

The Retirement Income of the Prime Working Aged

Daniel Thompson
United States Census Bureau

August 6, 2022

SEHSD Working Paper 2022-21
SIPP Working Paper 304

This paper reports the results of research and analysis undertaken by U.S. Census Bureau staff. It has undergone more limited review than official publications and was released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views expressed are those of the author and not necessarily those of the U.S. Census Bureau.

CORRESPONDENCE TO:
Daniel Thompson
Program Participation and Income Transfers Branch
Social, Economic, and Housing Statistics Division
U.S. Census Bureau
4600 Silver Hill Road
Washington, DC
daniel.k.thompson@census.gov

The Retirement Income of the Prime Working Aged

Daniel Thompson
U.S. Census Bureau

Abstract

A growing literature in fiscal sociology and public policy research identifies a “hidden welfare state”: a set of tax exemptions with social welfare objectives available to those with taxable income and the knowledge of how to use these exemptions. However, the distributional impact of the hidden welfare state is understudied, perhaps because it is poorly captured by household surveys. In particular, surveys fail to capture a large share of income from pensions and retirement accounts. This paper examines pension and retirement account withdrawals among prime working age persons—those aged 25-54—by linking the 2018 Survey of Income and Program Participation (SIPP) with respondents’ restricted-access tax records. The analysis shows that the SIPP captures only 30.3 percent of total pension and retirement account income. Using tax records and comparing this income to program income—the “visible” welfare state—shows that pensions and retirement accounts are a larger source of income for the prime working aged and this income is more common among higher earners. Moreover, there is little overlap among persons receiving program income and retirement income. Overall, early withdrawals are common, not confined to specific groups, and poorly captured by current survey methods.

Introduction¹

Much research in the social sciences has considered the distributional effects of U.S. social welfare programs such as Social Security, unemployment insurance, and the Supplemental Nutrition Assistance Program (SNAP), programs which make up what social policy scholars call “the welfare state” (Quadagno 1987). These programs, which are variously means-tested or universal, and conditional or unconditional on payment of payroll tax, insure against common life course risks, including employment instability and onset of poor health. The American welfare state and its distributional impacts are well-studied; in addition to a vast body of scholarly research, government agencies publish regular reports on income from program sources, the importance of these income sources for aggregate household income, and how receipt of social insurance income affects poverty rates.²

A growing literature in fiscal sociology, political science, and related fields has drawn attention to another, less-well-known aspect of America social policy: tax expenditures with social welfare

¹ The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure avoidance protection of the confidential source data used to produce this product (Data Management System (DMS) number: **P-6000562**, Disclosure Review Board (DRB) approval number: **CBDRB-FY22-SEHSD003-035**).

² For example, see Bridges and Gesumaria (2016), U.S. Census Bureau (2021), Giefer (2021), and Thompson and King (2021).

objectives. The United States government encourages homeownership, saving for retirement, and purchasing health insurance by allowing taxpayers to deduct mortgage interest, retirement account contributions, and health insurance premiums, respectively, from their taxable income. Research on these tax expenditures has shown that they are large -- almost half the cost of social welfare programs -- such that scholars have called tax expenditures for social welfare objectives a “hidden welfare state” or “invisible welfare state” (Howard 1997, Martin 2008).

An important component of the hidden welfare state is tax expenditures for private retirement saving. This is the second largest tax expenditure in the United States, after those for employer-sponsored health insurance. As a result of these incentives, wealth held in private pensions and retirement accounts totaled 32 trillion dollars in 2021 (Federal Reserve 2022), about 25 percent larger than equity in owner-occupied housing. Retirement accounts are the most commonly-held financial asset after savings and checking accounts, owned by more than 50 percent of families and with nearly universal ownership among higher income families (Bhutta et al. 2019).

This vast private pension system has also changed in recent decades. Defined-contribution (DC) retirement accounts have largely replaced defined-benefit pensions as the most common employer-sponsored, tax-advantaged retirement savings arrangement. At the same time, ownership of individual retirement accounts (IRAs), which are usually not employer-sponsored, has grown. A key implication of this change is that retirement assets are now more liquid, since retirement account withdrawals are generally allowed by plan administrators, and without tax penalties in some instances. This is a potentially large income source that can be used during prime working age to smooth income shocks and provide funds for large purchases. Moreover, if retirement income is realized early, tax preferences may subsidize non-retirement saving.

This paper examines early withdrawals from pensions and retirement accounts and the importance of this income source for prime age workers—those age 25-54—relative to other income sources, including social programs. While the hidden welfare state has most often been quantified in terms of fiscal cost -- specifically the forgone tax revenue due to tax expenditures -- a more complete picture of the private pension system as an institution requires also considering pensions and retirement accounts as a source of income for their owners. Yet a practical challenge to doing so is that pension and retirement account income is poorly captured by household income surveys. For two decades, researchers have observed that retirement income is severely underreported, and survey estimates fall far short of tax records (Roemer 2000, Rothbaum 2015, and Thompson 2020). Moreover, recent research using linked survey and tax records shows that this measurement error is nonclassical; it varies at different parts of the income distribution (Bee and Mitchell 2017, Dushi and Trenkamp 2021, Thompson 2021).

This analysis examines early withdrawals of retirement assets using the 2018 Survey of Income and Program Participation (SIPP) linked to individual tax records. By linking SIPP to individual tax records, it is possible to combine accurate data on retirement income with the survey’s rich, nationally-representative data on demographics, other income sources, and the households’ broader economic circumstances.

The paper uncovers several novel findings. The analysis shows the scope of underreporting of pension and retirement account withdrawals among the prime working aged: just 10.7 percent of withdrawals of any amount and 30.3 percent of total retirement income are collected in the SIPP. In aggregate, pension and retirement account income is a larger source of income for prime working age persons than all

social programs *combined*. Receipt of these two types of income is to a large extent “divided”: persons receiving social program income receive little retirement income, while persons receiving retirement income receive little social program income. The analysis also shows that retirement income amounts during prime working age have a U-shaped association with earnings; those with no earnings as well as those with high earnings receive greater retirement income amounts (conditional on receipt) than middle earners. Considering a broad set of individual characteristics and household circumstances, the analysis shows that early receipt of retirement income is not confined to specific groups. Instead, early withdrawals are common across a broad cross-section of American society.

