

# Chiseling a Notch Out of the Next Generation's Assets: The Effect of the Social Security Amendments of 1972 and 1977 on Intergenerational Transfer Behavior

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## Abstract

This paper investigates intergenerational wealth transmission between fathers and children using the 1972 and 1977 Amendments to the Social Security Act. These amendments created two successive cohorts; the first experienced increased growth in Social Security benefits and the second experienced a negative shock (the “Notch Generation”). Using the Health and Retirement Study, I find that sons with fathers born in the Notch Generation have significantly lower wealth levels than those with fathers born in surrounding cohorts, most notably the cohort just prior. Further evidence suggests that the wealth difference is likely due to a higher probability of providing financial support to parents and a lower probability of receiving an inheritance and financial assistance from parents.

**JEL Classification:** J14, H55, D10, D31

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# 1 Introduction

Numerous papers have been written on the theory of wealth transfers between parents and children [e.g. Barro (1974), Becker (1974), Bernheim, Shleifer, & Summers (1985), and Cox (1987)]. There are however, few empirical papers that investigate intergenerational transfer behavior employing a plausibly exogenous shock to wealth. This paper uses an unanticipated and permanent shock to retiree's Social Security benefits caused by the 1977 Amendments to the Social Security Administration Act. These amendments created a large unanticipated negative shock to retiree's Social Security benefits for individuals born between 1917 and 1921. This negative shock represents a roughly 10% reduction in Social Security benefits in comparison to the cohort born just prior (1912-1916), but the difference can be as high as 20% depending on the individual and the birth years considered. This cohort has been deemed the *Notch Generation* because of this *notch* taken from their benefits. Figure 1 provides an illustration created by the Social Security Administration of this notch in benefits.

Studying intergenerational wealth transmission is important to help us understand inequality and economic mobility. Additionally, due to the shock employed in this paper, we can estimate the repercussions of changing Social Security benefits and retirement income. Many studies find that inheritance and inter-vivos transfers (transfers occurring during life) contribute to growing inequality in the United States. Guth et al (2002) reference two papers, Kotlikoff (1988) who finds as much as 80% of all assets are the result of intergenerational transfers from parents to children and Gale & Scholz (1994) who find that of those transfers, 50% are inter-vivos. While Becker & Tomes (1986) find a regression to the mean within three generations for income, more recent research, such as that of Bowles & Gintis (2002) find that parental income and wealth are strong predictors of the economic status of their children, meaning inheritance and inter-vivos transfers may play a key role in growing inequality. Menchik & Jianakoplos (1997) find that inheritance accounts for 10 to 20% of the difference in the Black-White household wealth gap. Investigating the Social Security Amendments is also of interest because policy makers should consider both cohort inequality and the undue hardship on the next generation when contemplating future changes to Social Security benefits. Additionally, the results of this paper shed light on the possible costs individuals will bear as a result of their retired parents experiencing the negative income and wealth shocks caused by the Great Recession.

The 1972 and 1977 Social Security Amendments provide an exogeneous shock to income and allow for the estimation of late life income shocks on intergenerational financial transfers. The income shock caused by the Social Security Amendments is both permanent and unanticipated

because it was announced and took effect near retirement age (56 to 60 years old depending on birth year), at a time when recipients had relatively less control over their retirement wealth and income levels. The children of these individuals were likely past their college years<sup>1</sup>, a point in life where inter-vivos transfers are most important, so any transfers should be related to the parent's economic situation rather than their children's. The main finding of this paper is that sons of fathers born in the Notch Generation have significantly lower wealth levels in comparison to those with fathers born just prior. I argue that the mechanisms driving this difference in wealth are decreased bequests and to a greater extent reverse transfers (financial aid given to parents from their children).

The most similar research to my own is Croda (2000) and Reil-Held (2006), who finds that increased pension growth for East Germans following the fall of the Berlin Wall caused an increase in the probability and size of financial transfers to their children. The fall of the Berlin Wall caused a positive shock to retirement wealth due to the introduction of government pensions for East Germans, but also increased the lifetime earnings of their children due to increased job market prospects, resulting in a higher probability of reverse transfers from children to parents. The natural experiment that I employ only affects the Social Security benefits of the parent, does not affect the income or wealth of their children, and does not include the same social and political shocks caused by the fall of the Iron Curtain, allowing me to isolate the effect of the income shock.

There are very few papers investigating transfer behavior with exogenous or quasi-exogenous shocks. Arrondel & Laferrere (2001) find inter-vivos transfers increased following a change in French law that made transfers partly tax free. Cox & Jimenez (1992) find Peruvians that received social security pensions, received smaller transfers from their children. However, being covered by the Peruvian pension system is not random or exogeneous, making it harder to argue that the estimates are causal rather than correlational. Other papers that investigate intergenerational wealth transfers attempt to prove or disprove one of the predominant transfer models (altruistic or strategic) or describe differences in transfer behavior by gender, ethnicity, country, etc.

## 1.1 Brief Notch Generation History & the Effect on Wealth

Prior to 1972, Social Security benefits did not automatically adjust, but required legislative action. The 1972 Social Security Amendments mistakenly changed the adjustment process for those born after 1912 to automatically adjust for both inflation and the retiree's wages (which also increased with inflation). The uncharacteristic rampant inflation of the 1970's caused benefits to climb due

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<sup>1</sup>The average age is 59.6 in the sample used in this paper.

to the “double indexation” of benefits. Lackluster economic growth led policy makers to fear that Social Security would not be able to financially support itself. Increased wages due to inflation caused benefits to climb even higher for those who postponed retirement past age 62. Figure 1 depicts the large difference in benefits for individuals retiring at age 62 in Chart 5 and age 65 in Chart 6. To remedy this funding problem, the 1977 Social Security Amendments affected those born after 1916 and attempted to keep benefits roughly equal for those retiring at age 62. However, the additional benefits from working past age 62 were not estimated from the retiree’s actual wages so high inflation would not cause these additional benefits to rapidly increase, as was the case for those born between 1912-1916. While the Social Security Administration explains that benefits were roughly equal for either cohort if they retired at age 62, Chart 5 in Figure 1 still clearly shows a reduction in benefits for those in the Notch Generation retiring at age 62. Figure 2 illustrates the average monthly Social Security benefits for individuals retiring at age 65 for those born between 1907-1926, the birth cohorts included in my sample. For further details, see Krueger & Pischke (1992), General Accounting Office (1988), and the Social Security Administration’s website<sup>2</sup>.

Many studies have used the Notch Generation as a shock to income. The most influential study is Krueger & Pischke (1992), who find little evidence linking the Social Security benefits shock to the labor supply of older men. Other work has used the Notch Generation to investigate living arrangements - Engelhardt, Gruber, & Perry (2005), prescription medication expenditures - Moran & Simon (2005), mortality rates - Snyder & Evans (2006), elderly homeownership - Engelhardt (2007), obesity - Cawley, Moran, & Simon (2010), long-term care services - Goda, Golberstein, & Grabowski (2010). To my knowledge, this is the first paper to use the Social Security Notch to investigate intergenerational transfer behavior.

## 2 Methodology

The largest difference in benefit levels appears between the Notch Generation cohort born between 1917-1921, which I refer to as *Notch* (the cohort that experienced a negative shock to benefits as a result of the 1977 Social Security Amendments), and the cohort born just prior consisting of birth years 1912-1916, which I deem the *PreNotch2* (the cohort that experienced increased benefit growth rates as a result of the 1972 Social Security Amendments coupled with inflation in the 1970’s). In some specifications, I also include the cohort born between 1907-1911 because they were not affected by the 1972 or 1977 Social Security Amendments, which I refer to as the *PreNotch1* and the cohort

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<sup>2</sup>The files can be found at [www.ssa.gov/history/notchfile1.html](http://www.ssa.gov/history/notchfile1.html), [notchfile2.html](http://www.ssa.gov/history/notchfile2.html), and [notchfile3.html](http://www.ssa.gov/history/notchfile3.html)

born just after the Notch, in years 1922-1926, which I refer to as the *PostNotch*. Figure 2 illustrates the difference in average Social Security benefits by father’s birth year and provides a graphical breakdown of the four birth cohorts.

Assuming individuals have an expected level of retirement consumption, an individual experiencing an unanticipated negative shock to Social Security benefits faces several choices. The individual can counteract the negative income shock by increasing retirement wealth through delaying retirement, reduce retirement consumption levels, maintain planned consumption levels but deplete wealth at a faster rate than anticipated (leaving less for inter-vivos transfers and bequests), or borrow from the next generation in the form of reverse transfers. The first option does not seem likely since Krueger & Pischke (1992) argue there was relatively little change in retirement timing as a result of the Social Security Notch. If consumption levels fall in response to the negative income shock, then the children of those born in the Notch Generation should not have different wealth levels than those born in the PreNotch2 cohort. If instead, the father maintained his planned consumption level then the next generation should have lower wealth levels either as a result of smaller bequests and inter-vivos transfers or increased reverse transfers. While several estimation strategies will be discussed below, the basic question of this paper is, do children born to fathers from the Notch Generation cohort (negative shock) have lower wealth levels than children with fathers born just prior (positive shock)?

Table 2 reports a simple average wealth comparison for men stratified by father’s birth cohort. There is a \$20,000 to \$30,000 difference in wealth, depending on the wealth measure<sup>3</sup>, for men with fathers born in the PreNotch2 compared to Notch cohort. These results indicate that there is a difference in wealth that may be due to differences in the father’s Social Security benefits. For women, this difference in wealth is not apparent (as seen in Table 3), this will be discussed in the Female Results section. To more effectively investigate the differences in wealth, I employ both quantitative and graphical approaches.

## 2.1 Strategy 1: Quantitative Approach

$$Wealth_{it} = \alpha + \beta PreNotch2_i + Age_{it} + SurveyYear_t + \gamma Family_{it} + \epsilon_{it} \quad (1)$$

Strategy 1, shown in Equation 1, measures the wealth difference of children with fathers born in the different birth cohorts mentioned previously while controlling for numerous variables that affect wealth. The unit of observation is individual  $i$  in survey year  $t$ , since each individual can

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<sup>3</sup>Table 1 details the different components used in calculating each of the different wealth measures.

potentially appear in each of the eight survey years. Although I use panel data, the variation is not time specific, but individual specific (the birth year of the individual’s father does not vary with time) so I include a survey year fixed effect to control for wealth differences over time and cluster the standard errors on the individual. I estimate wealth transfer effects for each of the five different wealth measures described in Table 1 and *Wealth*, the dependent variable, consists of these different wealth measures. *Age* consists of age fixed effects and *Family* includes family control variables described in the Data section below. *PreNotch2* is an indicator variable equal to 1 for individuals with fathers born during the PreNotch2 cohort, leaving the Notch cohort as the omitted category<sup>4</sup>. The PreNotch2 coefficient estimates the difference in wealth for individuals with fathers born in the PreNotch2 cohort compared to the Notch cohort. If individuals with fathers born in the Notch cohort received smaller bequests and inter-vivos transfers or gave more financial help to their fathers, then this coefficient will be positive.

$$Wealth_{it} = \alpha + \beta_1 PreNotch1_i + \beta_2 PreNotch2_i + \beta_3 PostNotch_i + Age_{it} + SurveyYear_t + \gamma Family_{it} + \epsilon_{it} \quad (2)$$

Further investigation of Figures 1 and 2 indicates that there was an increase in the growth rate of benefits for cohorts born between 1912 and 1916 (before the negative benefit shock in 1917), which correlates with the 1972 Social Security Amendment and benefits seem to partially return to trend following 1921, which is what some consider to be the end of the Notch. To better utilize the shock, I include the PreNotch1 cohort and the PostNotch cohort. Equation 2 is identical to Equation 1 except for inclusion of these additional father’s birth year cohort indicator variables. The Notch is still the omitted category, so these father’s birth year cohort coefficients are an estimate of the difference in wealth each cohort experienced in relation to the Notch cohort.

