Meeting the Coming U.S. Fiscal Challenge

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The United States faces a fiscal challenge unlike any other in its history. Unless Congress takes action soon to restrain federal pension and health care benefits spending, total central government expenditures will rise to levels unprecedented in peacetime U.S. history. Financing the baby-boom-driven expenditures will require the U.S. Treasury to issue record amounts of federal debt, Congress to impose record high taxes, or some combination of the two.

The challenge faced by the U.S. is not unique among nations of the world. It is one that many developed countries of Europe and Asia confront. The common driving force behind the projected rise in government spending is demography. In each country, the sharp rise in birth rates in the aftermath of World War II followed by significant declines in birth rates will, over the next three decades, result in a substantial increase in senior citizens who are entitled to government pension and health care benefits and relatively small increase in the working age population to finance these benefits.

But demographic change, which is largely beyond the control of central governments, is not the sole cause of the projected rise in unfinanced government spending. The failure of government entitlement policies bears a large portion of the responsibility. In the U.S. the most pronounced of these failures include establishment of wage-indexed defined pension benefits, health care programs with minimal cost-sharing provisions, pay-as-you-go financing of both retiree pension and health care benefits, and an unwillingness to adjust these policies despite foreknowledge of the consequences of slow moving demographic changes.

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1 Senior Fellow, the Hoover Institution, Stanford University. I thank Daniel Heil and Tom Church for their many valuable comments and suggestions and thank Daniel for help in assisting with the calculations for this paper. Most of the calculations presented herein have been made using America Off Balance, an exceptional tool for understanding U.S. federal budget trends modeling the fiscal ramifications of alternative spending and tax policies.
In this paper, I show how modest changes in the design of U.S. federal government pension and health care programs for senior citizens, combined with steady sustainable economic growth, can prevent the fiscal burden of senior citizen entitlements from rising appreciably above its current level, despite the projected rise in the size of the beneficiary population. I further argue that modest Social Security changes to limit the growth in the inflation-adjusted value of initial monthly benefits and to raise the retirement age will maintain benefit levels that are fully consistent with the original objectives of the Social Security wage-indexing policy to help senior citizens avoid a precipitous drop in their standard of living upon retiring and to help senior citizen standards of living to keep pace with those of the working age population.

This paper has a limited purpose. My intent is not to provide a comprehensive reform plan for Social Security and Medicare. Nor is it an attempt to address Social Security’s often vague and conflicting promises. It is merely to demonstrate the cost growth of these programs can be limited without impairing the safety net of assistance they provide.

The Dimensions of the Fiscal Challenge

The magnitude of the U.S. fiscal challenge is described with the help of Chart 1. It shows the projected level of federal spending relative to GDP if nothing is done to rein in entitlements and places this spending in a long historical perspective. Federal spending is shown as a percent of GDP since the year 1900 and a projection for the next 30 years, which is based on the official Congressional Budget Office projection. The chart shows the fiscal impact of our major wars: in particular, the War of 1812; the Civil War, WWI, and the extraordinary expense of WWII. Also evident in the chart is the New Deal’s impact and of the post WWII emergence of the United States as a Great Power. The last spike in federal spending, occurring in 2009 and 2010, is the federal government’s spending response to the Great Recession.

The red portion of the chart shows the future path of federal spending unless action is taken to curtail entitlements. Past levels of federal spending, which averaged 19% of GDP during the last half of the 20th century, will pale in comparison to future levels. Federal spending relative to GDP will steadily rise to 27% of GDP in 15 years and to 30% in 30 years.

The projection deviates from CBO by assuming that non-defense discretionary and defense spending levels remain at their current levels relative to GDP in future years. Under the CBO projections, spending levels relative to GDP in both types of programs decline in future years.
The main driver behind the projected increase in federal government spending is, as is well-known, the two main entitlement programs for the elderly: Social Security and Medicare. Their importance in past and future federal spending trends is shown in Chart 2. The chart decomposes total federal program spending relative to GDP into three categories: Social Security and Medicare (in blue) national defense (in green), and spending on all other federal programs (in red). Interest payments on the outstanding public debt, which are currently just over 2 percent of GDP are not shown. The take away from the historical portion of this chart is that Social Security and Medicare account for all of the growth in federal program spending relative to GDP since at least the early 1960s. The reduction in national defense spending relative to GDP more than offsets the rise in spending on all “other spending” relative to GDP. Thus, taken together, spending on these two components as a percent of GDP has declined. Meanwhile, the steady rise in Social Security and Medicare spending relative to GDP has more than offsets the decline in the rest of federal program spending.  