This paper helps fill a gap in research on tax expenditures as social policy. This literature has most often measured the hidden welfare state in terms of fiscal cost, comparing government tax expenditures to revenue collection and direct spending on social welfare programs (Howard 1997, Hacker 2002, Martin 2020, Prasad 2006, Faricy 2015). Other work has taken on the considerable challenge of estimating how these tax expenditures are distributed among households (Avram 2018, Martin 2017). Yet, to understand the importance of the private pension system, it is also important to consider it as a source of income, and whether that income is realized before retirement. Moreover, income – accurately measured – is a required input for the simulation models of taxation used in research on tax expenditures.

The paper proceeds as follows. First, I briefly review the existing research on tax expenditures as social policy, focusing on how researchers have measured these institutions. Next, I describe the US private pension system’s tax advantages. Third, I discuss the challenge of measuring retirement income, which is poorly captured by income surveys. The fourth section describes the linked survey and administrative data used in the analysis. The results show that pension and retirement income received in prime working age is poorly captured by SIPP, this income is a substantively large component of personal income, and receipt and amounts are higher among higher earners. I conclude by discussing how data availability and quality limit research on the hidden welfare state, and what data are required to move this research forward.

Tax expenditures as social policy

While early scholarship on the welfare state considered taxation (Titmuss 1962), decades of subsequent research largely neglected taxation. Howard’s seminal 1997 book, “The Hidden Welfare State,” renewed interest in the use and fiscal cost of tax expenditures for social policy objectives. Howard’s work sparked renewed interest, particularly in the United States, in taxation as social policy. Examining all expenditures but focusing on four in depth – employer-sponsored pensions, the mortgage interest tax deduction, the Earned Income Tax Credit, and the Targeted Jobs Tax Credit – Howard shows that the fiscal cost of tax expenditures approaches spending on social insurance and transfers. For Howard, the magnitude of tax expenditures for social policy objectives is so great that they comprise a “hidden welfare state.” Subsequent research has built on Howard’s work, describing tax expenditures as part of a “divided welfare state”, “invisible welfare state”, or “welfare for the wealthy” (Hacker 2002, Martin 2020, Faricy 2015). Other work has questioned whether these expenditures can be considered a welfare state insofar as there is little risk pooling (Prasad 2015), but there is broad agreement that tax expenditures are an important aspect of social policy (see also Sinfield 1978).

The distributional impact of tax expenditures is a core concern of existing research. The extent to which selective tax preferences favor some groups over others has been described primarily in fiscal terms,

and in broad brushstrokes. It is now well-established that there are large fiscal costs of tax expenditures in terms of forgone revenue (Howard 1997, Hacker 2002, Martin 2020, Prasad 2006, Faricy 2015). The distributional effects are more ambiguous. If the needed revenue of a government is a constant, lowering the tax liability of one group will increase tax liability for other groups (Ruane, Collins, and Sinfield 2020). For example, lower taxes for people saving for retirement will require higher taxes for those who are not saving for retirement, if total revenue needs are unchanged. Intuitively, tax expenditures for mortgage interest deductions, pensions, retirement accounts, and health insurance are regressive insofar as the propensity to have these assets and services tends to be greater among more affluent persons. Studying this empirically is a challenge involving assumptions and counterfactuals. Avram (2018) estimates how tax expenditures are distributed among individuals in several countries of Europe, and Martin (2017) does the same for the US mortgage interest deduction, both finding that the respective tax expenditures are generally regressive.

The distributional effects of tax expenditures can be viewed from other vantage points. One, which is the focus of this paper, is that tax-advantaged retirement savings are an important source of household income. Typical employer-sponsored retirement savings arrangements allow workers to defer part of their ordinary compensation to a later date; receive additional deferred compensation from their employers through matching pension or retirement account contributions; and accumulate interest, dividends, and capital gains on this savings. Ultimately persons and households realize this income at some point, either before or after retirement. Various tax preferences, which are discussed in more depth in the next section, incentivize this behavior.

Focusing on income relates to another issue: the timing of withdrawals. Early pension and retirement account withdrawals can be used by prime-working-age households to dampen income shocks, to provide additional funds for large purchases, or simply as discretionary income. To the extent that retirement income is realized before retirement, retirement assets can be considered tax-advantaged savings vehicles rather than strictly retirement accounts.

The tax-advantaged private pension system in the United States

Private pensions and retirement accounts have significant tax advantages in the United States. (For a review of pensions and retirement accounts themselves, refer to the appendix.) The complexity of these tax advantages is often implicated as one reason for the “hidden” character of the private pension system. Most pensions and traditional retirement accounts are funded on a pre-tax basis by the employer, employee, or both. Employee contributions are exempt from income tax, though payroll taxes for Social Security and Medicare still apply. Employers’ contributions to pensions and retirement accounts are exempt from payroll taxes. Instead of taxing contributions, employees pay income tax upon withdrawal. Employer-sponsored DC accounts and IRAs also have Roth variants,³ which are funded with post-tax -- rather than pre-tax -- income.⁴ The timing of taxation is the key difference between traditional and Roth accounts: traditional accounts are funded with pre-tax contributions and taxed upon withdrawal, while Roth variants are funded with post-tax contributions and are not taxed upon withdrawal.

³ Employer-sponsored Roth accounts are somewhat less common than traditional accounts.

⁴ Some defined-benefit pensions, including those of Federal workers, are partly funded with post-tax contributions, so that annuity payments in retirement are partly untaxed.

Retirement accounts – both traditional and Roth-type accounts -- effectively exempt investment income from taxation.⁵ Consider a savings account with a commercial bank or a brokerage account with an investment bank. These accounts are funded with post-tax income, and then all investment income – including interest, dividends, and realized capital gains – is also taxed. Traditional or Roth retirement accounts are taxed only once (either at withdrawal or contribution), which is both a significant tax savings for workers and a significant tax expenditure for governments (Howard 1997). An additional tax advantage of retirement accounts is that they allow their owners to shift the realization of income to periods in their lives when their marginal tax rates are lower. For example, a worker with a salary of \$100,000 has a marginal federal tax rate of 24 percent as of 2022 (IRS 2021). If the worker defers this income until retirement or some other period with little other taxable income (such as a spell of unemployment or unpaid family leave), their marginal federal tax rate could be as low as 10 percent, assuming static tax brackets.

