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The Increasing Labor-Force Participation of Older Workers and its Effect on U.S. Retirement Income

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Abstract

The labor force participation rates of men and women aged 62-79 have notably increased since the mid-1990s. The bulk of the increase for men has been in full-time, wage and salary jobs. Women's labor force participation rates have increased at an even faster rate, and among those aged 65-69, full-time, wage and salary work has now overtaken part-time work as the prevalent form of employment. The result of these changes is a dramatic increase in the share of total money income attributable to earnings for people aged 62-79. For all units (singles and married couples) aged 65-69, the earnings share of total income increased from 30 percent in 1980-82 to 47 percent in 2008. Until the mid-1990s, Social Security benefits and earnings were roughly equal shares of total money income. The earnings share is now approximately double the Social Security benefit share. When we restrict attention to the earnings of aged units that receive Social Security benefits—receipt of which is sometimes used to define retirement—earnings shares increased markedly throughout the 62-79 age range since the early 1990s. We show that for aged units with labor market earnings, those earnings have a large impact on their relative position in the distribution of annual money income for older Americans.

I. Introduction

The labor force participation rates (LFPRs) of American men aged 62 and older fell for nearly four decades after World War II. Many factors contributed to that decline including the availability of Social Security retirement benefits, the provision of private pension plans, the inception (1956) and subsequent growth of the Social Security Disability Insurance program, the advent of Medicare (1965) to provide health care for people aged 65 and older, and sustained economic growth that increased real lifetime incomes for successive birth cohorts. In short, as Americans became wealthier, earlier retirements were viewed as both desirable and affordable.

Around the middle of the 1980s, participation rates stabilized for about a decade, and then began to trend upward by the middle of the 1990s. The subsequent turnaround has been accompanied by a large increase in the labor market earnings of the older population, particularly within the population aged 65-74, and applies to Social Security beneficiaries. This paper discusses the emerging importance of earnings as an income source for older Americans and discusses circumstances that may be driving this change.

A combination of longevity improvements and earlier retirements substantially increased the expected duration of retirement over most of the 20th century. For example, in the early 1950s, the median age of exit from the labor force was 66.9 for men and 67.6 for women, while life expectancy at age 65 was 12.8 years for men and 15.1 years for women.[1] Fifty years later, the median age of exit from the labor force by men was 61.6 and 60.5 for women. In 2000, life expectancy at age 65 was 15.9 years for men and 19.0 years for women. Thus, over the half century—as an approximation—the average duration of retirement increased from 10.9 to 19.3 years for men and from 12.5 to 23.5 years for women. Longer periods of retirement require commensurate increases in resources to maintain an adequate standard of living. Retirement resources have typically been drawn from three sources: Social Security benefits, private pensions, and personal savings. The long-anticipated arrival of the large, post-war baby-boom cohorts at ages customarily associated with retirement raises concerns about the adequacy of their retirement incomes.

Since the 1980s, public policymakers, employers, and individual workers all have had cause to re-assess the affordability of early retirement. The aging of the population that is

[1] Median retirement age statistics are from Gendell (2008), Table 1. Life expectancy statistics are from Board of Trustees (2010), Table V.A3.

occurring in many countries implies that the ratio of workers to retirees is falling. For Social Security, primarily a pay-as-you-go program, the worker/retiree ratio is projected to fall from its current level of 3 workers per beneficiary to 2.2 by 2030 as the baby boom generation exits the labor force. Recent annual reports to Congress from the Social Security trustees project that Social Security faces insolvency in 2037 (Board of Trustees 2010).[2] The easily foreseen demographic change has prompted re-examination of benefits scheduled under current law in view of the tax revenues required to pay them. Social Security retirement benefits were never intended to be the sole source of retirement income and the projected long-range financial insolvency is unlikely to prompt increased generosity of scheduled benefits.[3] Furthermore, Social Security's net replacement rates are declining under current law due to the gradual increase in the full retirement age from 65 to 67, increasing taxation of benefits, and increasing Medicare Part B premiums that are deducted from Social Security benefit checks (Reno and Lavery 2007).[4]

Employers have their own set of concerns about the potential adverse impact on competitiveness of costs associated with pensions and retiree health benefits. Private pension plan coverage rates for workers have been stagnant at best for decades — about half of the workforce is covered—and there has been a well-documented shift from defined benefit to defined contribution plans. That change has effectively shifted much of the risk associated with funding adequate pensions from employers to employees. Furthermore, the rapidly rising cost of health insurance in recent years has made employers less likely to offer health insurance to retirees than in the past.

Recent retirees and older workers currently planning their retirements face a decidedly different environment from what existed two decades ago. As the Social Security full retirement age increases, the benefit reduction for retirement at earlier ages increases, reducing the benefit amount payable each month. About half of the work force does not have an employer pension and one consequence of the now-chronic low personal saving rate is that many workers have not

[2] After trust fund exhaustion in 2037, continuing tax income would be sufficient to pay 78 percent of scheduled benefits, gradually declining to 75 percent by 2084.

[3] U.S. replacement rates for lower, medium, and higher earners are among the lowest in OECD countries (Organisation for Economic Co-operation and Development 2007).

[4] The 1983 amendments to the Social Security Act contained a mix of program changes designed to reduce benefit costs and increase revenues, including a gradual increase in the full retirement—the age at which full benefits are payable —in two phases, from 65 to 66 during 2000-05 and to 67 during 2017-22. It also gradually increased the incentive to delay claiming benefits between the full retirement age and age 70.

privately saved adequate resources for retirement. Those workers with either private savings or defined contribution pension plans whose assets they manage have seen a decade of wide swings in equity prices that have produced limited gains for investors. More recently, a large downturn in housing prices has lowered the real value of what for many near-retirees is their single most valuable asset. It is unsurprising, therefore, that recent surveys of younger workers and near-retirees show a large number of people—though usually not a majority—who appear to have inadequate resources for financing retirement and are not confident about their long-range financial status (Helman, Copeland, and VanDerhei 2010).

With these factors at work, for much of the past two decades the message from public officials, financial planners, and assorted peddlers of retirement advice has been to encourage people to work longer and to delay claiming Social Security benefits. This strategy shortens the retirement period that needs to be funded and can generate additional savings. The evidence presented in this paper indicates that earnings have indeed become a much greater share of total income of the older population since the mid-1990s.

