

A NUDGE TO IMPROVE RETIREMENT PLANNING THROUGH SOCIAL SECURITY

A PROPOSAL FOR THE SOCIETY 2030 COMPETITION

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INTRODUCTION

In cognitive studies, it has been shown that individuals have a difficult time storing more than a few numbers in their working memory, and, when it comes to retirement calculations, there are a lot of numbers. In order to calculate a person's Social Security benefit at her normal retirement age (age 67 for people born after 1959), a typical individual would need to know more than 75 numbers and perform over 200 separate calculations before arriving at a final number. And that is if she knows that she is retiring at her normal retirement age, and not collecting earlier or later, which involves even more calculations. Considering that, for people age 65 and older, Social Security checks make up the majority of monthly incomes for 53% of couples and 74% of non-married individuals, predicting one's Social Security benefit is important, but also a cognitive challenge for any person planning her retirement. In the last decade, Social Security began mailing reports that provided information about estimated benefit levels, but these have been suspended due to the federal budget. If they return, it will only be for workers age 60 and older who have not started collecting benefits. This does little for younger generations who need to determine an appropriate rate of savings today to meet their retirement goals of tomorrow.

Due to the computational challenge and general fear of complexity, most people have no idea what monthly check they would be eligible for if they claimed their benefit at their normal retirement age, nor the benefits of delayed claiming. A worker who was born after 1959 could increase her benefits by 77.1% simply by delaying benefit collection from 62 until 70. Moreover, if an individual is eligible for a pension through her employer, or has a personal retirement account (such as a 401(k) or IRA) then the number of viable ways to accomplish

one's retirement objectives increases.

In this proposal, I will focus on how to make the estimation and projection of Social Security benefits easier for households so that young and old can better plan their savings and claiming decisions to reach their retirement objectives. This proposal will first provide a summary of the current system and the benefits of simplification, then it will describe how I propose to make Social Security benefit calculations easier. Finally, I will consider the political and economic implications of this proposal. As many studies have shown, there is no “average” American household when it comes to retirement savings, as there are a plethora of retirement savings vehicles and plans. The most common source, however, is Social Security, and a simpler system will go a long way in making it easier for those who pay into this system to plan for their futures.

WHY SIMPLIFY?

Before discussing how to simplify the Social Security benefit calculation, it is important to recognize the importance of this single calculation to the aged population in the United States. According to the Social Security Administration (2012), in 2011, 55 million people were receiving Social Security benefits, and 5.567 million people received their first benefits. The average monthly benefit for these new beneficiaries was \$1,241. While Social Security checks make up the majority of monthly incomes for 53% of couples and 74% of non-married individuals, it accounted for 90% or more of monthly income for 23% of couples, and 46% of non-married individuals. In other research using the Health and Retirement Study, Poterba et al. (2011) show that, for the mean household aged 65-69 in 2008 (older members of the baby boom generation), Social Security makes up 32.6% of its total lifetime wealth after retirement. Due to substantial differences in how people fund retirement, however, the facts are even more stark when we look beyond the average household. The majority of households in this age group have less than \$52,000 in financial assets and personal retirement accounts aside from home equity and defined benefit pensions, with 30% having less than \$5,500 in these accounts.

Therefore, for a substantial portion of the population, knowing one's Social Security benefit is nearly equivalent to knowing one's income for the rest of one's life.

For an individual who has earned the average U.S. annual salary across her lifetime, the annual Social Security benefit would be \$18,960, or \$1,580 per month, if she retired at her normal retirement age of 67. For a married couple where the spouse did not work, the benefit would increase to \$28,440, or \$2,370 per month. While 44% of retired households worry about not having enough income in retirement to maintain a reasonable standard of living (Society of Actuaries, 2010), this level of inflation protected income through Social Security is capable of covering most daily expenses.