Another important aspect of employer-sponsored and individual retirement accounts is that, in contrast to defined-benefit pensions, there are greater opportunities to pass tax-advantaged retirement account wealth onto survivors. Defined benefit pensions often provide benefits for surviving spouses but rarely for surviving children. In contrast, the entire balance of retirement accounts can be passed onto whomever the decedent chooses, including non-dependent children. The balance of inherited accounts must be withdrawn within five years as of 2017⁶, but otherwise, tax rules are the same as retirement-age withdrawals: tax is owed on withdrawals from traditional retirement accounts, and withdrawals from Roth accounts are untaxed. While this paper's analysis cannot distinguish inherited accounts, some portion of prime-age withdrawals in any given year may be due to inheritance, and these withdrawals may plausibly be quite large.

The hidden retirement income of the prime working aged

The significance of private retirement as a component of the hidden welfare state is further obfuscated by limited data availability and quality. Household surveys often do not ask those respondents not yet retired about income from pensions and retirement accounts, or surveys may only ask about “regular” sources of income, excluding the irregular withdrawals common with retirement accounts. Even when respondents are asked about this income, it is likely to be underreported (Bee and Mitchell 2017). Respondents may not remember the exact timing of withdrawals and whether it was during the survey reference period. Terms such as 401(k) and IRA may be jargon to some respondents, particularly younger respondents. Social desirability may also play a role; advice on personal finance tends to strongly discourage early withdrawals,⁷ while the IRS refers to the additional tax on early withdrawals as a “penalty”, with negative connotations. Given these norms, respondents may be less likely to report early withdrawals.

⁵ Given stable tax rates, traditional retirement accounts have the same net return as Roth retirement accounts, which are funded with post-tax earnings income and exempt interest, dividends, and capital gains from tax.

⁶ The withdrawal period was extended to 10 years in 2020.

⁷ For example, personal finance website Bankrate.com advises, “Taking a withdrawal from your traditional 401(k) should be your very last resort,” and, “tread carefully as the decision may have long-range ramifications impacting your dreams of a comfortable retirement.” <<https://www.bankrate.com/retirement/how-to-withdraw-from-401k-early/>>

A growing body of research shows that retirement income is severely underreported in household surveys. Roemer (2000), Rothbaum (2015), and Thompson (2020) compare survey estimates of aggregate income against tax record benchmarks, finding that survey estimates fall far short. Bee and Mitchell (2017), Dushi and Trenkamp (2021), and Thompson (2021) examine linked survey and tax records, finding significant underreporting of retirement income among the population 65 and older, and that bias from undermeasurement varies at different parts of the income distribution. Bee and Mitchell (2017) also show that the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) estimates of retirement income among younger respondents -- those under 65 -- is just 44 percent of what linked tax records show.

Given the considerable measurement error in survey estimates of retirement income, some researchers have turned to other data sources. Amromin and Smith (2003) and Argento et al. (2015) use individual tax records, a more robust, longitudinal data source. Yet they note that a limitation of tax records is that they contain little information on individuals' demographics and economic circumstances, and the authors do not examine these individuals' program income, which for many programs is not captured by tax records. Other research uses proprietary data from retirement account administrators such as Vanguard (Munnell and Webb 2015). However, these data also have limited information on individual characteristics or other income sources, and they are unrepresentative given selection into any specific account administrator.

Studying income from pensions and retirement accounts during prime working age

Building on the tax expenditures literature as well as recent research linking surveys to administrative data, this paper examines pension and retirement account withdrawals among prime age workers, considering their importance as a source of household income relative to other income sources, particularly social insurance and income transfers, programs which comprise the "visible" welfare state. The analysis also considers how retirement income in prime working age is distributed among more- and less-affluent persons, as measured by one-year and five-year earnings quintiles, and how receipt and income amounts differ by demographics and household economic circumstances. In doing so, this paper sheds light on the distributional implications of an important part of the hidden welfare state.

This paper addresses measurement error by linking the Survey of Income and Program Participation (SIPP), a major US household income survey, with restricted-access tax records of retirement income and other income sources. Household income surveys contain rich data on household income circumstances, which may correlate with receipt of retirement income during prime working age and are the only microdata that capture income from several of the United States' social programs. However, surveys fail to capture a large share of private pension and retirement account income. By linking the survey to tax records, I combine robust data on retirement income with the data on other topics in the household survey.

Data and methods

This paper uses data from the 2018 SIPP, a nationally representative survey of the non-institutionalized US population, linked to administrative records from the Social Security Administration (SSA) and IRS. The SIPP asks detailed questions about earnings, transfers, and other income sources, all of which are used in varied parts of this analysis.

The administrative records of retirement income used in this analysis are from extracts of 1099-R information returns. The 1099-R is the form that plan administrators use to report a withdrawal from a pension or retirement account to the IRS. Importantly, the 1099-R data used here exclude rollovers⁸; if rollovers were not excluded, retirement income would be exaggerated (Auten and Splinter 2018).

I use earnings data from SSA's Detailed Earnings Record (DER) to examine the correlation of retirement account withdrawals with earnings, measured in the reference year as well as a five-year average (reference year and the preceding four years). The DER is one of SSA's official records of earnings, which SSA uses for calculating Social Security benefit amounts. While the SIPP also has earnings data, the main advantage of the DER is that it has earnings data from before the survey's reference period.

Parts of the analysis examine the individual characteristics and household shocks associated with a retirement account withdrawal. To examine only retirement account owners, I use a field from the DER which captures contributions to an employer-sponsored retirement plan. While SIPP also has measures of retirement account ownership, our preliminary analyses suggested that the SIPP asset ownership variables have considerable error.⁹ From the DER, I use contributions during the previous five years as a measure of retirement account ownership. However, this indicator, while commonly used in research based on tax records (Argento et al. 2015), has some limitations. Some persons may own retirement assets despite not making contributions in the last five years, and a small subset of these persons may have employer-sponsored retirement plans that do not require them to contribute anything from their earnings. The measure also does not capture persons saving only in IRAs. However, most IRAs balances are rollovers from employer-sponsored plans (Holden and Schrass 2021).

