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Raising the Social Security Entitlement Age: Implications for the Productive Activities of Older Adults

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Abstract

An aging America presents challenges, but also brings social and economic capital. We quantify public revenues from Americans ages 65 and older, public expenditures on this cohort, and the value of their unpaid (non-market) productive activities and private financial transfers to family members. Using dynamic microsimulation, we project the value of these activities, along with government revenues and expenditures, under different scenarios of change to the Old Age and Survivors Insurance (OASI) eligibility age through 2050. We find that the unpaid productive activities and private financial gifts of Americans ages 65 and older are \$722 billion in 2010, while net (of tax revenues) spending on them is \$984 billion. A five-year delay in the full retirement age decreases federal spending by 10 percent, while a two-year delay in the early entitlement age increases it by 1.5 percent. The effect of a five-year delay on unpaid activities and transfers is small: a \$4 billion decrease in services and a \$4.5 billion increase in bequests and monetary gifts.

Keywords

retirement; social security; older adults; volunteering; caregiving

Americans are living longer than at any other time in history (Administration on Aging, 2013). The boom in the U.S. population ages 65 presents economic and social challenges (Congressional Budget Office, 2014; Zissimopoulos, Goldman, Olshansky, Rother, & Rowe,

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2015) but also brings large-scale social and economic capital with the potential to benefit everyone in the United States.

Older Americans today are maintaining good health until later in life than earlier birth cohorts and are engaging in economic (e.g. paid work) and social activities (e.g. volunteering, education) that benefit themselves, their families, and their communities (Berkman, Borsch-Supan, & Avendano, 2015). However, the effects of the longevity revolution and population aging are most often framed more negatively in terms of the rising costs of Medicare and Social Security (The Board of Trustees Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2014). A much larger than expected number of beneficiaries (the baby boom generation), a larger than anticipated increase in life expectancy, and a political reluctance to increase payroll taxes now threaten the solvency of the Social Security Trust Fund.

One policy proposal at the center of discussions about how to reduce Social Security expenditures is to increase the age of eligibility for Old Age and Survivors Insurance (OASI) benefits. This change reduces the total number of years an individual receives benefits and consequently, lifetime benefit amounts (Social Security Administration [SSA], 2014). A change of this sort would have implications for beneficiaries and their families: eligibility for benefits at an older age could threaten the financial security of the two-thirds of beneficiaries rely on Social Security for more than 50 percent of their total income, and a quarter of beneficiaries rely on it for more than 90 percent of their income (SSA, 2014). On the other hand, this type of policy change may increase the number of years Americans remain in the labor force, thereby expanding their private savings and improving overall financial security.

Social Security has evolved extensively since its inception. Most recently, a 1983 amendment authorized gradual increases in the age of full eligibility from 65 to 67 (we refer to this as the “full retirement age” or FRA) for workers born after 1937– with provisions to be fully in effect for all workers born after 1959 (Svahn & Ross, 1983). This amendment also reduced benefits for those individuals who opt to begin receiving them at age 62 (we refer to this as the “early eligibility age” or EEA). The potential of any policy change to influence the participation of older Americans in the labor force may vary depending on whether it would affect the EEA or the FRA. According to one recent study, approximately 72 percent of new beneficiaries begin to draw benefits before the FRA, while 46 percent draw benefits at the EEA (Kingson & Morrissey, 2012). This reality could blunt the effect that a policy change to the FRA might have on the work lives of older Americans.

Changes to the EEA and FRA may also have other impacts on individuals, families, and society. These impacts are often neglected in policy discussions and are less well understood. Longer work lives spurred by a change to the eligibility age for benefits may reduce the level at which older Americans engage in other productive activities, such as volunteering or caring for grandchildren or disabled parents or spouses (Furstenberg, Hartnett, Kohli, & Zissimopoulos, 2015). According to the Bureau of Labor Statistics (2012), 16 percent of the population ages 65 and over in 2011 provided unpaid care to elderly individuals. While longer work lives may increase government revenues through

taxes, they may also raise government spending on care for the oldest Americans, as individuals substitute care by family members with publicly financed care through Medicaid or Medicare.

