

*Using data from the Health and Retirement Study (HRS) and linked administrative records, we explore differences in old-age benefits between men and women attributable to differences in length of work life and pay. We find that most women are fully insured for Social Security purposes, but those who are not would have to work substantially more to become eligible. Among those who are eligible, additional work would translate into only slightly higher benefits.*

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\*Philip B. Levine is with the Department of Economics, Wellesley College. Olivia S. Mitchell is with the Wharton School, University of Pennsylvania. John W.R. Phillips is with SSA's Office of Policy. (Manuscript received January 2000; accepted for publication August 2000.)

## ***A Benefit of One's Own: Older Women's Entitlement to Social Security Retirement***

*by Philip B. Levine, Olivia S. Mitchell, and John W.R. Phillips\**

### ***Summary***

This article explores differences in Social Security eligibility and benefit levels for older men and women using survey data from the Health and Retirement Study combined with administrative records on actual work histories and Social Security rules. We are able to determine the fully insured status of those persons, how close they are to meeting eligibility criteria when they are not fully insured, and their prospects for benefits.

Around three-quarters of older women nearing retirement today will be fully insured for Social Security old-age benefits on the basis of their own accounts, but the rest would need substantial extra employment to rise above the eligibility threshold. Further, two-thirds of older married women who are fully insured have sufficient lifetime earnings to translate into an age-65 primary insurance amount worth at least half their husband's, but the other one-third can expect no additional retirement benefit from contributing to Social Security late in life. Finally, most wives will not be able to improve their benefits by working more under current rules.

These results have mixed implications regarding the potential impact of women's rising labor force attachment on eventual retirement benefits. Work-

ing more years could increase women's chances of becoming eligible for Social Security benefits, but that effect is likely to be small. Furthermore, even when women do become fully insured according to the rules, not many wives will receive a higher benefit at the margin. The reason is that married women still receive higher Social Security benefits as a spouse than they do on the basis of their own work record. In fact, the net benefit from Social Security due to additional work is negative once one takes into account the Social Security contributions the women paid while employed. Benefits paid to widows are even more likely to be based on the spouse's work history rather than on the woman's. Hence, the rising labor market attachment of women in the future may increase their eligibility for benefits but will produce only modest (and often negative) impacts on their old-age Social Security benefits under current rules.

### ***Introduction***

Some charge that the Social Security system treats men and women inequitably (GAO 1997; Briceland-Betts 1997), while others contend that older women are "Social Security's number-one beneficiaries" (Smeeding, Estes, and Glasse, no date). The rules governing Social Security eligibility and benefit

amounts are sex-neutral, but in practice men are more likely to be eligible for benefits (because of their longer work histories) and entitled to higher benefits (because of their higher lifetime earnings). Work-life differences also play a role in marital benefits under the program: husbands are more likely than wives to qualify for their own benefit and, therefore, to receive that benefit rather than a spousal benefit; and among nonmarried persons, differences in average pay levels and years of work account for virtually all of the gap between men and women in Social Security benefits (Levine, Mitchell, and Phillips 1999).

This study analyzes whether longer periods of work and rising levels of pay for women might shrink those differences in the future. This topic is worthy of economic analysis because the complexity of the Social Security program's eligibility and benefit rules makes it difficult to predict how changes in the labor market might influence future benefit patterns for aging Americans. Previous analyses explored the effect of changes in average differences in work histories on future Social Security benefits. However, little is known about the effect of distributional differences in work histories. The present study extends the literature in that direction.

This article:

- Reviews briefly the key features of Social Security affecting eligibility and benefit levels,
- Documents differences in eligibility and average projected Social Security benefits between men and women, along with the work and pay differentials contributing to the gap, and
- Examines distributional differences in labor market behavior that may portend more equal benefit amounts for men and women.

### ***Social Security Eligibility and Benefit Rules***

To receive Social Security benefits in the United States, one must first meet specific eligibility criteria requiring a degree of labor market attachment.<sup>1</sup> For retirement benefits, the individual must be fully insured under the program, meaning that the person has amassed at least 40 quarters of coverage (QCs).<sup>2</sup> QCs are awarded on the basis of having received covered earnings of at least some threshold amount each year. Covered earnings are pay from jobs included under the Social Security system, with a cap on the maximum level of pay counted for program purposes (\$80,400 in 2001).