II. Background

The paper's statistical results are derived from the U.S. Census Bureau's Current Population Survey (CPS) data (monthly files and the Annual Social and Economic Supplement) for 1980-2009.[5] Figure 1 displays annual labor force participation rates (LFPRs) during 1980-2008 for U.S. men and women aged 62-79.[6] The choice of age range to study is somewhat arbitrary. Some workers younger than 62 leave the labor force for retirement and LFPRs begin to decline by age 55. Conversely, at ages 80+, about 7-8 percent of men participated in the labor force in 2007-08, a figure that has trended upward during the past decade. Nonetheless, a large majority of retirements, under various definitions of the term, occur during ages 62-79. In Figure 1, the LFPRs are calculated relative to the civilian noninstitutional population.

[5] The Bureau's requirement to protect the privacy of survey respondents results in some ages being adjusted (age perturbation) in public-use files depending on the demographic characteristics of household members. This masking technique can result in relatively large errors in income estimates for subgroups within the older population (Alexander, Davern, and Stevenson 2010). The effects on the paper's results are likely to be very small due to the level of aggregation used in our research (multi-year age groups that include all races). For more on this problem in the context of the population aged 60 and older, see Bureau of the Census (2010).

[6] The reader is cautioned to take note of the different scaling used in the vertical axes in the multiple charts displayed in Figure 1 and throughout the paper, which can easily convey the false impression that different absolute changes are the same.

For most of the latter half of the last century, successive generations of American workers with substantial lifelong labor force attachment scaled back or ceased labor force participation at increasingly early ages.[7] For men in all four of the age intervals (62-64, 65-69, 70-74, and 75-79) displayed in the upper panel of Figure 1, the early 1980s show the final years of the long decline in LFPRs. Those rates then more-or-less stabilize for about a decade, and then begin a period of generally sustained annual increases in the mid-1990s.[8] The largest percentage point increase measured from the low point to 2008 occurred for the 65-69 year old age group, but the proportional increases in LFPR for the other three age groups are substantial. Recent labor force projections from the Bureau of Labor Statistics (Toossi 2009) indicate that the LFPRs for three of the four age groups will continue to increase during 2008-2018 at roughly the same pace as occurred during 1998-2008, the exception being 65-69 year-olds, for whom the percentage-point increase will be about three-fifths as large.

The LFPRs for women in the same age groups show little trend until the late 1980s, at which point they begin to increase at a greater rate than those for men (Figure 1, lower panel). In part, the trend for women is likely to be driven by the increased life-long labor force attachment for later birth cohorts. Each successive cohort reaching age 62 tends to have a higher percentage of women with recent work experience than observed in earlier cohorts. Bureau of Labor Statistics labor force projections show similar increases in participation rates during 2008-18 as occurred in the previous decade (Toossi 2009).

The LFPR trends for the older population depicted in Figure 1 are well known. Less studied is the nature the jobs held by older workers. More specifically, what role does self-employment (SE) play versus wage and salary (WS) work, and is the increased work primarily full time (FT) or part time (PT)? Figure 2 presents LFPRs for men and women categorized by both employment characteristics. Wage and salary rates are distinguished from SE rates by color (WS blue, SE red) and full-time work is differentiated from part-time by line type (FT solid, PT dashed). Following the Bureau of Labor Statistics convention, part-time work is defined as working less than 35 hours per week.

[7] Ransom and Sutch (1988) find little change in labor force participation rates for older men during 1900-40 using decennial census data. Parsons (1980) documents a 15-percentage point decline in the labor force participation rate of men aged 55-64 during 1948-76.

[8] The lowest participation rates associated with the graphs for men are: 45.1 percent (1995 for 62-64 year olds), 24.6 percent (1984 and 1985 for 65-69 year olds), 14.8 percent (1987 for 70-74 year olds), and 8.3 percent (1986 for 75-79 year olds).

Since the mid-1990s, the bulk of the increase in LFPRs for older men has been in full-time wage and salary employment (Figure 2a). The largest percentage-point gains are observed for the two youngest age groups. For men aged 62-64, the WS-FT rate increased from 23.6 percent in 1995 to 30.2 percent in 2007, while the increase for men aged 65-69 during that interval was from 7.6 to 16.3 percent. Although the absolute increases for the two oldest age groups are smaller, the proportional increases during that interval are of the same magnitude as for the 65-69 year olds, approximately doubling the earlier LFPR. The LFPRs for part-time wage and salary work show the second-largest gains since 1993 for all four age groups. At ages younger than 70, full-time work has long been more important than part-time work for men, but the recent data indicate that even among men aged 70-74, full-time work is more prevalent. Only the 75-79 year-old men are more likely to work part time rather than full time. Finally, although there have been modest increases in both full-time and part-time self-employment during the past 15 years for all four age groups, self-employment cannot be judged to be the primary component of the overall increase in their labor force participation.

The results for women are similar, with the preponderance of increases in the LFPRs for the two youngest age groups attributable to rising full-time wage and salary employment rates (Figure 2b). Below age 70, women's LFPRs are considerably lower than are those of men. Until very recently, women in the 65-69 year-old age group who worked were more likely to be employed part-time. Although the WS-PT rate has risen by nearly 3 percentage points during 1993-2007 for that age group, the WS-FT rate increased even faster and has closed the gap with the WS-PT rate. Among women aged 70-74 and 75-79, part-time work dominates full-time work. In addition, women are considerably less likely than men to be self-employed, whether FT or PT, in all four age groups.

III. The importance of earnings in the total incomes of older Americans

Concomitant with the increased labor force participation of the older population has been a large increase in the importance of earnings in their total incomes. We examine this phenomenon by looking at the components of the annual income received by units aged 62 and older during 1980-2008. The aged units consist of married couples where at least one spouse has

attained age 62, and unmarried individuals aged 62 or older.[9] Married units are classified by the husband's age unless he is younger than age 55, in which case the unit is classified by the wife's age.[10] Thus, both members of the couple and their incomes are assigned to the same age category. The unit's *total money income* is the sum of five component categories:[11]

- *Earnings*. All wage and salary earnings and self-employment (farm and nonfarm) income.
- *Social Security benefits*. Retired-worker, disabled-worker, spouse and other dependent, and survivor benefits.
- *Pension benefits.* Private pensions and annuities, government employee pensions, railroad retirement. This category includes retirement, survivor, and disability benefits from these sources.
- *Asset income*. Interest, dividends, rents and royalties, estate and trust income.[12]
- *Other income*. Unemployment compensation, workers compensation, veterans payments, educational assistance, child support, alimony, contributions and financial assistance, miscellaneous survivor, disability, and retirement income, Supplemental Security Income, other public assistance.

