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Labor Force Transitions, Income Changes, and Poverty Entries among Older Workers During the COVID-19 Pandemic

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Abstract

Economic downturns, like the one caused by the COVID-19 pandemic, can change retirement plans by prompting early retirement or inducing workers to remain in the labor force longer. These changes in the timing and circumstances of later-life labor force transitions can have significant impacts on the income sources available to those making the transition—and thus the likelihood of experiencing poverty—but prior studies do not examine these outcomes. Using the Current Population Survey March ASEC from 2018-2021, this study examines older adults' (age 50 or over) labor force transitions during the COVID-19 pandemic. We contribute to prior literature by focusing specifically on trends, and the economic consequences of two types of labor force exits: retirement or non-retirement. Our main analysis estimates associations between labor force transitions and entries into poverty and describes changes in income during labor force transition years. We find that transitioning out of the labor force for any reason is significantly associated with substantial reductions in total income and a higher likelihood of entering poverty. However, these associations did not change much throughout the pandemic. We also find that COVID-19 Economic Impact Payments and Unemployment Insurance were important protections against earnings losses in 2020-21, but especially for those who transitioned out of the labor force. This study also sheds light on the fluidity of retirement and labor force participation in later life.

Keywords: Older adults, COVID-19, retirement, labor force exits, poverty

JEL Classification Codes: I3 Welfare, Well-Being, and Poverty, J1 Demographic Economics, J2 Demand and Supply of Labor

1. Introduction

The timing and circumstances of later-life labor force transitions can have significant, long-lasting consequences for older adults' (age 50 or older) economic futures and well-being. Later-life employment instability is associated with experiences of poverty and material hardship (Ahn & Song, 2017), and once someone enters poverty after age 55, they rarely leave it (McKernan & Ratcliffe, 2005). Economic hardship jeopardizes health at all ages but can have particularly devastating consequences for older adults, including years of lost life (Tucker-Seeley, et al., 2009; Brown, et al., 2019; Heflin et al., 2019).

Economic downturns, like the one caused by the COVID-19 pandemic, can change retirement plans by prompting early retirement or inducing workers to remain in the labor force longer. Early evidence from the first few months of the COVID-19 pandemic suggests that workers over age 65 were disproportionately pushed into unemployment (Bui et al., 2020). Yet, as employment rates have rebounded to mostly normal levels, findings on older adults' labor force exits are puzzling. In the first year of the pandemic, retirements increased, but Social Security retirement benefit claiming did not (Goda et al., 2021; Munnell & Chen, 2021; Quinby et al., 2021; Sanzenbacher, 2021). However, labor force exits for reasons other than retirement remained well above pre-pandemic levels for adults over age 50 despite apparent declines in exits due to disability (Goda et al., 2021; Quinby et al., 2021). By spring 2022, Forsythe et al. (2022) estimate that labor force exits among adults ages 65 and older account for all of the remaining 0.7 to 1 percent decline in the employment-to-population ratio since the start of the pandemic. About half of this decline is attributable to retirements above the expected rate.

It is well-known that the economic downturn caused by COVID-19 exacerbated existing inequities in the labor market. Studies have shown that among older adults, women, people without a four-year college degree, and those with jobs amenable to telework were more likely to transition out of the labor force both for retirement and other reasons (Goda et al., 2021; Quinby et al., 2021). Results on racial or ethnic disparities are mixed. One study reports that, all else equal, there was no racial variation among retirements and only employment among Asian-Americans decreased significantly compared to other groups (Quinby et al., 2021). Another study finds that Hispanic older adults and those in the "Other" racial category entered unemployment at higher rates than other racial/ethnic groups but did not necessarily transition out of the labor force (Goda et al., 2021).

Transitioning to retirement and leaving the labor force for non-retirement reasons may have significantly different impacts on the income sources available to those making the transition—and thus the likelihood of experiencing poverty—but prior studies do not examine these outcomes. Several studies show that those who rely primarily on Social Security or other public sources of income are much more likely to experience poverty or economic hardship in later life (Bee & Mitchell, 2017; Dushi et al., 2017; Levy, 2015; Li & Dalaker, 2019; Mitchell et al., 2021; Mutchler et al., 2019). Notably, Social Security receipt predicts poverty among those who claim benefits before full retirement age but is protective against poverty among those who claim their benefits after reaching full retirement age (Lu et al., 2021). A separate body of literature estimates the likelihood and correlates of entering poverty over time, but only a few studies focus on older adults. Analyses from the PSID and HRS both show that adults in their 40s and 50s are relatively less likely to enter poverty than in their 60s or later (Lu et al., 2021; Sandoval et al., 2009). Earlier experiences of poverty can also increase the risk of later poverty, and Black and Hispanic older adults are more likely to experience multiple instances of poverty (Clark et al., 2022; Hungerford, 2007; Ozturk & Macdonald, 2017; Sandoval et al., 2009).

This study builds upon existing research on older adults' employment during the COVID-19 pandemic by focusing specifically on how two types of labor force transitions, retirement and exiting for non-retirement reasons, are associated with changes in income and entries into poverty. Using the March Current Population Survey Annual Social and Economic Supplement (CPS-ASEC), we create two-year panels of adults ages 50 and over who were initially in the labor force. This allows us to examine income and poverty changes among older adults who transitioned out of the labor force at three time periods: prior to the pandemic (March 2018 to March 2019), early pandemic (March 2019 to March 2020), and first full year of the pandemic (March 2020 to March 2021).

Using this sample, we ask the following questions:

- (1) How did older Americans' labor force transitions change during the COVID-19 pandemic?
- (2) How did the association between labor force transitions and income levels change during the COVID-19 pandemic?
- (3) How did the association between labor force transitions and poverty entries change during the COVID-19 pandemic?

For all three questions, we examine whether the experiences or associations vary by worker characteristics associated with economic and health disparities in older age, including age, race/ethnicity, nativity, gender, education, and disability status.

2. Data

The CPS is a long-running monthly survey of households in the US-sponsored jointly by the US Bureau of Labor Statistics and the US Census and available in harmonized files through IPUMS at the University of Minnesota (Flood, Sarah et al., 2021). The CPS selects a probability sample of about 60,000 households each month. Sample members spend four months in the sample, eight months out, and then another four months in, allowing for both cross-sectional and longitudinal analysis. The CPS asks a core set of questions about individuals and households each month and supplemental questions on specific topics in certain months. The Annual Social and Economic Supplement (ASEC) is administered every March and contains detailed questions on employment, income, public program participation, and other household characteristics. It is administered to all March respondents as well as additional sample members from past samples.

When weighted, estimates from the CPS are representative of the US non-institutionalized population. IPUMS provides specific weights for the longitudinal samples of the CPS. The longitudinal weights are based on the annual cross-sectional weights, adjusted by state, age, binary sex, and race/ethnicity to account for attrition across years (IPUMS, 2018). We use the longitudinal weights for all descriptive analyses. For regression analyses, there are debates about whether and how to implement survey weighting, particularly in multinomial logistic regression models (Heeringa et al., 2017; Lumley, 2013; Solon et al., 2015). Consistent with the guidance from Solon et al. (2015), we do not use sample weights in regression models for this analysis.

The fielding of the March CPS in 2020 was interrupted by the outbreak of the COVID-19 pandemic. Several studies suggest COVID-related non-response is nontrivial for the March 2020 CPS-ASEC, given the data collection challenges introduced by social distancing measures. The response rate was 6.5 percentage points lower in March 2020 compared to the prior year (IPUMS, 2022). Those that did respond had higher incomes and were more likely to be non-Hispanic, born in the US, and higher educated (Montenovo et al., 2020; Rothbaum & Bee, 2021). Although IPUMS provides a supplemental cross-sectional weight to adjust for COVID-related non-response

for the March 2020 CPS-ASEC, it is unclear whether IPUMS based its longitudinal weights for that year on the COVID-adjusted or regular cross-sectional weight.

2.1 Analytic Sample

The rotating panel design of the CPS allows for the creation of 2-year, March-to-March panels of CPS-ASEC respondents that we use in this design to estimate labor force, income, and poverty transitions. Among CPS-ASEC respondents who we can link across two years, we create an analytic sample of those ages 50 and older who report being in the labor force during the first year of the panel. To examine changes before and during the COVID-19 pandemic, we restrict the sample such that there are three cohorts: 2018-2019 (pre-pandemic), 2019-2020 (early pandemic), and 2020-21 (later pandemic).

Table 1 and **Appendix Table 1** provide descriptive statistics for these cohorts and compares them to the full CPS-ASEC sample of adults ages 50 and over. For each cohort, nearly half of adults over 50 reported being in the labor force during the year they were first observed (**Table 1**). **Appendix Table 1** shows that about one-quarter of the analytic sample is aged 65 or older, and more than one-third have at least a four-year college degree. The racial/ethnic distribution of the analytic sample is roughly comparable with the full ASEC sample of older adults. The analytic sample is slightly less likely to be female and more likely to be born outside the US and to be living in a household with children than the full ASEC sample. Notably, only four percent of the analytic sample reported having a work-limiting disability, compared to 12 to 13 percent of the full CPS-ASEC population ages 50 and above. This is consistent with selecting a sample on employment status at baseline.

2.2 Measures

Labor force transitions.

We use changes in individuals' employment status across the two-year panels to create a "labor force transition" variable with three outcomes: remained in the labor force, retired, or transitioned from the labor force for non-retirement reasons. The CPS defines someone as "in the labor force," whether they are employed or unemployed. Employed is defined as working for profit

or pay in the past week or having a job but temporarily absent. Unemployed is defined as not having a job but actively looking for one or being temporarily laid off from a job. People who do not meet the definition of employed or unemployed are classified as “not in the labor force.” These individuals self-report whether they are not in the labor force because they are retired, unable to work, or for other reasons not otherwise captured in the survey. Because of limited responses to the “not in labor force but unable to work” questions, we combine the “unable to work” and “not in labor force for other reasons” category into one “not in labor force for reasons other than retirement” (“NILF, Not Retired”) category.

Individual income.

The CPS contains detailed information on household and individual income. Because the CPS-ASEC does not report income sources at the family level, the income source analysis is limited to changes in individual income. Individuals self-report pre-tax total personal income in the previous calendar year to the CPS. The primary outcome we use is mean income during the “transition year,” which is defined as the year prior to the March in which they are observed either remaining in the labor force or transitioning out of it. For example, a person transitioning out of the labor force in March 2019 would report income for 2018. It is worth noting that we do not know exactly when a respondent left the labor force and thus the income measure likely includes income from when they were in the labor force.

In addition to total income, we analyzed mean income from eight sources: (1) earnings, (2) retirement and pension income, including income from interest, dividends, annuities, and rent; (3) Social Security income due to retirement, (4) Social Security income due to disability, (5) Social Security income for other reasons, (6) Supplemental Security Income, (7) Unemployment Insurance, and (8) COVID-19 relief (federal Economic Impact Payments). While adults over 50 may report receiving income from other sources not captured here (e.g., friends and family), these income sources make up the majority of total income.

Poverty.

We define a “poverty entry” as those who had family incomes above the poverty level in the first year and below poverty level in the second year they were observed. This analysis uses two poverty thresholds provided by the CPS: the Official Poverty Measure (OPM) and

Supplemental Poverty Measure (SPM). Both the SPM and OPM are estimated at the family level, using slightly different methodologies to identify family units (IPUMS, 2021). This differs from the income source analysis, which is estimated at the individual level because the CPS does not report income sources by household.