Determining the monthly benefit for a retiring worker who is fully insured requires evaluating that worker's average indexed monthly earnings (AIME) and primary insurance amount (PIA). Those benefit and eligibility rules apply to all retiring workers and, as such, appear to

be sex-neutral. AIME is computed by taking the worker's annual indexed earnings, dropping the 5 lowest years, and averaging the earnings over the remaining years.<sup>3</sup> The PIA formula then applies a progressive replacement-rate formula to indexed earnings.<sup>4</sup> Finally, the retiree's monthly benefit amount will depend on his or her retirement age. If he or she has attained the so-called normal retirement age (NRA), the benefit is set equal to the PIA. If the retiree is younger than the NRA, the benefit is reduced by 5/9 of a percent per month below that age. The NRA was age 65 for people retiring in the early 1990s, so someone retiring at the early entitlement age (EEA) of 62 would receive only 80 percent of the full PIA for the remainder of his or her life. Both early and normal retirement benefits are indexed to the consumer price index.

In addition, a married worker's spouse may also be entitled to Social Security benefits based on his or her partner's employment history. As an example, consider a married couple, both of whom turned 65 in 1990. When the husband files for benefits as a fully insured retiree, his wife may not have sufficient QCs to receive a benefit on her own. Nevertheless, she would be entitled to receive a spousal benefit equal to half of her husband's PIA.<sup>5</sup> If the wife had accumulated 40 QCs, she would then be dually entitled. Persons who are dually entitled receive either their own retirement benefit or their benefit as a spouse, whichever is larger.

As demonstrated below, many older women fall short of being fully insured on the basis of their own earnings record. Even for a woman who is eligible in her own right, however, the benefit she would receive based on her own employment history may be less than her spousal benefit.<sup>6</sup> Both entitlement and benefit levels may change over time, as women's lifetime labor market attachment rises. Persons who never married are not entitled to spousal benefits, but the dual entitlement rules apply to divorced persons as long as the marriage to a covered worker lasted a minimum of 10 years.

Regardless of the wife's own insured status, she is eligible for survivor benefits when her (fully insured) spouse dies. The widow of a fully insured worker is first eligible to claim benefits at age 60. Survivor beneficiaries receive a benefit equal to 71.5 percent of the deceased worker's PIA at age 60, rising to 100 percent at age 65.<sup>7</sup> It is possible and often likely that a woman who claims a spousal benefit will eventually receive a benefit as a widow.

From this description of the eligibility and benefit formulas under Social Security, it should be clear that the program rules have potentially important "notches" or discontinuities. For instance, the requirement of 40 quarters of coverage for retirement benefits could mean that just one additional year of work (or marriage) could

move a woman from ineligible to eligible status. For those who are fully insured, additional work might change benefit levels in important ways at the margin. The next section explores the extent to which real-world work and pay histories interact with the eligibility and benefit rules.

### ***What Men and Women on the Verge of Retirement Can Expect from Social Security***

In order to assess how Social Security rules interact with actual earnings and work trajectories, we use a uniquely valuable database known as the Health and Retirement Study (HRS). That data collection effort was initiated in 1992 by the University of Michigan's Institute for Social

Research with funding from the National Institute on Aging and the Social Security Administration, among other supporters. The survey gathered extensive and very detailed demographic, health, wealth, income, and family structure data on a nationally representative sample of people between the ages of 51 and 61 and their spouses (regardless of age). With respondents' permission, the household files may be linked for research purposes with administrative records on covered earnings and employment histories.<sup>8</sup> No other current data source has equivalently rich and detailed linked administrative records for this cohort.<sup>9</sup>

The linked earnings and employment histories are used in the present study to generate eligibility and prospective Social Security benefits for 5,878 age-eligible HRS respondents and their spouses, as relevant. We also develop two indicators to capture patterns in respondents' lifetime employment and earnings.<sup>10</sup> One is prime-age earnings, defined as average annual earnings between the ages of 21 and 50 based on reported pay up to the Social Security earnings ceiling. We hypothesize that people with higher prime-age earnings would anticipate higher retirement benefits because of the way in which pay translates into Social Security benefits. A second indicator of labor market attachment is the number of years of Social Security-covered employment a worker has up to the time he or she turns age 50. That measure is invaluable in assessing how another year of work translates into additional Social Security income. The remaining information on respondents' characteristics is available directly from the HRS survey respondents who supplied extensive information on the key economic and demographic attributes of household members.