I expect the coefficient on PreNotch2 to be positive and larger than the other cohort coefficients since the difference in benefits is largest between this cohort and the Notch cohort. From Figure 2, it is not entirely clear if I should expect the coefficient on PreNotch1 to be positive or slightly negative, since the benefits are slightly lower than the Notch cohort. The results may depend in part on the father’s expectations about his retirement benefits rather than the benefits level, so if we find positive results for the PreNotch1 it may mean that the Notch cohort was “caught off guard” by the change to their Social Security benefits and offset this unexpected shock through decreased bequests and inter-vivos transfers or required a reverse transfer to maintain their consumption

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<sup>4</sup>Because this equation is limited to two cohort variables, when using this equation I only include individuals with fathers born between 1912 and 1921, rather than the full sample (1907-1926).

levels. I expect the coefficient on PostNotch to be slightly positive, however the difference in benefits is not as large as the PreNotch2 cohort. The effect I am most interested in estimating is the difference in wealth levels between the PreNotch2 and the Notch cohorts, but I include the other two father’s birth cohorts to provide additional evidence for the effect of the Notch on surrounding cohorts and to show that a negative time trend is not generating the results.

A problem with using OLS to estimate Equations 1 and 2 is that the distribution of the dependent variable, wealth, has an extremely long right tail. I employ several remedies to limit the influence of the outliers. The first and most straightforward remedy is to trim the top 5% of the wealth distribution from the data. The 5% is calculated using weighted means separately for each survey year and the Robustness Checks section includes estimates using different sample cutoff levels. I refer to this method as *OLS on Trimmed Sample*. The second remedy is Median Regression, as used by Altonji & Doraszelski (2005), who use this method to analyze the black-white wealth gap. This second remedy reduces the influence of outliers because Median Regression minimizes the absolute error, rather than the squared error as in OLS, so large errors caused by outliers in the wealth distribution will not affect the estimates as strongly as traditional OLS. For Median Regression I use a clustered bootstrap to estimate the standard errors.<sup>5</sup> These two methods as well as those discussed in the Robustness Checks section provide substantial evidence that there is a large, negative impact on wealth for men with fathers adversely affected by the Social Security benefits Notch.

## 2.2 Strategy 2: Graphical Approach

$$Wealth_{it} = \alpha + \beta BirthYear_i + Age_{it} + SurveyYear_t + \gamma Family_{it} + \epsilon_{it} \quad (3)$$

Strategy 1 is useful for determining the average effect of having a father born in the five year Notch cohort in comparison to the other five year cohorts. Here I propose an alternative method that allows more freedom in estimating father’s birth cohort transfer effects. In Equation 3, I estimate an intergenerational transfer effect for each father’s birth year to graphically compare to the cohort specific Social Security trend from Figure 2. The controls for this estimation strategy are the same as those found in Strategy 1, the only difference is the inclusion of father’s birth cohort fixed effects for years 1907-1925 with 1926 as the omitted year. I expect the birth year cohort

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<sup>5</sup>Due to convergence issues in Stata (a result of too many fixed effects and a relatively small dataset leading to small cells, see Median Regression Results below for more discussion on this problem), I estimate a more streamlined version of Strategy 1 when using Median Regression. Koenker has written code that should remedy this problem using R and I am in the process of re-estimating my Median Regression results.

transfer effects to follow a similar pattern as the average Social Security benefits seen in Figure 2 with a peak in benefits prior to the Notch in 1916, a trough roughly in the middle of the Notch cohort, and a gradual rise in benefits following the Notch.

### 3 Data

I use the Health and Retirement Study (HRS) due to the availability of wealth and parental data. The HRS initially included individuals if they or their spouse were born between 1931 and 1941. These birth years make the respondent's father most likely born between 1905 and 1915, if we assume that their father was 26 years old when the respondent was born.<sup>6</sup> The AHEAD sample is added in 1994, but this sample is of less use in this paper, since the respondents were born prior to 1923, with fathers likely born as late as 1897. In 1998, two new samples were added, both the Children of the Great Depression (born between 1923-1930) and the War Babies (born between 1942-1947). In 2004, the Early Baby Boomers (born between 1948-1953) were also added. The sample used in this paper consists of all individuals in the HRS sample with fathers born between 1907 and 1926.<sup>7</sup>

#### 3.1 Parent's Year of Birth

The HRS does not include the respondent's father's year of birth, but I calculate this variable using the respondent's father's age, year of death, death status, and survey year. The father's year of death data was merged from the raw HRS data files to the RAND compiled HRS data file. Due to small discrepancies in the father's age data, I create the birth year variable starting with data from the first survey year (1992) and move forward to 2006, replacing missing values. I initially create the birth year variable using only year of death and age (*year of death - age if dead*) and then fill in the missing values with birth year data created for those with living parents (*year of survey - age if alive*).<sup>8</sup> I start with the birth year created using the year of death method because it is more probable that the child will have a better recollection of their father's age shortly after their father's death than when their father is still alive. I make this assumption because a recent death will require the respondent to reflect on their father's life, organize the funeral, and deal with

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<sup>6</sup>The average age of the father at respondent's birth calculated using the HRS data.

<sup>7</sup>Individuals were removed who had missing values of .D, .R, .S, and .M for relevant variables, see RAND HRS Data Documentation Version H, Feb. 2008, p. 15 for more information.

<sup>8</sup>The data and method used in creating the year of birth variable potentially cause the birth year to be miscalculated up to one year on either side.



paperwork that most likely requests their father’s age. As shown below, the vast majority of the respondent’s fathers are already dead prior to the respondent being added to the survey, so varying this method has little effect on the outcome.

## 3.2 Wealth

There are several wealth measures available in the HRS. The broadest measure of wealth (Total Wealth) would be preferred, however due to coding errors in the value of secondary residences, this measure is not available for the third wave<sup>9</sup>, so a smaller number of observations is used when estimating effects, leading to larger standard errors. Rather than focusing only on the broadest measure, I include results for five different wealth measures. The breakdown of these different wealth measures can be seen in Table 1 which makes it clear that these measures are overlapping rather than mutually exclusive. The two wealth measures on which I focus on are the broadest wealth measure available for all eight survey years, Wealth (Excluding 2nd Residence), and the slightly less broad Non-Housing Wealth. These measures are preferred to more refined measures because the bequests, inter-vivos transfers, and/or reverse transfers most likely occurred many years prior to the survey date and it is difficult to know exactly which assets would be affected. The Non-Housing Wealth measure is useful because it captures the individual’s relatively more liquid wealth since it excludes real estate wealth, but is still broad enough to include most forms of wealth, unlike Financial Wealth. The exclusion of real estate wealth from the Non-Housing Wealth measure also circumvents the problem of real estate wealth being relatively volatile in the last three survey years (2002, 2004, and 2006).

## 3.3 Individual and Family Controls

Wealths levels increase with age and respondents with fathers born in the PreNotch cohorts will on average be older than those with fathers born in the Notch and PostNotch cohorts. To effectively control for the impact of age on wealth, I include unrestricted age fixed effects for the respondent. Education is also correlated with wealth and has been trending upward for both the respondent and their parents, so regressions include indicator variables for education of the father, mother, respondent, and the respondent’s spouse, splitting education into less than high school, high school, some college, and college completion or more. Any wealth transfers are likely to be split, in some manner, among all the parent’s children, so regressions include indicator variables for the number of

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<sup>9</sup>See RAND HRS Data Documentation Version H, Feb. 2008, pp. 548.

the respondent’s living siblings, 0, 1, 2, and 3 or more siblings. Indicator variables are also included for the number of respondent’s children (0, 1, 2, and 3 or more), race (black), ethnicity (Hispanic), marital status, number of divorces (never divorced, divorced once, and two divorces or more), and census region (Northeast, Midwest, South, and West). In addition I estimate coefficients separately for men and women.

Summary statistics for all controls are found in Table 4 for men and Table 5 for women. The age of both men and women drops as the father’s birth year increases, from 61.74 for men in PreNotch1 to 55.33 in PostNotch. Own, spouse’s, father’s, and mother’s education increase with father’s birth year for both men and women, from 12.82 in PreNotch1 to 13.25 in PostNotch for men’s own education. The percent married is relatively stable for both women and men while number of divorces increased slightly from 0.44 in PreNotch1 to 0.52 in PostNotch for men. The number of children decreased for both men and women from 3.24 in PreNotch1 to 2.88 in PostNotch for men while the number of living siblings increased from 2.65 in PreNotch1 to 3.05 in PostNotch for men.

## 4 Strategy 1 Results

Table 6 displays the results for Strategy 1 for men using the simplest division of the father’s birth cohorts (PreNotch2 and Notch). There appears to be a large difference in wealth between individuals with fathers born in the Notch cohort compared to the PreNotch2 cohort. The effect ranges from \$30,072 for Non-Housing Wealth to \$43,937 for Wealth (Excluding 2nd Residence) and these results are statistically significant at the 5% level. As individuals with fathers born in the Notch cohort are the omitted category, a positive number means that individuals with fathers born in the Notch cohort have lower wealth levels than individuals with fathers born just prior in the PreNotch2 cohort. These estimates support the hypothesis that individuals with fathers that received a negative income shock due to the 1977 Social Security Amendments (Notch) also have lower wealth levels than those with fathers born in the cohort that experience increased benefits growth rates as a result of the 1972 Social Security Amendments (PreNotch2).

The Strategy 1 results for men using all four cohorts, shown in Table 7, show that for all measures of wealth, there is a positive wealth difference for respondents with fathers born in the PreNotch2 cohort, and for all but Financial Wealth the difference is statistically significant at or above the 5% level. The effect for all PreNotch1 and PostNotch cohorts are positive (excluding Financial Wealth) as well and as expected, the effects are smaller than the PreNotch2 cohort for all

but Non-Housing Wealth. The outlier is Financial Wealth, but this wealth measure only includes liquid assets. Liquid assets are the least likely to reflect a difference because the transfer from the father most likely occurred several years prior to the survey date and it is unlikely that the transfer is still sitting in a savings account.

The lack of statistical significance for the PostNotch cohort reflects in part larger standard errors due to smaller sample sizes. First, there are far fewer observations in this cohort due to the sample design of the HRS. Respondents with fathers born in the PostNotch cohort would most likely not have been added until the middle of the survey (1998) when the War Babies cohort was added. The number of observations in Table 4 shows that there are roughly half as many observations in the PostNotch cohort as in the PreNotch cohorts. Additionally, there is some debate even among the Social Security Administration on the final birth year for the Notch Generation. The Social Security website on the Notch Generation history<sup>10</sup> states that there is no universally accepted definition for the final year of the Notch Generation, but many believe it to be either 1921 or 1926. Additionally, review of Figure 1 indicates that Social Security benefits did not return to the maximum level reached in the Notch cohort (1916) until almost 1955 for those retiring at age 65, so we should not expect wealth levels to return to PreNotch2 levels for the PostNotch cohort.

Men with fathers born in the PreNotch2 cohort have \$29,687 more Non-Housing Wealth or \$44,063 more Wealth (Excluding 2nd Residence) than those with fathers born in the Notch cohort. The PreNotch2 coefficient for Wealth (Excluding 2nd Residence) is not a trivial amount, it represents approximately 9% of the child's average wealth using the full sample or 15% using the trimmed sample. The PreNotch1 cohort effects are \$15,233 for Non-Housing Wealth and \$26,031 for Wealth (Excluding 2nd Residence) while the PostNotch cohort effects are \$29,956 for Wealth (Excluding 2nd Residence) and \$31,560 for Non-Housing Wealth. To put these results in perspective, I estimate that the future value of the difference in the Social Security benefits for the average father born in the PreNotch year 1916 compared to one born in the Notch year 1917 are between \$20,600 and \$65,500 depending on the interest rate.<sup>11</sup> This estimate only considers the father's and should also include at least a 50% increase in value to include the spousal benefits as well. The OLS on Trimmed Sample results fit between these estimated differences meaning it is probable

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<sup>10</sup>[www.ssa.gov/history/notchfile3.html](http://www.ssa.gov/history/notchfile3.html) footnote 3.

<sup>11</sup>To construct this estimate, I use the future value equation of an annuity for the time between when the father retires to his death (roughly 7.5 years from the HRS data assuming a retirement age of 65). This grows with simple interest for 12.5 years (roughly from the year the father died to the middle of my sample). The Social Security Administration graphs indicate a roughly \$85 difference in monthly Social Security benefits between those born in the PreNotch2 cohort and the Notch cohort. I then create the two estimates using either average stock market returns or T-Bill returns for 1977-1998 as the interest rate. Data on average returns are from the the Center for Research in Security Prices (CRSP).

that a large amount of the Social Security benefit difference was either transferred as bequests or inter-vivos transfers to their children or received from their children as reverse transfers. These results suggest that the majority of the Social Security shock is being absorbed by the children rather than the parent through decreased consumption.