The OPM is based on the federal poverty level (FPL), which is used for means-tested program eligibility (Institute for Research on Poverty, 2019). Using family data provided to the CPS, IPUMS estimates the official poverty threshold for each individual conditional on their family size and family members' age. The total family income is then divided by the official poverty threshold, such that a family with income that equals the threshold is said to be at 100% of poverty, and families with incomes higher than the threshold have incomes greater than 100% of poverty (IPUMS CPS, 2021). The poverty threshold is adjusted by the Consumer Price Index (CPI-U) every year for inflation.

We also use the Supplemental Poverty Measure (SPM), which uses a different definition of income and a poverty threshold that is adjusted for geographic costs of living. Unlike the OPM, the SPM definition of income includes in-kind government transfers with a calculable cash value (often called non-cash or near-cash), like SNAP, the value of housing assistance vouchers, and energy assistance. From the income total, the SPM subtracts "necessary expenses" from the family income total: those related to work, child care, and medical care (Bridges & Gesumaria, 2013). The poverty thresholds are adjusted by the local cost of living separately for homeowners, renters, and families containing children. The CPS uses the family and income information the survey to compute whether an individual is below or above the SPM poverty level.

For older adults, the SPM methodology is particularly consequential for the estimation of poverty in two ways: (1) it eliminates the lower poverty threshold used by the OPM for those ages 65 and above, and (2) it subtracts out-of-pocket medical expenditures from income. These features lead to much higher estimated poverty rates among older adults using the SPM than the OPM (Bridges & Gesumaria, 2013; Wimer & Manfield, 2015).

Demographic characteristics.

This analysis focuses on four key characteristics theorized to influence the likelihood of transitioning the labor force and/or entering poverty: age, educational attainment, binary sex,

race/ethnicity, whether children live in the household, work disability, and nativity. For all characteristics, we take the value provided in the first year of the panel.

The CPS only provides gender in terms of binary sex (male/female), which is not always representative of gender expression and excludes a range of possible gender identities not limited to the binary (Medeiros et al., 2020; Sullivan, 2020; Westbrook & Saperstein, 2015). Nonbinary and transgender older adults are particularly vulnerable to discrimination that affects employment and health outcomes that we are unable to describe using the CPS (Davidson, 2016; Dray et al., 2020; Kattari et al., 2020; Pharr, 2021).

The CPS includes rich detail on racial and ethnic identity, but small sample sizes limit the number of cross-group comparisons that can be made. The largest racial groups in the CPS are also the largest racial groups in the US: white (not Hispanic), Black (not Hispanic), and Hispanic (any racial identity). We use these three groups plus a fourth category: “Other racial identity, including multiracial but excluding Hispanic.” This last category captures the wide variety of racial/ethnic groups that do not fit into the three largest categories. Notably, the fourth-largest racial/ethnic group, Asian and Pacific Islanders, is grouped into the “Other” category, as are Native Americans/indigenous peoples. Multiracial people of a wide variety of backgrounds also fall into this “Other” category. We note the limitations of our measurement of racial and ethnic identity: the four racial/ethnic groups mask immense variation and nuance within their categories, and imply race and ethnicity are fixed, deterministic categories instead of dynamic social construction. In addition, racial and ethnic identity does not directly capture structural or interpersonal racism, which generates racial/ethnic disparities (R. S. Baker et al., 2021; Favreault, 2010; Ferrer et al., 2017; Graetz et al., 2022; Kijakazi et al., 2019; Phelan & Link, 2015; Williams, 2019).

Age is provided as a continuous variable in the CPS. This analysis is limited to adults ages 50 and over. We use a dummy variable to indicate adults ages 65 and above, who tend to have different labor force behavior and face a different public policy landscape (e.g., eligibility for Medicare) than those under age 65. Although early Social Security eligibility begins at age 62, we find age 65 to be a reasonable threshold. **Appendix Figure 1** indicates that, across cohorts, workers are equally likely to exit the labor force for retirement and non-retirement reasons until ages 64 and 65, with retirements becoming more likely as people age.

We stratify educational attainment into two groups: those with less than a four-year degree (e.g., Bachelor’s) and those with a four-year degree or more. This two-category split follows a

growing body of research demonstrating significantly different employment and health outcomes for these two groups across the life course (Case & Deaton, 2017; Doren & Lin, 2019; Shuey & Willson, 2019).

The CPS-ASEC allows respondents to report whether they have a disability that “limits or prevents work,” often referred to as “work disability.” This measure does not directly correspond to those who report they are not in the labor force because they are unable to work. A person may report having a work disability and be in the labor force. Work-limiting disability is tightly linked with labor force participation instability and experiences of poverty, especially in later life (Brown & Warner, 2008; Laditka & Laditka, 2018; She & Livermore, 2009; Shuey & Willson, 2019). People with work-limiting disabilities face physical or mental impairments that may influence their transition out of the labor force prior to becoming eligible for Social Security or Medicare. The combination of disability discrimination and ageism are significant barriers to employment for older adults with disabilities (Bjelland et al., 2010; Namkung & Carr, 2019; Neumark & Button, 2014; Stock & Beegle, 2004).

Using CPS-ASEC questions about immigration history, we construct a binary variable to indicate nativity, which is equal to 1 if respondents were not born in the US. Immigration history is particularly consequential for Social Security and Medicare benefit eligibility. Nearly half of the population of older adults who never receive Social Security benefits are immigrants who arrived in the US after age 50; more than half of these immigrants have incomes below the federal poverty level (Social Security Administration, 2015; Whitman et al., 2011).

We use a binary variable to indicate whether any children under the age of 18 were living in the household at the time of the interview. The prevalence of multigenerational and grandparent-headed households has been growing since the 1980s (Pilkauskas et al., 2020; Pilkauskas & Cross, 2018). The presence of children may play a role in labor force transition decisions, which was likely exacerbated during the COVID-19 pandemic as schools shut down and required children to learn from home. Households with children are particularly vulnerable to experiences of poverty and are eligible for a different array of safety net programs than households without (L. A. Baker & Mutchler, 2010; Rodems & Shaefer, 2020).

3. Methods

3.1 Trends in Labor Force Transitions

To describe trends in labor force transitions, we produced weighted descriptive statistics to estimate the proportion of labor force transitions by type over time. For this analysis, we extended the descriptive period to 2001 to contextualize the rate of labor force transitions during the analytic period (2018-2021). Then, we produced weighted descriptive estimates of poverty entries and demographic characteristics by labor force transition type over the analytic period.

To better understand the predictors of labor force transitions and whether they changed over the pandemic period, we estimate two sets of models. First, we estimate a multinomial logistic regression model to predict labor force transition type. The outcome variable is a 3-category labor force variable, where “Retired” and “Not in Labor Force, Non-Retired” is compared to the reference category “Remained in the Labor Force.” This model includes covariates for cohort, age, binary gender, race/ethnicity, education, nativity, work disability, and whether there are children in the household. By including cohort as a covariate, this model allows us to examine the association between the covariates and labor force transitions without regard to time.

The second set of models interacts covariates with the cohort term to examine how the associations between the covariates and labor force transitions varied during the COVID-19 pandemic. Due to the limited sample size in several cells, we estimate a separate multinomial logistic regression for each covariate interaction. We use the interaction models to generate predicted probabilities of labor force transition by transition type and age over time by the different covariates. For each covariate displayed (e.g., cohort, labor force transition, and race/ethnicity), the remainder of the covariates are held at their mean. The figures contain error bars that represent 95% confidence intervals.

Association with income changes and poverty entries.

To describe how labor force transition-year income changed during the COVID-19 pandemic, we estimate the proportion of people receiving each source of income and the average amount of income received by source of income, cohort, and labor force transition type. We estimate the percent change in average income from each source between cohorts. Additionally,

we estimate the average within-person change in income by source, cohort, and labor force transition type.

Then, to better understand the association between labor force transitions and poverty entries, we estimate two sets of logistic regressions. With these models, the primary predictor of interest is the three-category labor force transition variable (“Remained in the Labor Force,” “Retired,” and “Not in the Labor Force, Not Retired”) with “Remained in the Labor Force” as the reference group. Cohort, age, binary gender, race/ethnicity, education, nativity, work disability, and whether there are children in the household. As with the previous models, the first set of models includes all covariates and no interaction terms. The second set of models interacts cohort with each covariate to estimate the extent to which associations between the covariates and poverty entries varied during the COVID-19 pandemic. We estimate both sets of regressions using two separate poverty measures: the SPM and FPL. We use the interacted models to estimate predicted probabilities to visualize variation in outcomes by labor force transition type, cohort, and the other covariates. For each set of predicted probabilities, the covariates not displayed are held at their mean value. The figures contain error bars that represent 95% confidence intervals.

4. Results

4.1 Trends in Labor Force Transitions

Descriptive statistics.

The proportion of adults ages 50 and over transitioning out of the labor force for all reasons increased only slightly during the pandemic. As shown in **Table 1**, an estimated 90 percent of older adults remained in the labor force 2018-19, dropping by one percentage point each of the two subsequent years. An estimated 7 percent transitioned to retirement in the 2018-19 and 2019-20 cohorts, while 8 percent of adults in the labor force in 2020 had retired by 2021. Similarly, the percentage of adults ages 50 and older leaving the labor force for non-retirement reasons was the same for the 2018-19 and 2019-20 cohorts but increased by one percentage point in 2020-21. We will need to conduct further tests to assess whether these differences are statistically significant. **Figure 1** compares these transition rates from 2001 to 2021, showing that the non-retirement transition rate has generally hovered in the 3 to 4 percent range since 2001. Retirement rates,

however, had generally been increasing since falling below 6 percent following the Great Recession.

Table 2 displays the weighted retirement and non-retirement labor force transition rate for each cohort by demographic characteristics. Retirement and non-retirement transition rates slightly increased across the study period for most groups. Within a demographic sub-group, the split between retirement and non-retirement did not change during the pandemic. Across all cohorts, adults ages 65 and above and those with work-limiting disabilities had the lowest rates of remaining in the labor force. Adults ages 65 and older have the highest retirement rate out of any group each year, followed by those with a work-limiting disability. Those with a work-limiting disability consistently have the highest rates of leaving the labor force for a non-retirement reason. Black workers are slightly more likely to leave the labor force in each year than other racial and ethnic groups. White workers are roughly twice as likely to retire than leave the labor force for non-retirement reasons. Hispanic workers are slightly more likely to leave the labor force for non-retirement reasons than retire, while retirement and non-retirement transitions among those in the other/multi-racial category are more evenly distributed. Again, we note we will need to conduct further tests to assess whether these differences are statistically significant.

Regression results and predicted probabilities.

Table 3 reports multinomial logistic regression results in odds ratios with “Remained in the Labor Force” as the comparison group. We find that the odds of retirement did not change for the early pandemic cohort (2019-20) compared to the pre-pandemic cohort (2018-19). A null result was expected for this cohort, which was last observed in the data in March 2020, when pandemic restrictions had just begun to take effect. However, the odds of exiting the labor force for non-retirement reasons increased by 18 percent relative to remaining in the labor force. This association is statistically significant, but just barely so ($p < 0.1$). For the 2020-21 cohort, the odds of retirement increased by statistically significant 18 percent relative to remaining in the labor force, while the odds of exiting the labor force for non-retirement reasons increased by a statistically significant 32 percent. A model presented in **Appendix Table 3** indicates that the odds of exiting the labor force for non-retirement reasons were not significantly higher than the odds of retirement for any cohort.