1. Income shares received by units aged 62-79

Figure 3 displays the behavior of income shares for people aged 62-79 in even-numbered years during 1980-2008. Income shares are calculated as the weighted sum of the amounts for an income category expressed as a percentage of the weighted sum of total money income for the age group. Couple-units are assigned the husband's CPS weight. Top-coding of income sources in the CPS data is ignored and would affect income-share values for high-income units, but is unlikely to alter the paper's findings appreciably.[13]

[9] Persons who are separated or married but not living with their spouse are included in the nonmarried-persons category.

[10] Because units in which the husband is aged 55-61 and the wife is 62 or older are classified by the husband's age, those units are not included in our analysis except in the determination of the quintile cut-off values for the population 55 and older in Section 4 below.

[11] The Social Security Administration uses a similar categorization in the biennial publication *Income of the Population 55 or Older*.

[12] A shortcoming of the CPS income data is the lack of information on capital gains and losses, which is a nontrivial source of income for some elderly units. Because the CPS collects no data for asset holdings, imputing this source of missing asset income to CPS aged units would be problematic.

[13] Most of the increase in earnings share for units aged 62-79 occurred after 1995, the reference year for which the Bureau of the Census began to assign mean cell values for top-coded labor earnings amounts. (Burkhauser and Larrimore 2009). Therefore, the aggregate earnings amount for an age category is subsequently not affected by the topcoding.

Charts for all age categories show substantial increases in the share of total money income accounted for by labor market earnings since the early to mid 1990s. As the importance of earnings has increased, the asset-income share has fallen noticeably—a decline that began in the early 1980s—while the Social Security benefit income share has declined modestly. The pension benefit share is important for the three oldest age groups, and has varied over time. After increasing during the 1980s for all four age groups, the pension benefit share has declined gradually since the early 1990s for the 65-69 and 70-74 year-olds, but has held steady for the oldest group. The "other income" share is consistently small (about 0.03) for all age groups. For the youngest age group (62-64), among whom LFPRs have been roughly 50 percent for men and 30-40 percent for women during the last three decades, the earnings share has increased from about 55 percent in 1988-90, to 64 percent in 2000, to 70 percent in 2008, with the upward trend beginning in the mid-1990s. For this age group, the asset-income share attained its high value of 16 percent in 1984, falling to 9 percent in 1996. It remained in the 7-10 percent range during 2000-06, ending at 7 percent in 2008. Over the three decades, the Social Security benefit share of income declined from 13 to 9 percent.

The recent upward trend in LFPRs at older ages has been accompanied by striking increases in the earnings share for the oldest three groups. For 65-69 year olds, the earnings share increased from 30 percent in 1980-82, to 35 percent by 1998, to 38 percent in 2000, and was equal to 47 percent of total money income in 2008. Similar to the experience of the 62-64 year olds, the shares of asset income fell from 20-23 percent in the early 1980s to 11-12 percent in 2006-08. The Social Security benefit share also decreased by about 6 percentage points over the three decades. The changes in earnings and asset income shares since 2000 are pronounced for this age group. In 2000, the Social Security's full retirement age (the age at which benefits are not reduced for early claiming) began its gradual increase to age 67 and the retirement earnings test for beneficiaries aged 65-69 was repealed, with both changes improving work incentives for Social Security beneficiaries. The declining share of asset income likely reflects relatively low investment returns for most of this decade and a 6-percentage point decline (to 57 percent) in units reporting income from this source since 1998.[14] Perhaps the single most striking feature of

[14] The declining share of asset income since the 1990s is observed in both CPS data and in the Federal Reservue Board's Survey of Consumer Finances (SCF). Fisher (2007) notes that among SCF units aged 65 and older, the percentage holding financial assets has increased while the probability of owners not reporting corresponding asset income also increased. Because the increased non-reporting was observed for assets such as money market and

the chart for 65-69 year olds is that for the first half of the 28-year time period shown, Social Security and earnings were about equally important components of total money income, each with a 30-percent share. Since 1994, these components have sharply diverged, with the earnings share now nearly twice as large as the Social Security share.

Social Security benefits remain the most important share of total money income for the two oldest age groups, although the gap has narrowed substantially for those aged 70-74. The earnings share for 70-74 year olds has nearly doubled from 16 percent in the early 1980s to 30 percent in 2008. The corresponding increase for 75-79 year olds was from 6-8 percent in the mid-1980s to 15-17 percent in 2004-08. Both groups experienced large declines in asset-income shares. Not shown in Figure 3 is an increase in earnings share for units aged 80 and older from 3-4 percent in the first half of the period to 7-9 percent during the past decade.

2. Income shares received by units aged 62-79 with earnings

In recent years a majority of people aged 62-64 have resided in units with earnings, but the percentage declines with age. For example, in 2008, the percentages for our four age categories were 67 percent (62-64), 48 percent (65-69), 31 percent (70-74), and 18 percent (75-79) (Social Security Administration 2010). Among earners, it is natural that earnings represent a more important average share of total money income than for the larger population that includes nonearners, as shown in Figure 4. For all four age groups, the earnings share has consistently exceeded the Social Security benefit share and usually by quite a large amount even for the two oldest groups. The four panels of the chart show that the increase in earnings shares for the population of earners is not as large as depicted in Figure 3 for the total population in this age range, but is nonetheless clear. The reason is that some of the increase in LFPRs does not translate into an increasing earnings share for earners when the earnings shares of new participants are low. To the extent that an age group's higher LFPR is accounted for by increases in employment in higher paying (typically full time) jobs, the additional participation will tend to increase the earnings share of total money income. This increase is particularly noticeable for units aged 70-74. For the youngest age group (62-64), earnings always accounted for at least 70 percent, and more recently has increased to 80 percent of total money income. For 65-69 year old earners, the earnings share has always exceeded 50 percent, attaining 66 percent in 2008.