Less volunteering may also have negative implications for an individual's well being. Volunteering later in life is associated with health benefits, delayed physical disability, enhanced cognition, and lower mortality (Greenfield & Marks, 2004; Konrath, Fuhrel-Forbis, Lou, & Brown, 2012; Lum & Lightfoot, 2005; Van Willigen, 2000). Research that analyzed a program called Experience Corps, which encourages older adults to engage with children at schools, found that older adults who were randomly assigned to participate in the program had increased strength and cognitive ability relative to non-participants (Freedman et al., 2004; Carlson et al., 2008; Fried et al., 2004; Rebok et al., 2014).

The policy focus on public expenditures of an aging America overlooks important *private* financial contributions made by older Americans, such as cash gifts to their children and grandchildren while alive and in the form of bequests at death. Indeed, these private transfers by older parents to their descendants may help finance post-secondary education, reduce liquidity constraints in homeownership, and smooth consumption during periods of unemployment (Zissimopoulos & Smith, 2011).

This study analyzes public revenues from Americans ages 65 and older, public expenditures on this cohort, and the value of their unpaid (non-market) productive activities and private financial transfers to family members. Using multiple waves of the Health and Retirement Survey (HRS)—a biennial survey of Americans ages 51 and older that began in 1992—we estimate models of paid work; unpaid productive activities, such as volunteering and caregiving; and direct financial transfers to family by the population age 65 or older. We also estimate models of take-up of government programs and calculate public expenditures on the population age 65 or older, alongside the state and federal tax revenue received from older adults. Utilizing dynamic microsimulation, we project the value of unpaid productive activities and direct financial transfers, as well as government revenues and expenditures, through 2050. We then explore the implications of a policy change to Social Security's full retirement and early eligibility ages, estimating the effects on private transfers, non-market productive activities, and government revenues and expenditures.

Literature Review

Research on changes to the EEA and FRA generally focuses on how such changes would influence retirement and claiming behavior, or how they would affect the average benefit amount and the solvency of the Social Security Trust Fund. The Social Security Administration (SSA) uses a dynamic microsimulation model—Modeling Income in the Near Term (MINT)—to analyze the distributional consequences and impact on Trust Fund solvency of proposals to modify the Old Age, Survivors, and Disability Insurance (OASDI) program (for example, Springstead, 2011). Smith and Favreault (2012) provide a description of the model.

Although an important tool for understanding the future of the Social Security Trust Fund, MINT is not designed to project how changes to the EEA or FRA will affect other public expenditures; public revenues; private transfers between family members; or unpaid productive activities, such as caregiving and volunteering. MINT does not model these other outcomes and only models two health outcomes: self-reported health and self-reported work limitation.

A number of studies estimated the effect of raising the FRA on the timing of an individual's exit from the labor force or claiming of Social Security benefits (Behaghel and Blau, 2012; Blau & Goodstein, 2010; Kopczuck & Song, 2008; Mastrobuoni, 2009; Pingle, 2006; Song & Manchester, 2008). These studies consistently find that raising the FRA is associated with declines in the probability of claiming at a given age. For example, Song and Manchester (2008) find that increasing the FRA from 65 to 66 is associated with declines in the probability of claiming benefits between the ages 62 and 64. The literature is less consistent on the findings related to the impact of a later FRA on the timing of labor force exits. Retirement may be less sensitive to changes in the FRA, because there were no corresponding changes in the earnings test – the withholding of benefits if an individual's earnings exceed a certain level and she is under the FRA-, which provides a disincentive to work.

The reduced form estimation used in these prior studies is similar to our reduced form approach although these prior studies do not use microsimulation for projection nor do they examine familial transfers or non-market productive activities. The advantage of this methodological approach is that it uses the richness of the data available for understanding retirement decisions and allows for ample heterogeneity in response. A number of authors use structural estimation to study retirement and apply their models to project the effects of increases to the EEA or FRA (Gustman & Steinmeier, 1986, 2005; French, 2005; Van der Klaauw & Wolpin, 2008; Rust & Phelan, 1997). While structural estimation can capture behavioral responses to changes in incentives, a disadvantage is that the complex variety of factors associated with retirement cannot be modeled fully.

There are several challenges in comparing the results from these studies with our own projections of claiming behavior and retirement, and ultimately of public revenues and expenditures and private non-market activities. First, the findings on retirement are not always consistent. Gustman and Steinmeier (2005) find that raising the EEA to 64 would result in delayed retirement from age 62 to age 64, while French (2005) estimates that raising the EEA would have little effect on retirement. Second, the policy simulations in other studies are different from those in our analysis. Gustman and Steinmeier (2009) simulate the effect of delays of the FRA and the Delayed Retirement Credit (which raises the value of claiming Social Security benefits at a later age), and elimination of the earnings test. But they do not separately report the effect of these changes. In addition, none of this literature projects the effects of changes to the EEA and FRA on intergenerational financial transfers, bequests, and the non-market productive activities of caregiving and volunteering. Our research takes a much broader view of policy effects in order to inform our understanding of the implications of raising the EEA and FRA.