I link the SIPP to administrative records with Protected Identification Keys (PIKs), which probabilistically match respondent identifying information in the SIPP to Social Security records. With the PIK files, researchers can link SIPP respondents to a broad array of administrative records. However, not all respondents can be assigned a PIK. For the respondents aged 25-54 who are the focus of this study, 3.6 percent cannot be matched. Given the inherent bias in any omitted sample, however small, I reweight SIPP respondents using inverse probability weighting. Appendix Table A1 compares respondent characteristics in the original and reweighted PIK sample, showing that they are nearly identical.

The reference period for the 2018 SIPP and our analysis is 2017. The analysis sample is individuals aged 25-54 in 2017. All analyses are at the individual level.

Results

A key part of this analysis is capturing pension and retirement account withdrawals and quantifying to what extent they are measured accurately by existing survey data. Table 1 presents a cross-tabulation comparing retirement income receipt captured in the SIPP relative to receipt captured in 1099-Rs. Table 1 shows that retirement income receipt among the prime working aged is largely hidden. Among SIPP respondents aged 25-54, 12.0 percent received income from a pension or retirement account in IRS 1099-R records, but far fewer – 1.3 percent – reported this income in the SIPP, while 10.7 percent did

⁸ "Rollover" refers to tax-exempt transfers of retirement account balances from one account to another. For example, owners of employer-sponsored retirement accounts (i.e., employees) often rollover the balance to an IRA upon separation from the employer sponsoring the account.

⁹ Specifically, a large share of persons with records of retirement account contributions during the reference year report in the SIPP that they owned no retirement assets during the reference year.

not report it. Another 1.4 percent of reports are false positives: SIPP shows receipt of retirement income, but 1099-R records show no receipt. Some of these false positives may result from respondents reporting income that does not correspond to the reference period, and some observations in each category are imputations.¹⁰

Table 2 considers how replacing survey reports of retirement income with tax records changes estimates of mean income. In this instance, mean retirement income roughly triples when tax records are used, increasing from \$472 to \$1,554. For this analysis, the means are not conditional on receipt; zero values are included in the means.

To get a sense of the relative size of retirement income in prime working age, it is helpful to consider SIPP estimates of program income, which includes Social Security¹¹, Supplementary Security Income (SSI), unemployment insurance, Temporary Aid for Needy Families (TANF), and other program income, the means for which are shown in Table 2.¹² This cash income is from the programs that collectively make up the welfare state, or at least the “visible” welfare state per Howard (1997). When using administrative data to estimate mean retirement income, pension and retirement account withdrawals are a larger source of cash income for people 25-54 than all program income sources *combined* (\$1,554 versus \$1,015).

Hacker (2002) contends that the American welfare state is divided between social programs and tax expenditures, and these two types of social policy benefit different social groups. To examine this pattern using the data at hand, Table 3 shows the mean income estimates in Table 2 but conditional on receipt of program or retirement income. The table uses tax record estimates of retirement income and survey-reported estimates for the other income sources. The left column shows mean income conditional on any program income receipt, while the right column shows mean income conditional on any retirement income receipt. The results in the table suggest that receipt of these two incomes sources is divided: persons receiving retirement income receive four times as much retirement income as persons receiving program income, while persons receiving program income receive five times as much program income as persons receiving retirement income.

A core concern in the tax expenditures literature is how use of these institutions is stratified in American society. Tables 4A and 4B show how retirement income is associated with earnings income. Table 4A stratifies by earnings income quintile of the current year, while Table 4B stratifies by the quintile of average earnings income over the previous five years. Both earnings measures are from the SSA Detailed Earnings Record described in the previous section, while the retirement income values are from IRS Form 1099-R extracts. Both tables report the within-group percentage receiving retirement income during the reference year and the median amount of this income, conditional on receipt. The tables also report the within-group percentage receiving retirement income, conditional on contributions to

¹⁰ While some measurement error studies discard imputed values, I retain them. The imputations are performed by the Census Bureau and are released on the SIPP file. Any error due to imputations is one part of the overall measurement error of a survey.

¹¹ Given the age of this population, Social Security receipt is from Social Security Disability Insurance.

¹² These program income sources may also have measurement error. The largest – Social Security – tends to be overreported in SIPP, while others tend to be underreported (NAS 2018; Thompson 2020, 2021).

employer-sponsored retirement accounts within the past five years, which I use as a proxy for retirement account ownership.¹³

Table 4A shows that the rate of retirement income receipt among prime-working-age persons increases almost monotonically with income: the rate of receipt grows from 6.6 percent among persons with no earnings to 16.7 percent for those in the top quintile.¹⁴ Yet when I consider persons who have made retirement contributions in the past five years, a different pattern emerges. Lower earners are somewhat more likely to receive retirement income in prime working age. Receipt percentages for those with no earnings or in the first earnings quintile are 26.3 percent and 26.0 percent, respectively, compared to 17.6 percent in the fifth quintile. Retirement median income amounts (conditional on receipt) have a somewhat U-shaped association with earnings quintile. Retirement median income (within quintile) falls from \$7,514 for persons with no earnings to \$3,848 in the first earnings quintile and \$2,039 in the second quintile, then increases to \$6,001 in the fifth quintile.¹⁵

It should be noted that, among those with no annual earnings and among earnings quintiles, the groups are heterogenous. The no-earnings group is comprised of the long-term unemployed, discouraged workers, disabled workers, and persons who choose not to work. The first earnings quintile includes low-wage workers but also higher-wage workers with part-year earnings. Moreover, the distribution of retirement income within categories is heterogenous. Within all groups, but especially the no-earnings group, the retirement income distribution has a wide range and long right tail. The heterogenous distribution suggests that some persons with no earnings use pension and retirement account income to supplement other sources of income, while for others, pension and retirement account income is their main income source. An example of the latter is persons receiving pension income through the disability provision of a pension plan.