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savings accounts, which very likely generate income each year, at least part of the decline in asset income appears to be increasing failure to report asset income received.

3. Income shares received by units aged 62-79 who are Social Security beneficiaries

Many Americans equate retirement with recipiency of Social Security benefits that are not disability related. At least in the past, beneficiary status has been strongly associated with withdrawal from the labor force or reduced labor supply. From its inception, Social Security benefits have been subject to earnings tests of differing stringency that have helped reinforce the idea that benefits are intended to replace labor market earnings. Over the years, the relaxation of earnings test rules have made work more attractive to beneficiaries by increasing annual limits on allowable earnings, reducing the benefit reduction rate, and exempting more people from the test. We discuss these changes later in the paper.

Figure 5 shows the behavior of income shares for units aged 62-79 who receive Social Security benefits.[15] The Social Security benefit share of total money income is substantial for all four age groups, with the share increasing with age. All four age groups again show notable increases in the earnings share of total money income, particularly the 65-69 age group and, to a lesser degree, the 70-74 year olds. Among 65-69 year old beneficiaries, the earnings share increased sharply from 21 percent in 1990 to 38 percent in 2002, declining to 36 percent in 2008. The single largest 2-year increase (more than 5 percentage points) occurred from 2000 to 2002, the period immediately following the repeal of the earnings test for workers who reach the full retirement age.[16] For 70-74 year olds, the earnings share increased from 14 percent in 1990 to 27 percent in 2008. The largest 2-year gain (almost 4 percent) occurred from 2002-2004, but much (45 percent) of the increase from 1990 to 2008 occurred prior to 2000. For all four age groups, the asset-income share declined substantially over the past two decades. Since the early 1990s, pension shares have declined slightly (by 3-6 percentage points) for the three youngest age groups and increased by 4 percentage points for the 75-79 year old group. The "other income" share has remained small (about 0.03) for Social Security beneficiaries in all four age groups throughout the observation period.[17]

[15] A married unit is included in these calculations if the age criterion is satisfied and either spouse receives benefits.
[16] The gradual increase in the full retirement age from 65 to 67 during the 2000-2022 period did not change the full retirement age (65) for anyone aged 65-69 during 2000-2002. Increases in the full retirement age would begin to affect 65-69 year olds starting in 2003.
[17] When the earnings shares of Social Security beneficiaries are examined separately for married couples and nonmarried individuals, it is clear that Figure 5 (all units aged 62-79) fairly closely represents the experience of married couples. As one might expect, for unmarried individuals, the Social Security benefit share is consistently the largest share for all age groups in all years. (They have no spouse who may be the source of non-Social Security income.) The trend to increased earnings shares is present, but not as pronounced as for married couples.

4. The importance of earnings in the distribution of total money income

For some older workers, particularly those without adequate resources to finance retirement, labor market earnings may be a necessary component of total income. Other older workers may be motivated more by job satisfaction or a desire to remain active in the labor force, with any earnings being a secondary consideration. We now examine the behavior of the five income shares over time in different quintiles of the distribution of total money income. The quintile cut-offs are determined by the distribution of total money income for the population aged 55 and older. For this exercise, we calculate the adjusted income of the aged unit for each person aged 55 and older using a simple equivalence scale (equal to 1 for unmarried people, and equal to $\sqrt{2}$ for couples).[18] We then rank the size-adjusted total money incomes of persons using person-level CPS weights to determine quintile cut-offs.

Because earnings have long been the major income source of income for units under the age of 65, the focus is on the population aged 65 and older. Figure 6 displays the behavior of total money income during 1980-2008 for the five quintiles (1 = lowest, 5 = highest). Earnings represent a small share of total money income for the lowest two quintiles throughout the observation period, the share never exceeding 0.03 in quintile 1 or 0.07 in quintile 2. Social Security benefits account for a large proportion of income in the two lowest quintiles, with a slight increasing trend over the entire observation period. Growth in the earnings share since the early 1990s is increasingly apparent as one moves higher in the distribution of total money income from quintile 3 to quintile 5. For quintile 4, earnings became the largest component of total money income (share = 0.31) in 2008; in quintile 5, earnings have been the largest component since 1994, with the 2008 share equal to 0.48. These highest two quintiles have experienced notable declines in asset-income shares. The importance of Social Security benefits in total money income is notably smaller as one moves from quintile 3 (share is about 0.5), to quintile 4 (share is about 0.3), and finally to quintile 5 (share is well under 0.2).

To understand the importance of earnings for units aged 65 and older, one can examine how the adjusted total money income distribution is altered if earnings amounts are set equal to zero (no work). The resulting movements from higher to lower quintiles are tabulated using the original quintile cut-off values. Figure 7 summarizes the results of this exercise for men and women, looking at the entire population aged 65 and older, and then focusing on only those men

[18] There is no professional consensus on a single best equivalence scale. The square root equivalence scale has been used in recent publications from the Organisation for Economic Co-operation and Development.

and women whose units report earnings. Each panel in Figure 7 graphs the percentages of people whose units would move down one or more quintiles (shown in blue) and two or more quintiles (shown in red) over the 1980-2008 period when earnings are subtracted from total money income. Again, the growing importance of earnings since the early 1990s is apparent for both older men and women. Throughout the observation period, men are generally more likely than women to reside in a unit that has earnings, given the higher LFPRs for men. It is, therefore, no surprise that the elimination of earnings as an income source results in larger percentages of men moving down in the income distribution by one or more quintiles. For all men aged 65 and older, the percentage that moves down the income distribution one or more quintiles has increased from 19 percent in 1990 to 26 percent in 2008; among those men with earnings, the increase is from 66 to 75 percent. For all women aged 65 and older, the percentage moving down one or more quintiles increases from 11 to 15 percent between 1990 and 2008; among those women with earnings, the increase is from 61 to 70 percent. For both men and women in this age range, about half of the people who move down the income distribution by one or more quintiles when earnings are zeroed out, in fact, move down by two or more quintiles. Thus, earnings have become an increasingly important income source for the population aged 65 and older and, for those with aged units who report earnings, have a large impact on their relative position in the distribution of annual money income for Americans aged 55 and older.