#### 4.1 Median Regression Results

Median regression is used as an additional strategy to more effectively model the distribution of wealth. Koenker (2004) and Kato, Galvao, & Montes-Rojas (2010) explain that median regression is known to have an incidental parameters problem. In this case, when cluster bootstrapping the standard errors, the standard errors are inflated when several indicator variables are included. Because my estimating equation employs only indicator variables, I have pared down the estimating equation to only include the three cohort variables as well as what is arguably the most important estimator of an individual's wealth, an individual's own education (included as indicator variables). Table 8 contains the Median Regression estimates as well as the OLS on Trimmed Sample estimates using the pared down estimating equation, (in the far right column) for the reader to compare. The median regression results are smaller than the OLS on Trimmed Sample results, \$26,000 compared to \$53,218 for PreNotch2, but show a very similar pattern and are statistically significant. The Median Regression results are 16% of the individual's median wealth and as mentioned previously, the OLS on Trimmed Sample wealth effects are roughly 15% of the average of the individual's wealth using the trimmed sample indicating that these results are very similar in percentage terms.

#### 4.2 Results for Women

While I find large and statistically significant wealth differences for men, I do not find similar differences for women. The simplest OLS on Trimmed Sample results for women are found in Table 9 and the results for the full range of father's birth cohorts are in Table 10. These results indicate that there is no effect of the Social Security income shock on women's wealth levels. The coefficients are smaller or of the opposite sign from the results for men, and none are statistically significant at even the 10% level. While the difference in Wealth (Excluding 2nd Residence) for the PreNotch2 and Notch cohorts for men in Table 6 is \$43,937, it is -\$5,135 for women in Table 9. Although the birth cohort effects are not similar for men and women, the control variables, seen in the appendix, are similar and the expected sign and magnitude suggesting no selection difference

for men and women.<sup>12</sup> A discussion of the potential cause for this lack of wealth difference for women is found in the What is the Transfer Channel? section below.

### 4.3 What is the Transfer Channel?

The lack of results for women may help us understand the nature of the transfer behavior. Deere & Doss (2005) find that inheritance during the last two centuries has become more equal for men and women and also reference Shammass, Salmon, & Dahlin (1987:196) who find that by 1970 it was not uncommon for women in the United States to account for at least half of testators. These assertions seem valid given that the average probability of ever receiving an inheritance from a parent given one of the parents is dead is 17.3% for men and 16.3% for women in my sample. If parents give equally to their sons and daughters then the Social Security shock should affect both the sons and daughters similarly, however as shown in Tables 11 and 12, men have large wealth differences and women do not experience these same shocks. Additionally, as seen in Tables 11 and 12 the increased probability of receiving an inheritance is highest, at roughly 5% (30% of the base) for a man whose father was born in the PreNotch2 cohort compared to the Notch cohort, while the probability for women is 3.7% higher in the PreNotch2 cohort. However, the estimates for women appear to reflect a negative linear time trend in inheritance relative probability rather than following the Social Security benefits as shown in Figure 2. In addition to inheritance, the fathers can also change their inter-vivos transfers to counteract the negative Social Security benefit shock. Men and women have different probabilities of receiving financial help from their parents (given one parent is alive). Men only have a 5.1% chance of receiving financial help in the first survey year compared to 7.5% for women. Table 11 shows that men are 2.9% (57% of the base) more likely to receive financial help if their father was born in the PreNotch2 cohort while in Table 12 there is no difference for women. It seems clear that one of the channels that the Social Security shock travels is the downward transfer from father to son and it does not appear to be affecting women in the same way. It is also possible that children are providing aid to their parents when they experience this negative shock through reverse transfers. Men have a 9.9% probability of financially helping their parents in the first survey year (given at least one parents is alive) while women have an 8.6% probability. Table 11 shows that men with fathers born in the PreNotch2 cohort are 4.97% (50% of the base) less likely to provide financial assistance to their parents than those with fathers born in the Notch cohort and Table 12 indicates that there is no difference for women. It seems that the

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<sup>12</sup>The alternate specifications for women all reflect no wealth differences for those with fathers born in the Notch compared to the other cohorts and can be found in the Appendix.

wealth difference is driven partly by decreased inheritance and inter-vivos transfers from father to child for men as well as increased reverse transfers from child to father.

Previous studies find women transfer more time to their parents than men and are usually responsible for their parent’s care [e.g. Bourke (2009), Stoller (1983), and Zissimopoulos (2001)]. It may be that women transfer the good in which they are relatively more endowed. In this sample, a smaller percentage of women were employed compared to men and women’s income is approximately half of men’s, so it is possible that women are providing time transfers in lieu of financial transfers. Even for those women active in the labor market, Stoller (1983) finds that time transfers to parents for men fall as they work, but women’s time transfers do not. The data clearly show that women provide more time transfers in general; women have a 6.5% probability of providing time transfers to their parents in the first survey year given at least one parent is alive compared to only 4.4% for men. Tables 11 and 12 do not appear to corroborate the remainder of this theory. However the estimates for relative probability of Gave Time in the PreNotch2 cohort are too noisy to provide evidence that women are providing increased time transfers, however this could be a product of a relatively small number of observations or it may be that there is a response on the intensive rather than extensive margin.

#### **4.4 Stratifying by Father’s & Own Education**

If a reverse transfer is one of the primary mechanisms at work, fathers who have less wealth at retirement should rely more on their children in the event of an adverse income shock and children with the means to provide care to their parents should be more likely to provide transfers. The HRS does not contain data on parent’s wealth levels, but education and wealth are highly correlated, so I stratify the sample by father’s education into one group with high school education or less and another with above high school education. As further motivation for this decision to stratify, using the AHEAD sample of the HRS, I find that for respondents born in the father’s birth cohorts investigated in this paper, Social Security benefits constitute more than twice as much of a less educated individual’s total wealth compared to a more educated individual. This difference in the proportion of Social Security benefits to wealth can be seen in the bottom of the last two columns of Table 19 which illustrates the breakdown of wealth by education level, average Social Security benefits, and Social Security benefits share of wealth by birth cohort. The OLS on Trimmed Sample results found in Table 13 indicate that individuals with less educated fathers (had less wealth at retirement) also experienced larger transfer effects, while those with more educated fathers (more retirement wealth) experienced smaller and mostly negative, albeit very noisy, effects.

The difference in the transfer effects on wealth range from \$57,830 for the PreNotch2 coefficient on Wealth (Excluding 2nd Residence) for less educated fathers to -\$12,131 for more educated fathers.

To investigate the second implication, that children with larger resources should provide larger transfers to their parents, I could stratify by wealth levels, but rather than stratify on the dependent variable, I stratify on the individual's education level. Table 14 provides evidence that children with potentially higher wealth levels (more educated) provide more support for their parents who experienced a negative wealth shock than those that are worse off (less educated). As expected, less educated individuals provide support for their parents, however the effects are much smaller and noisy in comparison to those individuals with more education. Differences in transfer effects range from \$59,333 for the PreNotch2 coefficient on Wealth (Excluding 2nd Residence) for more educated individuals to \$17,827 for less educated individuals. These estimates provide support for the hypothesis that reverse transfers are a primary mechanism in the wealth differences.

## 5 Strategy 1 Robustness Checks

### 5.1 Logged, Robust, and Percentile Regression Results

In addition to OLS on Trimmed Sample and Median Regression, Table 15 reports the estimates for three additional robust estimation strategies. The first two columns are estimates from an equation identical to Strategy 1 except the wealth variable has been logged to minimize the effects of the outlying observations in the right tail of the wealth distribution. The only cost to using this strategy is that individuals with zero or negative wealth have been dropped from the sample, the regression for Wealth (Excluding 2nd Residence) is missing 5.8% of the sample as a result. For both measures of wealth, men with fathers born in the PreNotch2 cohort have roughly 17% more wealth than those with fathers born in the Notch cohort. This 17% is approximately the same as the OLS on Trimmed Sample and Median Regression results converted into a percentage of average and median wealth, 15% and 16% respectively. The next two columns are estimated using Robust Regression which also uses all the controls from Strategy 1, but Robust Regression down-weights observations that are classified as outliers. While the coefficients are not statistically significant and are smaller (\$12,062 for Wealth (Excluding 2nd Residence) PreNotch2), the coefficients still reflect a similar pattern as the other methods. Lastly, I convert wealth into percentiles by sorting the sample by survey year and the appropriate wealth variable, then create a running sum of the observation's household weight and all prior weights in the survey year, then divide this running sum by the total weight for each survey year. The Percentile effects follow the same pattern as the

other methods, with a 2.65 to 2.87 percentile difference in wealth for men with fathers born in the PreNotch2 cohort compared to the Notch cohort. It is not straightforward to convert the percentile to a monetary value, but moving from the 50th to 53rd percentile is a change of \$16,448, while a change from the 25th to 28th percentile is a change of \$10,704, and from the 75th to 78th percentile is \$58,626 for Wealth (Excluding 2nd Residence). All of these robust estimation strategies tell the same story; sons are experiencing lower wealth levels as a result of the negative Social Security benefit shock their parents experienced.

## 5.2 Stratify by Father’s Year of Death

A simple robustness check to the shock this paper employs is to separately estimate results for individuals whose father died prior to the Social Security Amendment of 1977. If the father changed his transfer behavior or required a reverse transfer, he (or his wife) must have been alive following the Social Security Amendment to first accrue the income shock. The first two columns of Table 16 restrict the sample to only include respondents with a father who died prior to 1977 and the last two columns restrict the sample to respondents with fathers that died after 1977. The results for respondents with fathers dead following 1977 are very similar to the full sample OLS on Trimmed Sample results, except they are slightly larger. In contrast, the results for respondents with fathers dead prior to 1977 are much smaller and not statistically significant, providing evidence that the Social Security Amendments are what is driving this difference in wealth levels. The effect of having a father born in the PreNotch2 cohort for individuals with their father’s death occurring after the 1977 Social Security Amendments is \$46,756 compared to \$25,381 for those whose fathers died prior to the Amendment. Since survivor benefits exist for the wives of the fathers dead prior to 1977, a slightly more preferred specification would stratify by restricting the mother to have also died prior to 1977, but this limits the sample to only 731 observations, posing problems for estimation.

Another potential explanation for why there is still a small effect for the PreNotch2 cohort for individuals with fathers dead prior to 1977 may be that the restricted sample includes fathers that were affected by increased benefits growth as a result of the 1972 Social Security Amendment. To remedy this, I stratify the sample using a 1972 father’s death year cutoff. The results found in Table 17 provide even clearer evidence that the Social Security Amendments are what is driving the difference in wealth levels. The effect for individuals with fathers dead following the 1972 Amendment are slightly larger and more statistically significant than the original sample and the dead post-1977 sample, while the results for individuals with fathers dead prior to the 1972 Amendment are much smaller and not statistically significant. The transfer effect for the PreNotch2 cohort



for Wealth (Excluding 2nd Residence) restricted to those individuals with fathers dead following the 1972 Amendment sample is \$50,516 and only -\$6,044 for individuals with fathers dead prior to 1972. This stratification provides much stronger support for the argument that the Social Security Amendments are the driving force behind the transfer effects estimated in this paper.

### 5.3 Different Trimmed OLS Levels

As mentioned in the Method section, wealth data are not normally distributed and one of the remedies used in this paper is to trim the top 5% from the wealth distribution. To show that the estimates are robust to different distribution trimming specifications, Table 18 presents estimates for the full sample and samples constructed by trimming the top 1%, 3%, default 5%, and 10% from Wealth (Excluding 2nd Residence). All effects are the expected sign with the exception of the PostNotch effect for the full sample, which is slightly negative, but extremely noisy. The PreNotch2 transfer effects are approximately the same level for the 1%, 3%, and 5% trim specifications and statistically significant at the 10%, 5% and 1% levels, respectively. The full sample transfer effect for PreNotch2 is the expected sign and roughly the same value as the 5% sample transfer effect, \$33,157 for full sample compared to \$44,063 for the sample trimmed at 5%, but is statistically insignificant. The PreNotch2 transfer effect for the sample trimmed at 10% is smaller at \$26,380, but statistically significant at the 5% level. These results indicate that the top 1% introduces a large amount of noise to the estimates with coefficients that are roughly the same.