The section of the chart that depicts the future shows the growth in Social Security and Medicare if nothing is done to curtail their growth. Future defense and “other spending” are assumed to remain at their current levels relative to GDP. The takeaway from this chart is that all of the projected future growth in federal program spending as a share of GDP, as all of the

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3 The Social Security and Medicare projections are taken from the CBO long-term budget forecasts. The assumption that the rest of government spending remains a constant share of GDP differs from the CBO projection in which the rest of government spending relative to GDP declines slightly over the next decade before rising back up to its current level.
past growth over the last half century, is due to the projected increase in Social Security and Medicare spending.\textsuperscript{4}

Chart 2. Federal Spending by Category: 1962 to 2048 (% of GDP)

Financing this future spending will require either the imposition of record setting levels of taxes, the issuance of record setting amounts of public debt, the printing of massive amounts of money, or some combination of the three. Chart 3 shows the impact on the outstanding public debt relative to GDP if the government were to rely exclusively on debt to finance the higher spending levels (left-scale, shaded rust colored area) and impact of taxes relative to GDP if it were to rely exclusively on taxation (right scale blue dotted line). Exclusive reliance on debt would cause the debt relative to GDP to rise from its current level of 80 percent to 100 percent in 10 years and would cause it to double to 160 percent in 25 years. Exclusive reliance on higher taxes, on the other hand, would cause the average tax on economic activity to rise from its current level of 17\% of GDP to 24\% of GDP in 10-years. This would represent a nearly 50\% increase in each and every tax rate in the federal tax code. For middle class households, the payroll tax and the marginal federal income tax would each rise from 15\% to 22.5\%; raising the marginal tax rate to 45\% for these households. The top tax rate on capital formation would rise to somewhere in the neighborhood of 70\%.

\textsuperscript{4} The future spending levels shown in Chart 1 are derived from the data in this chart and include the interest costs associated with financing these expenditures with debt.
Economics teaches us that such high tax rates, broadly imposed, reduce economic activity and, thereby, impair standards of living. History teaches us that such high levels of public debt threaten economic prosperity by also reducing economic growth, causing inflation, and making a country’s economic system more prone to financial crisis and recession. While the direction of these impacts is clear, the precise amount of economic destruction that would occur is subject to considerable uncertainty.

As disturbing as these ramifications are, readers need to keep in mind Milton Friedman’s essential point that the real problem of government finance is higher spending rather than whether it is financed by higher debt or taxes. Every additional dollar of government spending means fewer resources for the private sector to produce, save, or invest. Additionally, every dollar of government entitlement spending carries with it incentives for recipients to work less and save less. And, every dollar government spends on in-kind entitlements is invariably accompanied by government rules and regulations on how funds can be spent. All of these combine to produce lower economic output. The particular means of financing spending, be it issuing debt, raising taxes, or simply printing money may each have different adverse economic consequences. But, the ultimate source of any resulting economic woe is spending. This, the challenge the U.S. faces is how to reduce the rising government burden and not, as most elected officials in Washington believe, how to finance it.
How to think about meeting the fiscal challenge?

In the usual treatment of rising senior citizen entitlement spending, focus is placed almost exclusively on demographics. According to the U.S. Bureau of the Census, there are currently 56 million persons age 65 and older. In 20 years, there will be 81 million; an increase of 25 million in just two decades.\(^5\) Over the same period of time, the number of employed persons is expected to increase by fewer than 10 million.\(^6\) As senior citizens come forth to claim their Social Security and Medicare benefits, federal expenditures will rise rapidly. The relatively slow growth in the number of workers means relatively fewer workers to finance these claims.

In this view, there is little that can be done to reduce the rising gap between senior citizen entitlements and revenues except to either significantly raise payroll and other taxes, or sharply reduce entitlement benefits.