Research Design

To estimate the effects of changes to Social Security policy, we used the Future Elderly Model (FEM), a population-based microsimulation that projects health and economic outcomes for middle-aged and older adults. Researchers have previously used the FEM to examine the impact of new medical technologies (Goldman et al., 2005), changes in disability (Chernew, Goldman, Pan, & Shang, 2005), improved prevention of diseases (Goldman et al., 2009), the benefits and costs of delayed aging (Goldman et al., 2013) and the value of a delay in the onset of Alzheimer's disease (Zissimopoulos, Crimmins, & St. Clair, 2014).

The FEM uses data from the Health and Retirement Survey (HRS) - a nationally representative, biennial survey of Americans ages 51 and older that began in 1992. The technical appendix details the data sources and contributions to the model. For each individual in the sample, we predict health conditions; functional status; and economic outcomes, such as income, wealth, and work, for the subsequent two years after a given year. We also predict monetary gifts to children, eldercare, and care for grandchildren. The predictions come from multivariate regressions that take into account demographic characteristics, current health risk factors, and past health and economic status. Similarly, we predict receipt of Social Security and other public benefits. We supplement the HRS data with data from the Medicare Beneficiary Survey (MCBS) to predict medical spending of individuals eligible for Medicare and Medical Expenditure Panel Survey (MEPS) to predict this outcome for individuals not eligible for Medicare. We quantify the expenditures of major entitlement programs—including OASI, Social Security Disability Insurance (DI), and Supplemental Security Income (SSI)—by aggregating individual-level outcomes and using the benefit rules of the particular program.

On the basis of these model estimates using data from HRS respondents (e.g., estimates of two-year probabilities (hazards) of dying, developing new health conditions etc.), we age our cohort of 51 and 52 year olds. As each cohort ages, we replenish it with a new cohort of 51 year olds. We use trends in the prevalence of diabetes, heart disease, and hypertension projected using National Health Interview Survey (NHIS) data to reweight the characteristics of the HRS cohort so that they reflect the health of these new cohorts of 51 year olds. We use the CPS to reweight to population predictions (Crimmins & Beltrán-Sánchez, 2011; Lakdawalla, Bhattacharya, & Goldman, 2004). Increases in life expectancy follow the same assumptions as Social Security Administration projections (The Board of Trustees Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2013). Figure 1 illustrates the FEM architecture. The simulation begins in 2004. Accordingly, the 2010 estimates include the base HRS population from 2004 and three simulated cohorts for 2006, 2008, and 2010. We conducted a cross-validation of the FEM by starting the simulation in 1998 and running it through 2008 and compared it with actual HRS data, which validated our results. The Technical Appendix provides a more technical description of our approach and results of the validation study. Further details on the empirical models are provided below.

Health and Disability

We derive the measures of health conditions, functional status from HRS questions: (1) having been diagnosed with heart disease, any cancer except skin cancer, chronic bronchitis or emphysema, diabetes, hypertension, or stroke or transient ischemic attack; (2) any difficulty performing activities of daily living (ADLs), difficulty performing instrumental activities of daily living (IADLs), and residency in a nursing home. We model both the likelihood of developing a health condition and functional status on the basis of a person's demographic characteristics, economic status, other health conditions, functional status, marital status, and health characteristics at age 50 - included as controls for unobserved factors, which allows estimated transition probabilities to account for the declining health of future cohorts.

Work

We estimate probit models of “working for pay” (work hazards) on the basis of a person's demographic characteristics, health conditions, disability, earnings, and wealth. In our model, the age indicators are defined relative to the EEA and FRA. For example, an individual who is age 62 and for whom the FRA is 67 will have a value of 1 for “at EEA” indicator, 0 for “at FRA indicator,” and 5 for “number of years before FRA” covariate. In a policy scenario where the EEA changes to age 64 and the FRA is unchanged, this individual's EEA indicator is reset to 0.