### 5.4 Distributional Impact

Figure 3 provides further evidence that outliers at the upper and lower end of the wealth distribution are not driving the estimates. Figure 3 depicts the estimates of 250 regressions similar to Equation 1 except the dependent variable is an indicator variable equal to one when the Wealth (Excluding 2nd Residence) of an individual is greater than some threshold  $Z$ . Wealth is on the horizontal axis<sup>13</sup>, while the vertical axis is the increased probability an individual with a father born in the PreNotch2 cohort will have a wealth level above the wealth threshold  $Z$  in relation to an individual with a father born in the Notch cohort. The black line is created from these regression coefficients and the gray lines represent the 95% confidence interval. I expect the relative probability to be positive, since the parents born in the PreNotch2 cohort experienced a positive income shock and

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<sup>13</sup>The Wealth variable is graphed categorically along the horizontal axis with the first 25 regressions starting at the minimum value of wealth for this group, -\$2,453,000 + \$98,120 per bin, then starting at \$0 for the next 200 regressions a bin size of \$7,500 was used, and lastly at \$1,500,000 a bin size of \$2,166,200 was used to fit all the wealth data.

those with fathers born in the Notch cohort experienced a negative shock. The most statistically significant action appears to be occurring in the region between the median and mean of wealth (illustrated as vertical gray lines on the graph), which means that the upper and lower tails of the wealth distribution are not the driving force behind the results found in this paper.

## 6 Strategy 2 Results

In Figure 4, I present the graphical results for Wealth (Excluding 2nd Residence) based on Strategy 2: Graphical Approach, with the gray dashed lines providing a visual breakdown of the four father's birth year cohorts. The effect of father's wealth is rising prior to the bump in 1912, followed by a relative flattening until 1916, then a drop during the Notch, followed by a relatively noisy rise in the PostNotch cohort. The notch in this figure is visible, however there is a positive blip in 1919. In Figure 5, I include the average Social Security benefits from the Social Security Administration<sup>14</sup>, the dashed gray line, along with the birth year effects. The differences in wealth are strikingly similar to the Social Security benefit pattern in Figure 2.

The OLS on Trimmed Sample estimates when stratifying by fathers and own education produced even stronger results. I include graphs that restrict the sample to those groups that experienced larger and more statistically significant transfer effects. Figure 6 only includes more educated sons (more than 12 years of education) and the results are basically the same as the full sample results. The results restricting the sample to only include less educated fathers (12 years or less) are extremely similar to the average Social Security benefits as seen in Figure 7. Lastly, Figure 8 restricts the sample to fathers that would need the most help in the event of a negative shock (less educated) and sons that would most able to help (more educated). This specification seems to be the best match of the Social Security benefits, providing further evidence that a reverse transfer may be the primary mechanism causing these wealth differences.

## 7 Conclusion

The Social Security Amendments of 1977 and 1972 provide a rare opportunity to investigate the intergenerational transfer behavior of individuals facing an exogenous shock to income. The cohorts analyzed in this paper are still living and the repercussions of the change to Social Security are felt today, making the results of this paper both informative and relatable. The transfer effects

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<sup>14</sup>These values were taken from chart 6 in Figure 1 of this paper.

estimated in this paper indicate that sons have been negatively impacted by the Social Security Notch through reductions in bequests, but more importantly through increased financial transfers to their parents. The wealth transfer effect for sons with fathers negatively affected by the Social Security Notch is not small, with most estimates representing a wealth difference of 16%. This large difference in wealth will have long lasting impact on the children of those born in the Notch Generation. However, it is still unclear why women are unaffected by the income shocks their parents experience and additional study is required to answer this question. Numerous petitions to restore the Notch Generation's Social Security benefits to Pre-Notch levels have been unsuccessful and with many of the affected generation deceased, this will not likely be resolved to the Notch Generation's surviving members' pleasure. What is clear is that the ongoing debate over how to reform Social Security should include the impact on the next generation as well.

## Works Cited

- Arrondel, Luc and LaFerrere, Anne, 200. "Taxation and Wealth Transmission in France", *Journal of Public Economics*, Vol. 79, pp. 3-33.
- Barro, Robert J, 1974. "Are Government Bonds Net Wealth?", *Journal of Political Economy*, Vol. 82, pp. 1095-1117.
- Becker, Gary S., 1974. "A Theory of Social Interactions, *Journal of Political Economy*, Vol. 82, pp. 1063-1094.
- Becker, Gary S. and Tomes, Nigel, 1986. "Human Capital and the Rise and Fall of Families," *Journal of Labor Economics*, Vol. 4, No. 3, Part 2: The Family and the Distribution of Economic Rewards (Jul., 1986), pp. S1-S39
- Bernheim, B. Douglas, Andrei Shleifer, and Lawrence H. Summers, 1985. "The Strategic Bequest Motive, *Journal of Political Economy*, Vol. 93, N. 6, pp. 1045-1076.
- Bourke, Josephine Emily, 2009. "Elder Care, Self-Employed Women and Work-Family Balance. An Exploration Using Work-Family Border Theory."
- Cawley, John, Moran, John, and Simon Kosali, 2010. "The Impact of Income on the Weight of Elderly Americans", *Health Economics*, Vol. 19, pp. 979-993.
- Cox, Donald, 1987. "Motives for Private Income Transfers", *Journal of Political Economy*, Vol. 95, N. 3, pp. 508-546.
- Cox, Donald and Jimenez, Emmanuel, 1992. "Social Security and Private Transfers in Developing Countries: The Case of Peru", *The World Bank Economic Review*, Vol. 6, No. 1, pp. 155-169.
- Croda, Enrica, 2000. "Sharing the Wealth: Income Shocks and Intra-Family Transfers in Germany".
- Deere, Carmen Diana and Doss, Cheryl, 2005. "The Gender Asset Gap: What Do We Know and Why Does it Matter?".
- Engelhardt, Gary V., 2008. "Social Security and Elderly Homeownership", *Journal of Urban Economics*, Vol. 63, pp. 280-305.
- Engelhardt, Gary V., Gruber, Jonathan, and Perry, Cynthia D., 2005. "Social Security and Elderly Living Arrangements", *The Journal of Human Resources*, Vol. 40, No. 2, pp. 354-372.
- Gale, W. G. and Scholz, J. K. (1994), "Intergenerational Transfers and the Accumulation of Wealth", *Journal of Economic Perspectives*, No. 8, pp. 145-160.

General Accounting Office. 1988. Social Security: The Notch Issue. Washington, D.C.: Government Accounting Office.

Goda, Gopi Shah, Golberstein, Ezra, and Grabowski, David C. 2010. "Income and the Utilization of Long-term Care Services: Evidence from the Social Security Benefit Notch", NBER Working Paper 16076.

Goldscheider, Frances and Goldscheider, Calvin, 1993. "Who's Nest? A Two Generational View of Leaving Home During the 1980's", Journal of Marriage and Family, Vol. 55, No. 4 (Nov., 1993), pp. 851-862.

Guth, Werner, Offerman, Theo, Potters, Jan, Strobel, Martin, and Verbon, Harrie A. A., Dec. 2002 "Are Family Transfers Crowded Out by Public Transfers?", The Scandinavian Journal of Economics, Vol. 104, No. 4 (Dec., 2002), pp. 587-604. Source: The Scandinavian Journal of Economics, Vol. 104, No. 4, pp. 587-604.

Kato, Kengo, Galvao, Jr., Antonio F., and Montes-Rojas, Gabriel V., Feb. 2010. "Asymptotics and Bootstrap Inference for Panel Quantile Regression Models with Fixed Effects".

Koenker, Roger, Oct. 2004. "Quantile Regression for Longitudinal Data", Journal of Multivariate Analysis, Vol. 91, Issue 1, pp. 74-89.

Kotlikoff, Laurence J., Spring 1998. "Intergenerational Transfers and Savings", The Journal of Economic Perspectives, Vol. 2, No. 2 (Spring, 1988), pp. 41-58.

Krueger, Alan and Jorn-Steffen Pischke, 1992. "The Effect of Social Security on Labor Supply: A Cohort Analysis of the Notch Generation, Journal of Labor Economics 10, pp. 412-437.

Menchik, Paul L. and Jianakoplos, Nancy Ammon, 1997. "Black-White Wealth Inequality: Is Inheritance the Reason?", Economic Inquiry, Vol. XXXV, April 1997, pp. 428-442.

Moran, John R. and Simon, Kosali Ilayperuma, 2005. "Income and the Use of Prescription Drugs by the Elderly: Evidence From the Notch Cohorts", NBER Working Paper 11068.

Reil-Held, Anette, 2006. "Crowding out or crowding in? Public and private transfers in Germany", Eur J Population, Vol. 22, pp. 263-280.

Schoeni, Robert F., 1993. "Private Interhousehold Transfers of Money and Time: New Empirical Evidence", Rand Labor and Population Program, Working Paper Series 93-26.

Shammas, Carole, Marylynn Salmon and Michel Dahlin. 1987. "Inheritance in America: From Colonial Times to the Present", New Brunswick: Rutgers University Press.

Snyder, Stephen E. and Evans, William N., 2002. "The Impact of Income on Mortality: Evidence from the Social Security Notch", *The Review of Economics and Statistics*, Aug 2006, 88(3): pp. 482-495.

Stoller, Eleanor Palo, 1983. "Parental Caregiving by Adult Children", *Journal of Marriage and Family*, Vol. 45, No. 4 (Nov. 1983), pp. 851-858.

Zissimopoulos, Julie, 2001. "Resource Transfers to the Elderly: Do Adult Children Substitute Financial Transfers for Time Transfers?", *Rand, Labor and Population Program, Working Paper Series 01-05*.

## 8 Figures

Figure 1: Social Security Notch

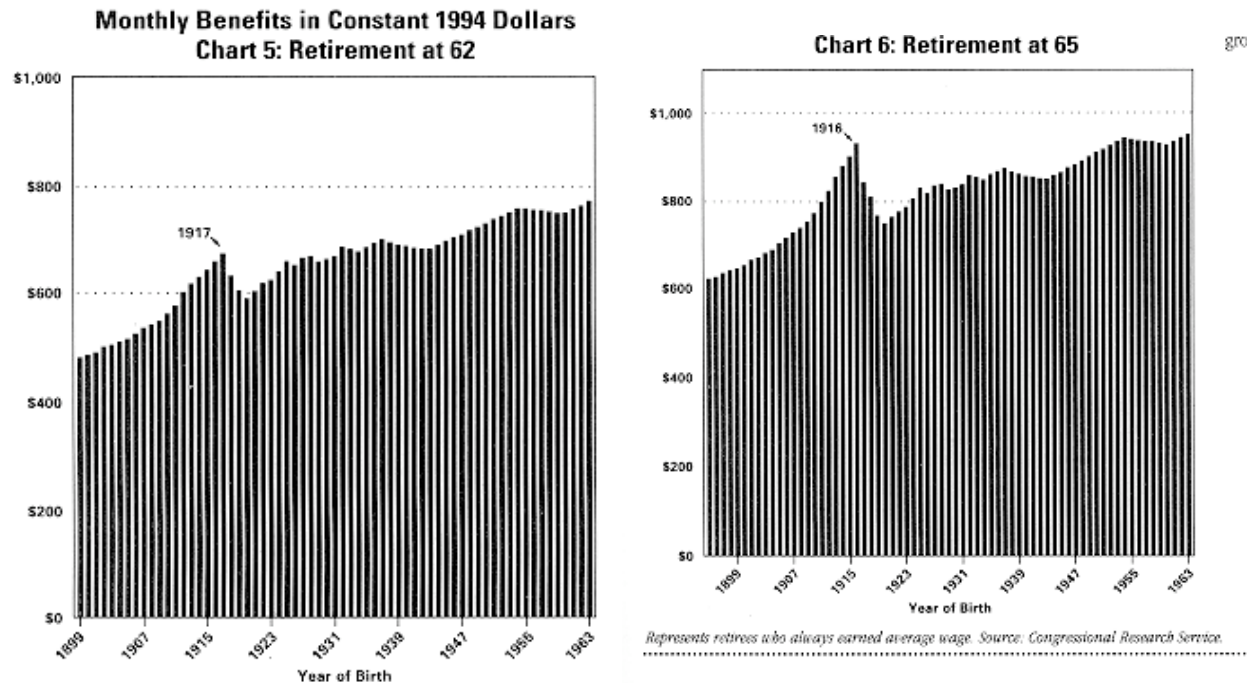
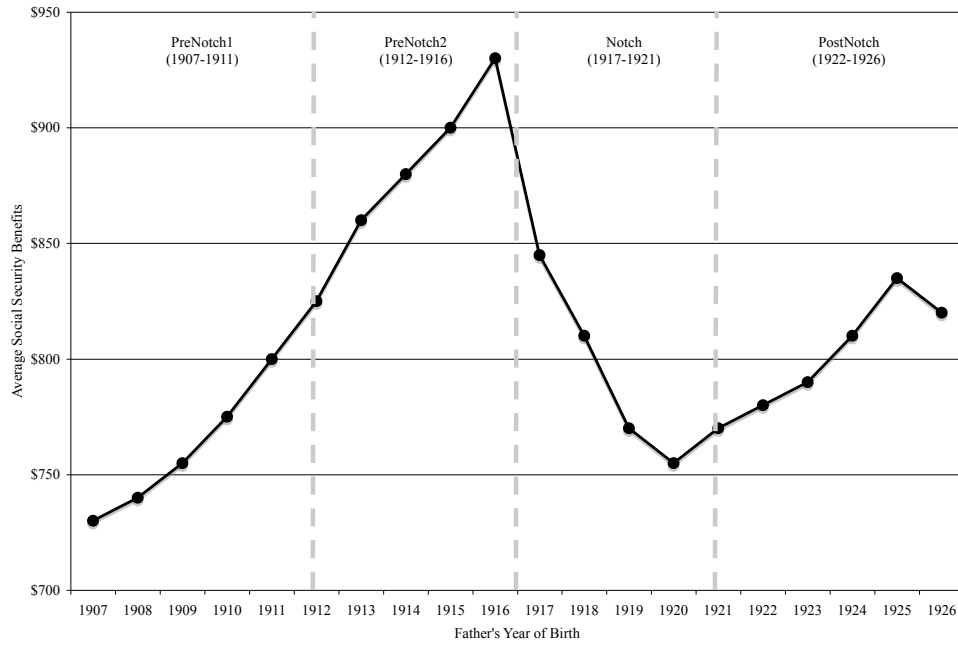