Table 3 also reports the associations between demographic characteristics and labor force transitions. We find that being age 65 or older, compared to ages 50-64, is associated with 25 percent lower odds of exiting the labor force for non-retirement reasons, and 548 percent higher odds of retirement than remaining in the labor force. Both associations are statistically significant ($p < 0.01$). Appendix Table 3 shows that people aged 65 and above have 89 percent lower odds of exiting the labor force for non-retirement reasons instead of retiring, compared to those who are ages 50 to 64. Women have higher odds of exiting the labor force for any reason compared to men and roughly equal odds of retirement and non-retirement exits. Black older adults have 118 percent higher odds of non-retirement labor force exits compared to white older adults and 21 percent higher odds of retirement. Hispanic older adults and those identifying as another or multiple racial categories have statistically significant higher odds of non-retirement labor force exit relative to remaining in the labor force compared to white older adults, but no statistically significant differences in retirements. Black, Hispanic, and other or multi-racial older adults all have statistically significant higher odds of non-retirement labor force exits relative to retirements, compared to white older adults (Appendix Table 3).

Older adults with less than a four-year college degree have statistically significant 70 percent higher odds of non-retirement labor force exits relative to remaining in the labor force, compared to those with more education (Table 3). Adults with and without four-year college degrees have roughly equal odds of retirement. People who were not born in the US have 25 percent higher odds of non-retirement exits and 26 percent lower odds of retirement compared to those born in the US. Both associations are statistically significant. Adults with a work-limiting disability have 244 percent higher odds of non-retirement labor force exits and 60 percent higher odds of retirement relative to remaining in the labor force compared to adults who do not report being disabled. Appendix Table 3 shows that work-disabled older adults are 107 percent more likely to report exiting the labor force for non-retirement reasons than retire. Older adults living in a household with children have 47 percent lower odds of retiring relative to remaining in the labor force compared to adults living in an adult-only household. This association is statistically significant ($p < 0.01$). However, older adults living with children in the household have roughly equal odds of exiting the labor force for non-retirement reasons and remaining in the labor force compared to those in adult-only households.

Table 4 reports the results from the second set of models that tested whether the associations between demographics and the likelihood of transitioning out of the labor force changed during the pandemic. Each row represents a separate regression in which the covariate interacted with the cohort indicator. The coefficients in each row are the coefficients from the interaction terms. Coefficients on the other, non-interacted covariates are not displayed.

From Table 4, we see that the associations between demographic characteristics and labor force transitions changed little throughout the pandemic relative to the pre-pandemic cohort (2018-19). The coefficients on age, education, nativity, and work-disability interacted with the cohort are not statistically significant, indicating that the association between these covariates and labor force transitions did not change between 2018 and 2021. A sensitivity test setting the age threshold at 62 instead of 65 also indicated no change over time (results available upon request). Statistically significant interaction terms on sex, race/ethnicity, and whether children live in the household indicate that relationships between these covariates and labor force transitions changed over time. The predicted probabilities in **Figure 2** depict how these relationships varied throughout the pandemic.

In the pre-pandemic cohort, women had a slightly higher predicted probability of exiting the labor force for non-retirement reasons, but in the pandemic cohorts, the likelihood of leaving for non-retirement reasons increased substantially for women but not men. In contrast, retirement differences by binary sex stayed roughly the same across time, with women being slightly more likely than men to exit each year (Figure 2a).

The differences by race and ethnicity are similar in that the pandemic years change the comparative probabilities of non-retirement exits but not retirement exits (Figure 2b). The predicted probability of a non-retirement transition among adults identified as Black (not Hispanic) increased slightly in 2019-20 before reaching a peak of 15 percent in 2020-21. Among those identified as Hispanic (any racial identity), non-retirement transitions jumped by 5 percentage points to 13 percent in 2019-20 before declining to 10 percent in 2020-21. Non-retirement transitions for adults in the “Other” or “Multiple” race/ethnicity category hovered around 10 percent each year. For those identified as white (not Hispanic), the predicted probability of a non-retirement transition increased slightly in 2019-20 and increased by more than 1 percentage point to 8 percent in 2020-21. The predicted probabilities of retirement for each group were

roughly comparable between 2018-19 and 2019-20. In 2020-21, retirements increased for all racial groups.

Households with children and households without saw opposite labor force transition trends (Figure 2c). Across all years, older workers living in households with children are less likely to retire than adult-only households. This is likely because of age; supplemental analyses indicate that only about 10 percent of respondents in households with children were aged 65 and above (tables available upon request). While adults living in households without children saw slightly increasing predicted probabilities of retirement over time, the predicted probabilities of retirement among adults living in households with children declined each year. Similarly, the predicted probabilities of non-retirement labor force transitions among those living in households without children increased significantly over time, from 9 percent to 12 percent, but remained about the same for those living in households with children (around 10 percent).

4.2 Association with Income Changes and Poverty Entries

Income changes.

Table 5 reports the mean transition-year income for the 2018-19 cohort by labor force transition type and income source and displays the percent change in average income for the following cohorts. These values are visualized in **Figures 3a and 3b**. The average annual income of adults who remain in the labor force ranges was \$76,780 in 2018-19, composed mostly of earnings. Adults who transitioned to retirement in 2018-19 had an average income of \$40,782, and those who exited the labor force for non-retirement reasons that year had an average income of \$20,168. Average total income increased across all years for each group except among those who retired. Among retirees, average total income decreased by 9 percent between the 2019-20 and 2020-21 cohorts.

Table 6 displays the mean change in transition-year income for each source by labor force transition type and is visualized in **Figures 4a and 4b**. These figures represent the average within-person change in income across two years. Adults who transition out of the labor force see substantial drops in total income during the transition year, mostly driven by earnings declines. The total incomes of people who remain in the labor force increased, on average, in 2018-19 and 2019-20 but slightly decreased in 2020-21.

Unsurprisingly, people who report retiring tend to see greater transition-year increases in income from private retirement accounts (e.g., annuities, dividends, pensions) and Social Security claimed for retirement reasons (presumably Old Age Insurance) than the other groups. Both **Table 5** and **Appendix Table 5** show that people who remain in the labor force also report some income from private retirement accounts and Social Security (all sources), indicating that labor force participation and retirement are likely not exclusive statuses in practice.

People who leave the labor force for non-retirement reasons see higher within-year increases (**Table 6**) and average incomes from disability sources (SSI and SSDI) and lower average incomes from private retirement sources than the other groups (**Table 5**). This is consistent with the regression results from **Table 3** and **Appendix Table 3** that indicate people with work-limiting disabilities are more likely to exit the labor force for non-retirement reasons than remain in the labor force or retire. However, it's important that 3 percent of retirees in 2018-19 reported receiving Social Security for disability reasons, with an average amount of \$477. As with those in the labor force who concurrently report retirement income, people self-identifying as retired while receiving disability income indicates that retirement and non-retirement labor force transitions are neither monolithic nor mutually exclusive (Kail & Warner, 2013; Moen et al., 2021; Warner et al., 2010).

In 2020-21, each group experienced substantial increases in average income from Unemployment Insurance and COVID-19 relief, which helped but did not totally offset average income losses. Those who transitioned out of the labor force for non-retirement reasons benefitted the most from Unemployment Insurance, seeing an average within-year increase of \$2,677 in 2020-21 (+1557%) compared to 2019-20. People who retired saw an average increase of \$956 in Unemployment Insurance (+1107%) compared to 2019-20. These results could suggest that both retirement and non-retirement labor force transitions in 2020-21 at least partially stemmed from pandemic-related unemployment and may be temporary rather than indicative permanent exits. People who remained in the labor force saw the lowest, but still substantial, the average increase in Unemployment income (+\$879 and +962%) compared to 2019-20.

COVID-19 emergency relief played a meaningful role for all groups in 2020-21, but especially for those who transitioned out of the labor force. Without the relief, the average incomes of people who left the labor force for non-retirement reasons during the first year of the pandemic

would have been about \$1,000 lower compared to the previous cohort (**Appendix Table 4**). For retirees, the emergency relief helped mitigate against overall income losses in 2020-21.

For all income comparisons, we note that mean differences do not indicate statistical significance; these differences will be tested in future studies.

Poverty entries.

Table 7 reports the proportions of poverty entries for the Supplemental Poverty Measure (SPM) and Federal Poverty Level (FPL) by labor force transition type and cohort. Older adults who remain in the labor force have relatively low levels of poverty entries under both measures (1-2 percent for the FPL, 2-4 percent for the SPM). Adults who exit the labor force for non-retirement reasons tend to have the highest poverty entry rates under both measures (12-17 percent for the SPM, 11-17 percent for the FPL). Retirees see poverty entry rates of 7-10 percent (SPM) and 6-9 percent (FPL). In general, poverty entry rates are measured to be higher using the SPM than when measured using the FPL, although this trend does not hold for the 2020-21 cohort. Descriptive poverty entry rates show no clear or consistent time trends across cohorts.

Table 8 reports the logistic regression results predicting poverty entries under both poverty measures. We find that, under both measures, people who exit the labor force have far higher odds of entering poverty compared to those who remain in the labor force. People who retired have 210 percent higher odds of entering poverty as measured under the SPM and 455 percent higher odds of entering FPL-measured poverty compared to those who remained in the labor force. People who exited the labor force for non-retirement reasons had 367% higher odds of entering SPM-based poverty and 777 percent higher odds of entering FPL-based poverty. These associations are all statistically significant at the $p < 0.01$ level. These findings are particularly notable given that poverty is measured at the family level, while labor force transitions reflect individuals. These findings indicate that an individual's transition out of the labor force can push their entire family's income below the poverty line, regardless of how poverty is defined.

From **Table 8**, we also find that only the 2020-21 cohort is associated with statistically significant different odds of poverty entry compared to the 2018-19 cohort, and only when measuring poverty using the SPM. In 2020-21, older adults had 32 percent lower odds of entering SPM-based poverty compared to the 2018-19 cohort.

Controlling for labor force transition type and cohort, **Table 8** shows that identifying as Black, Hispanic, or another or multiple racial identities are associated with statistically significant higher odds of entering poverty compared to those who identify as white, regardless of the measure. People with less than a four-year college degree, those who were not born in the US, and those with a work-limiting disability also have statistically significant higher odds of entering poverty compared to their reference groups.

Adults ages 65 and older have 35 percent lower odds of entering FPL-measured poverty than those ages 50-64, statistically significant at the $p < 0.01$ level (**Table 8**). However, there is no significant association between age and SPM-measured poverty entries. Estimates using age 62 as the threshold are consistent with these results (tables available upon request). Conversely, living with children in the household is significantly associated with 20 percent lower odds of entering SPM-based poverty, but there is no significant association for FPL-measured poverty. We find no significant association between binary sex and the likelihood of entering poverty under either definition.

Table 9 reports the results from the second set of models that tested whether the associations between labor force exit, demographic characteristics, and the likelihood of transitioning out of the labor force changed during the pandemic. Each row represents a separate regression in which the covariate interacted with the cohort indicator. The coefficients in each row are the coefficients from the interaction terms. Coefficients on the other, non-interacted covariates are not displayed.