Current-year earnings may not be representative of the broader economic circumstances of a person. In a given year, persons may experience negative earnings shocks or unemployment spells, and these may motivate retirement account withdrawals to smooth consumption. If examined annually, people in the first quintile may be more affluent when observed over a longer time period, or people in the top quintile may be having an exceptionally high-income year. To address this, Table 4B shows how withdrawals are associated with average earnings over the previous five years. The patterns are similar when stratifying by five-year mean earnings than when stratifying by current year earnings. The propensity to take retirement account withdrawals is strongly associated with income. Only 4.0 percent of persons with no earnings have retirement income, while 17.9 percent of people in the top quintile have retirement income. Among persons with contributions in the last five years, the distribution is almost flat. Differences between groups are not statistically significant.

Retirement income receipt and amounts can also vary across other characteristics. Table 5 presents estimates of receipt and median amounts (conditional on receipt) by gender, race, marital status, age,

¹³ While this measure does not capture persons contributing only to IRAs, I suspect that most IRA owners also have pensions or DC retirement accounts. Moreover, a large share of IRA balances are rollovers from employer-sponsored pensions or retirement accounts (ICI 2019).

¹⁴ The difference in receipt between quintiles 3 and 4 is not statistically significant.

¹⁵ The differences in median amount are not statistically significant for quintiles 1 and 2 and quintiles 4 and 5.

and other characteristics.^{16,17} The table shows some heterogeneity in retirement income receipt. Black respondents are more likely to receive retirement income during prime working age than Asian, White, or Hispanic respondents. Homeowners are more likely than renters to have retirement income, though this appears to be confounded by asset ownership since, conditional on receiving income from retirement accounts, renters are more likely to make withdrawals. Older, native-born, and veteran households are also more likely to have retirement income. However, the differences in receipt rates are not substantively large in most instances, which shows that retirement income receipt in prime working age is not limited to specific groups. There is somewhat more variation in median amounts: households with a householder who is male, a homeowner, aged 45-54, or a veteran tend to have greater income from pensions and retirement accounts, conditional on receipt. But again, variation across groups is generally not large.

SIPP also allows analysts to examine a broad array of household shocks, which I measure as within-reference-period changes in status the household level. There are shocks that may imply precarity, including unemployment, disability, and marital status changes. However, there are also shocks that do not imply precarity, such as home purchases, education, and childbirth. Both categories of shocks are plausibly factors that motivate retirement account withdrawals. The IRS allows penalty-free withdrawals for these each of these reasons, though this varies across retirement account types.

Table 5 shows that these shocks are often correlated with higher withdrawal propensities. Moves to owner occupied housing, unemployment, and leaving a job are associated with increases of 2.2 to 4.1 percentage points above the baseline of 11.6 percent in the absence of shocks. New widowhood nearly triples the likelihood of retirement income during prime working age, ostensibly through disbursement of retirement life insurance, survivor benefits from pensions, and inheritance of retirement accounts.

A final matter relates to the universality of retirement income during prime working age. The share of prime working aged adults receiving income from social welfare programs such as unemployment insurance and TANF during any given year is relatively low. But a considerably larger number of people receive program income at some point during their working years. Analogously, I estimate retirement income receipt over a longer period using the respondents' 1099-R records for the previous 20 years. 16.0 percent of persons aged 45-54 received retirement income during 2017, but 64.8 percent of the same cohort received retirement income at some point in the previous 20 years. Along with the results presented for 2017, this shows that early pension and retirement account withdrawals are common among the prime working aged population.

Discussion and conclusion

The analysis has shown that pensions and retirement accounts are a largely "hidden" source of income for the prime working aged. Survey data fail to capture most retirement income among this group. Pension and retirement account withdrawals are a large source of income -- \$1,554 for the average

¹⁶ Sex, race/ethnicity, citizenship status, veteran status, disability status, and date of parent's death are measured at interview date. Housing tenure, marital status, age, and education are measured as of month 12 of the reference period.

¹⁷ Federal surveys, including the 2018 SIPP, give respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups". The first method is used in this paper.

person – which is larger than all program income sources combined. Persons across the income distribution receive retirement income, but the propensity to receive this income tends to increase with higher earnings or household income. Early withdrawals are somewhat correlated with household characteristics and the economic shocks they experience, but they are not confined to specific groups. And while most of the analysis pertains to 2017, I also find that 64.8 percent the cohort aged 45-54 in 2017 received retirement income at some point in the previous 20 years. Overall, the evidence presented shows that early withdrawals are common, not confined to specific groups, and poorly captured by current methods.

Why are higher earners more likely to have retirement income during prime working age, and why does this income tend to be larger? There are several possible explanations. First, pensions and retirement accounts are individualized, largely self-financed assets; the ability to withdraw from a pension or retirement account in any year is conditional on having previously made contributions. High earning people are more likely to have pensions and retirement accounts offered by their employers and more likely to contribute to these assets when available (Tamborini and Kim 2020). As a result, they are more likely to own pension and retirement assets, and therefore are more likely to have the ability to withdraw from them.

Second, higher-earning households likely have greater knowledge of financial assets and tax advantages and may be using retirement accounts for not only retirement saving but also saving for other nearer-term costs. If someone is saving for anticipated housing, health, or education costs, for which the early withdrawal penalty may be waived, it may be advantageous to save in a retirement account, where interest, dividends, and capital gains are essentially untaxed.

Third, the American social safety net may not adequately insure higher income persons and households against economic risks. In 2017, only nine states had a maximum weekly unemployment insurance benefit greater than \$600 (\$31,200 in annual terms), an amount which is well below median earnings. Persons experiencing a negative income shock or unemployment spell may use retirement dissaving to bridge this gap.

The literature on taxation as social policy has made the case that the politics and use of these institutions is obscured in several ways and, as a result, the extent of tax expenditures as social policy is not well known. As this paper has shown, another way these institutions are obscured is that they are not captured well by household income surveys, the source of official income and poverty statistics in the United States. While any survey income estimate contains some measurement error, retirement income, particularly in prime working age, is severely affected. While this paper has only examined retirement income, it is worth mentioning that major income surveys such as CPS ASEC and SIPP do not attempt to capture other quantities related to taxation as social policy, such as mortgage interest and employer contributions to health insurance premiums.