Chart 5 and Chart 6 from [www.ssa.gov/history/notchfile1.html](http://www.ssa.gov/history/notchfile1.html).

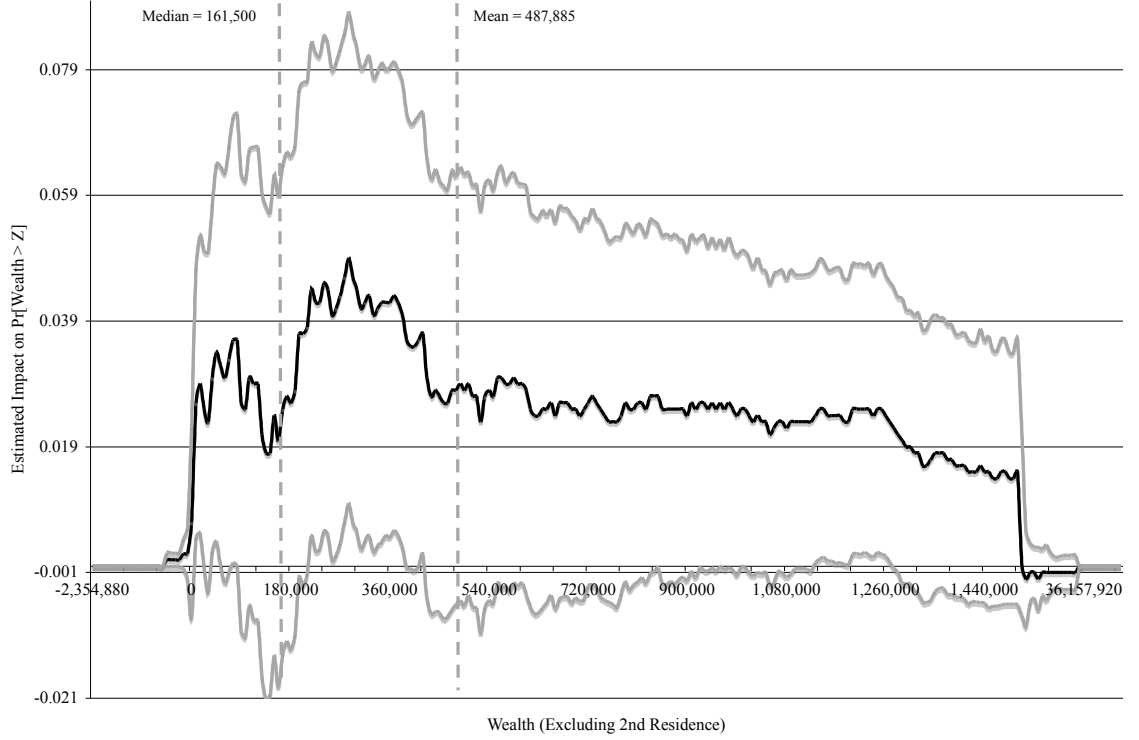
Figure 2: Graphical Version of Method



Recreation of average monthly Social Security benefits for individuals retiring at age 65 using Chart 6 from [www.ssa.gov/history/notchfile1.html](http://www.ssa.gov/history/notchfile1.html).

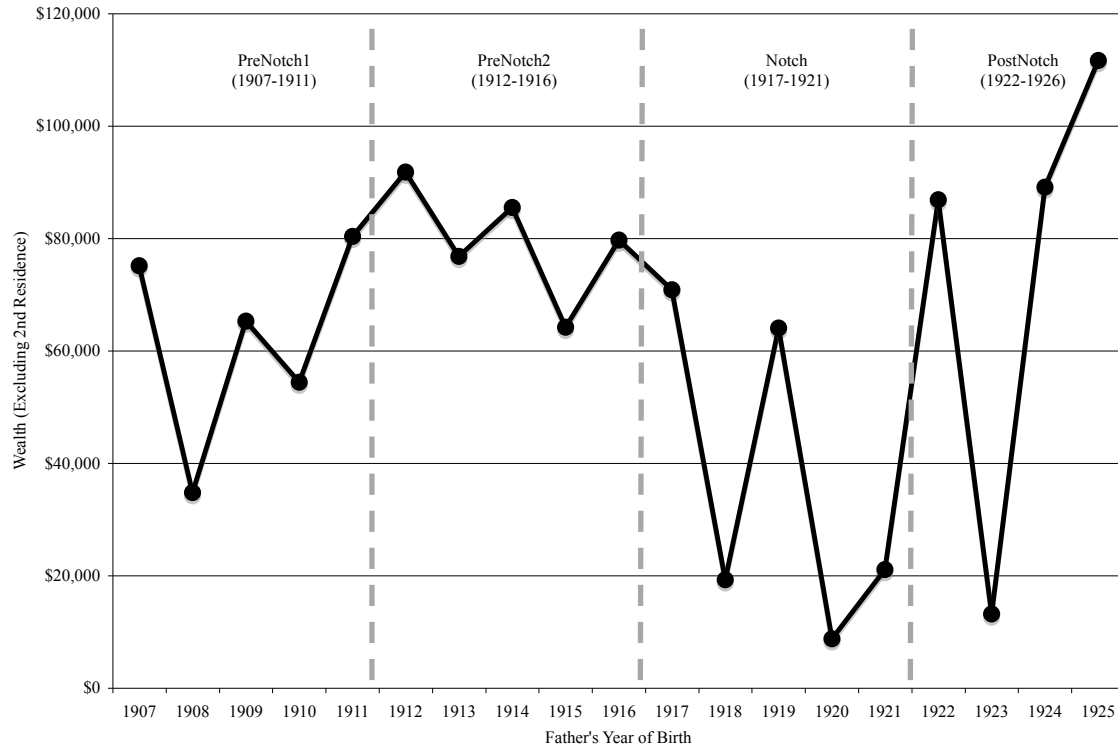


Figure 3: Distributional Effects for Men



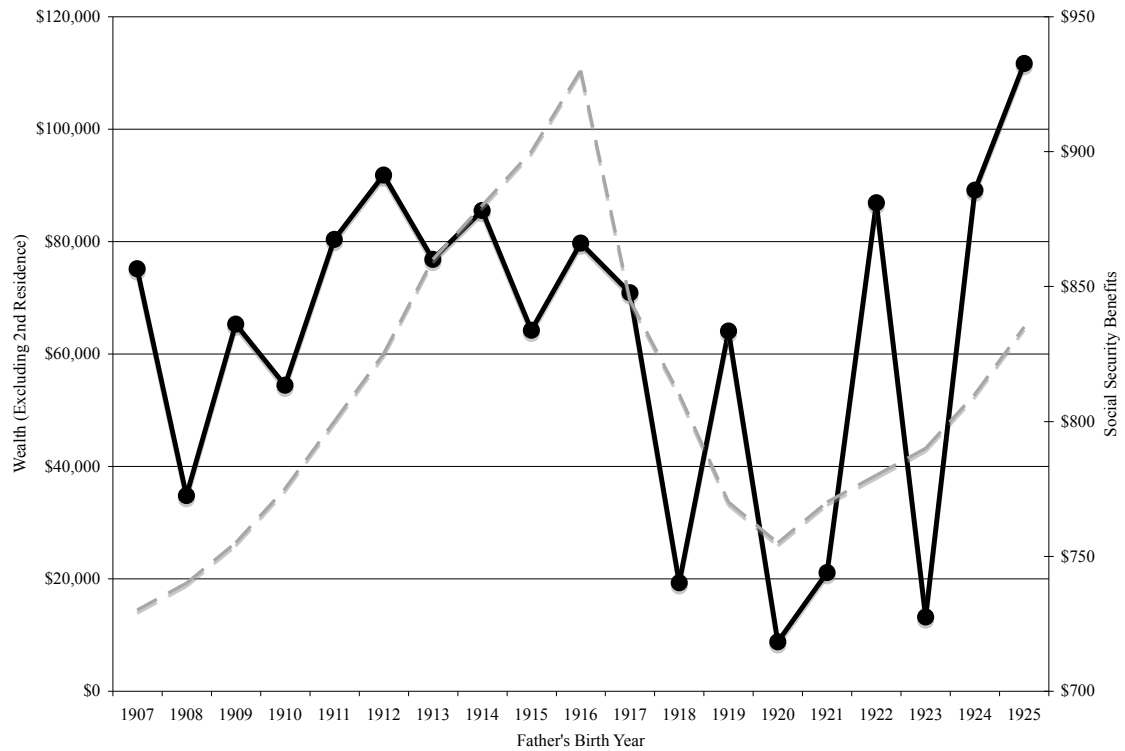
The black line depicts the estimates of 250 regressions similar to Equation 1 except the dependent variable is an indicator variable equal to one when the Wealth (Excluding 2nd Residence) of an individual is greater than some threshold  $Z$ , so the line represents the increased probability an individual with a father born in the PreNotch2 cohort has of possessing at least  $Z$  value of wealth in relation to an individual with a father born in the Notch cohort. The Wealth variable is graphed categorically along the horizontal axis, with the first 25 regressions starting at the minimum value of wealth for this group,  $-\$2,453,000 + \$98,120$  per bin, then starting at  $\$0$  for the next 200 regressions a bin size of  $\$7,500$  was used, and lastly at  $\$1,500,000$  a bin size of  $\$2,166,200$  was used to fit all the wealth data. The gray lines represent the 95% confidence interval.