From the results in **Table 9**, we find that the associations between exiting the labor force and entering poverty under either definition varied little during the pandemic. Apart from weakly significant lower odds ($p < 0.1$) of entering SPM-based poverty for those who exited the labor force for non-retirement reasons in 2019-20, we do not find statistically significant changes in the association between labor force transitions and poverty entries across the cohort. Because income was measured in March 2020 for the 2019-20 cohort before emergency COVID-19 aid was enacted, the lower odds of SPM-measured poverty entry for non-retirement labor force leavers are not reflective of increased pandemic-related cash assistance. **Figure 5** uses predicted probabilities to display the estimated associations between labor force transitions and poverty entries. The figure reflects the findings from the models and descriptive statistics: across all cohorts and for both poverty measures, far fewer adults who remain in the labor force enter poverty compared to those

who leave the labor force. The predicted probability of entering poverty under both measures is highest, but not statistically significantly so, among those who transitioned out of the labor force for non-retirement reasons.

There is similarly little evidence for changes in the associations between demographic characteristics and poverty entries throughout the pandemic. We find no significant changes in associations between poverty entries and age, binary sex, nativity, and work disability throughout the pandemic (**Table 9**). Those who identified as Hispanic had 37 percent lower odds of entering SPM-based poverty in 2019-20 relative to 2018-19 compared to those who identified as white. However, there were no statistically significant associations between identifying as Hispanic and entering FPL-based poverty in any year, and SPM-based poverty in 2019-20. Those who identified as another race or multiracial had weakly significant ($p < 0.1$) higher odds of entering poverty under both measures in 2019-20 compared to those who identified as white, but there was no significant association in 2020-21. Similarly, those with less than a four-year college education had lower odds of entering poverty under both measures in 2019-20 relative to 2018-19 and compared to those with higher education, but no significant associations in 2020-21. Finally, adults living with children in the household had 79 percent higher odds of entering FPL-based poverty in 2019-20 compared to those living in adult-only households and relative to 2018-19. However, the association in 2019-20 was not statistically using SPM-based poverty, and there were no significant associations for the 2020-21 cohort.

5. Discussion

Using the Current Population Survey (CPS), we create two-year panels of adults ages 50 and over to examine trends in older American's labor force transitions before and during the COVID-19 pandemic. For the group overall, and by demographic subgroups, we asked whether patterns of labor force transitions changed and whether the associations between labor force transitions on income, income sources, and poverty changed.

Overall, we find that retirement and non-retirement labor force exits did increase in the first year of the pandemic relative to the year prior to the pandemic. Yet, we contextualize these increases—particularly the increase in retirement transitions—as generally keeping pace with the trends over the last decade. We also found generally stable associations between demographic characteristics and labor force transitions throughout the pandemic. Some exceptions to the

generally stable trends and associations included a higher likelihood of non-retirement labor force transitions for women early in the pandemic compared to men and a declining probability of retirement among older workers living in households with children. We also found increases in non-retirement transitions among older workers identified as Hispanic and increases in retirements among older workers of another or multiple racial/ethnic identities in the 2019-20 cohort compared to other cohorts and racial/ethnic groups.

We find that transitioning out of the labor force is associated with significant declines in income and a higher likelihood of entering poverty across all years and demographic groups. We do not find that the probability of entering poverty changed over the study period, counter to our expectations given the mass employment disruptions caused by the COVID-19 pandemic. The income analysis suggests that COVID-19 relief—Economic Impact Payments and Unemployment Insurance—played a substantial role in mitigating earnings and private retirement income losses for people who transitioned out of the labor force.

Our findings suggest three primary implications. First, disproportionate increases in labor force exits during the first year of the pandemic were concentrated among only a few groups: women, those identifying as Hispanic, and older adults identifying as another or multiple racial/ethnic identities. These groups may face long-term re-employment challenges or lower retirement income if pushed out of the labor force prematurely. That older workers living in households with children became less likely to leave the labor force during the pandemic could be indicative of multigenerational families' financial needs during the pandemic. As in-person learning resumes, older workers in households with children may leave the labor force at higher rates. Further study should explore the composition of these households and how the pandemic changed the labor force patterns of all household members.

Second, the stability of poverty entries throughout the pandemic suggests that federal COVID-19 relief played a substantial role in mitigating poverty for older workers in all groups and especially among those who left the labor force. We find that without emergency assistance, the average incomes of people who left the labor force for non-retirement reasons in 2020-21 would have decreased compared to the prior cohort. Despite the influx of assistance, the average income among retirees in 2020-21 decreased compared to the 2019-20 cohort, but the assistance helped mitigate losses from earnings and private retirement income.

Finally, this study contributes to the contemporary conversation about the evolving nature of work and retirement in the US and its relationship to economic insecurity. We find that there are meaningful and substantive differences between the demographic and income compositions of the three labor force categories in this study (“in the labor force,” “not in the labor force but not retired,” and “retired”). People who transition out of the labor force see substantial income reductions and are much more likely to enter poverty during the transition years compared to people who remain in the labor force. People who leave for non-retirement reasons tend to have about half the income that retirees do and, on average, receive more income from disability-based sources (SSDI, SSI) and less from retirement sources. Yet, these categories are likely neither static nor mutually exclusive. Older workers who report being in the labor force also report income from private and public retirement accounts, as do people not working who also don’t identify themselves as retired.

Some limitations of the study are worth noting. First, the COVID-19 pandemic substantially interfered with CPS data collection, particularly in March 2020, which threatened the external validity of the cohorts ending and originating in 2020 (2019-20 and 2020-21). These cohorts are likely higher income, whiter, older, and more highly educated than the general population (IPUMS, 2022; Rothbaum & Bee, 2021). Additional research could further identify the differences in these samples and reweight accordingly. This study is also limited by the short-term nature of the CPS longitudinal design. We are only able to link longitudinally across two years in the CPS, so we are unable to identify whether people returned to the labor force after transitioning out of it. Future research could use a different dataset like the Health and Retirement Study to track the long-term labor force and income impacts of the pandemic. To identify intra-year variability, future research could link the monthly CPS employment records to the annual longitudinal sample, but, at most, a respondent is observed for four months at a time. Because income is only available in the March ASEC, our income measures likely include a mix of income from different labor statuses across the transition year. We also measure poverty entries as a binary outcome indicating whether someone crossed the threshold that year, which includes people whose incomes may not have meaningfully changed (e.g., dropping from 101% FPL to 99% FPL). Future analyses could use a continuous measure (like income as a percent of the FPL) to better identify income variability at all levels. Finally, we were limited in our subgroup analysis by low sample sizes, especially among those who transitioned out of the labor force for non-retirement reasons.

As more post-pandemic years become available, future research could stack pre- and post-pandemic cohorts to increase the sample size.

Despite these limitations, this study adds to the growing literature on the economic effects of the pandemic and on the evolving nature of employment and economic security in later life. People who leave the labor force for any reason are substantially and significantly more likely to experience poverty during their labor force transition. This is true for retirees, but the likelihood of entering poverty is even greater for people who exit the labor force for non-retirement reasons. While research and policy have paid much attention to retirement transitions and experiences of unemployment in later life, we know less about people who leave the labor force but don't retire. Although this status may be a matter of self-identification, this group has distinct demographic and income characteristics. We find that older workers who exit the labor force for non-retirement reasons tend to leave the labor force before age 65, are people of color, have less education and lower incomes, and are more likely to rely on disability-based income sources. As such, this group may be particularly vulnerable to gaps in the social insurance system. More work should be done to understand their economic circumstances and needs.

6. Tables

Table 1: Weighted Population Characteristics of Analytical and Full CPS Samples

	Analytic Sample			Full CPS Sample		
	Age 50+ and In Labor Force			Age 50+		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Year 1 Labor Force Status						
In Labor Force	1.00	1.00	1.00	0.48 (0.004)	0.48 (0.004)	0.47 (0.004)
NILF, Not Retired	--	--	--	0.11 (0.003)	0.11 (0.003)	0.10 (0.003)
Retired	--	--	--	0.41 (0.004)	0.41 (0.004)	0.42 (0.004)
Year 2 Labor Force Status						
In Labor Force	0.90 (0.004)	0.89 (0.004)	0.88 (0.004)	0.46 (0.004)	0.46 (0.004)	0.43 (0.004)
NILF, Not Retired	0.03 (0.002)	0.03 (0.002)	0.04 (0.003)	0.11 (0.003)	0.11 (0.003)	0.11 (0.003)
Retired	0.07 (0.003)	0.07 (0.003)	0.08 (0.003)	0.43 (0.004)	0.44 (0.004)	0.46 (0.004)
N	8,696	8,960	8,081	18,113	18,427	17,171

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates are proportions with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. “In labor force” includes employed or unemployed. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement.

Table 2: Probability of Labor Force Transitions by Select Demographic Characteristics

	Retired			NILF, Not Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Age						
Age 50-64	0.04 (0.003)	0.04 (0.003)	0.04 (0.003)	0.03 (0.003)	0.04 (0.003)	0.04 (0.003)
Age 65+	0.20 (0.010)	0.19 (0.010)	0.22 (0.011)	0.01 (0.003)	0.02 (0.004)	0.03 (0.005)
Binary Sex						
Female	0.08 (0.005)	0.08 (0.005)	0.08 (0.005)	0.04 (0.003)	0.03 (0.003)	0.03 (0.004)
Male	0.07 (0.004)	0.07 (0.004)	0.08 (0.005)	0.04 (0.003)	0.03 (0.003)	0.03 (0.003)
Race and Ethnicity						
White alone, Not Hispanic	0.08 (0.004)	0.08 (0.004)	0.09 (0.004)	0.03 (0.002)	0.03 (0.002)	0.04 (0.003)
Black alone, Not Hispanic	0.08 (0.012)	0.07 (0.010)	0.08 (0.012)	0.06 (0.012)	0.07 (0.012)	0.07 (0.012)
Hispanic, Any Racial Identity	0.04 (0.008)	0.04 (0.008)	0.05 (0.009)	0.04 (0.007)	0.07 (0.010)	0.05 (0.009)
Other Race or Multiracial	0.06 (0.011)	0.06 (0.011)	0.05 (0.011)	0.05 (0.012)	0.05 (0.011)	0.05 (0.011)
Disability						
Work-Limiting Disability	0.09 (0.017)	0.11 (0.020)	0.11 (0.019)	0.09 (0.018)	0.09 (0.019)	0.11 (0.019)
No Work-Limiting Disability	0.07 (0.003)	0.07 (0.003)	0.08 (0.004)	0.03 (0.002)	0.03 (0.002)	0.04 (0.003)
N	626	657	682	261	314	313

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates are proportions with standard errors in parentheses, weighted using the ASEC longitudinal weight provided by IPUMS. NILF = Not in labor force. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Table 3: Multinomial Logistic Regression Predicting Labor Force Transition Type