The richness of the data set is evident from the summary measures of labor market attachment and earnings reported in Table 1.<sup>11</sup> Using Social Security program rules, we determine

Table 1.  
Characteristics of men and women nearing retirement, by sex, marital status, and Social Security eligibility

	Men, fully insured	Women		
		Fully insured	Ineligible	All
		<i>Married</i>		
Work history				
Years of prime-age work	28	17.5	4	13.5
Quarters of coverage	134	83	17.4	62.5
Percentage fully insured	100	100	0	70
Age became fully insured (mean)	30.4	38.9	n.a.	n.a.
Average annual prime-age earnings in nonzero earnings years (dollars)	27,152	11,323	2,551	8,758
Social Security PIA				
In 1991 (dollars)	884	436	0	327
If retire at age 65 (dollars)	972	507	0	392
Percentage whose age-65 PIA is greater than one-half of spouse's PIA	98	66	n.a.	52
Sample size (unweighted)	2,253	1,540	663	2,203
		<i>Nonmarried</i>		
Work history				
Years of prime-age work	27	21.6	5	18.1
Quarters of coverage	125	97.4	18.6	83
Percentage fully insured	100	100	0	78
Age became fully insured (mean)	31	37.2	n.a.	n.a.
Average annual prime-age earnings in nonzero earnings years (dollars)	21,407	12,779	2,342	10,227
Social Security PIA (dollars)				
In 1991 (dollars)	734	493	0	423
If retire at age 65 (dollars)	826	596	0	491
Sample size (unweighted)	428	752	242	994

SOURCE: Authors' calculations using weighted 1992 data from the Health and Retirement Study.

NOTES: All reported statistics (except where noted) represent the median as calculated by taking the mean value for respondents between the 45th and 55th percentiles. See text for definitions of variables and sample criteria.

All dollar amounts are in 1992 dollars.

n.a. = not applicable; PIA = primary insurance amount.

which respondents are fully insured, the ages at which they became fully insured, their annual earnings, and their primary insurance amounts. Statistics for all men are grouped together, because most are insured for Social Security purposes at a young age. By contrast, for women, we distinguish those who are fully insured at the time of the HRS survey from those who are not. In some cases, we also consider married individuals separately from those who are not married; we do that to focus attention on the importance of women's own work records versus those of their spouses from the perspective of retirement benefits.<sup>12</sup>

Work history patterns depicted in Table 1 indicate that men on the verge of retirement in 1992 worked virtually all of their prime-age years. The median male acquired 125 to 134 QCs during that time and became fully insured around age 30. Married men had indexed annual earnings during their prime-age years that averaged about \$27,200, compared with about \$21,400 for nonmarried men. If those men continued to work until age 65 and their earnings followed the same trajectory as before 1992, they would be entitled to monthly Social Security benefits of \$972 (married) and \$826 (nonmarried).<sup>13</sup> Virtually all married male respondents could qualify for benefits on their own record and would not receive a spousal benefit since their own benefit was higher.

Women's work patterns were markedly different and varied by marital status (see Table 1). For example, the

work histories of nonmarried women more closely resemble those of men than of married women, but nonmarried women still had 5 fewer years of work and 42 fewer QCs than nonmarried men. The evidence also shows that only three-quarters of women on the verge of retirement were fully insured for Social Security on the basis of their own work history.

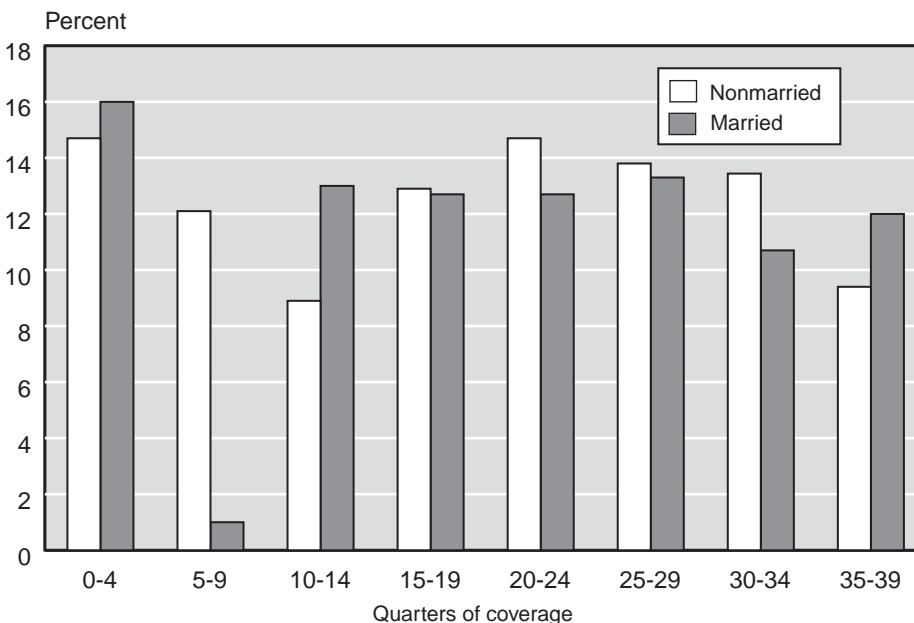
Differences in benefits between men and women are even more marked than the differences in eligibility patterns. The reason is that the smaller number of years that women are in the labor market lowers their own Social Security benefit levels after retirement. The projected gap is exacerbated by the fact that across the board, women's prime-age indexed earnings are much lower than men's. For instance, among the fully insured group, wives' average lifetime pay was only about 42 percent of that of married men, and nonmarried women earned only 60 percent as much as nonmarried men. The calculations also show that if fully insured married women kept working to age 65 with earnings along the same trajectory, they would have a PIA worth only half that of married men; for nonmarried women, the PIA would be 72 percent of that of nonmarried men.