But demographics are only part of the reason why senior citizen entitlements are projected to increase. Social Security and Medicare promise benefits to future recipients that are far higher than those received by today’s senior citizens. Monthly benefits promised to future Social Security recipients are higher even after adjusting for the rise in consumer prices and future government Medicare expenditures per enrollee are higher even after adjusting for the rise in medical care prices.

Chart 4 provides examples of the amount by which Social Security benefits promised to future retirees exceed those of today’s retirees, after adjusting for inflation. The orange bar shows the amount the typical person who reaches age 65 this year will receive on an annual basis: $20,766. The blue bars show the amounts Social Security promises to typical persons (in 2019 dollars) at age 65 who are currently age 50 and 40, respectively. The increase in promised benefits in inflation-adjusted dollars is not trivial. Social Security promises the typical worker who is 50 years-old today benefits that have 14 percent more purchasing power than today’s

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\(^5\) [https://www.census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html](https://www.census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html), Table 2

\(^6\) To obtain this estimate, the Census projection of the increase in the number of persons age 18-64 was multiplied by the current employment to population ratio of 63 percent. [https://www.census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html](https://www.census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html), Table 2
benefits. The typical worker who is 40 years-old today is promised benefits that have 29 percent more purchasing power.


Chart 5 shows the increases in government Medicare expenditures adjusted for medical price inflation. In 2020, the government will spend an average of $10,826 on Medicare enrollees. In 15 years, the government is projected to spend 29 percent more on each Medicare enrollee, after adjusting for the projected nearly 60 percent rise in economy-wide medical care prices. In 25 years, it is projected to spend 58% more.

Chart 5. Medicare Spending per Recipient (2019 $)

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7 The MCPI is assumed to increase at an annual rate of 3.1 percent; about 50 percent faster than the 2.2 percent annual growth rate of the CPI assumed by CBO.
These extraordinary increases in inflation-adjusted Social Security benefits and Medicare expenditures per enrollee are the result of specific policies imbedded in each program. In Social Security, the inflation-adjusted benefit increases are purposely designed to achieve specific policy goals. The increases in Medicare expenditures per enrollee are largely the intended consequence of a poorly designed program.

Social Security Benefit Increases

The current policy for determining Social Security benefits dates back to the 1970s. Since that time, monthly benefits have been automatically determined without the need for Congress to act. Since that time, benefits for persons who have already begun receiving Social Security have been indexed to the annual rate of consumer price inflation. This cost-of-living adjustment is designed to compensate recipients for the loss of purchasing power caused by rising prices. Less well-understood is the policy for setting initial benefits for persons who are receiving Social Security for the first time. The policy for determining these initial benefits is crucial to understanding the growth in Social Security over time. Hence, it will be useful to take a few minutes to describe the policy and the goals it seeks to achieve.

Stripped down to its barest essentials, the initial benefits policy automatically indexes the growth in initial benefits over time from one group of new retirees to the next to the growth in the economy-wide average wage. Thus, the average initial benefits received by newly retired workers in any one year will exceed the average initial benefits received by newly retired workers in the preceding year by the increase average wages during that year. Another way to explain the outcome using a longer period of time is to say that if, over a 10-year period, the average level of wages in the economy grows by 10 percent, then the initial Social Security benefits received by the typical new retiree in the 10th year will be 10 percent higher than the benefits received by the typical new retiree in the 1st year.

This policy, which was established in 1977, is designed to achieve two primary objectives. The first objective is to ensure that the standard of living of newly retired persons kept pace with improvements in the standard of living of the rest of the population. By ensuring that initial Social Security benefits for new retirees grow over time at the same rate as average wages in the economy, Social Security’s wage-indexing policy roughly achieves this objective.
The second objective of the wage-indexing policy is to prevent new retirees from experiencing a precipitous drop in their income, i.e., standard of living, upon retirement. The drop could be prevented by replacing a certain percentage of workers’ pre-retirement income with a sufficient level of initial Social Security benefits i.e., establishing a sufficient “replacement rate” and maintaining this replacement rate over time as one group of new retirees followed another. The policy of indexing initial Social Security benefits to economy-wide wages precisely achieves this outcome if the relationship between the average economy-wide wage and the wages of workers as they neared retirement remains the same over time. Under this condition, both wages rise at about the same rate over time. Since initial Social Security benefits were indexed to economy-wide wages, the initial benefits received by new retirees also rise at this same rate. With initial Social Security benefits and workers’ pre-retirement wages rising at the same rate, initial benefits remain a constant percentage of workers’ pre-retirement wages over time.