Reference outcome: Remained in Labor Force	NILF, Not Retired		Retired	
Cohort (Comparison: 2018-19)				
2019-20	1.18	*	1.01	
	(0.10)		(0.06)	
2020-21	1.32	***	1.18	***
	(0.11)		(0.07)	
Demographics				
Age 65+	0.75	***	6.48	***
	(0.07)		(0.33)	
Female	1.29	***	1.17	***
	(0.09)		(0.06)	
Black alone, not Hispanic	2.18	***	1.21	**
	(0.23)		(0.11)	
Hispanic, any racial identity	1.57	***	0.99	
	(0.19)		(0.11)	
Other Race or Multiracial	1.48	***	1.11	
	(0.21)		(0.13)	
Less than 4-Year College	1.70	***	1.06	
	(0.13)		(0.05)	
Not Born in the U.S.	1.25	**	0.74	***
	(0.14)		(0.07)	
Work Disabled	3.44	***	1.60	***
	(0.39)		(0.17)	
Children (<18) in Household	0.94		0.53	***
	(0.08)		(0.05)	
N	77,163			

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. *** p<0.01, ** p<0.05, * p<0.1. Estimates are odds ratios with standard errors in parentheses. NILF = Not in labor force. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Table 4: Demographic Characteristics Interacted with Cohort Predicting Labor Force Transition Type

Reference outcome: Remained in Labor Force Reference cohort: 2018-19	NILF, Not Retired		Retired		
	X 2019-20	X 2020-21	X 2019-20	X 2020-21	
Age 65+	1.11 (0.28)	1.45 (0.35)	0.98 (0.12)	0.99 (0.12)	
Female	1.40 (0.24)	* 1.24 (0.21)	1.04 (0.13)	1.00 (0.12)	
Black alone, not Hispanic	1.13 (0.29)	0.98 (0.25)	1.01 (0.23)	1.01 (0.23)	
Hispanic, any racial identity	1.62 (0.41)	* 0.98 (0.26)	0.94 (0.25)	0.92 (0.23)	
Other Race or Multiracial	0.88 (0.27)	0.72 (0.23)	1.04 (0.27)	0.82 (0.22)	
Less than 4-Year College	0.97 (0.19)	0.99 (0.19)	1.04 (0.13)	1.16 (0.14)	
Not Born in the U.S.	0.94 (0.19)	0.71 (0.15)	0.89 (0.18)	0.82 (0.16)	
Work Disabled	0.75 (0.21)	0.85 (0.23)	1.22 (0.32)	1.17 (0.30)	
Children (<18) in Household	0.81 (0.17)	0.68 (0.15)	* 0.78 (0.17)	0.61 (0.13)	**
N	77,163				

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. *** p<0.01, ** p<0.05, * p<0.1. Estimates are odds ratios with standard errors in parentheses. Each row represents a separate multinomial logistic regression with the row term interacted by cohort and controlling for the other covariates. NILF = Not in labor force. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Table 5: Percent Change in Average Income Amount from Prior Cohort

	Remained in Labor Force			NILF, Not Retired			Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
	\$	% chg	% chg	\$	% chg	% chg	\$	% chg	% chg
Total Income	76,780 (1,247)	9%	3%	20,168 (2,067)	34%	1%	40,782 (1,850)	35%	-9%
Earnings	65,912 (1,112)	7%	1%	10,986 (1,833)	50%	-13%	16,456 (1,292)	32%	-15%
Retirement	7,804 (376)	23%	11%	2,946 (641)	67%	-7%	12,545 (1,265)	64%	-15%
Social Security: Retirement	1,924 (83)	5%	-3%	1,913 (456)	-10%	28%	9,669 (476)	0%	10%
Social Security: Disability	49 (11)	19%	0%	2,098 (411)	-51%	-9%	477 (142)	-87%	350%
Social Security: Other	284 (32)	34%	12%	208 (144)	-97%	1429%	246 (109)	-63%	178%
SSI	14 (5)	31%	28%	729 (196)	-44%	34%	76 (39)	81%	-54%
Unemployment Insurance	108 (14)	-15%	962%	51 (23)	240%	1557%	49 (20)	78%	1107%
N	7,809	7,989	7,086	261	314	313	626	657	682

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates from 2018-19 represent the average income by source with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. Estimates for 2019-20 and 2020-21 represent the percent change in average income by source from the prior year cohort. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Table 6: Average Within-Person Income Change During Labor Force Transition Year

	Remained in Labor Force			NILF, Not Retired			Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Total Income	3,459 (1,267)	3,885 (1,507)	-769 (1,632)	-21,193 (3,660)	-11,523 (2,659)	-18,330 (4,814)	-24,065 (3,368)	-21,226 (8,294)	-19,402 (3,635)
Earnings	2,068 (1,168)	757 (1,387)	-1,671 (1,396)	-22,028 (3,103)	-16,557 (2,525)	-22,693 (4,618)	-27,664 (2,811)	-28,566 (6,462)	-24,468 (2,831)
Retirement	1,202 (407)	2,443 (483)	-26 (713)	-1,555 (1,379)	2,301 (817)	135 (1,226)	636 (1,564)	2,908 (3,365)	1,109 (2,055)
Social Security: Retirement	222 (71)	306 (68)	258 (79)	559 (393)	594 (272)	630 (429)	3,482 (468)	3,449 (495)	2,877 (511)
Social Security: Disability	-10 (12)	-1 (16)	-20 (20)	1,697 (423)	317 (413)	662 (265)	405 (131)	-141 (99)	165 (98)
Social Security: Other	225 (34)	322 (44)	350 (53)	-193 (211)	-712 (405)	-191 (150)	174 (118)	-114 (91)	134 (117)
SSI	-8 (7)	2 (8)	-7 (10)	598 (185)	304 (157)	453 (134)	-26 (67)	102 (73)	-5 (38)
Unemployment Insurance	16 (16)	6 (14)	879 (52)	-291 (149)	92 (65)	2,677 (481)	-10 (34)	-102 (114)	956 (186)
COVID-19 Relief	-	-	1,360 (21)	-	-	1,577 (90)	-	-	1,578 (66)
N	7,809	7,989	7,086	261	314	313	626	657	682

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates are means with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. Estimates for 2019-20 and 2020-21 represent the percent change in average income by source from the prior year cohort. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Table 7: Poverty Entries During Labor Force Transition Year

	Remained in Labor Force			NILF, Not Retired			Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
SPM (100%)	0.03 (0.002)	0.04 (0.002)	0.02 (0.002)	0.17 (0.027)	0.12 (0.023)	0.15 (0.023)	0.10 (0.013)	0.09 (0.013)	0.07 (0.012)
FPL (100%)	0.01 (0.002)	0.02 (0.002)	0.02 (0.002)	0.17 (0.028)	0.11 (0.023)	0.17 (0.024)	0.07 (0.012)	0.06 (0.011)	0.09 (0.013)
N	7,809	7,989	7,086	261	314	313	626	657	682

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates are proportions with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. Poverty entries represent people whose income was above the poverty level in the first year observed, and below the poverty level in the second year observed. SPM = Supplemental Poverty Measure. FPL = Federal Poverty Level. “In labor force” includes employed or unemployed. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement.

Table 8: Logistic Regressions Predicting Poverty Entry

	100% SPM		100% FPL	
Labor Force Exit (Comparison: Remained in labor force)				
Retired	3.10	***	5.55	***
	(0.305)		(0.639)	
NILF, Not Retired	4.67	***	8.77	***
	(0.493)		(0.979)	
Cohort (Comparison: 2018-19)				
19-20	0.94		0.86	
	(0.072)		(0.089)	
20-21	0.68	***	1.14	
	(0.058)		(0.114)	
Demographics				
Age 65+	0.98		0.65	***
	(0.081)		(0.072)	
Female	1.04		1.07	
	(0.069)		(0.088)	
Black alone, not Hispanic	1.82	***	1.88	***
	(0.191)		(0.239)	
Hispanic, any racial identity	1.49	***	1.67	***
	(0.177)		(0.244)	
Other Race or Multiracial	1.39	**	1.59	***
	(0.185)		(0.261)	
Less than 4-Year College	1.59	***	1.67	***
	(0.119)		(0.160)	
Not Born in the U.S.	1.66	***	1.37	**
	(0.168)		(0.175)	
Work Disabled	1.67	***	1.43	**
	(0.215)		(0.230)	
Children (<18) in Household	0.80	**	0.90	
	(0.074)		(0.100)	
N	25,721		25,721	

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. *** p<0.01, ** p<0.05, * p<0.1. Estimates are odds ratios with standard errors in parentheses. NILF = Not in labor force. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Table 9: Covariates Interacted with Cohort Logistic Regressions Predicting Poverty Entry

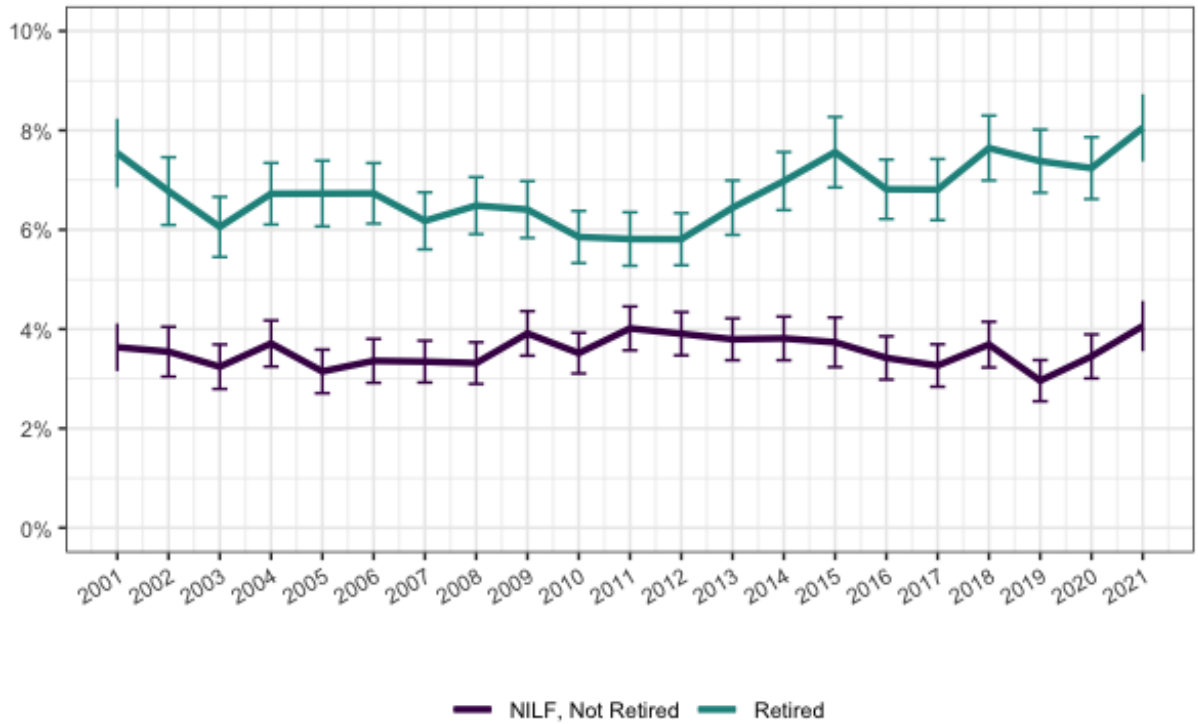
	100% SPM		100% FPL	
	2019-2020	2020-21	2019-2020	2020-21
Labor Force Exit (Comparison: Remained in labor force)				
Retired	0.75 (0.161)	0.85 (0.195)	0.65 (0.183)	1.10 (0.291)
NILF, Not Retired	0.62 * (0.158)	1.08 (0.276)	0.71 (0.194)	1.13 (0.281)
Demographics				
Age 65+	0.99 (0.174)	0.89 (0.172)	0.77 (0.199)	0.94 (0.220)
Female	1.11 (0.171)	1.05 (0.178)	0.99 (0.207)	0.84 (0.168)
Black alone, not Hispanic	0.99 (0.236)	0.80 (0.217)	1.52 (0.470)	0.87 (0.275)
Hispanic, any racial identity	0.63 ** (0.148)	1.07 (0.249)	1.23 (0.375)	1.28 (0.364)
Other Race or Multiracial	1.62 * (0.452)	1.13 (0.370)	1.81 * (0.650)	0.97 (0.368)
Less than 4-Year College	0.66 ** (0.113)	0.97 (0.188)	0.65 * (0.155)	0.84 (0.196)
Not Born in the U.S.	0.87 (0.161)	1.20 (0.233)	1.11 (0.282)	1.35 (0.320)
Work Disabled	1.56 (0.465)	1.17 (0.390)	1.11 (0.282)	1.35 (0.320)
Children (<18) in Household	1.20 (0.247)	0.81 (0.196)	1.79 ** (0.469)	0.81 (0.227)
N	25,721		25,721	

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. *** p<0.01, ** p<0.05, * p<0.1. Estimates are odds ratios with standard errors in parentheses. Each row represents a separate multinomial logistic regression with the row term interacted by cohort and controlling for the other covariates. NILF = Not in labor force. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

7. Figures

Figure 1: Labor Force Transitions by Type, 2001-2021



Source. CPS March ASEC, two-year longitudinal cohorts of adults ages 50+ initially in the labor force.