The data in Table 1 show that 70 percent of married and 78 percent of nonmarried women on the verge of retirement were fully insured for Social Security benefits on the basis of their own record. That level might be expected to increase in the future as women spend more years working. Nonetheless, an indication that this will

be slow to happen is that the typical woman who is ineligible for benefits is rather far from fully qualifying for benefits on her own. In the HRS, for example, the median number of quarters of coverage for both married and nonmarried ineligible women was about 18. Since a worker can earn a maximum of four QCs per year, the median ineligible woman would need to work at least 5 1/2 years to meet the 40 QC eligibility criterion.

Of course, a median statistic cannot identify how many people might be "close" to meeting the eligibility criterion. For instance, a median of 18 could imply either that all women had 18 QCs, or that most women were either at zero or 39 QCs. To explore this issue further, we looked at the full distribution of QCs for ineligible women (see Chart 1). Among the 30 percent of married women (22

Chart 1.  
Distribution of quarters of coverage for women ineligible for Social Security, by marital status



SOURCE: Authors' calculations using weighted 1992 data from the Health and Retirement Study.

percent of the nonmarried women) who were ineligible on their own, there appears to be no particular clumping: that is, the QC distribution appears relatively uniform. Among the ineligible, about half would have to work 20 or more quarters (5 or more years) to become eligible.<sup>14</sup> What these data confirm, then, is that small increases in

the number of years women worked would not dramatically boost their eligibility for Social Security benefits based on their own work records.