Increases in Medicare Expenditures per Enrollee

The rapid growth in Medicare expenditures per enrollee are due largely to flaws in Medicare’s structure that encourage the overutilization of services and the use of more complex and costly procedures. The two principal flaws are low copayments charged to enrollees for Medicare services and fee-for-service reimbursement policies for physicians and other health care providers for services delivered outside the inpatient hospital setting. Low copayments insulate Medicare patients from the true cost of medical services and, thereby, create incentives for patients to over-utilize these services. Fee-for-service reimbursement creates incentives for physicians and other health care providers to provide more services and more complex services so long as the marginal cost of providing the services exceeds the reimbursement rates. Taken together, the “moral hazard” induced by these incentives is a recipe for rapidly rising Medicare utilization rates, greater use of more complex and more-costly medical services, and consequently, rising government Medicare expenditures per enrollee.

Some Policy Considerations

The straightforward implication of the forgoing discussion is that polices to limit the growth in inflation-adjusted Social Security benefits and Medicare expenditures per enrollee can play a role, possibly an important one, in meeting the U.S. fiscal challenge. But before turning to
the question of the magnitude of their role, a discussion of importance of economic growth is in order.

A growing economy is crucial to meeting the challenge. Economic growth creates less of a need for assistance to senior citizens and more resources to finance the remaining need. With economic growth comes higher earnings and greater investment returns, both of which increase the ability of individuals to provide for their own retirement needs. With economic growth comes additional government revenues to finance needed assistance with less reliance on higher taxes.

How much does economic growth matter? The answer is that higher growth alone cannot provide all of the additional resources to meet the fiscal challenge. But it can help make the challenge more manageable. The Congressional Budget Office economic projections, upon which the preceding charts are based, assume that real GDP will grow annually at the rather anemic rate of only 1.9 percent per year over the next three decades. This rate is below the average annual 2.2 percent GDP growth rate that has occurred over the last 20 years and during the last 8 years beginning a year after the Great Recession ended. If the economy were to sustain this 2.2 percent annual growth, the fiscal burden of federal government spending, measured by total federal spending relative to GDP would decline from its current projected rise by about one-quarter to one-third. The remaining fiscal challenge still remains a formidable one. The bottom line is that, by itself, economic growth is not sufficient. Social Security and Medicare expenditure growth must be curtailed through policy change. For the calculations in the remainder of this paper, we have replaced the CBO 1.9 percent annual real GDP growth rate with a 2.2 percent annual rate.

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8 How reasonable is 2.2% real GDP growth? As John Taylor, Glenn Hubbard, Kevin Warsh and I have argued, with the right set of economic policies, 2.2% real growth is very achievable. It requires only that worker productivity grow at an average 1.8% per year. Over the last 30 years, it has grown at 2 percent per year. In all 30-year periods dating back to the period ending in 1978, only once has productivity averaged less than 1.8 percent, and that was only by a smidgeon. Increases in the employment-to-population ratio increases in addition to the 1.8 percent productivity growth would produce an even larger increase in GDP growth.
Purchasing Power Constant Benefits

The fact that both inflation-adjusted Social Security benefits and medical inflation-adjusted Medicare expenditures per enrollee are rising over time leads naturally to the question of how much of the fiscal challenge can be met by limiting future increases in the per recipient expenditure in each program to their respective inflation rates: the CPI for Social Security and the MCPI for Medicare. Such a policy would, in the aggregate, allow program recipients in the future to purchase the same level of goods and services and medical care as current retirees. The policy would not involve any reduction in the aggregate purchasing power of expenditures in either program and hence can be thought of as a “purchasing power constant” policy.

Chart 6 shows the projected growth in Social Security and Medicare expenditures relative to GDP holding the inflation-adjusted value of the benefits of both programs constant at their current level. The chart compares that growth to the growth projected under current law (the latter is reproduced from chart 2). As the chart shows, the purchasing power constant policy virtually eliminates all of the projected increase in the future fiscal burden of Social Security and Medicare. Their combined expenditures relative to GDP gradually rise only slightly over the next decade (from 8.0 percent to 8.4 percent in 2028) and then gradually decline to below their current level in just over two decades.