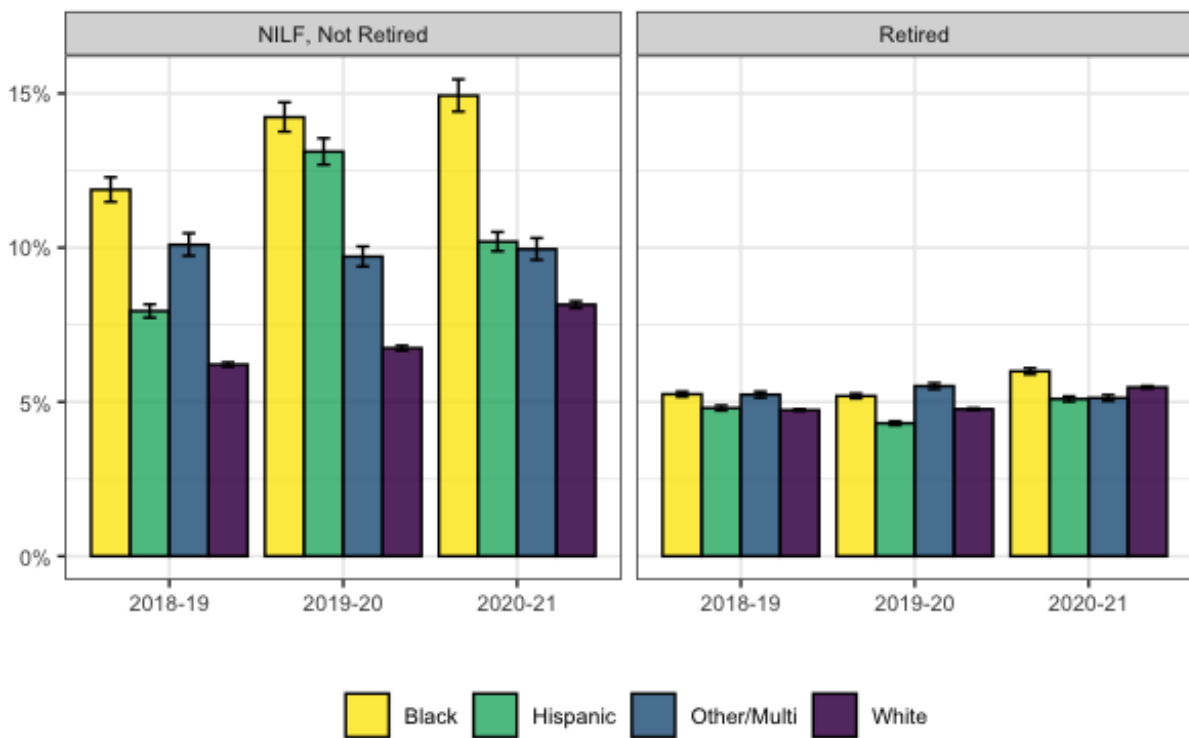
Notes. Estimates are weighted using the final ASEC longitudinal weight provided by IPUMS. Error bars are 95% confidence intervals. Reference category “remained in labor force” omitted due to scale. NILF = Not in labor force. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement.

Figure 2: Predicted Probabilities of Labor Force Transition by Cohort

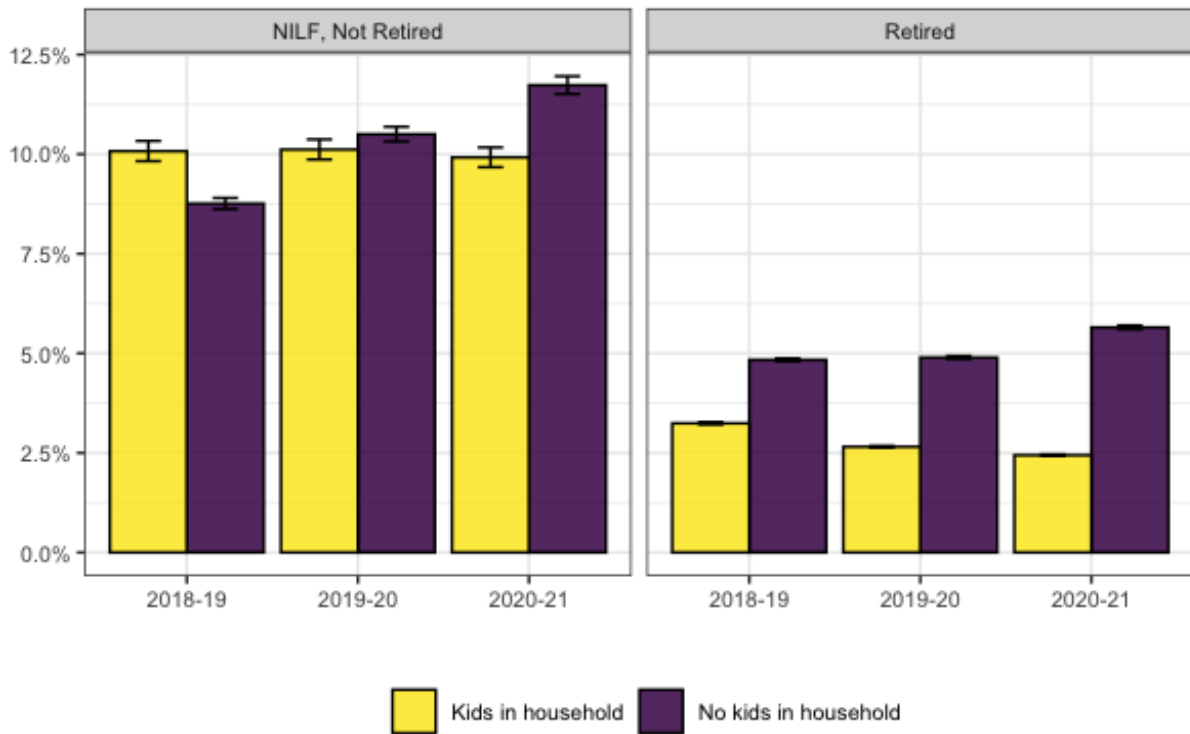
a. By Binary Sex



b. By Race/Ethnicity



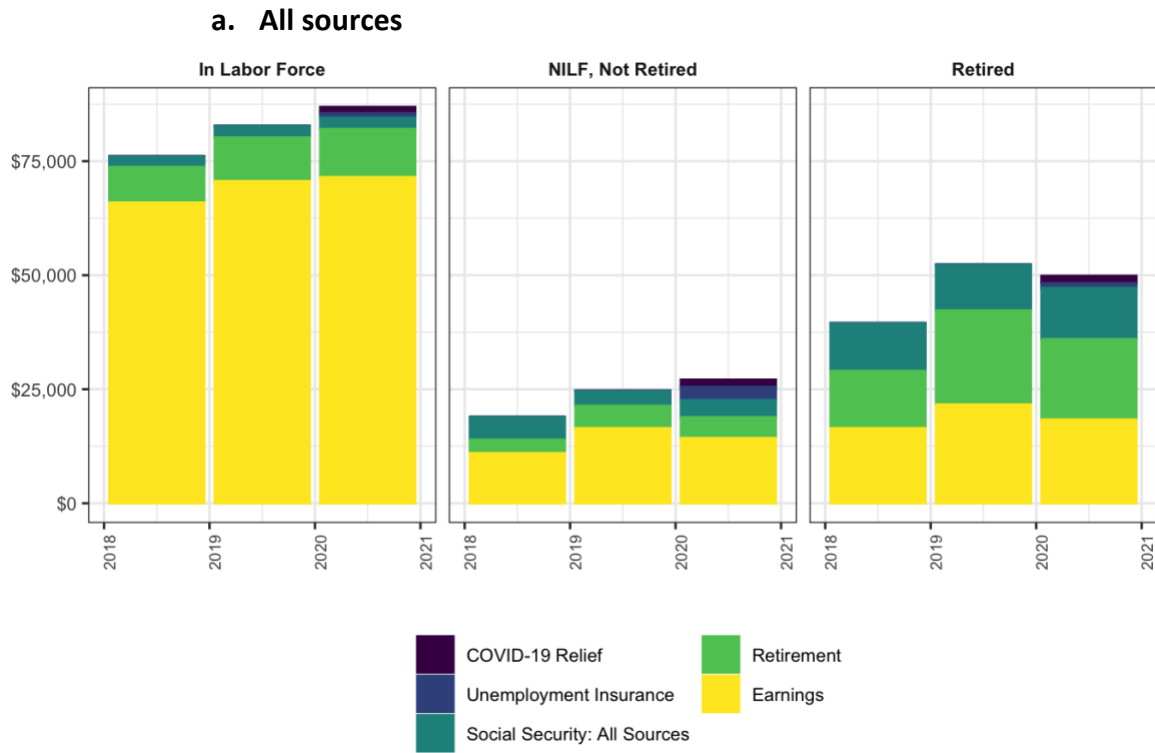
c. By Whether Living in Household with Children Under Age 18



Source. CPS March ASEC, two-year longitudinal cohorts of adults ages 50+ initially in the labor force.

Notes. Predicted probabilities generated from the model in Table 4 with the covariates not displayed held at their means. Error bars are 95% confidence intervals. Reference outcome “remained in labor force” omitted due to scale. NILF = Not in labor force. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement. “In labor force” includes employed or unemployed.

