raises equity concerns, it does not appear to distort incentives for divorce.

Biggs, Andrew G., Gayle L. Reznik, and Nada O. Eissa. 2010. "The Treatment of Married Women by the Social Security Retirement Program." CRR WP 2010-18. Chestnut Hill, MA: Center for Retirement Research at Boston College.

> It is generally accepted that the Social Security program pays women a higher average ratio of lifetime benefits to lifetime taxes than it does men. Social Security's progressive benefit structure and annuity payment combine with women's lower average earnings and longer average life spans to provide women with more favorable treatment on a lifetime basis. This more favorable treatment does not necessarily imply that women are presented with stronger incentives to participate in the labor force and contribute to Social Security than are men. If anything, Social Security does the opposite. The auxiliary benefit provisions, including spousal and widow's benefits, mean that many women do not receive higher benefits in return for their contributions than they would have received had they never worked or contributed to the program. In this paper, we calculate two measures of treatment by Social Security using the SSA's *Modeling Income in the Near Term* (MINT) micro-simulation model: the net tax rate, which reflects the net value of Social Security taxes and benefits as a percentage of lifetime earnings; and the generated net tax rate, which represents the net value of benefits received in return for a participant's taxes relative to lifetime earnings. While women pay low and even negative average net taxes to Social Security, their generated net tax rates are higher and often equal the full statutory tax rate. Men, by contrast, pay higher net tax rates but lower generated net tax rates, as their earnings may generate additional benefits for their spouse or survivor. The work incentives presented by Social Security may differ significantly from those implied by measures of overall treatment by the program.

Shoven, John B., and Sita Nataraj Slavov. 2014. "Does it Pay to Delay Social Security?" *Journal of Pension Economics and Finance* 13(2): 121-144.

> Social Security benefits may be commenced at any time between ages 62 and 70. As individuals who claim later can, on average, expect to receive benefits for a shorter period, an actuarial adjustment is made to the monthly benefit to reflect the age at which benefits are claimed. We investigate the actuarial fairness of that adjustment in light of recent improvements in mortality and historically low interest rates. We show that delaying is actuarially advantageous for a large number of people, even for individuals with mortality rates that are twice the average. At real interest rates closer to their historical average, singles with mortality that is substantially greater than average do not benefit from delay, although primary earners with high mortality can still improve the present value of the household's benefits through delay. We also investigate the extent to which the actuarial advantage of delay has grown since the early 1960s, when the choice of when to claim first became available, and we decompose this growth into three effects: (1) the effect of changes in Social Security's rules, (2) the effect of changes in the real interest rate, and (3) the effect of changes in life expectancy. Finally, we quantify the extent to which the gains from delay can be expected to increase in the future as a result of mortality improvements.

Sass, Steven A., Wei Sun, and Anthony Webb. 2007. "Why Do Married Men Claim Social Security Benefits So Early? Ignorance, Caddishness, or Something Else?" CRR WP 2007-06. Chestnut Hill, MA: Center for Retirement Research at Boston College.

> Most married men claim Social Security benefits at age 62 or 63, well short of both Social Security's Full Retirement Age and the age that maximizes the household's expected present value of benefits (EPVB). This results in a loss of less than 4 percent in household EPBV. But essentially the entire loss is borne by the survivor benefit, which falls nearly 20 percent. As many elderly widows have very low incomes, early claiming by married men is a major social problem.
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> Regression results found no association between early claiming and caddishness or the ability of husbands to make claiming decisions independently. The one statistically significant finding is the association of college education and later claiming, which cautiously take to indicate greater financial awareness. This suggests that an effective educational campaign might be able to raise the claiming ages of married men and improve widows' retirement income security. But financial education has not been especially effective in changing behavior. Policymakers should thus consider other initiatives to assure a survivor benefit greater than that produced by an age 62 or 63 husbands' claiming age. Such initiatives include raising the Earliest Eligibility Age, requiring spousal consent for claiming prior to the Full Retirement Age, and preserving the survivor benefit at its Full Retirement Age value and allowing the higher-earning spouse to access only a portion of his (or her) Primary Insured Amount prior to the Full Retirement Age.

Distributional Effects of Social Security Family Benefits

Smith, Karen, Eric Toder, and Howard Iams. 2003/2004. "Lifetime Distributional Effects of Social Security Retirement Benefits." *Social Security Bulletin*. 65(1): 33-61.

> This article presents three measures of the distributional effects of Social Security benefits on actual and projected retirement income of workers born between 1931and 1960. Microsimulations take into account marital history, the sharing of incomes and tax burdens within couples, and differences in life expectancy among subgroups of the population. More important than changes in tax rates or benefits are changes in the demographics and earnings patterns of the workforce, particularly the higher lifetime covered earnings of women. The growing share of women receiving worker benefits instead of spouse or survivor benefits, plus the increased proportion of retirees who are divorced, make Old-Age and Survivors Insurance (OASI) benefits more progressive, even in the face of declining net benefits.

Coe, Norma B., Zhenya Karamcheva, Richard Kopcke, and Alicia H. Munnell. 2011. "How Does the Personal Income Tax Affect the Progressivity of OASI Benefits?" CRR WP 2011-21. Chestnut Hill, MA: Center for Retirement Research at Boston College.

> This study calculates the impact of federal income taxes on the progressivity of the OASI program. It uses HRS data linked with the Social Security Earnings Records to estimate OASI contributions and benefits for individuals and households, before and after income taxes. It uses two measures of progressivity — redistribution by decile (the difference between the share of total benefits received and the share of total taxes paid), and effective progression (the change in the Gini coefficient). Under both measures, the results without the income tax are exactly what others have found: Social Security is progressive on an individual basis, and about half as progressive when measured on a household basis for the HRS cohort. Adding income taxes could make the program either more or less progressive. On the one hand, the tax treatment of contributions makes the system even less progressive than generally reported. On the other hand, the taxation of benefits makes it more progressive. The net result is that adding the personal income tax to the analysis makes Social Security more progressive on both the individual- and household-level bases for the HRS cohort, but has a relatively small effect. Importantly, the impact of taxation increases across cohorts. Ignoring taxation historically has not led to much under-reporting of the redistribution of the OASI program; that is not true going forward.

Karamcheva, Nadia S., Wu, April Yanyuan, and Alicia H. Munnell. 2015. "Does Social Security Continue to Favor Couples?" CRR WP 2015-11. Chestnut Hill, MA: Center for Retirement Research at Boston College.

> While dramatic increases in women's labor supply and earnings have led to a substantial decline in the fraction of women eligible for spouse benefits at retirement, most wives still receive a survivor benefit, as wives still typically have lower earnings than their husbands and live longer. Using the MINT microsimulation model and the HRS data

linked with Social Security administrative earnings records, this paper examines the extent to which Social Security continues to favor couples and will do so in the future.

The paper found that:

- While the Old-Age and Survivors Insurance program still distributes lifetime income from singles to couples, the transfers appear to be shrinking over time.
- Nevertheless, couples are still projected to have a higher benefit/tax ratio, a lower median net tax rate, and a greater likelihood of receiving positive net transfers from the system compared to those who are never married or divorced.
- The increased labor force participation and earnings of women have contributed significantly to the decline in redistribution from men to women, and from singles to couples, while the effect of declining marriage rates has only a modest effect.

The policy implications of the findings are:

- Family benefit provisions within the Social Security program can have a significant impact on various measures of redistribution.
- Policymakers may find the results of this paper helpful in evaluating any reform proposals that would change these provisions.