Most individuals claim their benefit at the earliest possible claim age, far greater than would be predicted by any standard economic model. Among individuals who stopped working prior to age 62, the first age at which Social Security benefits may be claimed, 86.4% claimed benefits at age 62, despite the fact that 85.8% of these individuals would have maximized their lifetime benefits by delaying claiming until 65 or later (Sass et al., 2013). Often, this is because individuals substitute the question of when to claim benefits, with easier to answer questions such as when should I retire or do I need money today? Much of this is owed to the complexity of the Social Security system and uncertainty surrounding the level of benefits an individual is eligible to receive and how these benefits change if an individual delays claiming or continues to work.

A worker who has earned the average wage for her entire life, and retires at 62 would be eligible for about \$1,106 per month, but if she delayed retirement until age 70, her benefit would increase by 77.1% in real dollars to \$1,959. Moreover, because Social Security is a progressive system, the benefit amount increases more significantly at lower income levels as shown in table 1. A simpler method of calculating the Social Security benefit could encourage workers to delay claiming benefits (and also possibly delay retirement) in favor of a larger payment for the rest of life.

For younger workers who are just beginning their working lives, the question they face is not

Average Yearly Income over lifetime	Claim at 62	Claim at 70	Difference
(50% U.S. Avg. Wage)	\$21,489.81	\$705	\$1,249
(100% U.S. Avg. Wage)	\$42,979.61	\$1,106	\$1,959
(200% U.S. Avg. Wage)	\$85,959.22	\$1,593	\$2,823
			\$1,230

Table 1: Approximate Social Security Benefit based on Claim Age

so much when to claim benefits, as it is how much to save in order to have an additional source to fund retirement. The simple formula described in the next section allows for extrapolation, in a relatively simple fashion, to many possible retirement ages based on current income levels. This means that young individuals may estimate their potential Social Security benefit without needing to do the over 200 calculations mentioned in the introduction. This is important because, as Love et al. (2009) point out, that while many people do not save enough for retirement, many others often “over-save”, which could be due to greater than expected Social Security benefits.

Finally, from a national perspective, discussions about Social Security are rarely substantive because the details of program are too difficult to cram into simple sound bites. Instead, the discussion primarily focuses on the normal retirement age or cost of living adjustments. While these are important components of Social Security, they do not inform the casual listener and potential beneficiary of how a proposed change would impact them in specific dollar terms. The following simplification provides a clearer way of calculating benefits which could help reporters and policy makers relate the implications of policy changes into specific dollar sacrifices for current and future beneficiaries.

HOW TO SIMPLIFY

I propose altering the way benefits are calculated so that individuals and households are more capable of calculating and projecting their own benefits without needing to resort to complex online calculators or learning excessive information about how Social Security benefits work. The next two paragraphs describe the current system, and the last two paragraphs present my recommendation for a user-friendly system.

Under the current system, an individual's benefit is computed using a multistep formula. First, the earner's average indexed monthly earnings (AIME) are computed based on the best 35 years of earnings since 1950, where the worker's earnings before age 60 are indexed by the U.S. average annual wage when the worker reaches age 60 relative to the average annual wage in the year the income is earned. Wages earned after age 60 are not indexed. Second, the earner's primary insurance amount (PIA) is calculated based on a progressive scale, where the earner receives 90% of her first \$749 of AIME, 32% of the next \$3,768 of AIME, and 15% of AIME over \$4,517 (for workers reaching age 62 in 2011). The PIA bend points change every year based on the U.S. average annual wage. For an earner, they are calculated using the bend points in the year a worker reaches age 62. Third, the AIME is increased each year by a cost of living adjustment based on the consumer price index.

If the earner claims her Social Security benefit in the month she achieves the full retirement age, then the benefit is equal to the PIA. The full retirement age is 65 for workers born before 1938 and increases gradually to age 67 for any earners born after 1959. Alternatively, earners may choose to claim their benefits as early as age 62. An early claimer's benefit, however, is reduced by 6.67% for the first three years before the full retirement age and then reduced by an additional 5% for any additional years. Earners may also choose to claim their benefits after the full retirement age, in which case these benefits are increased by up to 8% for each year of delayed claiming up to age 70.