Figure 3: Mean Transition-Year Income by Labor Force Transition Type and Income Source

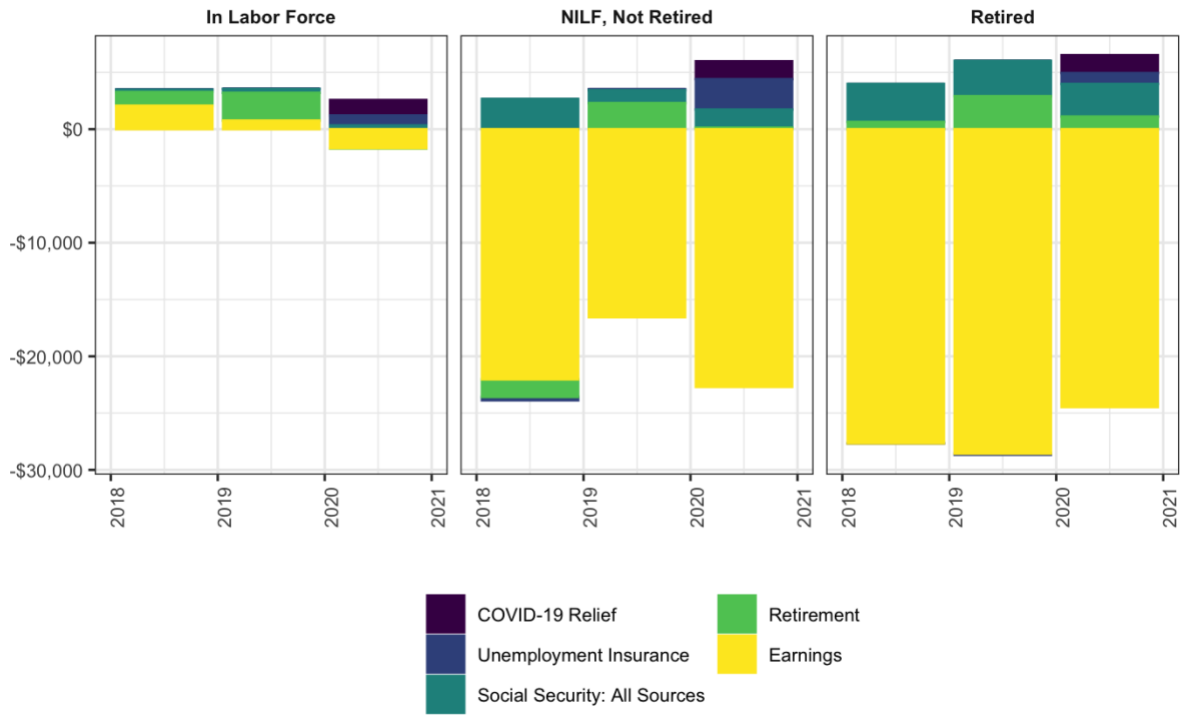


Source. CPS March ASEC, two-year longitudinal cohorts of adults ages 50+ initially in the labor force.

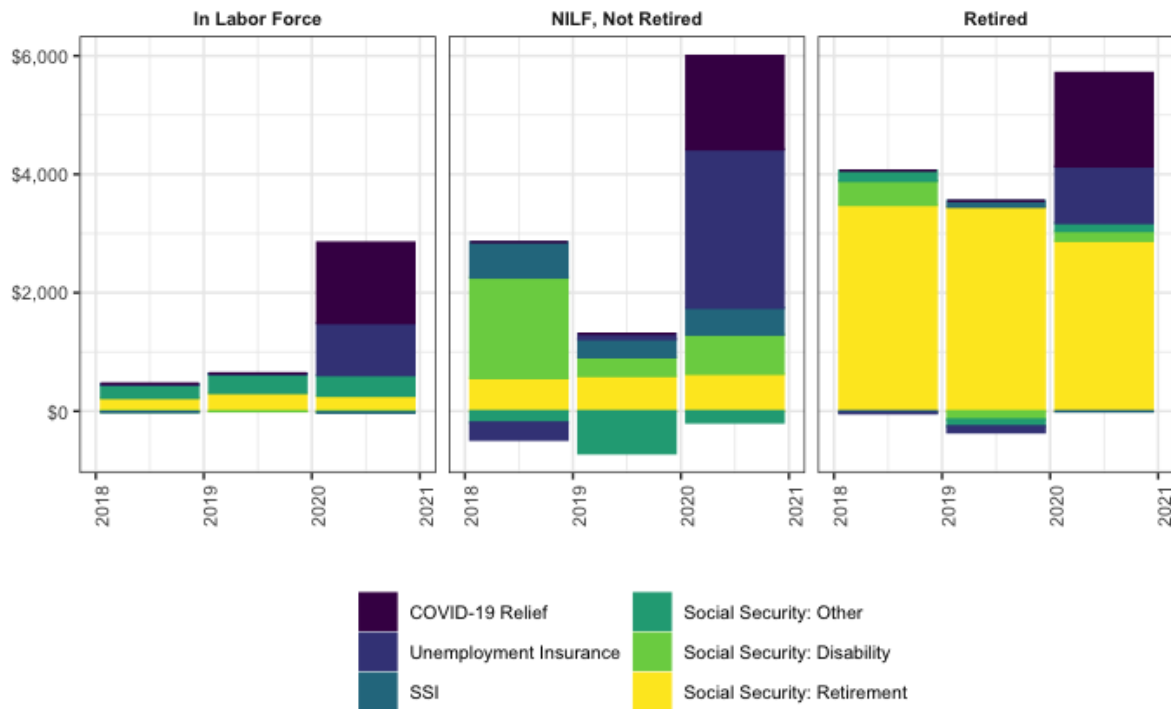
Notes. Income in dollars, not adjusted for inflation. Estimates are weighted using the final ASEC longitudinal weight provided by IPUMS. LF = labor force, NILF = Not in labor force, SSI = Supplemental Security Income. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement. “In labor force” includes employed or unemployed. “Transition year” indicates the year in which the labor force transition occurred, from March to March.

Figure 4: Mean Change in Transition-Year Income by Labor Force Transition Type and Income Source

a. All sources



b. All sources excluding earnings and retirement

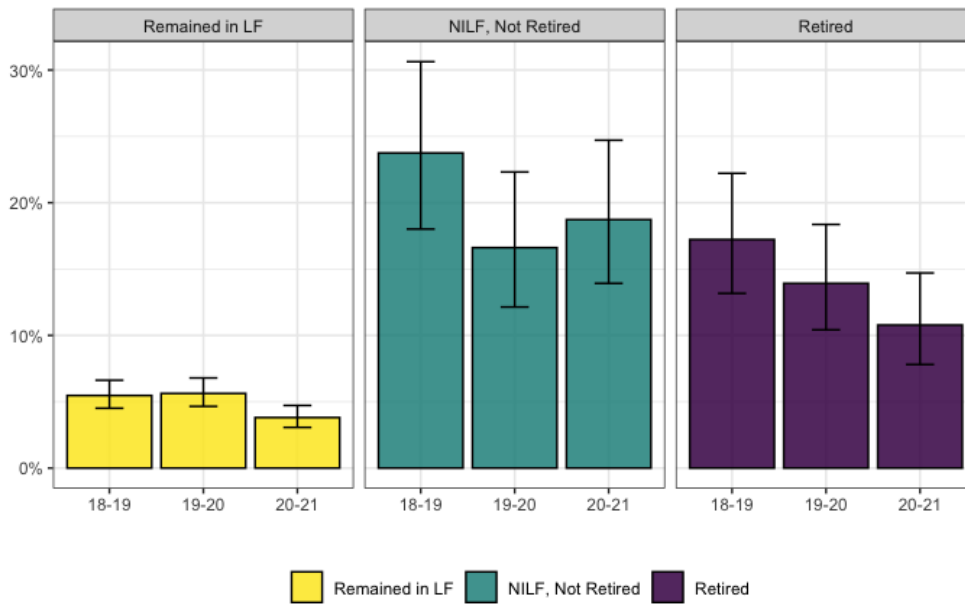


Source. CPS March ASEC, two-year longitudinal cohorts of adults ages 50+ initially in the labor force.

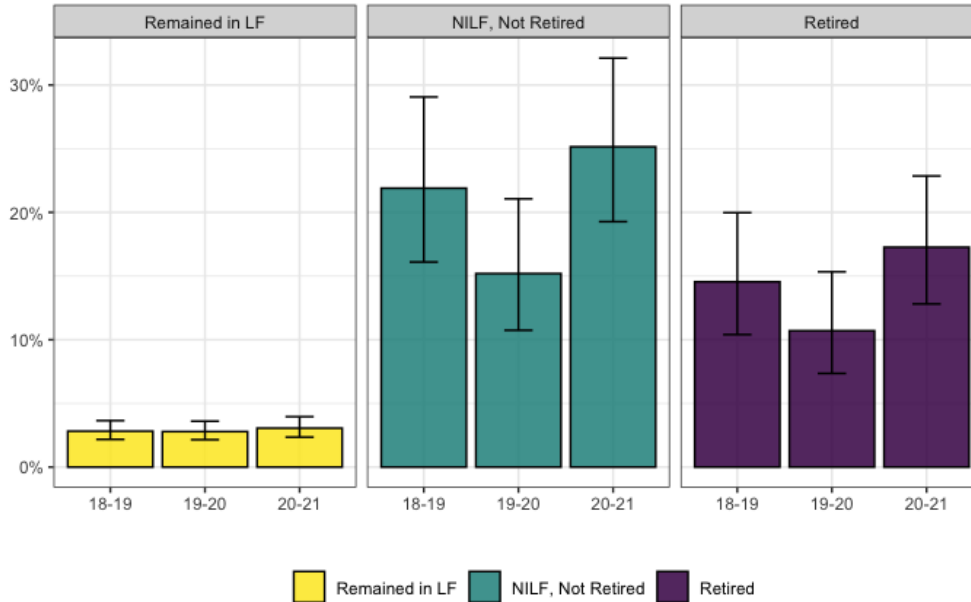
Notes. Income in dollars, not adjusted for inflation. Estimates are weighted using the final ASEC longitudinal weight provided by IPUMS. LF = labor force, NILF = Not in labor force, SSI = Supplemental Security Income. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement. “In labor force” includes employed or unemployed. “Transition year” indicates the year in which the labor force transition occurred, from March to March.

Figure 5: Predicted Probabilities of Entering Poverty by Labor Force Transition Type Over Time

a. SPM



b. FPL



Source. CPS March ASEC, two-year longitudinal cohorts of adults ages 50+ initially in the labor force.
Notes. Estimates are weighted using the final ASEC longitudinal weight provided by IPUMS. Error bars are 95% confidence intervals. LF = labor force, NILF = Not in labor force, SPM = Supplemental Poverty Measure, FPL = Federal Poverty Level. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement. “In labor force” includes employed or unemployed. “Entered poverty” signifies those whose incomes were above the poverty level the first year and fell below the poverty level during the transition year. “Transition year” indicates the year in which the labor force transition occurred, from March to March.

