Research Brief 371 | OCTOBER 2017

Marriage-related Policies in an Estimated Life-cycle Model of Households' Labor Supply and Savings for Two Cohorts

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In the United States, taxes and old-age Social Security benefits explicitly depend on one's marital status. Couples with very different individual incomes tend to pay a proportionally lower income tax, while couples with similar incomes tend to face an income-tax penalty. With Social Security benefits, married and widowed people can claim Social Security spousal and survivorship benefits, respectively. The benefit amounts of the lower-earner spouse, or secondary earner, are based on the earnings of their main-earner spouse. This implies that the tax system for married people tends to reduce the labor supply of the secondary earner by increasing their portion of each earned dollar going to payroll taxes. In addition, Social Security spousal and survival benefits compound the disincentive effect of the current tax system on the secondary earner because their reduced labor supply does not necessarily imply lower Social Security benefits for them.

In this paper, we study the effects of these marital provisions by evaluating what would happen if we made taxes and Social Security benefits independent from marital status. That is, people would individually file for taxes and receive Social Security benefits only related to their own past contributions.

To do this, we develop and estimate a life-cycle model with single and married people, in which single people meet partners and married people might get divorced. Every working-age person experiences wage shocks, and every retiree faces medical expenses and life-span risk. People in couples face the risks of both partners. Households can self-insure by saving and by choosing whether and how many hours to work (for both partners if in a couple). We allow for labor market experience to affect wages, that is, potential wages depend on accumulated human capital on the job. We explicitly model Social Security and pension payments with survival and spousal benefits, the differential tax treatment of married and single people, the progressivity of the tax

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system, and old-age, means-tested transfer programs such as Medicaid and Supplemental Social Insurance (SSI).

We use data from the Panel Study of Income Dynamics (PSID) and from the Health and Retirement Study (HRS) for the cohort born in 1941-1945 (the "1945" cohort), which by now has completed a large part of its life cycle. The PSID provides excellent information for their working lives and the HRS details their retirement. We also estimate our model for the 1951-1955 cohort (the "1955" cohort), which had much higher participation of married women and for which policy implications might, therefore, be very different.

Our estimated model matches the life-cycle profiles of labor market participation, hours worked, and savings for married and single people for both cohorts very well. It also generates labor supply changes by age, gender, and marital status consistent with the data. The latter provides an additional test of the reliability of our model and its policy implications.

For the 1945 cohort, we find that Social Security spousal and survivor benefits and the current structure of joint income taxation provide strong disincentives to work for married women, but also to single women who expect to get married, and to married men older than 55. For instance, the elimination of all marriage-based rules raises participation at age 25 by more than 20 percentage points for married women and by 5 percentage points for single women. In addition, spousal and survivor benefits reduce the participation of married men starting at age 55, resulting in a participation rate 3 percentage points lower by age 65. Finally, for these cohorts, marital provisions decrease savings of married couples by $40,000 at age 70, and wages for married women by about 10 percent due to the reduction of job experience when women take time out of the workforce to care for family.

Given that the labor supply of married women has been increasing over time, a natural question that arises is whether the effects of these marital provisions are also large for younger cohorts in which married women are much more likely to work. (By way of comparison, the labor market participation of married women at age 25 is slightly more than 50 percent for the 1945 cohort and more than 60 percent for the 1955 cohort.) To estimate the 1955 cohort model, we assume that their preferences are the same as the ones we estimate for the 1945 cohort, but we give the 1955 cohort their observed marriage and divorce probabilities, number of children, initial conditions for wages and experience, and returns to working. We then estimate the child care costs, available time, and participation costs that reconcile their labor supply and saving behavior to the observed data. Finally, we run the policy experiment of eliminating the marriage-related provisions of both taxes and Social Security. We find that the effects for the 1955 cohort on participation, wages, earnings, and savings are large and similar to those in the 1945 cohort. This suggests that the effects of marriage-related provisions are large even for cohorts in which the labor participation of married women is higher.