The mismeasurement of retirement income in household surveys and other limitations of surveys complicate research on the hidden welfare state. To the extent that self-reported survey income estimates are erroneous, simulations of the distributional effect of income taxation and tax exemptions are also erroneous. Tax records contain several useful fields and can be used as an alternative or supplement to income surveys. However, access to tax records is highly restricted, especially when these data are linked to other, potentially disclosive datasets.

Acknowledgements

For helpful comments on previous drafts of this paper, I thank Tracy Loveless, Lindsay Monte, Daniel Perez-Lopez, Trudi Renwick, Briana Sullivan, and Mahdi Sundukchi.

References

- Amromin, G., & Smith, P. (2003). What explains early withdrawals from retirement accounts? Evidence from a panel of taxpayers. *National Tax Journal*, 56(3), 595–612.
- Anguelov, C. E., Iams, H. M., & Purcell, P. J. (2012). Shifting income sources of the aged. *Soc. Sec. Bull.*, 72, 59.
- Argento, R., Bryant, V. L., & Sabelhaus, J. (2015). Early withdrawals from retirement accounts during the Great Recession. *Contemporary Economic Policy*, 33(1), 1–16.
- Auten, G., & Splinter, D. (2018). Income inequality in the United States: Using tax data to measure long-term trends. *Washington, DC: Joint Committee on Taxation*.
- Avram, S. (2018). Who benefits from the ‘hidden welfare state’? The distributional effects of personal income tax expenditure in six countries. *Journal of European Social Policy*, 28(3), 271–293.
- Bee, A., & Mitchell, J. (2017). *Do Older Americans Have More Income Than We Think?* (SEHSD Working Paper No. 2017–39). United States Census Bureau.
- Bhutta, N., Bricker, J., Chang, A. C., Dettling, L. J., Goodman, S., Hsu, J. W., Moore, K. B., Reber, S., Henriques Volz, A., & Windle, R. (2020). Changes in US family finances from 2016 to 2019: Evidence from the Survey of Consumer Finances. *Federal Reserve Bulletin*, 106(5).
- Bridges, B., & Gesumaria, R. V. (2016). Poverty status of Social Security beneficiaries by type of benefit. *Soc. Sec. Bull.*, 76, 19.
- Dushi, I., & Trenkamp, B. (2021). Improving the Measurement of Retirement Income of the Aged Population. *Available at SSRN 3765468*.
- Faricy, C. G. (2015). *Welfare for the Wealthy: Parties, Social Spending, and Inequality in the United States*. Cambridge University Press.
- Federal Reserve Board of Governors. (2022). *The Financial Accounts of the United States*. <https://www.federalreserve.gov/releases/z1/>
- Giefer, K. (2021). A Profile of SSI Recipients: 2017. *Current Population Reports, P70BR-171*. U.S. Census Bureau.
- Hacker, J. S. (2002). *The Divided Welfare State: The Battle Over Public and Private Social Benefits in the United States*. Cambridge University Press.
- Holden, S., & Schrass, D. (2021). The role of IRAs in US households’ saving for retirement, 2020. *Available at SSRN 3789270*.
- Howard, C. (1997). *The Hidden Welfare State: Tax Expenditures and Social Policy in the United States*. Princeton University Press.
- Internal Revenue Service. (2021). IRS provides tax inflation adjustments for tax year 2022. <https://www.irs.gov/newsroom/irs-provides-tax-inflation-adjustments-for-tax-year-2022>
- Martin, I. W. (2020). Can the invisible welfare state redistribute? *Economic Sociology_the European Electronic Newsletter*, 21(2), 3–11.

- Martin, I. W. (2021). *The most regressive social policy? The economic sociology of the home mortgage interest deduction*. <https://escholarship.org/uc/item/7rf4g9pc>
- Prasad, M. (2006). *The Politics of Free Markets: The Rise of Neoliberal Economic Policies in Britain, France, Germany, and the United States*. University of Chicago Press.
- Quadagno, J. (1987). Theories of the Welfare State. *Annual Review of Sociology*, 13(1), 109–128. <https://doi.org/10.1146/annurev.so.13.080187.000545>
- Roemer, M. I. (2000). *Assessing the Quality of the March Current Population Survey and the Survey of Income and Program Participation Income Estimates, 1990–1996* (p. 79). United States Census Bureau.
- Sabelhaus, J., & Weiner, D. (1999). Disposition of lump-sum pension distributions: Evidence from tax returns. *National Tax Journal*, 52(3), 593–613.
- Sinfield, A. (1978). Analyses in the social division of welfare. *Journal of Social Policy*, 7(2), 129–156.
- Tamborini, C. R., & Kim, C. (2020). Are you saving for retirement? Racial/ethnic differentials in contributory retirement savings plans. *The Journals of Gerontology: Series B*, 75(4), 837–848.
- Thompson, D. & King, M. (2021). Income Sources of Older Households: 2017. *Current Population Reports*, P70–177. U.S. Census Bureau.
- Titmuss, R. (2019). *Essays on the welfare state (reissue)*. Policy Press.
- U.S. Census Bureau. (2021). PINC-09. Source of Income-Number with Income and Mean Income of Specified Type of People 15 Years Old and Over, by Age, Race, Hispanic Origin, and Sex. <https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-pinc/pinc-09.html>

Appendix: The private pension and retirement account system in the United States

The array of private tax-advantaged retirement savings assets in the United States is largely comprised of three categories: employer-sponsored defined-benefit pensions, employer-sponsored defined-contribution retirement accounts, and individual retirement accounts (IRAs).

Employer-sponsored, defined-benefit pensions (DB pensions hereafter) typically provide retirees with an annuity that makes monthly payments from retirement to death. Before the 1980s, DB pensions were the most common employer-sponsored retirement plan, but now pensions are mostly limited to the public sector, and even there, are being displaced by other retirement plans. Typically, DB pension monthly payments are a function of pre-retirement wages and tenure. Employers, rather than beneficiaries, assume the risk of managing assets and providing pension benefits.