IV. Discussion

Many factors are likely to have contributed to the increase in late-life earnings and this project is currently investigating a number of these using multivariate statistical procedures. In this section, we briefly review some of the more plausible influences.

Although their influence is difficult to measure, several important changes in the law have helped facilitate longer work lives. The Age Discrimination in Employment Act (1967) prohibits workplace discrimination, in general, against people 40 years of age and older based on age and specifically bans practices such as discrimination in hiring, firing, wages, fringe benefits, training, job assignments, and promotions, and explicitly bans job notices that specify age preferences. The 1978 Mandatory Retirement Act, which amended the ADEA, prohibited mandatory retirement before age 70. A further amendment in 1986 abolished mandatory retirement for most jobs (employers with fewer than 20 workers are exempt).

The passage of the Employee Retirement Income Security Act (ERISA) in 1974 had large effects on the operation of employer pensions, including liberalizing vesting rules for workers. The 1986 Tax Reform Act reduced ERISA's 10-year vesting requirement to 5 years. Although these changes were designed to increase the probability that an employee would retire with a pension, they raised pension costs for employers, providing incentives either to scale back pension coverage or to shift those added costs to workers by slowing the growth in money wages. These two pieces of legislation are thought to have contributed to the decline in defined-benefit pensions. A stagnant pension coverage rate coupled with the shift in pension type is likely to have increased work incentives. Unlike defined benefit plans, where there are usually large incentives to retire at specific ages, defined contribution plans are largely neutral with respect to retirement age. Thus, employees who may have formerly been covered by a defined benefit plan, but who want to continue working, are no longer penalized for doing so.

One aspect of the very low private saving rate (until its recent modest recovery) in the U.S. is the substantial fraction of near-retirees who are estimated to have inadequate retirement savings. Although there has been some disagreement about the extent to which people have failed to accumulate sufficient assets, the evidence on the sources of retirement income for the bottom two quintiles of the distribution of total money income indicates the near-absence of asset income, or for that matter, private pensions. For many seniors, earnings are necessary to attain a satisfactory standard of living, but many aged units in the lowest quintiles do not work.

Inadequate retirement savings are not only the result of a failure to contribute regularly to a retirement savings account, but can also occur if investment returns are unexpectedly low. The past decade has seen average equity returns that are lower than the historical averages, with periodic gains being offset by precipitous declines in asset prices. There is not yet much evidence on the effects of poor investment performance on the timing of retirement, and the little evidence that exists is mixed. For many families, housing equity represents the single largest form of wealth. The effects of the recent steep declines in house prices on retirement decisions is unknown, but is likely to increase work incentives for older workers.

Continued work is usually contingent on good health and, by most measures, the health of the young old—those who are most likely to want to continue working—has improved over time, making them more able to work. A healthier older population can participate in a labor market where work also has become less physically demanding over time. Related to this point are the increasing levels of educational attainment of successive cohorts. Higher skilled workers

are more likely to enjoy work, be better compensated for it, and are more likely to be able to continue working.

The increasing cost of health care has led to the declining availability of employer-provided health insurance for retired workers. Without group coverage, many older individuals are unable to afford prohibitively expensive coverage. The risk of incurring health expenses without insurance coverage motivates some workers to continue employment in order to retain employer-provided health insurance, at least until age 65 when Medicare coverage begins.

The aging of the population is determined largely by the smaller size of the birth cohorts that follow the baby boomers. There has been considerable speculation that the market for older workers will continue to improve due to an increased demand for older workers. To meet that demand, prospective employers may have to redesign jobs and offer compensation packages to suit the preferences of older workers.

Finally, during the past two decades there have been a number of important changes in the Social Security retirement program, most of which have been made with the intention of promoting work and postponing benefit application. These include:

- A gradual increase in the full retirement age (FRA) from 65 to 67 in two phases. During 2000-05, the FRA increased by 2 months each year for cohorts born during 1938-43. During 2017-22, the FRA will increase by 2 months each year for cohorts born from 1955 to 1960.[19] The effect of a 2-year increase in the FRA is equivalent to a 13.3 percent benefit cut. A benefit cut induces more work.

- A gradual increase in the delayed retirement credit (DRC) from 3 to 8 percent per year during 1990-2008.[20] The DRC is the rate by which the monthly benefit amount is increased when the onset of benefits is deferred beyond the FRA, and is applicable up to age 70. The 8-percent rate is thought to be actuarially fair. Thus, for a person with average life expectancy, the present value of expected lifetime benefits is unchanged when first receipt of benefits is delayed. The increased DRC also promotes continued work.

- Liberalization of the annual earnings test and abolition of the test for persons aged 65-69 in 2000. Social Security has had an earnings test since the program's inception. There have been many ad hoc increases in the amount of earnings allowed before benefits are reduced for earnings that exceed the limit. Four changes are particularly relevant during the 1980-2008 period examined in this paper. In 1983, beneficiaries aged 70-71 were

[19] The 1938 cohort, which attained age 62 in 2000, has an FRA of 65 years and 2 months; the 1939 cohort, 65 years and 4 months; and the like, up to the 1943 cohort with an FRA equal to 66 years. The next 11 cohorts also have an FRA of 66 years. The 1955 cohort, which attains age 62 in 2017, has an FRA of 66 years and 2 months; the 1956 cohort, 66 years and 4 months; and the like, up to the 1960 cohort with an FRA equal to 67 years. Ensuing cohorts also have an FRA of 67 years under current law.

[20] The DRC increased by 0.5 percentage points in successive even-numbered years.

made exempt from the test. In 1990, the benefit reduction rate decreased from 0.50 to 0.33 for beneficiaries aged 65-69. Beginning in 1996, a series of large annual increases in the exempt amount was adopted for beneficiaries aged 65-69, which was overridden by a 2000 change that abolished the earnings test above the FRA.[21] Elimination of the earnings test is usually thought to be a work incentive, especially for beneficiaries who do not understand that lost benefits are subsequently restored, as well as for workers with high discount rates who strongly prefer current period income.

All told, the economic environment over the past 30 years has changed in ways that are favorable to increased work and earnings by older workers. Investigation of the relative importance of the plausible causes is still in its early phase and is the focus of our current work.