Figure 4: Men - Wealth (Excluding Secondary Residence)



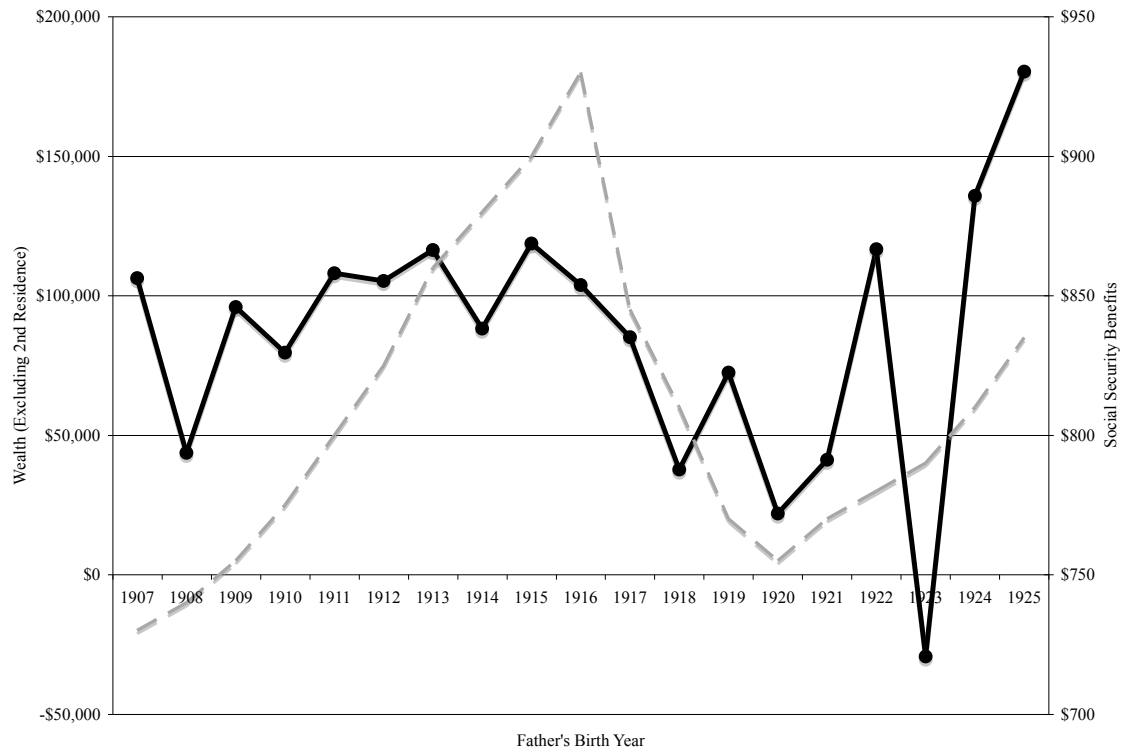
This graph is created using the individual's father's year of birth effects from a regression of the individual's wealth on father's year of birth fixed effects, own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

Figure 5: Men - Wealth (Excluding Secondary Residence) Including Social Security Benefits



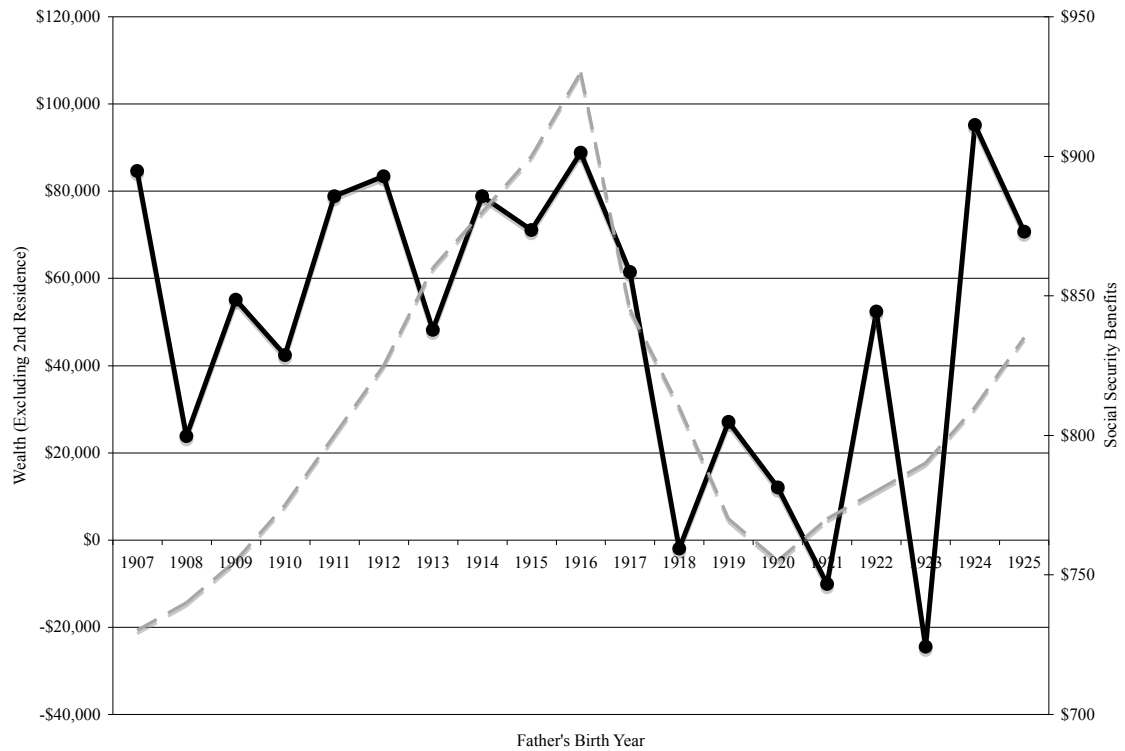
The solid black line is created using the individual's father's year of birth effects from a regression of the individual's wealth on father's year of birth fixed effects, own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, black, Hispanic, census region, wave, and age fixed effects. The dashed gray line is the Social Security Benefits from Figure 2.

Figure 6: Men - Predicted Wealth (Excluding Secondary Residence) - More Educated



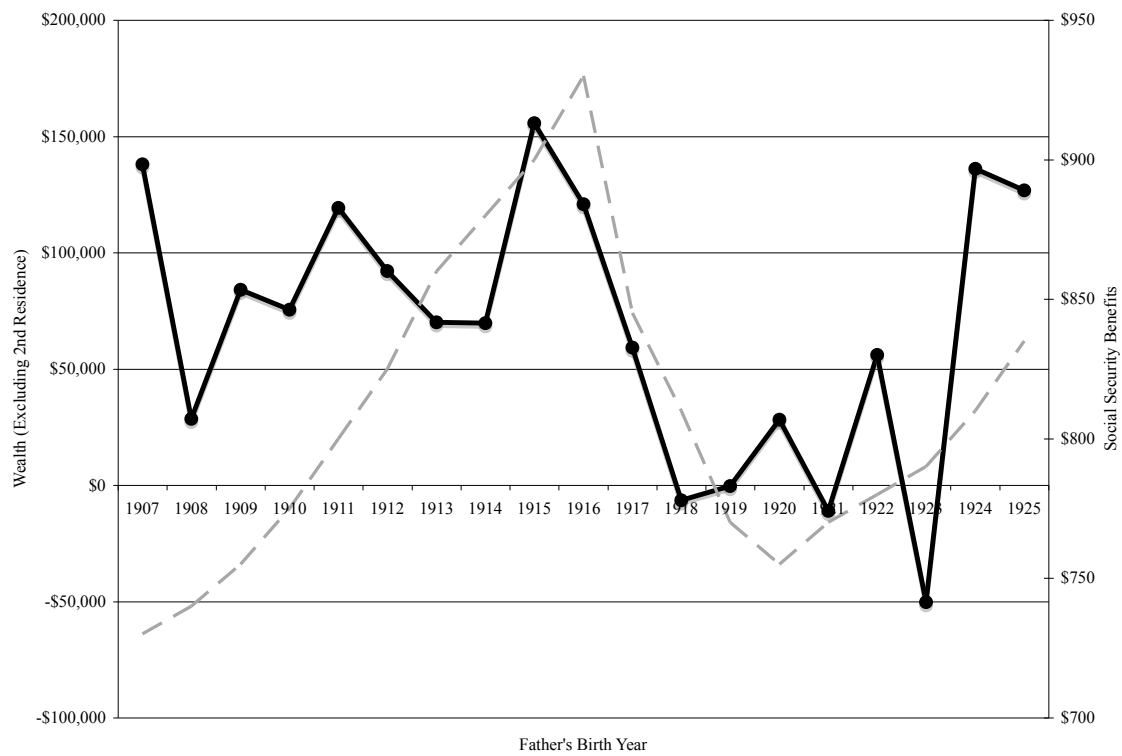
The solid black line is created using the individual's father's year of birth effects from a regression of the individual's wealth on father's year of birth fixed effects, own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects restricting the sample to only include individuals with more than 12 years of education. The dashed gray line is the Social Security Benefits from Figure 2.

Figure 7: Men - Wealth (Excluding Secondary Residence) - Less Educated Fathers



The solid black line is created using the individual's father's year of birth effects from a regression of the individual's wealth on father's year of birth fixed effects, own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects restricting the sample to only include individuals with fathers with 12 years or less education. The dashed gray line is the Social Security Benefits from Figure 2.

Figure 8: Men - Wealth (Excluding Secondary Residence) - More Educated Sons and Less Educated Fathers



The solid black line is created using the individual's father's year of birth effects from a regression of the individual's wealth on father's year of birth fixed effects, own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects restricting the sample to only include individuals with more than 12 years of education and fathers with 12 years of less education. The dashed gray line is the Social Security Benefits from Figure 2.

## 9 Tables

Table 1: Wealth Measures Explained

	Non-Primary Residence Real Estate	Net Value of Vehicles	Net Value of IRA	Net Value of Stocks, Mutual Funds, and Investment Trusts	Checking, Savings, or Money Market	CD, Gov Savings Bond, and T-Bills	Net Value of Bonds and Bond Funds	Net Value of all other Savings	Value of Primary Residence	Net Value of Business	Value of Secondary Home
Total Non- Housing Wealth	x	x	x	x	x	x	x	x			
Total Wealth (Excluding IRAs)	x	x		x	x	x	x	x	x	x	
Net Value of Non-Housing Financial Wealth				x	x	x	x	x			
Total Wealth (Excluding Secondary Residence)	x	x	x	x	x	x	x	x	x	x	
Total Wealth (Including Secondary Home)	x	x	x	x	x	x	x	x	x	x	x

Table 2: Men: Simple Mean Comparison of Wealth by Father's Birth Year

Wealth Measure	PreNotch1 (1907-1911)	PreNotch2 (1912-1916)	Notch (1917-1921)	PostNotch (1922-1926)
Wealth (Excluding 2nd Residence)	\$510,441	\$490,579	\$463,765	\$469,650
Non-Housing Wealth	\$366,607	\$351,996	\$326,436	\$349,941
Wealth (Excluding IRA)	\$431,589	\$413,747	\$405,096	\$407,271
Non-Housing Financial Wealth	\$120,142	\$126,364	\$126,334	\$106,501
Total Wealth	\$553,241	\$525,587	\$513,437	\$492,205

Means are unweighted and do not control for survey year or age of respondent.

Table 3: Women: Simple Mean Comparison of Wealth by Father's Birth Year

Wealth Measure	PreNotch1 (1907-1911)	PreNotch2 (1912-1916)	Notch (1917-1921)	PostNotch (1922-1926)
Wealth (Excluding 2nd Residence)	\$495,832	\$387,771	\$415,037	\$472,028
Non-Housing Wealth	\$357,073	\$267,405	\$277,764	\$341,601
Wealth (Excluding IRA)	\$421,722	\$322,308	\$354,070	\$417,359
Non-Housing Financial Wealth	\$174,423	\$101,840	\$99,882	\$97,895
Total Wealth	\$531,826	\$418,172	\$461,789	\$497,648

Means are unweighted and do not control for survey year or age of respondent.



Table 4: Men: Summary Statistics by Father's Birth Cohort

Variable	PreNotch1 (1907-1911)	PreNotch2 (1912-1916)	Notch (1917-1921)	PostNotch (1922-1926)
Age	61.74	59.52	57.48	55.33
Own Education	12.82	12.97	13.17	13.25
Wife's Education	12.68	12.84	12.82	13.12
Father's Education	9.44	9.86	9.93	10.32
Mother's Education	9.99	10.1	10.32	10.7
Married	0.82	0.80	0.82	0.79
# of Divorces	0.44	0.49	0.53	0.52
# of Children	3.24	3.18	3.14	2.88
# of Siblings	2.65	2.69	2.92	3.05
Wave	4.45	4.67	5.13	5.94
Obs	7,085	5,814	3,503	1,481

Means are weighted using household weight.