Employer-sponsored, defined-contribution retirement accounts -- including 401(k), 403(b), and the Thrift Savings Plan -- have largely replaced defined-benefit pensions as the most popular employer-sponsored retirement plan. Employees, employers, or both may pay into these. Commonly, employers match employee contributions up to a certain percentage. With defined-contribution accounts, employees have greater responsibility for managing assets, and they take on greater risk. Employees or plan administrators typically invest the account's balance in stocks, bonds, or diversified assets like lifecycle funds.

IRAs are, as the name suggests, individualized. They are most commonly set up and administered by the account owner with no contribution from an employer, but there are instances when an employer establishes or funds an IRA for an employee, such as Savings Incentive Match Plan for Employees (SIMPLE) IRAs. A large share of IRA balances are rollovers from employer-sponsored, defined-

contribution plans after the employee has left (ICI 2019). IRA owners have wide discretion on contributions, assets within the IRA, and the timing of withdrawals.

Table 1: Crosstabulation of any retirement income receipt in SIPP vs. tax records, persons age 25-54: 2017

	Survey reported in SIPP		
	No retirement income	Retirement income	Total
1099-R: No record retirement income	86.6%	1.4%	88.0%
1099-R: Record of retirement income	10.7%	1.3%	12.0%
Total	97.3%	2.7%	100.0%

N=114,000,000

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R.

Notes: Estimates are for persons aged 25 to 54 among the civilian, non-institutionalized population of the United States. SIPP estimates are survey-reported and imputed values for those respondents assigned a Protected Identification Key (PIK). The SIPP weights are adjusted for the differential probability of being assigned a PIK. The administrative data estimates replace survey-reported and imputed income values with administrative records from IRS Form 1099-R.

Table 2: Mean income in SIPP vs. tax records, persons age 25-54: 2017

(in 2017 dollars)

All persons age 25-54			
Income source		Survey reported	Retirement income substituted with 1099-R records
Retirement income		472	1,554
Program income		1,015	
	Social Security	525	
	SSI	107	
	Unemployment insurance	76	
	TANF	19	
	Other program income	286	
Earnings and property income		57,210	
Other income		1,007	
Total income		59,700	60,784

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R.

Notes: Estimates are for persons age 25 to 54 among the civilian, non-institutionalized population of the United States. SIPP estimates are survey-reported and imputed values for those respondents assigned a Protected Identification Key (PIK). The SIPP weights are adjusted for the differential probability of being assigned a PIK. The administrative data estimates replace survey-reported and imputed income values with administrative records from IRS Form 1099-R. Retirement income includes income from retirement accounts, pensions, life insurance, and annuities. Property income includes interest, dividends, rents, and royalties.

Table 3: Mean income in SIPP linked to tax records, conditional on receipt of program or pension income, persons age 25-54: 2017

(in 2017 dollars)

Income source	All persons age 25-54	
	Conditional on program income receipt	Conditional on retirement income receipt
Retirement income (<i>tax records</i>)	3,410	12,980
Program income (<i>survey reported</i>)	10,170	2,050
Earnings and property income (<i>survey reported</i>)	34,430	70,790
Other income (<i>survey reported</i>)	1,300	2,200
Total income	49,310	88,020

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R.

Notes: Estimates are for persons age 25 to 54 among the civilian, non-institutionalized population of the United States. SIPP estimates are survey-reported and imputed values for those respondents assigned a Protected Identification Key (PIK). The SIPP weights are adjusted for the differential probability of being assigned a PIK. The administrative data estimates replace survey-reported and imputed income values with administrative records from IRS Form 1099-R. Retirement income includes income from retirement accounts, pensions, life insurance, and annuities.

Table 4A: Retirement income in SIPP linked to tax records, persons age 25-54, by quintile of wage income for current year: 2017

(in 2017 dollars)

Earnings quintile	Earnings lower limit	Earnings upper limit	Percent receipt of retirement income	Percent receipt of retirement income, conditional on contributions within the previous five years	Median retirement income, conditional on any receipt
No earnings	0	0	6.6%	26.3%	7,514
1	1	less than 18,480	9.8%	26.0%	3,848
2	18,480	less than 34,450	11.5%	20.5%	2,039
3	34,450	less than 51,760	13.4%	19.1%	3,201
4	51,760	less than 82,350	13.0%	15.5%	6,013
5	82,350	D	16.7%	17.6%	6,001

Table 4B: Retirement income in SIPP linked to tax records, persons age 25-54, by quintile of CPI-adjusted average wage income for previous five years: 2017

(in 2017 dollars)

Earnings quintile	Earnings lower limit	Earnings upper limit	Percent receipt of retirement income	Percent receipt of retirement income, conditional on contributions within the previous five years	Median retirement income, conditional on any receipt
No earnings	0	0	4.0%	NA	6,249
1	1	less than 8,119	5.5%	19.9%	4,863
2	8,120	less than 23,350	9.3%	19.5%	1,493
3	23,350	less than 40,400	13.5%	19.1%	2,754
4	40,400	less than 68,210	14.4%	17.7%	6,636
5	68,210	.	17.9%	18.8%	6,533

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R; SSA Detailed Earnings Record.

Notes: Estimates are for persons age 25 to 54 among the civilian, non-institutionalized population of the United States. The estimates use IRS Form 1099-R data linked to SIPP respondents' records. The SIPP weights are adjusted for the differential probability of being assigned a Protected Identification Key (PIK). Earnings quintiles are calculated using data from the Social Security Administration's Detailed Earnings Record. Retirement income includes income from retirement accounts, pensions, life insurance, and annuities.

Table 5: Household retirement income receipt and equivalized median amount, householders age 25-54, by personal and household characteristics: 2017.