The alternative I propose, is that, at the end of each year, an individual be awarded up to 100 credits based on her earnings. Every year, an individual is capable of earning up to 100 credits, so at the time the individual claims benefits, she can have a maximum of 3500 credits. These credits would then translate into a monthly benefit level based on the year an individual starts collecting benefits. For example, if the individual, born in 1947, claims benefits at age 66, then she would receive a monthly benefit credit rate of \$0.723 per credit, with a lower rate if she starts at age 62 and higher rate if she starts collecting at age 70. The individual would only need to know her total number of credits, instead of her entire earnings

$$\begin{aligned}
\text{Monthly Benefit} &= \text{Benefit Credit Rate} \times \text{Number of Credits} \\
&= (0.723) \times 3000 \\
&= \$2,169
\end{aligned}$$

Figure 1: Example Calculation

history, when making financial plans. This means the worker would not need to keep track of her best 35 years of earnings, the respective index, the PIA bend points, or know any other minutia related to the benefit calculation. Moreover, when benefits grow by the consumer price index (or any other future method), an individual only needs to know her new monthly benefit per credit to calculate her benefits. Figure 1 provides an example.

For individuals who are still working, they can predict the growth in their benefit for working another year based on last year's credits. Therefore, if the individual above had not reached her maximum number of credits (see figure 1 for an example) and working at age 67 was equivalent to the full 100 credits, then she knows an additional year of work would lead to an additional \$72.30 in monthly benefits for the rest of her life. Alternatively, for young workers who are many years from retirement, they could multiply the number of credits they earn in their first year on the job, times 35 years of potential earnings, times the monthly benefit credit rate in the current year in order to predict their benefits in retirement. Since the ratios are adjusted by the average wage, this would be an accurate measure of the individual's benefit if the worker's income grew at the same rate as the average wage in the U.S.

While the previous paragraph addressed how the individual's problem would be simplified, from Social Security's perspective, the aforementioned credit system would have a very similar burden compared to the current system. The progressive calculation of the individual's benefit would be preserved, but would be done for the individual through the calculation of the number of benefit credits. For example, an individual earning the equivalent of the average U.S. wage per year, despite earning approximately 40% of the maximum taxable earnings, would earn 62.3 credits (out of 100) due to the progressive benefit formula. This is consistent with the

current setup of Social Security, but the way it is presented to individuals is far simpler and is easier to use for household retirement planning.

PROGRAM EVALUATION

The direct costs associated with switching to the proposed benefit credits would be relatively small because all that is being done is changing how Social Security reports accrued benefit levels to individuals. Further research would need to be conducted in order to determine whether or not the proposed benefit credits system would have major behavioral implications for Social Security recipients and the economy as a whole.

Previous studies looking at the impact of automatic enrollment in defined contribution plans, such as 401(k)s, have found that non-participation rates dropped from 63% to 14% when employers automatically enrolled their employees (Madrian and Shea, 2001). The impact of moving from an opt-in to an opt-out policy implies that there are significant behavioral effects that cannot be accounted for in common economic models. It is likely that these behavioral effects carry over to Social Security, and help to explain the high rate of benefit claiming at the earliest possible age of 62, which partially may be attributable to a misunderstanding of the gains from delayed benefit claiming.

Past economic studies have had a hard time capturing these behavioral effects because it requires understanding each individual's financial literacy (i.e. how well does she understand the financial programs and if she is able to develop appropriate plans) which is both hard to measure and harder still to map into an effect. Furthermore, financial literacy does not imply individuals will take action, which can be seen in the persistence of default contribution levels in the aforementioned studies on 401(k) plans. In order to test the impact of the benefit credit plan, a behavioral study would need to be conducted for both younger and older individuals that would ask for information about their current employment, retirement plans, and expectations for retirement. A control group could be given information about how Social Security works currently, and the test group could be given the benefit credit method

described above. A series of experiments could then be designed to tease out whether the new plan elicits a change of action, and if it improved the accuracy of the individuals' expectations regarding their retirement benefits.

In the end, the purpose of this proposal is to create a more user-friendly method for calculating and projecting an individual's Social Security benefit without significantly altering the program. While studies will be needed to estimate the size of the behavioral response, given the low cost and possible benefits, it seems reasonable to implement this policy change regardless of the magnitude of their response.