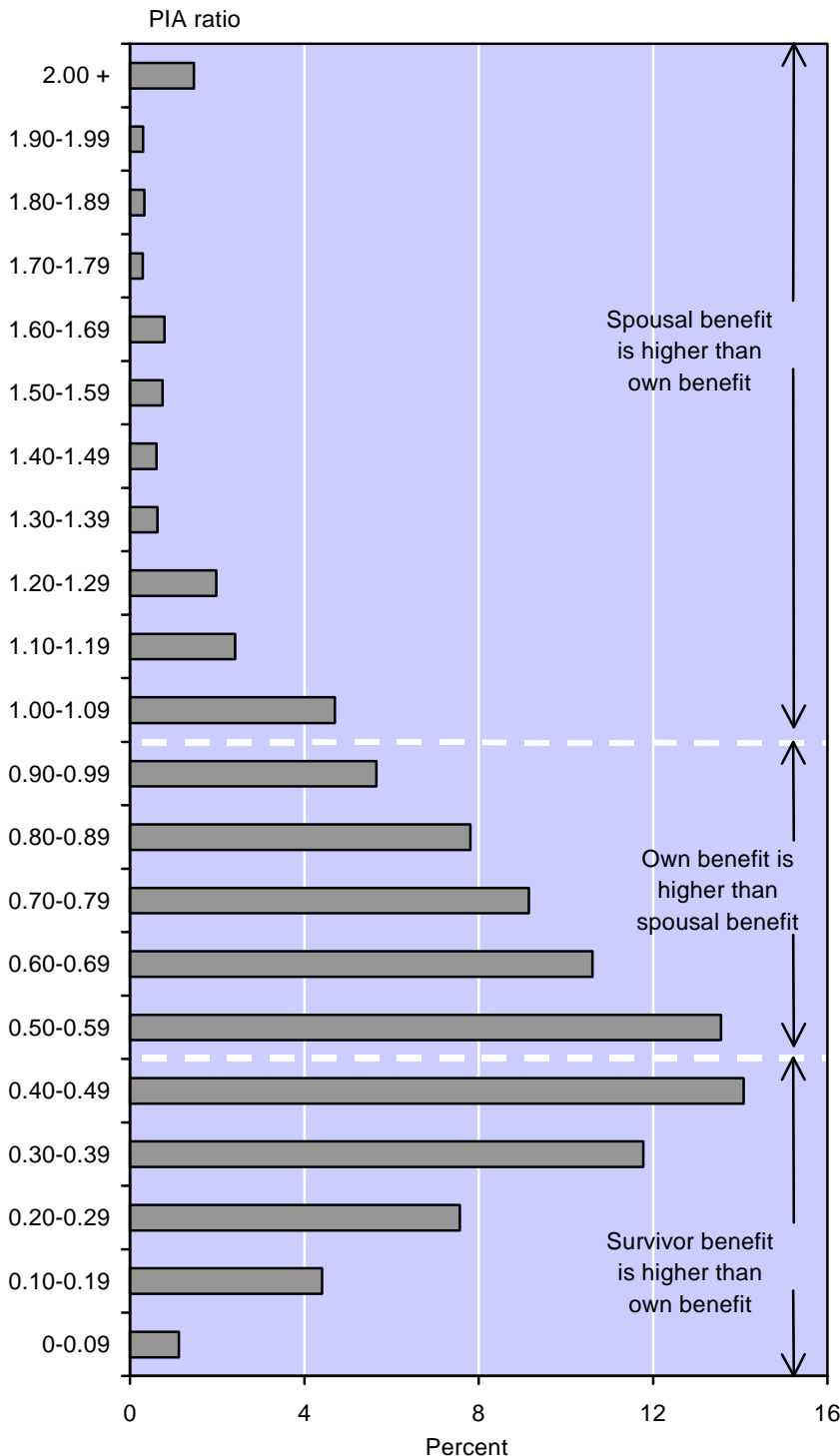
For women who are fully insured, a further question arises regarding how increases in earnings might translate into additional Social Security benefits. A complicating factor is that for married women, the answer depends not only on their own earnings history but also on the size of their PIA relative to their husband's, since a working wife receives no incremental benefit as a direct result of her own work history until her PIA exceeds half her husband's PIA.

The pattern of wives' PIA relative to that of their husband among the fully insured is shown in Chart 2. Two-thirds of fully insured wives have a PIA ratio greater than one-half and hence are eligible for higher benefits on their own record than on their spouse's. The remaining third is eligible for higher benefits based on the spouse's work history.<sup>15</sup>

This fraction may decline over time if women's earnings continue to rise relative to men's. The extent to which that occurs depends on the share of women for whom the PIA ratio is close to one-half. Chart 2 shows that about 14 percent of all fully insured women, or fewer than half of fully insured women whose PIA is less than half their husband's, have a PIA ratio between 0.4 and 0.5. Therefore, unless future earnings gains for women are quite large, relatively few additional women will have their benefit levels determined on the basis of their own records in the near future.<sup>16</sup>

Our assessment may still be too optimistic regarding women's ability to collect benefits based solely on their own work histories. The reason is that widows are entitled to receive benefits that depend on their husbands' full PIA rather than just half, as in the case of the (living) spouse benefit. Chart 2 shows that fewer than 15 percent of the HRS women have a PIA ratio that is greater than unity. In the case of a married couple with both members turning 65 on the same day, the life expectancy of the wife is 4 years longer than for her husband (19 versus 15 years). If they both lived as long as expected, the wife would spend at least 20 percent of her remaining years collecting benefits based on her

Chart 2.  
Fully insured persons: ratio of wife's PIA to husband's PIA



SOURCE: Authors' calculations using weighted 1992 data from the Health and Retirement Study.

husband's earnings rather than on her own. Since relatively few women are near the threshold PIA ratio of unity, wage gains for women are unlikely to dramatically alter that pattern in the near future.

## Notes

*Philip Levine* is an Associate Professor of Economics at Wellesley College, an NBER Research Associate, and a faculty affiliate at the Joint Center for Research on Poverty.

*Olivia S. Mitchell* is the International Foundation of Employee Benefit Plans Professor of Insurance and Risk Management and the Executive Director of the Pension Research Council at the Wharton School of the University of Pennsylvania. She is also an NBER Research Associate and a co-Principal Investigator of the AHEAD/Health and Retirement Study Project at the University of Michigan.