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9. Appendix

Appendix Table 1: Weighted Population Characteristics of Analytical and Full CPS Samples

	Analytic Sample			Full CPS Sample		
	Age 50+ and In Labor Force			Age 50+		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Demographics						
Less than 4-Year College	0.61 (0.006)	0.60 (0.006)	0.58 (0.006)	0.68 (0.004)	0.66 (0.004)	0.64 (0.004)
Female	0.48 (0.006)	0.48 (0.006)	0.48 (0.006)	0.53 (0.004)	0.53 (0.004)	0.53 (0.004)
White alone, Not Hispanic	0.82 (0.004)	0.79 (0.005)	0.79 (0.005)	0.82 (0.003)	0.81 (0.003)	0.82 (0.003)
Black alone, Not Hispanic	0.07 (0.003)	0.08 (0.003)	0.08 (0.003)	0.07 (0.002)	0.08 (0.002)	0.07 (0.002)
Hispanic, Any Racial Identity	0.07 (0.003)	0.08 (0.003)	0.08 (0.003)	0.06 (0.002)	0.07 (0.002)	0.07 (0.002)
Other Race or Multiracial	0.04 (0.002)	0.06 (0.003)	0.05 (0.002)	0.04 (0.002)	0.05 (0.002)	0.04 (0.002)
Age 65+	0.23 (0.005)	0.23 (0.005)	0.23 (0.005)	0.49 (0.004)	0.50 (0.004)	0.51 (0.004)
Children (<18) in Household	0.12 (0.004)	0.13 (0.004)	0.14 (0.004)	0.09 (0.002)	0.09 (0.002)	0.09 (0.002)
Has Work-Limiting Disability	0.04 (0.003)	0.04 (0.002)	0.04 (0.003)	0.13 (0.003)	0.12 (0.003)	0.12 (0.003)
Not Born in U.S.	0.14 (0.004)	0.14 (0.004)	0.15 (0.005)	0.12 (0.003)	0.13 (0.003)	0.13 (0.003)
N	8,696	8,960	8,081	18,113	18,427	17,171

Source. CPS March ASEC.

Notes. Estimates are proportions with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Appendix Table 2: Probability of Labor Force Transitions by Additional Demographic Characteristics

	Retired			NILF, Not Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Education						
Less than 4-Year College	0.07 (0.004)	0.07 (0.004)	0.08 (0.005)	0.04 (0.003)	0.04 (0.003)	0.05 (0.004)
4-Year Degree or More	0.08 (0.006)	0.07 (0.005)	0.08 (0.005)	0.02 (0.003)	0.02 (0.003)	0.03 (0.003)
Nativity						
Not Born in U.S.	0.05 (0.007)	0.04 (0.007)	0.06 (0.007)	0.05 (0.007)	0.05 (0.007)	0.05 (0.007)
Born in U.S.	0.08 (0.004)	0.08 (0.004)	0.09 (0.004)	0.03 (0.002)	0.03 (0.002)	0.04 (0.003)
Household Composition						
Any Children in Household	0.03 (0.005)	0.02 (0.004)	0.02 (0.004)	0.04 (0.006)	0.04 (0.006)	0.04 (0.006)
No Children in Household	0.08 (0.004)	0.08 (0.004)	0.09 (0.004)	0.03 (0.002)	0.03 (0.002)	0.04 (0.003)
N	626	657	682	261	314	313

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates are proportions with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. “In labor force” includes employed or unemployed. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement.

Appendix Table 3: Binomial Logistic Regression
Predicting Likelihood of Exiting the Labor Force
for Non-Retirement Reasons vs. Retirement

Reference outcome: Retired	NILF, Not Retired	
Cohort (Comparison: 2018-19)		
19-20	1.18	
	(0.14)	
20-21	1.20	
	(0.14)	
Demographics		
Age 65+	0.11	***
	(0.01)	
Female	1.08	
	(0.10)	
Black alone, not Hispanic	1.82	***
	(0.27)	
Hispanic, any racial identity	1.69	***
	(0.32)	
Other Race or Multiracial	1.54	**
	(0.32)	
Less than 4-Year College	1.59	***
	(0.16)	
Not Born in the U.S.	1.87	***
	(0.31)	
Work Disabled	2.07	***
	(0.34)	
Children (<18) in Household	2.07	***
	(0.29)	
N	2,849	

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. *** p<0.01, ** p<0.05, * p<0.1. Estimates are odds ratios with standard errors in parentheses. NILF = Not in labor force. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Appendix Table 4: Income During Labor Force Transition Year

	Remained in Labor Force			NILF, Not Retired			Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Total Income	76,780 (1,247)	83,694 (1,314)	86,222 (1,373)	20,168 (2,067)	27,078 (2,556)	27,393 (4,382)	40,782 (1,850)	55,037 (4,719)	49,885 (2,416)
Earnings	65,912 (1,112)	70,627 (1,166)	71,497 (1,198)	10,986 (1,833)	16,451 (2,249)	14,289 (4,191)	16,456 (1,292)	21,651 (3,075)	18,344 (1,594)
Retirement	7,804 (376)	9,564 (439)	10,573 (503)	2,946 (641)	4,907 (915)	4,570 (1,229)	12,545 (1,265)	20,617 (2,200)	17,619 (1,589)
Social Security: Retirement	1,924 (83)	2,026 (82)	1,963 (86)	1,913 (456)	1,714 (354)	2,191 (450)	9,669 (476)	9,701 (508)	10,665 (512)
Social Security: Disability	49 (11)	58 (14)	58 (13)	2,098 (411)	1,034 (269)	939 (249)	477 (142)	62 (49)	281 (84)
Social Security: Other	284 (32)	382 (43)	428 (48)	208 (144)	6 (6)	85 (77)	246 (109)	90 (32)	250 (99)
SSI	14 (5)	19 (6)	24 (9)	729 (196)	407 (148)	546 (160)	76 (39)	137 (68)	63 (32)
Unemployment Insurance	108 (14)	92 (11)	980 (52)	51 (23)	175 (72)	2,895 (485)	49 (20)	87 (60)	1,052 (189)
COVID-19 Relief			1,360 (21)			1,577 (90)			1,578 (66)
N	7,809	7,989	7,086	261	314	313	40,782	657	682

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates are means with standard errors in parentheses, weighted using the longitudinal ASEC weights provided by IPUMS. Estimates for 2019-20 and 2020-21 represent the percent change in average income by source from the prior year cohort. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

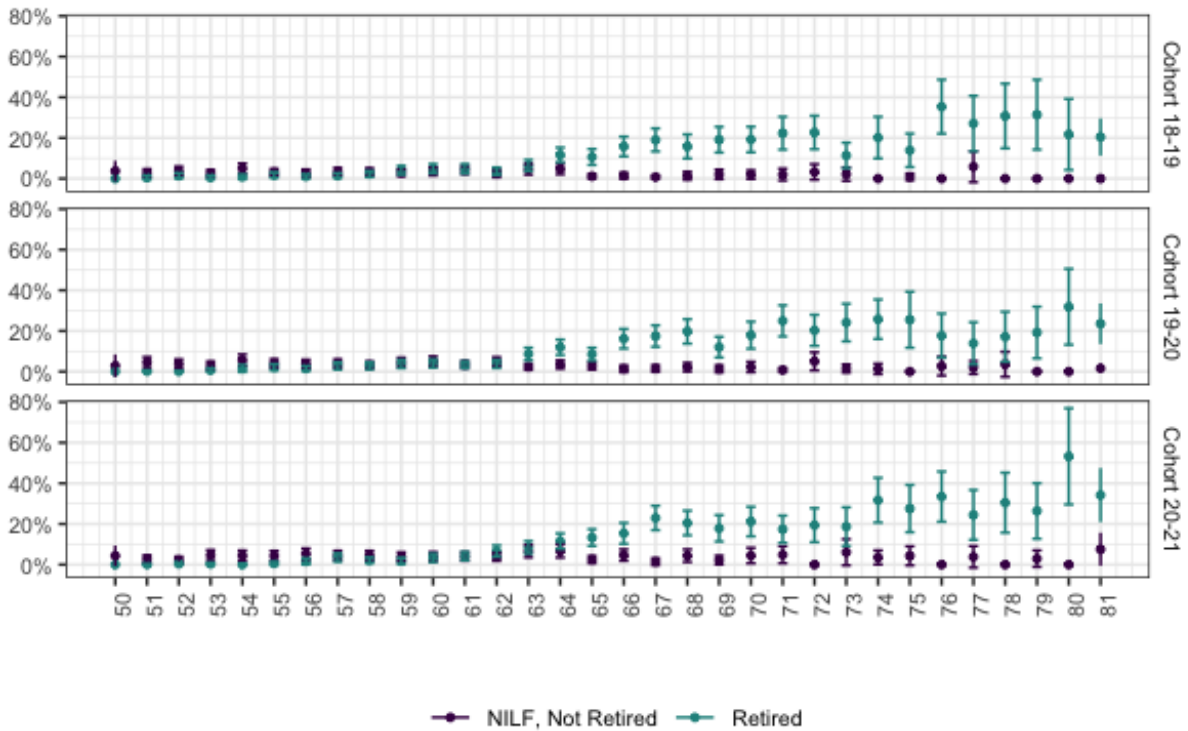
Appendix Table 5: Sources of Income During Labor Force Transition Year

	Remained in Labor Force			NILF, Not Retired			Retired		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Earnings	0.98 (0.002)	0.99 (0.001)	0.98 (0.002)	0.37 (0.035)	0.44 (0.033)	0.47 (0.033)	0.48 (0.023)	0.47 (0.023)	0.47 (0.022)
Retirement	0.74 (0.006)	0.75 (0.006)	0.75 (0.006)	0.42 (0.036)	0.42 (0.033)	0.43 (0.032)	0.74 (0.020)	0.74 (0.020)	0.73 (0.020)
Social Security: Retirement	0.11 (0.004)	0.12 (0.004)	0.10 (0.004)	0.14 (0.026)	0.11 (0.021)	0.12 (0.021)	0.59 (0.023)	0.57 (0.023)	0.59 (0.022)
Social Security: Disability	0.00 (0.001)	0.00 (0.001)	0.00 (0.001)	0.15 (0.026)	0.08 (0.018)	0.07 (0.017)	0.03 (0.007)	0.00 (0.003)	0.02 (0.006)
Social Security: Other	0.02 (0.002)	0.02 (0.002)	0.02 (0.002)	0.01 (0.010)	0.00 (0.004)	0.01 (0.004)	0.01 (0.006)	0.01 (0.004)	0.01 (0.005)
SSI	0.00 (0.001)	0.00 (0.001)	0.00 (0.001)	0.08 (0.020)	0.04 (0.012)	0.05 (0.014)	0.01 (0.004)	0.01 (0.004)	0.01 (0.004)
Unemployment Insurance	0.02 (0.002)	0.02 (0.002)	0.11 (0.004)	0.02 (0.011)	0.04 (0.012)	0.20 (0.026)	0.02 (0.006)	0.01 (0.005)	0.09 (0.013)
COVID-19 Relief	--	--	0.53 (0.007)	--	--	0.63 (0.031)	--	--	0.60 (0.022)
N	7,809	7,989	7,086	261	314	313	626	657	682

Source. CPS March ASEC, two-year longitudinal cohorts of adults aged 50+ initially in the labor force.

Notes. Estimates represent the proportion of people receiving income from each source, with standard errors in parentheses. Estimates are weighted using the longitudinal ASEC weights provided by IPUMS. "In labor force" includes employed or unemployed. "NILF, Not Retired" signifies those who left the labor force but did not self-report retirement.

Appendix Figure 1: Labor Force Transitions by Age and Cohort



Source. CPS March ASEC, two-year longitudinal cohorts of adults ages 50+ initially in the labor force.
Notes. Estimates are weighted using the final ASEC longitudinal weight provided by IPUMS. Error bars are 95% confidence intervals. Reference category “remained in labor force” omitted due to scale. NILF = Not in labor force. “NILF, Not Retired” signifies those who left the labor force but did not self-report retirement. “In labor force” includes employed or unemployed. Age is age during the year of the labor force transition.



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