[21] Throughout this time period, the earnings test for beneficiaries aged 62 to 64 remained unchanged: a 0.50 benefit reduction rate for excess earnings with a wage-indexed annual limit. It should also be noted that any lost benefits during ages 62-64 are restored by an actuarially fair amount added to monthly benefits at FRA. When the test applied to beneficiaries aged 65-69, lost benefits were restored at the DRC rate.

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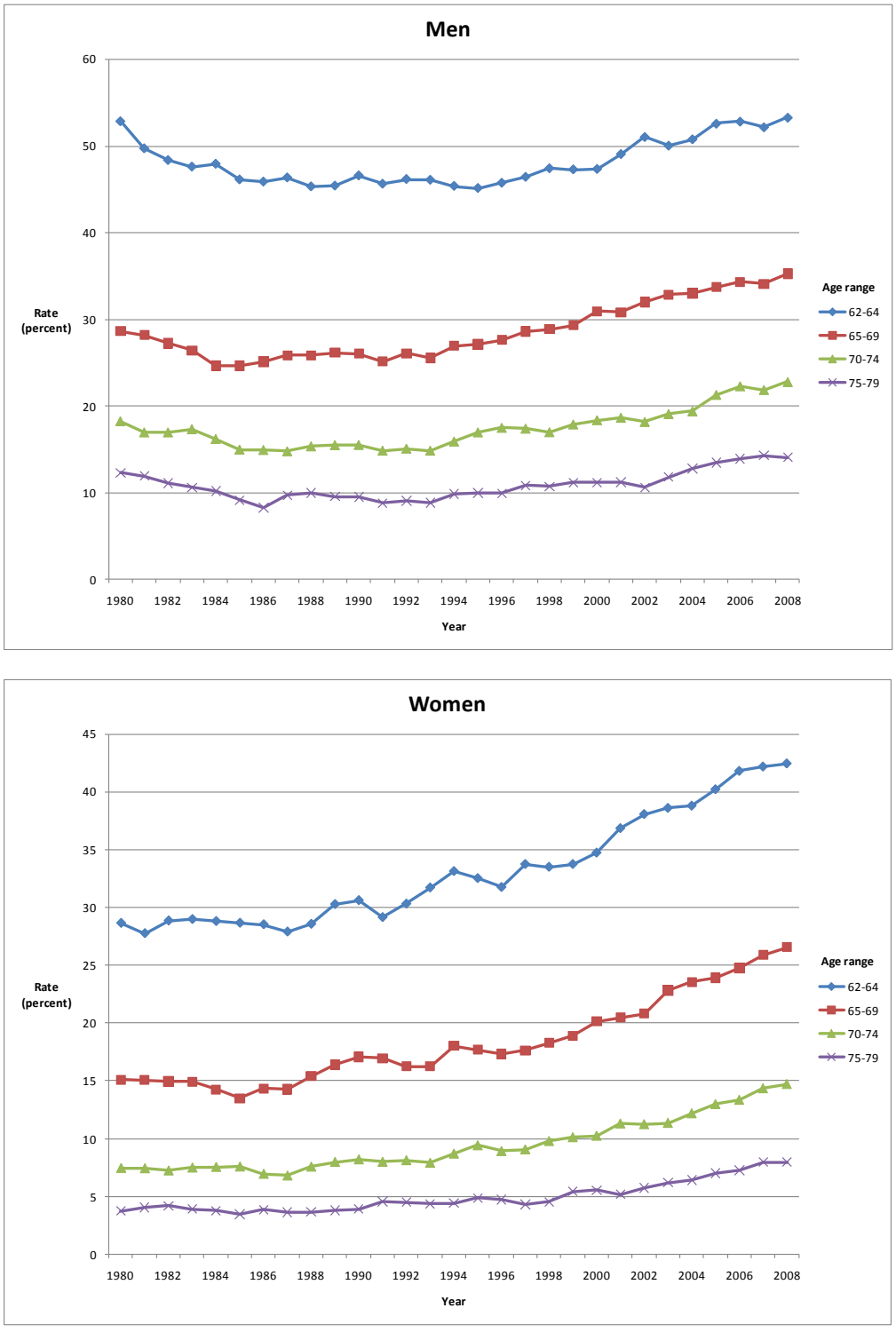
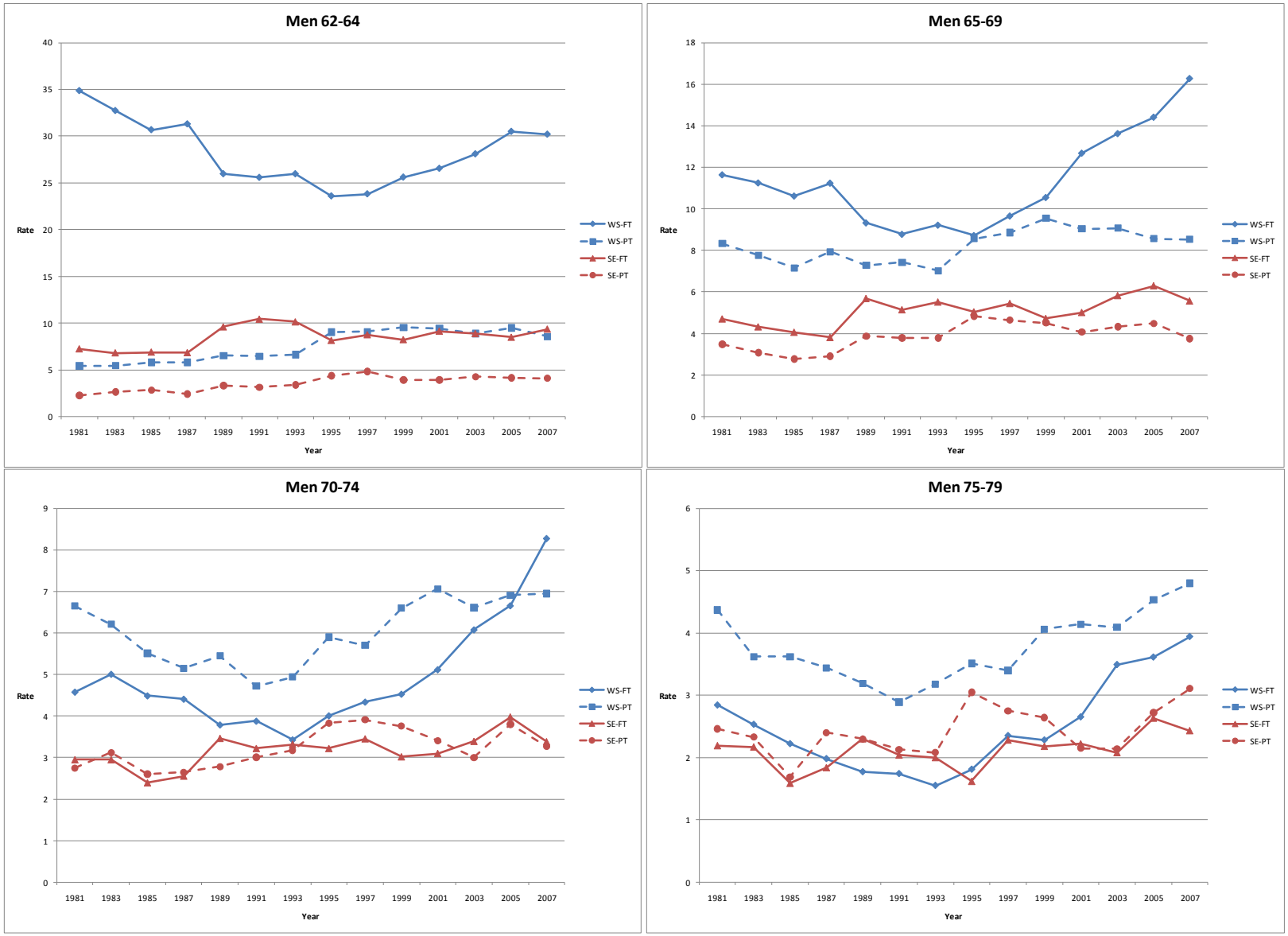
Figure 1. Labor force participation rates for the population aged 62-79, 1980-2008