Chart 6. Spending on Social Security and Medicare (% of GDP)

The intuition behind what is perhaps a surprising result can be had by focusing on Social Security. Under the constant purchasing power policy, aggregate Social Security benefits grow at
the rate of inflation plus the rate of growth in the number of recipients. GDP grows at the rate of inflation plus the rate of growth in real GDP. Whether Social Security benefits rise or fall relative to GDP depends upon whether the growth in the number of Social Security recipients rises or falls relative to the growth in real GDP. Over the next 10 years, the number of Social Security recipients grows at an average annual rate of 2.1%; a notch below the assumed for real GDP. Thus, 8 years from now Social Security expenditures relative to GDP equals its level today. Thereafter, the number of Social Security recipients grows at a rate less than the real GDP growth rate and, under the purchasing power constant policy, Social Security expenditures would decline relative to GDP. A similar intuition applies to Medicare if spending per enrollee were capped at consumer prices rather than medical inflation.

In the data underlying chart 6, Medicare expenditures per enrollee grow at the rate of growth in the MCPI which is about 1 percentage point per year faster than the annual growth in consumer prices. This more rapid growth and the fact that for the next decade the number of program participants rises faster than real GDP accounts for the slight rise in Social Security and Medicare relative to GDP during the next decade. In the following decade and beyond, the number of program recipients is projected to grow less rapidly than the 2.2 percent real GDP growth rate and the fiscal burden of Social Security and Medicare will gradually begin to fall.

The key takeaway from this analysis, one that warrants special emphasis, is that the fiscal challenge presented by Social Security and Medicare can be met without reducing the aggregate purchasing power of benefits provided by either program. Retirees in the future can enjoy the same level of Social Security and Medicare benefits as current retirees. Deep reductions in benefits that allegedly shred the senior citizen safety net are not necessary.

The Impact of Specific Social Security and Medicare Policy Changes

This section shows how specific modest changes to restrain Social Security and Medicare spending can prevent expenditures on these programs from rising appreciably relative to GDP. It is important to keep in mind that the purpose of this exercise is a narrow one. The policies I describe should not be construed in any way as comprehensive reform package. They do not constitute a fundamental restructuring Social Security and Medicare, nor do they address important distributional issues. Their purpose is merely to show that the fiscal challenge can be effectively met without deep cuts in program benefits.
For Social Security, we consider two policies. The first is to limit the growth in initial benefits promised to future new retirees to the growth in the consumer price level rather than average wages. Under this policy, the initial monthly benefit the typical new retiree receives at Social Security’s normal retirement age in any given year would be higher than the initial benefit received by the typical new retiree in the previous year by the rate of inflation. For future recipients who retire at Social Security’s normal retirement age, this policy would preserve the purchasing power of their initial benefits at today’s level.

The second Social Security policy is to gradually increase Social Security’s retirement age. Under current law, starting this year, Social Security’s normal retirement age starts to rise by two months each year until it reaches age 67 in 2026. Our proposed policy is to continue this rate of increase starting in 2027 until Social Security’s retirement age reaches 70. The increase is roughly in-line with the projected increase in life expectancy over the next 30 years.9

Holding the growth in Medicare expenditures per enrollee to the growth in medical prices may seem like a tall order. But the experience of Medicare spending over the past several decades provides some confidence that it can be achieved, if policymakers avoid expansions of the program. During the last twenty years, there has been only one significant Medicare expansion; namely the addition of prescription drug coverage in 2003 (Part D). Excluding Part D expenditures, Medicare spending per enrollee has risen more slowly than the MCPI during the last 10 years (1.9% vs 3.0%) and at the same rate as the MCPI over the last 20 years (3.5%).

Additional policies are likely to be needed to keep the future growth in Medicare expenditures per enrollee at a rate no higher than the MCPI. The increasing age of the senior citizen population over the next 30 years will create upward pressure on medical expenses per enrollee. This upward pressure can be offset by policies that make seniors more cost-conscious. An obvious policy to do this is to gradually increase the Part B coinsurance rate that applies to physician and other non-inpatient hospital services from its current 20 percent to 30 percent.