Government Expenditures

We derive government expenditures from federal and state spending on Medicare and Medicaid, and federal income-support through OASI, DI, and SSI. We first model participation in each program and then use age, marital status, and other economic outcomes to calculate benefits, applying the rules for the particular programs. Annual costs are given in constant 2009 dollars. We discount all cumulative costs using a 3 percent annual discount rate (Gold, Siegel, Russell, & Weinstein, 1996).

We use data from MCBS to estimate individual medical spending and enrollment in insurance for individuals eligible for Medicare, and data from MEPS to estimate these outcomes for individuals not eligible for Medicare. We use MCBS to model enrollment in ambulatory care and prescription drug coverage separately (Medicare-eligible individuals are automatically enrolled in inpatient benefits program). We estimate Medicare spending models separately for inpatient, ambulatory care, and prescription drug costs. Enrollment and spending models are based on an individual's demographic characteristics, health risk factors, functional status, and marital status. We model Social Security claiming and other government benefits - veteran's benefits, welfare, and food stamps - using the same set of covariates but also including economic status variables. The Social Security monthly benefit is calculated when an individual begins to make claims and is based on their lifetime earnings history—available through linked SSA-restricted earnings data and following SSA's algorithm for benefit calculations. Individuals claiming disability switch to Social Security benefits after reaching the FRA.

Taxes

We draw our federal and state income tax estimates from TAXSIM estimates for HRS respondents (Feenberg & Coutts, 1993). We report results for Michigan, which is assumed to be representative of average tax levels for all states. We base the models of income tax on earnings, capital income, wealth, claiming of government benefits, and marital status. City tax is calculated as 2.55 percent of net income. Payroll taxes are calculated on the basis of individual earnings. Social Security payroll taxes are set at 6.2 percent of earnings up to \$97,500, and Medicare payroll taxes are set at 1.45 percent of total earnings. We model property tax, basing estimates on a person's demographic characteristics, economic status, health risk factors, functional status, and marital status.

Private Transfers: Bequests and Inter Vivos Gifts

We calculate bequests as the financial and housing wealth remaining upon an individual's death or, for couples, upon the death of the last living spouse. We model wealth on the basis of an individual's demographic characteristics, economic status, health risk factors, functional status, marital status, and number of children and year indicators to control for economy-wide effects during the estimation period.

HRS respondents report the amount of money they gave to children and grandchildren over the last two-years (or since the last interview wave). First, we estimate a model of the likelihood of making a transfer, and then we estimate amount of financial transfer conditional upon making a transfer. Key covariates are a person's demographic characteristics, economic status, health risk factors, functional status, marital status, and number of children. The mechanism through which increases in the EEA or FRA impact inter vivos transfers and bequests is through the impact of changes in EEA or FRA on work and then the subsequent changes in earnings and wealth associated with changes in the likelihood of working.

Non-Market Productive Activities: Caregiving and Volunteering

Non-market productive activities are most commonly defined by the third-person criterion: An activity is deemed productive if it could be delegated to someone else while achieving the desired result. This criterion distinguishes unpaid, non-market work from personal activities. Most commonly, this category includes eldercare, childcare, volunteering, and housework. We quantify and model the first three of these (i.e., not housework) because our focus is on non-market productive activities that benefit others.

Eldercare is defined as help with eating, bathing, and dressing, as well as with errands, chores, and transportation. Respondents in the HRS report the annual hours of eldercare they provide to their spouses or parents. They report if they live with their grandchildren or not, and how many hours of care they provide to both co-resident and non-coresident grandchildren. Respondents report total annual hours spent volunteering for educational, charitable, or health-related organizations.

We model informal hours of care on the basis of a person's demographic characteristics, work status, economic status, health risk factors, functional status, marital status (except for

care to spouse), location of residence, and proximity to children. For volunteer hours we use the same set of covariates and include religious affiliation, and religiosity. The mechanism through which increases in the EEA or FRA impact caregiving or volunteering is directly through the impact of changes in EEA or FRA on the likelihood of working.