Source: Employment status of the civilian noninstitutional population 55 years of age and over by single years of age, sex, race, and Hispanic or Latino ethnicity, annual averages (Table 11, various years), Bureau of Labor Statistics.

Figure 2(a). Labor force participation rates for wage and salary versus self-employed workers, by full-time versus part-time work status, men aged 62-79, 1981-2007.

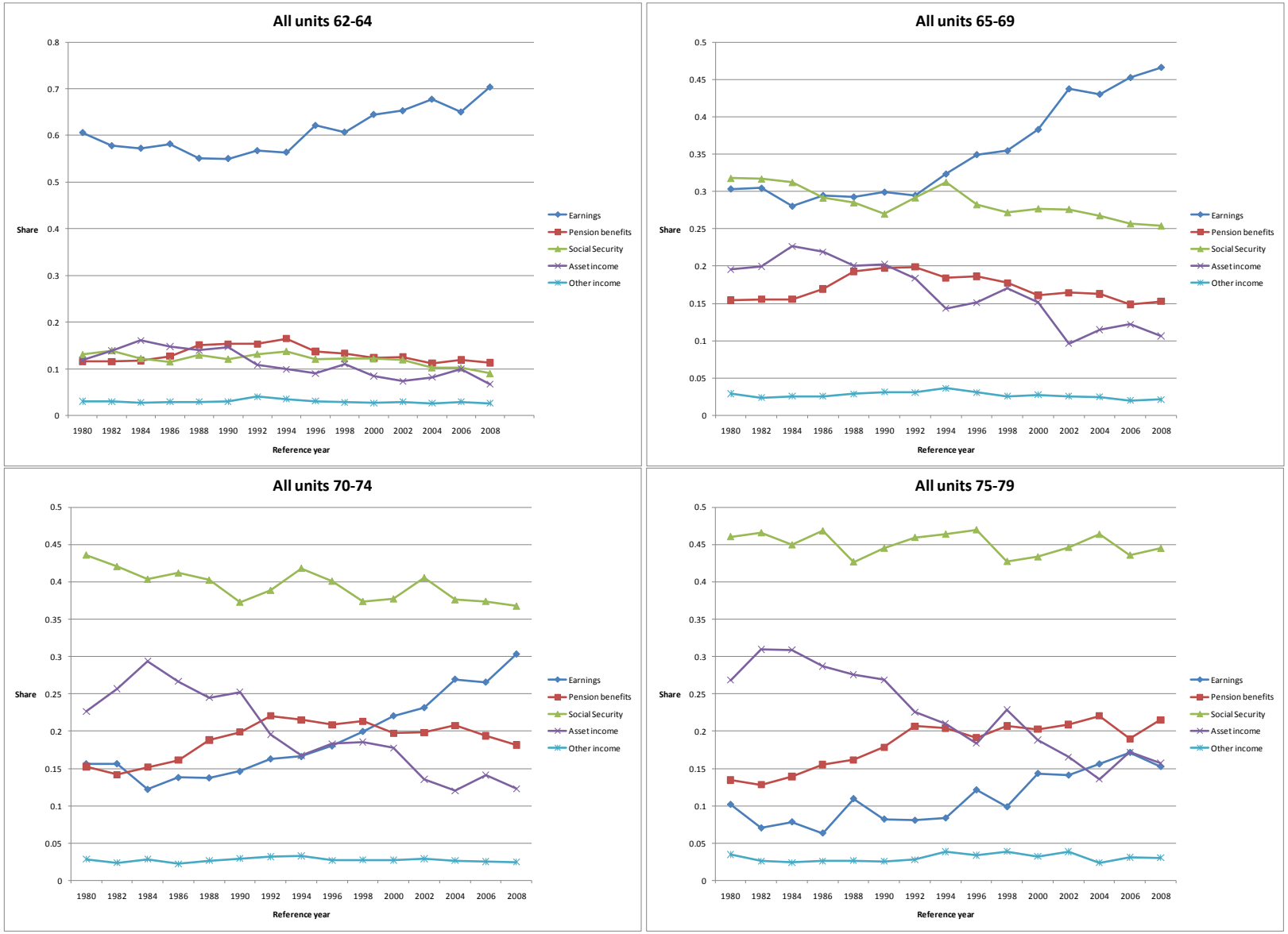


Authors' calculations using Current Population Survey data for full-time (FT), part-time (PT), wage and salary (WS), and self-employment (SE) earnings. Part-time work is defined as working less than 35 hour per week.