Table 5: Women: Summary Statistics by Father's Birth Cohort

Variable	PreNotch1 (1907-1911)	PreNotch2 (1912-1916)	Notch (1917-1921)	PostNotch (1922-1926)
Age	60.26	57.98	55.45	52.93
Own Education	12.63	12.70	12.88	12.90
Husband's Education	12.69	12.80	12.91	13.05
Father's Education	9.45	9.64	9.95	10.23
Mother's Education	9.70	9.88	10.21	10.31
Married	0.69	0.70	0.73	0.73
# of Divorces	0.40	0.43	0.45	0.53
# of Children	3.31	3.25	3.19	3.15
# of Siblings	2.83	2.91	3.21	3.27
Wave	4.50	4.59	4.94	5.46
Obs	8,937	7,870	5,983	3,213

Means are weighted using household weight.

Table 6: Men Simple - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
PreNotch2 (1912-1916)	43936.9** (17130.4)	30071.8** (12221.5)	39324.8*** (13623.7)	6386.5 (4564.7)	40636.6** (19419.1)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
<i>N</i>	9036	9007	9020	8988	8203

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

These regressions only include respondents with fathers born from 1912 - 1921.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 7: Men - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
PreNotch1 (1907-1911)	26030.8 (18213.4)	15233.0 (13202.0)	22542.2 (14845.0)	-3285.0 (5250.7)	29240.7 (21230.5)
PreNotch2 (1912-1916)	44063.3*** (16760.5)	29686.5** (12085.4)	38223.2*** (13427.1)	3625.9 (4576.2)	41911.0** (19019.0)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	29956.4 (23191.0)	31560.2* (17410.4)	14887.7 (18257.5)	5968.1 (6196.9)	24429.4 (25464.7)
<i>N</i>	17320	17250	17294	17200	15617

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 8: Men - Median Regression

	Median Regression					OLS
	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total	Excl. 2 <sup>nd</sup> Res.
PreNotch1 (1907-1911)	22500.0*** (8,488)	10961.0*** (3593.8)	19350.0*** (6,647.2)	1700.0** (811.1)	21000.0** (8,833.1)	48250.4*** (17063.7)
PreNotch2 (1912-1916)	26000.0*** (9,037.3)	13500.0*** (4,445)	21200.0*** (7,413.4)	1000.0 (834.1)	25930.0*** (9,706.8)	53217.9*** (17137.5)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	4000.0 (12,080)	-600.0 (3,506.6)	-100.0 (11,403.5)	-1.90e-10 (901.6)	1480.0 (12,582.9)	29116.9 (23313.4)
<i>N</i>	17883	17883	17883	17883	16101	17320

The first 5 columns are estimated using median regression with bootstrapped clustered errors in parenthesis using 1,000 reps. The last column is OLS on Trimmed Sample with clustered standard errors in parenthesis.

All regressions include controls for own education.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 9: Women Simple - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
PreNotch2 (1912-1916)	-5135.0 (9863.4)	-9256.5 (10647.0)	1251.0 (3976.3)	-15363.4 (13031.1)	-18943.0 (14406.0)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
<i>N</i>	13267	13313	13290	13331	11957

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 10: Women - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
PreNotch1 (1907-1911)	-1643.0 (9840.4)	6570.4 (10787.5)	2729.7 (3802.2)	5141.6 (13374.5)	506.5 (14523.1)
PreNotch2 (1912-1916)	-5324.1 (9638.0)	-7678.5 (10449.2)	677.5 (3881.8)	-13009.4 (12774.2)	-16018.2 (14070.6)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	-5240.3 (11301.2)	-49.52 (12610.3)	-2855.6 (4490.2)	-15999.6 (15096.6)	-12954.5 (16583.9)
<i>N</i>	24850	24952	24885	24976	22415

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 11: Men: Transfer Behavior - OLS

	Inheritance	Received Help	Gave Help	Gave Time
PreNotch1 (1907-1911)	0.0451*** (0.0155)	0.0176 (0.0161)	-0.0440* (0.0238)	0.0125 (0.0141)
PreNotch2 (1912-1916)	0.0524*** (0.0162)	0.0290* (0.0170)	-0.0497** (0.0240)	-0.00454 (0.0135)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	-0.0109 (0.0196)	0.00686 (0.0331)	-0.0804** (0.0391)	0.0222 (0.0349)
Base	17.3%	5.1%	9.9%	4.4%
<i>N</i>	4092	909	1588	1588

Robust standard errors in parenthesis.

Inheritance: ever receive an inheritance if father and mother are both dead.

Received Help: received financial help from parents in second survey year if father or mother is alive (note: the received help variable is first available in the second survey year).

Gave Help: gave financial help to parents in first survey year if father or mother is alive.

Gave Time: gave time help to parents in first survey year if father or mother is alive.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 12: Women: Transfer Behavior - OLS

	Inheritance	Received Help	Gave Help	Gave Time
PreNotch1 (1907-1911)	0.0537*** (0.0137)	-0.0175 (0.0150)	0.0140 (0.0163)	0.0382*** (0.0142)
PreNotch2 (1912-1916)	0.0369*** (0.0138)	0.00951 (0.0160)	0.00449 (0.0160)	0.00891 (0.0131)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	-0.0437*** (0.0144)	0.00330 (0.0219)	-0.00167 (0.0224)	-0.0271* (0.0147)
Base	16.3%	7.5%	8.6%	6.5%
<i>N</i>	5313	2046	2364	2364

Robust standard errors in parenthesis.

Inheritance: ever receive an inheritance if father and mother are both dead.

Received Help: received financial help from parents in second survey year if father or mother is alive (note: the received help variable is first available in the second survey year).

Gave Help: gave financial help to parents in first survey year if father or mother is alive.

Gave Time: gave time help to parents in first survey year if father or mother is alive.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 13: Men Stratify: Father Education - OLS on Trimmed Sample

	<b>Less Educated</b>		<b>More Educated</b>	
	Excl. 2 <sup>nd</sup>	Non-	Excl. 2 <sup>nd</sup>	Non-
	Res.	Housing	Res.	Housing
PreNotch1 (1907-1911)	40306.7** (18482.7)	25088.4* (13637.0)	-41246.7 (58822.4)	-34476.6 (39874.4)
PreNotch2 (1912-1916)	57830.4*** (17017.5)	39467.0*** (12465.0)	-12131.1 (53238.5)	-12595.2 (35987.3)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	24788.8 (22685.8)	35884.3* (18371.3)	34133.2 (69565.3)	9931.2 (47836.0)
<i>N</i>	14892	14845	2428	2405

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01



Table 14: Men Stratify: Own Education - OLS on Trimmed Sample

	<b>Less Educated</b>		<b>More Educated</b>	
	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. 2 <sup>nd</sup> Res.	Non- Housing
PreNotch1 (1907-1911)	2129.4 (20771.1)	-1805.7 (13765.2)	39106.4 (27744.1)	24927.6 (20662.2)
PreNotch2 (1912-1916)	17827.4 (19005.2)	13143.5 (13032.3)	59332.6** (25526.1)	39012.2** (18605.9)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	13733.4 (29900.1)	21573.4 (23909.0)	35271.8 (33118.7)	36278.2 (24520.3)
<i>N</i>	8629	8604	8691	8646

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 15: Men - Robustness Check

	<b>Log</b>		<b>Robust</b>		<b>Percentile</b>	
	Excl. 2 <sup>nd</sup>	Non-	Excl. 2 <sup>nd</sup>	Non-	Excl. 2 <sup>nd</sup>	Non-
	Res.	Housing	Res.	Housing	Res.	Housing
PreNotch1 (1907-1911)	0.0388 (0.0732)	0.00905 (0.0840)	-1997.2 (7,737.9)	-844.0 (4,424)	0.00646 (0.0129)	0.00145 (0.0128)
PreNotch2 (1912-1916)	0.169** (0.0668)	0.171** (0.0780)	12061.5 (7,399.3)	5990.4 (4,432.1)	0.0287** (0.0121)	0.0265** (0.0121)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	0.0662 (0.0886)	0.0735 (0.108)	-2831.6 (9,571.7)	-2634.9 (5,624.9)	0.0130 (0.0163)	0.0126 (0.0164)
<i>N</i>	16848	16374	17883	17883	17748	17748

Standard errors clustered on the individual in parenthesis with bootstrapped clustered errors in parenthesis using 1,000 reps for Robust Regression.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 16: Men Stratify: Father's Death Year - 1977 Amendment - OLS on Trimmed Sample

	<b>Died Before 1977</b>		<b>Died After 1977</b>	
	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. 2 <sup>nd</sup> Res.	Non- Housing
PreNotch1 (1907-1911)	-5550.7 (33793.0)	-12362.8 (25206.5)	37558.0* (21604.0)	25058.7 (15548.6)
PreNotch2 (1912-1916)	25380.9 (33540.8)	713.6 (25038.7)	46755.8** (19381.9)	36570.9*** (13910.4)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	26612.0 (60013.2)	21482.9 (46988.8)	32301.2 (24787.3)	34021.9* (18630.2)
<i>N</i>	4328	4313	12992	12937

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 17: Men Stratify: Father's Death Year - 1972 Amendment - OLS on Trimmed Sample

	<b>Died Before 1972</b>		<b>Died After 1972</b>	
	Excl. 2 <sup>nd</sup>	Non-	Excl. 2 <sup>nd</sup>	Non-
	Res.	Housing	Res.	Housing
PreNotch1 (1907-1911)	-65322.9 (46114.1)	-61785.7* (34139.4)	45452.2** (19884.4)	30709.9** (14270.8)
PreNotch2 (1912-1916)	-6043.5 (45608.2)	-25480.4 (33869.3)	50516.3*** (17974.3)	37535.4*** (12865.6)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	54895.7 (82481.1)	-378.8 (64791.4)	33529.1 (23926.9)	36355.2** (17985.1)
<i>N</i>	2758	2748	14562	14502

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 18: Men Alternate Trim Levels - Wealth (Excluding 2nd Residence) - OLS on Trimmed Sample

	Full	1%	3%	5%	10%
PreNotch1 (1907-1911)	54816.1 (98506.7)	32905.1 (27668.5)	25758.8 (20877.2)	26030.8 (18213.4)	3906.0 (13244.7)
PreNotch2 (1912-1916)	33156.7 (74318.9)	49228.0* (27522.1)	44342.7** (19607.6)	44063.3*** (16760.5)	26379.9** (12366.6)
Notch (1917-1921)	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>	<i>omitted</i>
PostNotch (1922-1927)	-5374.1 (73135.9)	35896.1 (41119.6)	23083.5 (27390.8)	29956.4 (23191.0)	16446.9 (17361.0)
<i>N</i>	17748	17673	17488	17320	16844

Standard errors clustered on the individual in parenthesis.