*John W.R. Phillips* is a labor economist in the Social Security Administration's Office of Policy, Office of Research, Evaluation, and Statistics, Division of Policy Evaluation.

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<sup>1</sup> Here we can only summarize coverage, eligibility, and benefit rules under the U.S. Social Security program; additional detail is available on the SSA Web page at [www.ssa.gov](http://www.ssa.gov), or see Myers (1993) and SSA (1998).

<sup>2</sup> Additional criteria are required to be "disability insured" under the system; a discussion of those benefits is beyond the scope of this article.

<sup>3</sup> Earnings are indexed using the SSA average covered earnings series to age 60; cost-of-living adjustments are applied from age 60 to the retirement year.

<sup>4</sup> Benefits are equal to 90 percent of AIME up to a first tier of indexed pay, with an additional 32 percent of AIME up to a second tier of pay, and a third 15 percent of AIME paid above that. The value of the AIME tiers is indexed over time; see [www.ssa.gov](http://www.ssa.gov) for more detail.

<sup>5</sup> A spouse of a fully insured retired or disabled worker is entitled to 50 percent of the worker's PIA at age 65; benefits are reduced for younger ages (SSA 1998).

<sup>6</sup> Because some working wives will have paid Social Security payroll taxes without gaining any additional benefit above what they could receive on the basis of their husband's work history, the system has been seen as levying a substantial implicit tax on working women (McCaffery 1997).

<sup>7</sup> Benefits are capped if the deceased claimed benefits before age 65. As with spousal benefits, divorced women can qualify for benefits as a surviving divorced wife. For more detail on survivor benefits, see SSA (1998).

<sup>8</sup> Here we use only the baseline HRS survey; subsequent waves have been fielded biennially, most recently in 2000. For a description of the HRS data set including conditions of use, see Mitchell, Olson, and Steinmeier (2000) or [www.umich.edu/~hrsahed](http://www.umich.edu/~hrsahed).

<sup>9</sup> Social Security benefit estimates and earnings histories are required for the analysis, so respondents lacking those data are excluded. We have no evidence that this biases results. See Levine, Mitchell, and Phillips (1999) for further discussion.

<sup>10</sup> Creation of variables is described in Mitchell, Olson, and Steinmeier (2000).

<sup>11</sup> All reported statistics (except where noted) represent the median 10 percent, calculated by taking the mean value for respondents in the 45th to 55th percentiles to avoid the potential impact of bunching at particular round numbers.

<sup>12</sup> One shortcoming of the HRS data is that they do not permit identification of spousal benefits for currently divorced people who had previously been married for at least 10 years. See Butrica, Iams, and Sandell (1999) for a discussion of the importance of data on couples in calculating Social Security benefits.

<sup>13</sup> Age-65 benefits are derived by projecting smoothed and indexed pre-1992 annual real earnings to age 65 and subsequently calculating AIME and PIA based on the respondent's "completed" earnings history (for detail see Mitchell, Olson, and Steinmeier 2000).

<sup>14</sup> This finding is not restricted to the younger members of this sample; results are similar when we split the sample for those ages 51-55 and 56-61.

<sup>15</sup> This includes women whose spouses had no covered earnings because their job was not covered by Social Security.

<sup>16</sup> Butrica, Iams, and Sandell (1999) evaluate potential eligibility for own retirement benefits among women born 1931 to 1960 using a different empirical approach, and they conclude that women's eligibility rises from around 70 percent for the older cohort to nearly 100 percent for the more recent cohort. They also note that as the gap between men's and women's earnings narrows over time, more women will claim their own retirement benefits as opposed to spousal benefits. To put all of these findings in perspective, we have simulated how much a fully insured older woman's benefits might grow if she worked an additional year. In the HRS sample, an additional year of work at the rate of pay consistent with prior earnings translates into only a tiny benefit increase at the margin, on the order of 1 percent of average earnings. That is a small number, equivalent to about 2.5 percent of PIA or about \$120 in additional Social Security benefits per year for life, and it is consistent with the results reported by Levine, Mitchell, and Phillips (1999). The benefit increase is so small in part because many women always receive more as a spouse, even though they work additional years. Further, even for those who have a PIA ratio of 100 percent or more, the nonlinear benefit formula means that more work years do relatively little to improve benefits. In other words, additional years of work and longer earnings records do boost Social Security eligibility and benefit levels but by relatively small amounts for women with the types of labor force patterns seen in the HRS.

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