We value hours of caregiving and volunteering in 2010 dollars, on the basis of three wage rates. We use the federal minimum wage as the low valuation for caregiving services and volunteering (Arno, Levine, & Memmott, 1999; Johnson, 2005). In 2010, that minimum wage was \$7.25 (Bureau of Labor Statistics, 2011). We give the value of caregiving to a spouse or parent a moderate value equal to the average wage reported by the Bureau of Labor Statistics for home health aides (\$10.46 per hour), taking the high value from a survey of hourly rates of caregiver agencies (\$20.00 per hour). The moderate value for childcare is the national average wage for childcare workers (\$10.15 per hour), while the maximum is the average wage for skilled preschool workers (\$14.04 per hour) (Bureau of Labor Statistics, 2010). We set the moderate value for volunteering to the national average wage for clerical office workers (\$13.58 per hour), and the high value is the average wage for social service workers (\$20.76 per hour). We report results at all three valuations in Table 1 otherwise results are based on the moderate (middle) value. We assume wages grow by three percent each year.

Scenarios

We develop four scenarios. The first scenario represents the status quo EEA and FRA. The other three represent various changes to the EEA and FRA. The second scenario raises only the FRA by five years (results for one-year and three-year delays available upon request). The third scenario raises only the EEA by two years (similarly, results for delaying the EEA by both fewer and more years are available). We step the EEA delay, so that the number of years between the EEA and FRA is never less than two. The fourth scenario raises both the EEA and FRA by three years. We assume that with a delay in the EEA, 10 to 30 percent of workers shift to DI benefits. The results shown in this paper use the mid-range assumption that 20 percent of workers shift to DI with a delay in the EEA. We compare public expenditures and revenues and the value of private financial transfers and non-market productive activities across all four scenarios. For each scenario, we run the simulation 100 times and average the outcomes. The results were stable between 50 and 100 simulations.

Results

Table 1 shows private giving and non-market productive activities by Americans ages 65 and older at the low, mid, and high valuations. Financial transfer amounts are significant. In 2010, bequests totaled \$475 billion and inter vivos gifts of money to children totaled \$151 billion. In the same year, older Americans also engaged in non-market productive activities valued at \$96 billion, comprised of \$27 billion in volunteer activities and \$69 billion in caregiving services. In total, these two categories of activity came to \$722 billion in 2010, much of which (90 percent) directly benefited the children of people ages 65 and older. Non-market productive activities at the low valuation (\$62 billion) are 38 percent of the value at the high valuation (\$161 billion). We use the mid valuation for all results shown below.

Table 2 shows estimated public expenditures on Medicare, OASI, Medicaid, DI, SSI, and other programs (e.g., veteran's benefits, welfare, and food stamps) that benefited Americans ages 65 and older in 2010. It also shows estimated revenues from federal, state, city, property, Social Security payroll, and Medicare payroll taxes paid by Americans ages 65 and over in 2010. Total expenditures were \$1,217 billion and total revenues were \$233 billion. Eighty-nine percent of expenditures were for spending on Medicare and OASI, and 63 percent of revenues came from federal taxes.

Public expenditures nearly quadruple between 2010 and 2050, rising from \$1,217 to \$4,525. During this same time period, revenues from the population ages 65 and older just about double (Table 3). Fifty-three percent of the dollar increase in expenditures is driven by increased Medicare spending. Private gifts of money and the value of non-market productive activities were 73 percent of public expenditures, less revenues, in 2010. By 2050, they double, increasing from \$722 billion to \$1,447 billion (Table 3). Sixty-four percent of the increase is attributable to rising wealth and gifts in the form of bequests.

Figure 2 shows the impact of policy changes to the EEA and FRA on the percentage of individuals claiming DI and OASI benefits, and doing paid work—*relative* to the status quo scenario at age 62 through age 75. Delaying the FRA by five years (the second scenario) increases the percentage of individuals working at ages 62, 63, 64, and 65 by about 10 percentage points compared with the status quo. For example, under the status quo, 43 percent are working at age 65, but with a five-year increase in the FRA, 53 percent are working at age 65. Raising the FRA by five years increases the percentage of individuals working at age 66 by 12 percentage points, with a sustained increase in people working up to age 75. Compared with the status quo, Social Security claims in this second scenario are reduced significantly—particularly at ages 64 (43 percentage points lower than the status quo) through 66 (65 percentage points lower than the status quo). At age 68, ninety-eight percent are claiming Social Security benefits under the status quo, as opposed to only 64 percent with a five-year delay of the FRA—a drop of 34 percentage points. The percentage of individuals claiming disability relative to the status quo also increases through age 70.