POLITICAL AND ECONOMIC IMPLICATIONS

A clearer understanding of individual benefits will help pave a path for future Social Security reform. If individuals are able to understand how changes to Social Security will actually alter their monthly benefit, then they will be able to give clearer opinions to their political representatives regarding reforms to the program as a whole. As such, I believe many Congressional representatives would be open to a plan for making the calculation of Social Security benefits more user-friendly if it had minimal costs and a minimal impact on the benefits that individuals would receive. It could also help the Social Security Administration to provide a clear mapping between how much is paid for a credit and how that translates into retirement and disability benefits for both policymakers and beneficiaries.

If people are more informed about the potential benefits of Social Security claiming, it would likely encourage many early claimers to delay retirement, which will improve their finances when they do eventually choose to leave the labor force. In addition, Social Security will benefit from the years of additional income from these workers. More importantly, however, an improved understanding of how Social Security works will improve future generations ability to account for the level of Social Security benefit they will receive and create a savings plan that balances annuitized income sources with liquid wealth. Since health care expenses are taking over larger portions of late in life expenditures, it is important for households to

have both a source of consistent income (annuitized wealth such as Social Security) and liquid wealth which can pay for occasional large health expenses.

For individuals who over-save for retirement, a clearer projection of their Social Security benefits might encourage them to actually save less and consume more today knowing that they might actually be closer to the target income level in retirement than previously expected. This would be good for the economy, as over-savings by these individuals provides little more than large bequests for their heirs.

The political and economic questions surrounding this proposal cannot be answered with certainty, because the purpose of this proposal is to nudge individuals to make more informed decisions. It is my hope that, by making how Social Security benefits are calculated clearer, more people can better plan a financial path to retirement. Finally, since most of economic theory rests on agents making rational decisions, it would be best that the Social Security system make it easy for them to do so.

CONCLUSION

Social Security is a major source of income for U.S. retirees, and it is nearly universal in its coverage of American workers. For older workers, a simple and clear way of projecting the benefits of delayed claiming may encourage them to work a few years longer in order to ensure a higher income stream for both themselves and their spouses. For younger workers, a simpler way of calculating their benefits can help them better plan for retirement and prevent incorrect expectations that might lead to under- or over-savings.

In this proposal, I have introduced a way of reporting Social Security benefits to individuals that will allocate credits based on annual earnings. These credits can then be multiplied by a factor set by the Social Security Administration to determine an individual's actual or projected benefit levels. In this way, individuals will better know what benefits they are entitled to, policymakers will be better able to relate how proposed changes will impact recipients, and workers deciding whether or not to retire can better understand the incentives

to delayed benefit claiming.

My hope is that if people have a clearer picture of what benefits they are entitled to, then they can make more informed decisions when it comes to choosing the contribution levels to their 401(k)'s, and that companies can have more informed discussions with their employees over the benefits and costs of annuitization of personal retirement accounts. More broadly, if there were significant changes from this policy change in either savings or retirement decisions, then that would lend greater credence to the notion that many of the retirement problems today are functions of the “nudges”, planned or unplanned, built into how Social Security and other retirement plans are designed. If so, that could launch a new area of research targeted at understanding what policy heuristics individuals focus on, and perhaps encourage simpler, more user-friendly retirement programs.

BIBLIOGRAPHY

Love, David A., Michael G. Palumbo, and Paul A. Smith, “The trajectory of wealth in retirement,” *Journal of Public Economics*, February 2009, *93* (1), 191–208.

Madrian, Bridgitte C. and Dennis F. Shea, “The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior,” *Quarterly Journal of Economics*, November 2001, *116* (4), 1149–1188.

Poterba, James M., Steven F. Venti, and David A. Wise, “The Composition and Draw-down of Wealth in Retirement,” *NBER Working Paper 17536*, 2011.

Sass, Steven A., Wei Sun, and Anthony Webb, “Social Security claiming decision of married men and widow poverty,” *Economics Letters*, 2013, *119*, 20–23.

Social Security Administration, “Fast Facts and Figures About Social Security,” 2012.

Society of Actuaries, “2009 Risks and Process of Retirement Survey: Report of Findings,” 2010.