All regressions include controls for own, spouse's, father's and mother's education, marital status, number of divorces, number of children, number of siblings, Black, Hispanic, census region, wave, and age fixed effects.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table 19: Wealth and Social Security Benefits

Birth Year	Full Sample		Ave Monthly Social Security Benefits (SSB)	SSB/Wealth	Wealth		Less Educated (Education <= 12)	SSB/Wealth More Educated	SSB/Wealth Less Educated
	(Excluding 2nd Residence)	Wealth			(Education > 12)	Wealth			
1907	126,873		730	0.58%	403,196	43,569	0.18%		1.68%
1908	155,139		740	0.48%	247,654	95,752	0.30%		0.77%
1909	119,571		755	0.63%	179,027	108,618	0.42%		0.70%
1910	153,577		775	0.50%	302,113	103,474	0.26%		0.75%
1911	238,863		800	0.33%	454,234	134,529	0.18%		0.59%
1912	199,541		825	0.41%	245,199	181,148	0.34%		0.46%
1913	201,177		860	0.43%	250,196	179,591	0.34%		0.48%
1914	354,015		880	0.25%	461,447	320,131	0.19%		0.27%
1915	225,040		900	0.40%	369,770	169,899	0.24%		0.53%
1916	258,977		930	0.36%	445,873	157,734	0.21%		0.59%
1917	253,414		845	0.33%	395,173	179,538	0.21%		0.47%
1918	204,999		810	0.40%	317,854	149,892	0.25%		0.54%
1919	257,021		770	0.30%	405,656	162,362	0.19%		0.47%
1920	211,958		755	0.36%	382,034	134,707	0.20%		0.56%
1921	308,935		770	0.25%	516,543	186,018	0.15%		0.41%
1922	288,916		780	0.27%	455,387	186,782	0.17%		0.42%
1923	271,105		790	0.29%	408,192	198,247	0.19%		0.40%
1924	225,450		810	0.36%	319,545	178,796	0.25%		0.45%
1925	302,402		835	0.28%	452,683	188,285	0.18%		0.44%
Average	229,314		808	0.38%	369,041	161,004	0.24%		0.59%

## A Appendix

Table A1: Men Controls - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
High School	44398.4*** (15878.2)	34932.9*** (10990.0)	40168.5*** (12552.1)	12613.0*** (3595.0)	42070.5** (17403.9)
Some College	72928.8*** (18229.8)	59615.1*** (12416.7)	60301.0*** (13892.3)	23589.3*** (4468.2)	81162.4*** (20366.8)
College +	199834.9*** (22187.2)	147456.7*** (15735.9)	157410.8*** (16911.9)	55684.1*** (5547.1)	215833.1*** (24493.7)
Wife High School	57707.0*** (16508.8)	42999.4*** (12115.1)	42990.8*** (13990.9)	14136.8*** (3957.6)	59270.6*** (18009.2)
Wife Some College	92335.5*** (19891.9)	62931.4*** (13967.1)	65157.4*** (15952.1)	16785.9*** (4869.9)	95763.1*** (21915.0)
Wife College +	178561.5*** (21218.7)	130856.1*** (15743.3)	125340.6*** (17201.8)	37353.1*** (5450.4)	198714.7*** (23516.0)
Father High School	-662.8 (15627.5)	-231.6 (11725.6)	941.7 (12356.1)	2721.6 (4220.6)	-3457.6 (17427.9)
Father Some College	4923.1 (29512.4)	-19601.0 (20225.8)	-12788.5 (21947.0)	-11688.6 (8550.3)	-1764.3 (32868.8)
Father College +	73047.6** (31218.0)	35764.9 (22443.7)	53833.7** (24233.0)	13488.4 (8248.8)	85237.0** (35826.7)
Mother High School	25537.4* (15388.1)	24211.2** (11404.8)	20716.4* (12192.0)	9160.0** (4086.5)	24638.7 (17166.7)
Mother Some College	26487.7 (29603.8)	34584.4 (22689.0)	23298.4 (23705.7)	16608.1* (8713.9)	26684.2 (33582.8)
Mother College +	50467.9 (34179.1)	33376.8 (24777.5)	36106.0 (26990.1)	1559.2 (10188.9)	56335.1 (39378.5)
Married	181551.0*** (19658.8)	120917.5*** (14567.4)	137596.3*** (15180.2)	31003.3*** (5309.6)	193275.0*** (22559.0)
1 Divorce	-17355.5 (14737.2)	-9844.3 (11071.6)	-13701.9 (11996.8)	-5706.6 (4332.0)	-20752.3 (16658.6)
2+ Divorces	-103659.0*** (19034.2)	-66486.7*** (14356.7)	-85260.1*** (14835.7)	-29154.9*** (5100.9)	-114843.6*** (21799.6)
<i>N</i>	17320	17250	17294	17200	15617

Standard errors clustered on the individual in parenthesis.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table A2: Men Controls Continued - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
1 Child	10112.3 (31066.9)	1258.3 (23856.8)	14100.8 (24526.8)	-6226.1 (9348.6)	3267.1 (34174.6)
2 Children	52841.0** (26476.3)	17515.4 (19825.8)	43724.1** (20449.6)	185.1 (8670.5)	63627.0** (30085.6)
3+ Children	7519.4 (24845.3)	-5432.0 (19000.6)	12797.3 (19628.8)	-15598.6* (8325.2)	14688.4 (27980.1)
Black	-110017.7*** (14569.1)	-74364.8*** (11806.0)	-81584.2*** (12025.0)	-28886.2*** (3523.6)	-119058.1*** (16385.2)
Hispanic	-66653.9*** (21865.8)	-43987.1*** (16099.3)	-45478.3** (18371.0)	-15448.1*** (5359.0)	-68319.7*** (24534.3)
1 Sibling	-10693.6 (24753.7)	-1625.3 (18854.8)	-10290.5 (19732.9)	1368.3 (6529.2)	-27945.4 (28962.4)
2 Siblings	-49428.2** (24848.7)	-34117.1* (18585.7)	-46712.9** (19733.3)	-8866.2 (6574.2)	-65819.1** (29185.3)
3+ Siblings	-56204.8** (23370.5)	-41180.6** (17656.6)	-50874.9*** (18509.6)	-15097.9** (6175.2)	-72805.2*** (27389.4)
1992	-136019.6*** (17670.2)	-55376.7*** (12450.2)	-108201.2*** (14501.4)	-3573.9 (4704.5)	-142811.2*** (19830.3)
1994	-127842.7*** (16285.5)	-43970.9*** (11704.3)	-98765.1*** (13827.8)	1446.5 (4464.1)	-141132.3*** (18150.1)
1996	-112368.8*** (15288.1)	-38953.3*** (11051.4)	-85673.5*** (13049.5)	4207.8 (4363.1)	
1998	-100585.9*** (14099.9)	-29342.5*** (9949.7)	-86507.0*** (11415.4)	4016.0 (4012.4)	-113958.3*** (15297.0)
2000	-68609.4*** (13157.0)	-9949.2 (9589.5)	-61028.5*** (11037.2)	7249.5* (3886.3)	-74554.4*** (14353.6)
2002	-53035.7*** (11855.3)	-20312.9** (8789.1)	-45416.2*** (10171.8)	2443.9 (3508.7)	-58598.7*** (12738.8)
2004	-36754.4*** (9938.2)	-16503.8** (7178.1)	-29860.0*** (8352.6)	4162.7 (3418.2)	-33566.7*** (10183.7)
Northeast	-34421.2 (22415.8)	-27576.9* (16358.6)	-40059.8** (18068.7)	-562.0 (5885.6)	-26580.1 (25059.6)
Midwest	-49192.0** (19836.3)	-14441.4 (14510.9)	-51820.5*** (16194.2)	-1466.6 (5202.6)	-47281.4** (22532.1)
South	-95567.0*** (18140.7)	-41720.3*** (13487.4)	-86792.2*** (14861.5)	-9103.4* (4979.4)	-103778.2*** (20184.0)
N	17320	17250	17294	17200	15617

Standard errors clustered on the individual in parenthesis.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01



Table A3: Women Controls - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
High School	30875.8*** (8551.8)	32789.0*** (9756.3)	15735.5*** (2761.6)	45688.7*** (11164.6)	47775.3*** (11904.8)
Some College	53985.3*** (10476.5)	52567.6*** (11906.5)	19912.6*** (3637.1)	80699.9*** (13885.9)	85388.0*** (14748.1)
College +	125787.4*** (12766.2)	137983.5*** (14160.0)	48111.9*** (4879.7)	177636.5*** (16708.9)	198657.0*** (18239.9)
Husband High School	28993.0*** (9673.0)	32496.6*** (11443.7)	7329.6** (3196.0)	37375.0*** (13421.6)	39308.1*** (14477.4)
Husband Some College	59081.0*** (11324.4)	56339.0*** (12830.8)	20149.5*** (4099.1)	74853.3*** (15351.3)	81161.7*** (16458.1)
Husband College +	119508.0*** (11765.0)	116360.8*** (12954.0)	48257.2*** (4505.6)	161445.4*** (15912.3)	177749.7*** (17364.8)
Father High School	8062.8 (8401.2)	6501.5 (9290.9)	7911.5** (3316.6)	14866.0 (11391.5)	11796.2 (12445.6)
Father Some College	22525.1 (16120.4)	24533.5 (17006.1)	9286.5 (6533.8)	38509.5* (20853.8)	33159.0 (22100.4)
Father College +	53906.5*** (16758.7)	70261.2*** (18391.6)	19011.0*** (7186.6)	75290.1*** (21945.9)	80242.2*** (23949.7)
Mother High School	7407.8 (8392.1)	10424.9 (9453.8)	2401.3 (3206.9)	8307.4 (11320.7)	8843.4 (12393.0)
Mother Some College	21347.5 (15310.6)	16127.5 (16338.6)	9920.5 (6458.8)	14843.2 (20364.8)	17394.6 (22053.3)
Mother College +	29252.2 (19414.7)	23670.3 (21338.8)	14481.8* (8475.2)	28435.6 (25209.4)	33118.0 (27533.3)
Married	163814.6*** (10692.9)	170730.0*** (11406.7)	51514.6*** (4501.2)	235224.2*** (14346.9)	260153.6*** (15894.6)
1 Divorce	-22343.0*** (8021.2)	-32218.5*** (9066.9)	-8508.0*** (3182.3)	-38421.7*** (10701.5)	-42062.5*** (11547.5)
2+ Divorces	-40560.9*** (11489.8)	-69058.3*** (11902.4)	-13162.1*** (4494.8)	-73932.6*** (14978.5)	-74524.5*** (15978.1)
<i>N</i>	24850	24952	24885	24976	22415

Standard errors clustered on the individual in parenthesis.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

Table A4: Women Controls Continued - OLS on Trimmed Sample

	Excl. 2 <sup>nd</sup> Res.	Non- Housing	Excl. IRA	Financial	Total
1 Child	-3507.5 (17259.7)	-6384.7 (19626.7)	-1554.5 (7273.6)	-6003.0 (23681.0)	-18850.0 (26546.5)
2 Children	6125.5 (15067.2)	11175.3 (17700.7)	759.2 (6357.5)	13623.0 (20714.3)	9129.9 (23905.0)
3+ Children	-13766.5 (14607.5)	-5152.0 (17053.4)	-9032.8 (6152.3)	-13377.3 (19969.7)	-17326.5 (23228.4)
Black	-71924.8*** (7912.8)	-81654.6*** (8100.4)	-31370.4*** (2608.4)	-101630.5*** (9938.1)	-106361.6*** (10866.7)
Hispanic	-44828.5*** (11335.4)	-36967.3*** (14097.3)	-14204.0*** (3718.4)	-56654.5*** (15483.6)	-51907.8*** (16891.1)
1 Sibling	16727.2 (13665.7)	12589.4 (15097.8)	6790.2 (5696.3)	24215.8 (17614.6)	22625.7 (19597.1)
2 Siblings	682.6 (13430.3)	-5172.6 (15172.1)	-6536.6 (5504.7)	8232.0 (17711.1)	421.9 (19348.2)
3+ Siblings	-5667.2 (12649.8)	-21544.3 (14058.4)	-9649.9* (5144.6)	-14286.2 (16320.1)	-15753.4 (18154.9)
1992	-47348.6*** (9624.0)	-93088.6*** (10844.5)	-8873.9** (3957.0)	-128542.4*** (13022.2)	-130290.1*** (13698.6)
1994	-36341.8*** (9024.4)	-86572.4*** (10120.9)	-2790.7 (3765.7)	-117184.1*** (12181.7)	-122806.0*** (12798.0)
1996	-27846.7*** (8552.1)	-72552.1*** (9590.2)	56.45 (3553.4)	-96186.5*** (11619.1)	
1998	-17758.2** (7633.2)	-72151.5*** (8651.9)	3266.1 (3430.4)	-89072.1*** (10329.7)	-94025.8*** (10873.9)
2000	-4140.1 (7455.3)	-54456.9*** (8089.7)	8018.9** (3232.8)	-65370.9*** (9579.5)	-72911.5*** (9990.2)
2002	-9650.6 (6529.2)	-39260.7*** (7000.5)	7625.0** (2984.0)	-49061.6*** (8762.8)	-51381.9*** (9058.1)
2004	-6934.6 (5369.2)	-22522.9*** (5610.3)	7273.5*** (2496.5)	-32454.1*** (6744.2)	-36277.6*** (6989.5)
Northeast	-17149.7 (11695.3)	-38229.7*** (13325.0)	1357.6 (4444.8)	-39343.5** (16104.1)	-24415.4 (17756.0)
Midwest	4323.5 (10657.4)	-40176.2*** (12142.1)	3933.1 (4032.3)	-42075.8*** (14770.8)	-41173.5*** (15785.9)
South	-13728.4 (10079.0)	-62883.5*** (11505.3)	3502.6 (3941.5)	-68228.8*** (13892.8)	-71935.8*** (14728.3)
N	24850	24952	24885	24976	22415

Standard errors clustered on the individual in parenthesis.

\*p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01