In contrast, raising the EEA by two years (the third scenario) increases the percentage of individuals working at ages 62 and 63 by just 5 percentage points, as compared with the status quo. For example at age 63, 50 percent are working under the status quo, and with a two-year delay to the EEA, 55 percent are working. Raising the EEA by two years increases DI claims by about 4 percentage points. However, this scenario reduces OASI claims by a much larger 34 percentage points at age 62, and 43 percentage points at age 63, compared with the status quo. There is a very small impact on OASI claims at ages 64 and 65 compared with the status quo, and no effect at ages beyond 65.

Raising both the EEA and the FRA by three years (the fourth scenario) has a smaller effect on the percentage of people working compared with the status quo than raising just the FRA by five years. For example, 50 percent of individuals are working at age 66 under the status quo. With a three-year increase in both the EEA and FRA, 60 percent are working at age 66. When the FRA is raised by five years, 62 percent are working at age 66. With regard to OASI claims, the percentage point change from the status quo is substantial—ranging from

30 percentage points to just under 60 percentage points between the ages of 62 and 67. There is a an increase in DI claims at ages 62 through 68 relative to the status quo that is the highest at ages 66 and 67 at just under 10 percentage points.

The results in Tables 4 and 5 show how the changes in working for pay and claiming behaviors that stem from modifications to the EEA and FRA translate into changes in public expenditures and revenues, as well as changes in monetary gifts to family members and non-market productive activities. Among the four scenarios, raising the FRA by five years produces the largest decrease in expenditures and the greatest increase in revenues in 2050, compared with the status quo (Table 4). Expenditures decrease by 10 percent (from \$4,525 to \$4,059 billion) and revenues increase by 19 percent (from \$489 to \$581 billion) in 2050. The scenario in which the EEA is raised without changing the FRA results in slightly higher expenditures, as more individuals move to DI and then remain there until they reach the FRA. The fourth scenario—increasing both the EEA and FRA by three years—leads to similar overall changes as increasing the FRA by five years; however, the distribution of spending is different. Increasing the FRA by five years results in declines in OASI spending of 24 percent in 2050 compared with the status quo, but in stark contrast, expenditures on DI increase by 460 percent that year compared with the status quo. Alternatively, increasing the EEA and FRA by three years produces OASI spending declines of 14 percent in 2050 compared with the status quo, while expenditures on DI increase by 320% compared with the status quo.

Our findings show that changing the EEA and FRA will increase the time that Americans spend in the labor force, but will also expand their income and wealth. As a result, this policy measure may increase financial gifts from older Americans to younger family members. It will also, however, reduce available time for leisure activities, volunteering, and caregiving. Table 5 shows the effects of changes in the EEA and FRA on private transfers of money and non-market productive activities. A five-year delay in the FRA increases bequests and inter vivos transfers by \$4.5 billion in 2050 compared with the status quo. It also reduces the value of volunteer hours by \$1 billion and of caregiving services by \$3 billion in 2050. In percent terms, the increase in monetary gifts (bequests and inter vivos transfers of money) is about 1 percent and the reduction in the value of caregiving is approximately 2 percent. The reduction in the value of time (volunteering and caregiving) with a five-year delay in FRA relative to the status quo becomes almost twice as large (\$7 billion) if we use a high valuation for services (results not shown) but again, as a percent of the status quo value, the change is not large (4.5 percent). Using a low valuation of time, there is a \$2 billion decrease in the value of time associated with a 5-year delay in FRA compared to the status quo.

Raising both the EEA and FRA by three years has a smaller effect on private transfers and non-market productive activities. This measure increases bequests and inter vivos transfers by \$2.6 billion in 2050 compared with the status quo, reduces the value of volunteer hours by \$0.6 billion, and reduces the value of caregiving services by \$1.8 billion in that year.

Discussion

Research studies and policy proposals addressing the implications of an aging society should recognize the economic and social contributions of older Americans and the benefit of these contributions to themselves, their families, and their communities. In this study, we report our findings on the non-market productive activities of Americans ages 65 and older, the direct monetary gifts these individuals make to family members, public expenditures on people in this age group, and the revenues received from them. We find that in 2010, Americans ages 65 and older made economic contributions of \$626 billion in inter vivos transfers and bequests; 2 billion hours of volunteering valued at \$27 billion; and 6.6 billion hours of caregiving to spouses, parents and grandchildren valued at \$68 billion. The total value of private financial transfers and productive activities among people in this age group was \$722 billion. Ninety percent of this amount directly benefited their children. This cohort also provided society with \$233 billion in tax revenues. At the same time, public expenditures on this age group in 2010 were \$1.2 trillion. The difference between the level of public expenditures and the value of the contributions of this age group is \$245 billion. Policy will be better informed if these contributions are discussed side by side with the emerging economic challenges to the public entitlement programs that support older Americans.