The history of Medicare demonstrates the political difficulty of raising copayments. Most attempts have failed. But as we noted during the discussion of Medicare’s design flaws, the

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9 CBO estimates that life expectancy at birth will increase by 3.3 years over the next 30 years.
program’s low copayments contribute to the over utilization of medical services. Correcting this flaw is one of the essential policy changes that should accompany any Medicare reform package.

Chart 7 shows the impact of these policies on total government spending, including interest on the outstanding public debt. The light orange color shows the projected level of federal government spending relative to GDP in the absence of any policy changes. This portion of the chart reproduces the spending trajectory reported in Chart 1. The dark orange color shows the projected level federal government under the Social Security policies described above. Federal spending rises gradually from its current level of 21 percent of GDP to 22.7 percent over the next 15 years. Thereafter, it steadily declines to a level of 21.5 percent in 30 years. The three modest policies prevent the large rise in future federal spending from the rapidly increasing size of the senior citizen population. Along with a modest 2.2 percent annual economic growth rate, they largely meet the federal government’s fiscal challenge.

Chart 7. Total Federal Spending: 1900 to 2048 (% of GDP)

Senior Citizens Income

Any consideration of Social Security and Medicare policy change must consider how the income of households headed by persons age 65 and older have fared under existing policies.
Social Security’s wage-indexing policy has been in place since the early 1980s. So in evaluating any policy change that moves away from wage-indexing, it is natural to evaluate changes in income levels of senior households since that time and against the two goals that wage-indexing policy has sought to achieve.

One goal is to ensure that improvements in living standards of senior citizens keep pace with the growth in living standards enjoyed by the working age population. Chart 8 sheds some light on the extent to which this goal has been achieved. The blue bars show the growth since 1980 in the inflation-adjusted median income of households headed by persons age 65 or older (termed senior households) for each quintile of the senior household income distribution. Focusing first on the overall income growth for senior households, the overall median is given by the growth for the middle quintile, which is 60 percent. The orange bar shows the growth in the median income of households headed by persons under age 65 (termed non-senior households). Median senior household income has grown four times faster than median non-senior income. The more rapid growth in senior household income has raised the median senior household income relative to non-seniors significantly, from 43 percent in 1980 to 59 percent in 2017.

Chart 8. Real Household Income Growth from 1980 to 2018

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10 The wage-indexing policy became effective for persons born on or after January 1, 1917. The policy had a 5-year phase-in period during which retirees received a benefit level which was a blend of the old formula and the new formula. Thus, the current wage-indexing policy partially affected the initial benefits of persons who retired at Social Security’s normal retirement in 1982 and fully affected the initial benefits of persons who retired at the normal retirement age in 1987. (fact check)
Increases in earnings from work and in retirement income mainly from private pension plans account for the lion’s share of the increase in senior household income. The rising inflation-adjusted value of Social Security benefits due to wage-indexing has played only a relatively minor role in the relative growth of senior household income. Inflation-adjusted median household Social Security benefits increased by 40 percent since 1980. Had the median benefit remained at its 1980 level, median senior household income would have increased by 38 percent instead of 60 percent. This growth is still more than twice the growth in non-senior household income.

Turning now to a comparison of senior household incomes by quintile, the growth in the median senior household income of each quintile of the distribution of senior income is much higher than the 15% growth in the median income of all non-senior households. The median income of poorest fifth of senior households grew nearly twice as fast; the median income of the second poorest by more than three times as fast; the middle by nearly four times as fast, the second richest by nearly five times as fast and the richest fifth of senior households by nearly six times as fast.\(^{11}\)

The data show that the growth in senior household income over the last four decades has been accompanied by a sharp increase in the dispersion of income.\(^{12}\) Since at least 1980, the growth rates rise monotonically from the lowest to the highest quintile. The fastest income growth has consistently occurred among higher income seniors and the slowest growth among the lowest income seniors. As a result, the median income of the top income quintile of seniors relative that of the middle quintile is now 23% higher than it was in 1980. The median income of the middle quintile relative that of the lowest quintile is now 21% higher. This increase in the degree of income inequality among senior households has, as we will argue later, important policy implications for Social Security reform.