Group	Percent with receipt of any retirement income	Percent with receipt of any retirement income, conditional on contributions in the previous five years	Median retirement income, conditional on receipt (in 2017 dollars)
All households	12.0%	18.7%	4,995
Householder sex			
Male	12.9%	19.2%	5,942
Female	11.0%	18.1%	3,703
Householder race and ethnicity			
Non-Hispanic White	12.7%	17.7%	5,499
Non-Hispanic Black	16.1%	26.0%	3,111
Non-Hispanic Asian	9.5%	15.5%	4,743
Other non-Hispanic	13.1%	22.4%	6,302
Hispanic of any race	7.8%	16.6%	3,550
Housing tenure			
Own	13.2%	17.7%	6,177
Rent	10.4%	20.8%	2,241
Occupy without rent	7.3%	15.7%	1,344
Householder marital status			
Married	12.1%	18.1%	5,496
Widowed	16.4%	20.0%	7,368
Divorced	16.8%	25.3%	5,140
Separated	14.4%	34.6%	3,746
Never married	9.2%	16.2%	1,993
Householder age			
25-34	8.8%	15.4%	1,745
35-44	11.0%	17.4%	4,535
45-54	16.0%	22.9%	9,422
Citizenship			
Native	13.4%	19.5%	5,068
Foreign-born citizen	9.5%	14.6%	5,425

Foreign-born non-citizen	4.7%	14.4%	1,576
Education			
Less than high school	4.9%	17.0%	6,457
High school	9.6%	19.1%	3,676
Some college	14.1%	23.1%	4,012
College	13.2%	16.4%	5,499
Other householder characteristics			
Veteran	25.7%	32.2%	15,979
Disabled	12.2%	31.1%	5,653
Death of parent in last five years	17.2%	25.1%	5,504
Household size			
1 person	13.4%	18.5%	5,107
2 people	12.4%	19.0%	5,451
3 or more people	11.5%	18.6%	4,943
Equivalentized household income quintile			
Quintile 1	6.4%	20.5%	3,696
Quintile 2	8.7%	17.7%	2,064
Quintile 3	10.2%	15.3%	3,826
Quintile 4	12.3%	16.0%	4,523
Quintile 5	19.7%	22.9%	6,013
Household shocks			
Move to owner-occupied housing	13.8%	19.5%	7,428
Widowed	31.4%	27.4%	13,741
Divorce	17.4%	24.6%	9,123
Separation	17.4%	35.5%	3,884
HH member in tertiary education	11.7%	18.1%	5,231
Unemployment	14.0%	27.4%	3,391
Disability	11.3%	26.4%	6,374
Left job	15.7%	23.3%	4,913
Birth	11.9%	20.5%	2,564
No shocks	11.6%	17.0%	5,001

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R.

Notes: Estimates are for households with a householder age 25 to 54 among the civilian, non-institutionalized population of the United States. The estimates use IRS Form 1099-R data linked to SIPP respondents' records. The administrative data estimates replace survey-reported and imputed income values with administrative records. The SIPP weights are adjusted for the differential probability of being assigned a Protected Identification Key (PIK). Household incomes are equivalentized. Federal surveys, including the 2018 SIPP, give

respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups". The first method is used in this paper.

Table A1: Respondent characteristics in original and reweighted matched sample, 2017

Characteristic	SIPP weights	Margin of error	Rewighted matched sample	Margin of error
Non-Hispanic White	59.2%	0.6%	59.2%	0.6%
Non-Hispanic Black	12.5%	0.3%	12.5%	0.4%
Non-Hispanic Asian	6.8%	0.3%	6.8%	0.4%
Other non-Hispanic	2.7%	0.3%	2.7%	0.3%
Hispanic of any race	18.7%	0.4%	18.7%	0.5%
Self-reported interview	71.6%	0.6%	71.5%	0.6%
Proxy-reported	19.0%	0.5%	18.9%	0.5%
Imputed interview	9.5%	0.5%	9.6%	0.5%
Married	59.4%	0.8%	59.5%	0.8%
Widowed	1.1%	0.2%	1.1%	0.2%
Divorced	10.9%	0.6%	10.9%	0.6%
Separated	2.0%	0.2%	2.0%	0.2%
Never married	24.7%	0.6%	24.7%	0.6%
Age 25-34	32.9%	0.4%	32.9%	0.4%
Age 35-44	33.1%	0.3%	33.1%	0.4%
Age 45-54	34.0%	0.4%	34.0%	0.5%
Less than high school	8.4%	0.5%	8.5%	0.5%
High school	22.2%	0.7%	22.2%	0.7%
Some college	27.1%	0.7%	27.1%	0.8%
College	42.3%	0.8%	42.2%	0.9%
Veteran	6.8%	0.5%	6.8%	0.5%
Disabled	8.5%	0.5%	8.5%	0.5%
Weighted N (in millions)	114		114	
Unweighted N	21200		19900	

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R.

Notes: Estimates are for persons age 25-54 among the civilian, non-institutionalized population of the United States. The estimates using the SIPP weights use the original SIPP replicate weights. The reweighted estimates use the SIPP weights adjusted for the differential probability of being assigned a PIK. Federal surveys, including the 2018 SIPP, give

respondents the option of reporting more than one race. These data can be shown in two ways: (1) as mutually exclusive from other race groups, which may be denoted by "alone" or (2) not mutually exclusive with other race groups, denoted by "alone or in combination with other race groups". The first method is used in this paper. The unweighted N is rounded for disclosure avoidance.

Table 3: Mean income in SIPP linked to tax records, conditional on receipt of program or pension income, persons age 25-54: 2017

(in 2017 dollars)

		All persons age 25-54	
Income source		Conditional on program income receipt	Conditional on retirement income receipt
Retirement income (<i>tax records</i>)		3,410	12,980
Program income (<i>survey reported</i>)		10,170	2,050
	Social Security	5,260	491
	SSI	771	143
	Unemployment insurance	1,080	12
	TANF	193	13
	Other program income	2,870	1,390
Earnings and property income (<i>survey reported</i>)		34,430	70,790
Other income (<i>survey reported</i>)		1,300	2,200
Total income		49,310	88,020

Source: Survey of Income and Program Participation, calendar year 2018 (reference year 2017); IRS 1099-R.

Notes: Estimates are for persons age 25 to 54 among the civilian, non-institutionalized population of the United States. SIPP estimates are survey-reported and imputed values for those respondents assigned a Protected Identification Key (PIK). The SIPP weights are adjusted for the differential probability of being assigned a PIK. The administrative data estimates replace survey-reported and imputed income values with administrative records from IRS Form 1099-R. Retirement income includes income from retirement accounts, pensions, life insurance, and annuities. Property income includes interest, dividends, rents, and royalties.