Among a number of scenarios exploring different types of policy changes to the EEA and FRA, raising the EEA increases public expenditures: Spending on both DI and OASI rises. In contrast, a five-year increase in the FRA lowers public expenditures over time. Increases in DI spending are offset by lower OASI spending, as individuals put off claiming OASI benefits in response to the older eligibility age. This scenario also increases public revenues, as workers respond by remaining in the labor force longer. While expenditures fall by \$466 billion and revenues grow by \$92 billion in 2050 under this scenario, there is only a \$4.5 billion increase in bequests and monetary gifts and a \$4 billion reduction in caregiving and volunteer services in that year. The empirical models of non-market activities and transfers that we estimate do show a relationship between work, earnings, and non-market productive activities and financial transfers. There is a negative relationship between working and providing eldercare but the estimated effect is small in magnitude. Thus an increase in the EEA or FRA will lead to more work and less caregiving but at the societal level, the overall value of the time reduction is not large. Income is positively associated with higher levels of monetary gifts and bequests. An increase in the EEA or FRA increases the likelihood of work and through this mechanism, impacts income and wealth. Thus, again it is not surprising that the change in the overall level of financial gifts and bequests at the societal level is small. However, at the *individual level*, there may be substantial heterogeneity in size of response to increases in the EEA and FRA and thus to its impact on families.

The effects of policy change are likely to be heterogeneous by socioeconomic status. That is, if high-income and wealthy families are more likely to make financial gifts to adult children than low-income families, the increase in monetary gifts due to raising the FRA may enhance the welfare of children from well-off families. If on the other hand, low-income families are more likely to provide caregiving services than high-income families, policy change that increase the eligibility age for OASI benefits may mean that fewer caregiving

needs will be met among these families. Or, alternatively, it could mean that these families will shift to paid caregiving financed by either the family or the federal government (e.g., through Medicaid). Families are often the first to respond to change. Policy tools designed to support an aging population may threaten the ability of families to provide their own safety net or enhance it. More research is needed on how proposed policy changes impact different individuals—individuals who are differentiated by both the strength of their familial ties to serving as a safety net and by their own financial security. A vibrant area for future research is the differences in response to changes in the EEA or FRA across individuals and families.

There are limitations to our approach. First, we test various changes to Social Security policy using simulation, which includes assumptions about the steadiness of underlying parameters used to model health and economic outcomes. More study would be required before any policy change should be implemented—including work in which the Congressional Budget Office officially scores such a change; fuller consideration of distributional and health outcomes beyond the major entitlement programs; consideration of the impact of any financing reforms (e.g. Affordable Care Act); and study of the impact on economic growth of a larger and older labor force. The scenarios that we model do not account for potential increases in Medicaid expenditures, if families begin to draw more heavily on Medicaid to provide paid care in place of providing it themselves. Moreover, we do not account for potential changes in the structure of families or household arrangements. Our focus on Americans ages 65 and older does not account for increased work by individuals younger than 65 brought about by raising the EEA or FRA.

Conclusion

Policies that would lessen the burden on the Social Security Trust Fund and help grow the future workforce by providing incentives for remaining in the labor force longer may, as a consequence, also impact the engagement of older individuals in productive activities and their capacity to support old and young family members. Our results indicate that policy changes that raise the Social Security early eligibility age and full retirement age delay retirement and claiming and also result in a decline in volunteering and caregiving but that is small at the societal level relative to the reduction in public expenditures and increase in revenues due to this policy change. The dollar value of the monetary gifts from Americans ages 65 and older across generations of family members is large and increases under policy changes that raise the early eligibility age and full retirement age.

This study points policymakers to another important fact: The proper unit of analysis for policy change cannot be one specific age cohort but must be society as a whole. Older Americans provide inter vivos financial transfers and bequests to the younger generation and caregiving to both the old and the young. When evaluating proposed policies, policymakers should consider these sorts of intergenerational impacts and design solutions for all of society.