The main takeaway from this chart is that in the years since wage-indexing was established, incomes of senior households who are largely the group collecting Social Security, has not just

\(^{11}\) When means are used instead of medians the story is much the same with two notable exceptions. First, the mean income growth among the poorest fifth of senior households is slightly below that of the median among non-senior households (30% for seniors vs 35% for non-seniors). Second, the relative growth of mean incomes of each quintile is less than in the corresponding growth measured using median incomes.

\(^{12}\) (see Poterba)
kept pace with that of non-senior households, who are largely the group paying taxes to finance these benefits, it has a grown about four times faster. The more rapid income growth among senior households compared to the income of the typical working household has been an across-the-board phenomenon.

The second goal of Social Security’s wage-indexing policy was to prevent household incomes from dropping precipitously when the household’s main breadwinner reaches retirement age. A major contribution to our understanding of how well Social Security helps achieves this goal was recently made by Bee and Mitchel (2017). Combining information on demographic characteristics of household with income data obtained from IRS records and Social Security earnings and benefits obtained from Social Security Administration records, Bee and Mitchel were able to construct the path of household income of individuals in the years immediately preceding and after their retirement. More specifically, Bee and Mitchell were able to identify the age at which individuals began collecting Social Security benefits. They then used the tax returns of these individuals to obtain their IRS reported income in the year in which the individuals began collecting Social Security benefits and in each of the five years preceding and succeeding that year.

Chart 9 reproduces Bee and Mitchell’s results for persons with the median household income. The left-side axis and the bars show median household income levels for each of the five years before and after the first year the household head collects Social Security retirement benefits. The year in which the household head begins collecting Social Security is designated “0.” The right-side axis and the red line express each year’s income as a percentage of the household’s income five-years before the household head begins collecting Social Security.

As the data show, there is only a modest decline in median household income in the years after workers begin collecting Social Security benefits relative to those in the years leading up to first collecting Social Security benefits. The income decline from 5 years prior to first receiving Social Security to the first year benefits are received is a modest 11 percent. The income decline from 5 years before first collecting Social Security to five years after is only 23 percent; about two percent per year. It is important to keep in mind that these modest reductions likely overstate the reductions in disposable income since tax rates on Social Security benefits and
capital income which is typical drawn upon during retirement years are lower than on wage earnings which are the primary source of pre-retirement income.13

Chart 9. Total Income Before and After Retirement

Bee and Mitchell do not provide sufficient data to enable us to calculate the importance of wage-indexed benefits in preventing household income from sharply declining as heads of households reach retirement age. But an upper bound estimate can be made. From the Health and Retirement Survey, we know that about 25 percent of the median household’s income in the year the household reaches retirement age consists of Social Security benefits. For the median household, Social Security benefits would be about $3,000 lower had initial benefits been indexed to consumer prices rather than to wages. This amounts to 5 percent of median household income in the year in which Social Security benefits were first received. Hence, median household income from 5 years before the household first received Social Security to the year it first received benefits would have been 16 percent instead of the 11 percent reduction shown in Chart 9.

13 The results for workers who are at the 25th and 75th percentile of the income distribution of persons initially collecting Social Security benefits are similar. The decline in income for both groups is modest. The decline is slightly lower for persons at the 25th percentile than for persons at the median and is slightly higher for those at the 75th percentile.
Concluding thoughts

The fiscal challenge presented by rising government expenditures is one that is common among most developed countries. This paper has emphasized that demographic change is only part of the reason for the future increases in the government spending burden. At the federal level in the United States, Social Security and Medicare policies play an important role by increasing inflation-adjusted value of government payments per enrollee.

This paper has shown that if the purchasing power of future government payments to each Social Security and Medicare recipient can be held at its current level, the high cost of rising future expenditures can largely be avoided. Although fundamental reform is desirable, modest policy changes alone can achieve this result. We have shown that price indexing Social Security benefits, continuing the gradual increase in Social Security's retirement age, and increasing Medicare coinsurance rates can achieve this outcome.

The aforementioned policies are illustrative of the type of modest policies that will meet the U.S. federal fiscal challenge. Other Social Security and Medicare policies, in particular those which account for the distributional consequences of rising income inequality in senior citizen incomes, should be considered.