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Figure 1:
Schematic of the Future Elderly Model (FEM) Architecture

Figure 2:
Percentage Point Change in Work Status and Claiming 2010

Table 1:

Private Transfers and Unpaid Services, Americans Ages 65 and Over in 2010 (2010 Dollars, Billions): Results for low, mid and high valuation of unpaid services

Private Transfers (\$)			
Bequests	475		
Inter vivos	151		
Valuation of hours of unpaid services (\$)	Low	Mid	High
Volunteer hours	14	27	41
Help to spouse	29	41	79
Care to parents	4	6	12
Care to grandchildren	15	21	29
Total = Private transfers + unpaid services	688	721	787

FEM simulations results. Value of unpaid services under low valuation is minimum wage \$7.25. Value under mid is \$13.58 for volunteering, \$10.46 for care to parents or spouse, and \$10.15 for care to grandchildren. Value under high is \$20.56 for volunteering, \$20.00 for care to parents or spouse, and \$14.04 for care to grandchildren. Total is sum of bequests, inter vivos transfers, volunteer hours, and caregiving.

Table 2:

Public Expenditures and Revenues, 2010 to 2050 (2010 Dollars, Billions)

	2010	2020	2030	2040	2050
Population 65+ (millions)	43.76	57.44	71.91	77.04	79.98
Public Expenditures (2010 \$, billions)					
Medicare	461	651	1,125	1,684	2,223
OASI	616	871	1,178	1,380	1,541
Medicaid	97	133	233	419	661
SSI	9	11	13	15	19
Disability	1	1	4	4	5
Other	33	48	67	73	75
Total	1,217	1,715	2,620	3,575	4,524
Public Revenues (2010 \$, billions)					
Federal tax	147	234	313	314	313
State tax	11	20	26	23	24
City tax	18	27	35	39	43
Property tax	42	61	80	83	82
SS tax	12	20	23	22	23
Medicare tax	3	5	5	5	5
Total	233	367	482	486	490

Table 3:

Private Transfers and Unpaid Services, Americans Ages 65 and Over, 2010–2050 (2010 Dollars, Billions)

	2010	2020	2030	2040	2050
Bequests	475.39	610.54	839.47	961.19	937.59
Inter vivos transfers	150.85	212.14	275.88	304.64	310.33
Volunteer hours	26.81	36.57	45.69	45.38	43.71
Help to spouse	41.39	56.61	78.32	95.42	108.59
Care to parents	6.34	9.12	11.10	10.51	10.57
Care to grandchildren	21.09	28.14	35.53	35.56	35.99
Total (rounded)	722	953	1,286	1,453	1,447

FEM simulation results. Value of unpaid services is \$13.58 for volunteering, \$10.46 for care to parents or spouse, and \$10.15 for care to grandchildren

Table 4:

Effect of Delaying EEA and FRA on Public Expenditures and Tax Revenues (2010 Dollars, Billions)

	Status Quo	FRA 5-years	EEA 2-years	EEA & FRA 3-years
2010				
Revenue	233	254	234	246
Expenditure	1,217	1,006	1,222	1,092
Medicare	461	449	462	457
OASI	616	410	620	490
Medicaid	97	97	97	97
SSI	9	9	9	9
Disability	1	10	1	7
Other	33	31	33	32
2030				
Revenue	482	577	485	537
Expenditure	2,620	2,232	2,679	2,422
Medicare	1,125	1,051	1,127	1,090
OASI	1,178	852	1,235	1,005
Medicaid	233	234	233	233
SSI	13	13	13	13
Disability	4	20	5	17
Other	67	61	67	63
2050				
Revenue	489	581	492	542
Expenditure	4,525	4,059	4,592	4,271
Medicare	2,223	2,110	2,226	2,171
OASI	1,541	1,172	1,605	1,327
Medicaid	661	663	661	663
SSI	19	19	19	19
Disability	5	28	6	21
Other	75	69	75	71

Table 5:

Effect of Delaying EEA and FRA on Private Transfers (2010 Dollars, Billions)

	Status Quo	FRA 5-years	EEA 2-years	EEA & FRA 3-years
2010				
Bequests	475	476	475	476
Inter vivos	151	151	151	151
Volunteer hours	27	27	27	27
Care	69	68	69	68
2030				
Bequests	839	841	839	840
Inter vivos	276	279	276	278
Volunteer hours	46	45	46	45
Care	125	122	125	123
2050				
Bequests	938	939	938	939
Inter vivos	310	313	310	312
Volunteer hours	44	43	44	43
Care	155	152	155	153

Table Notes: FEM simulation results.