Figure 2(b). Labor force participation rates for wage and salary versus self-employed workers, by full-time versus part-time work status, women aged 62-79, 1981-2007

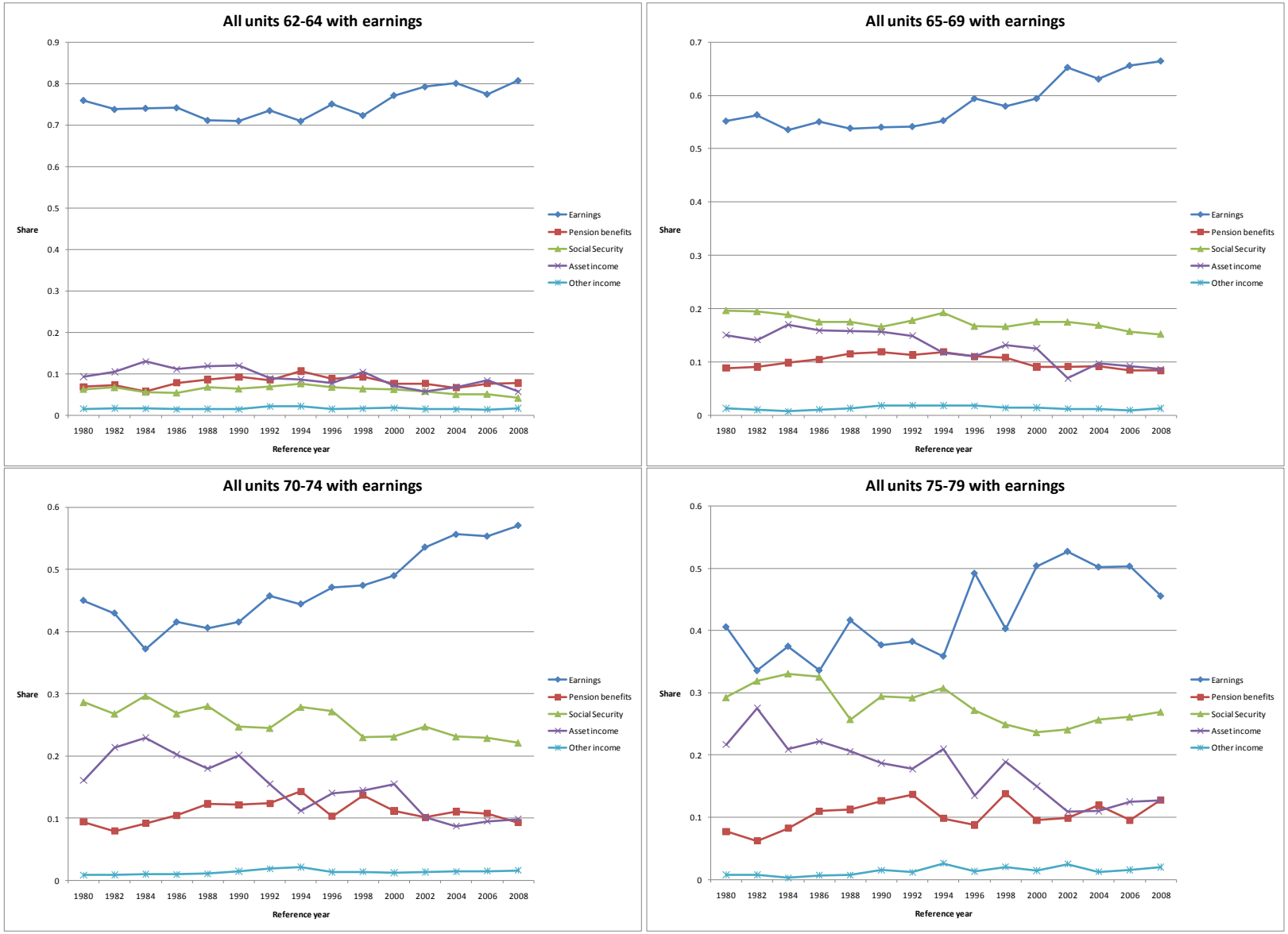
Authors' calculations using Current Population Survey data for full-time (FT), part-time (PT), wage and salary (WS), and self-employment (SE) earnings. Part-time work is defined as working less than 35 hour per week.

Figure 3. Income shares for population aged 62-79, all aged units, 1980-2008.



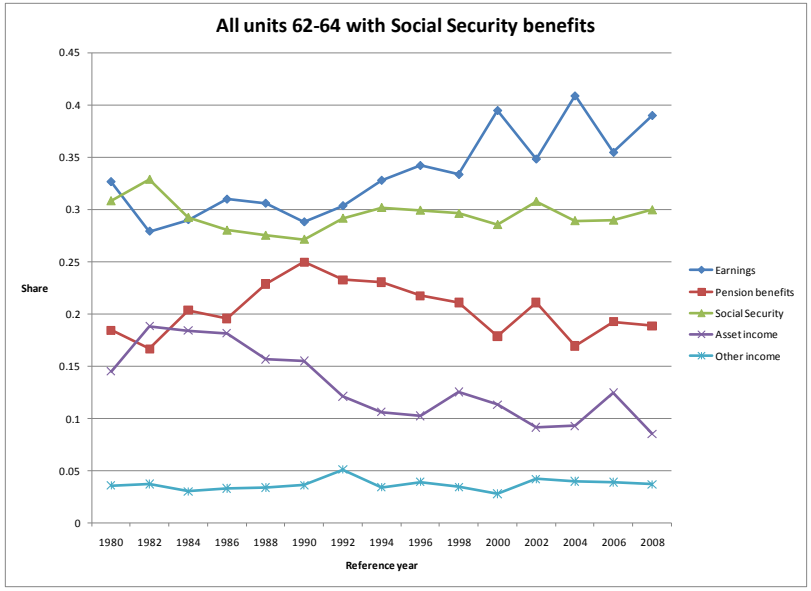
Authors' calculations using Current Population Survey data.

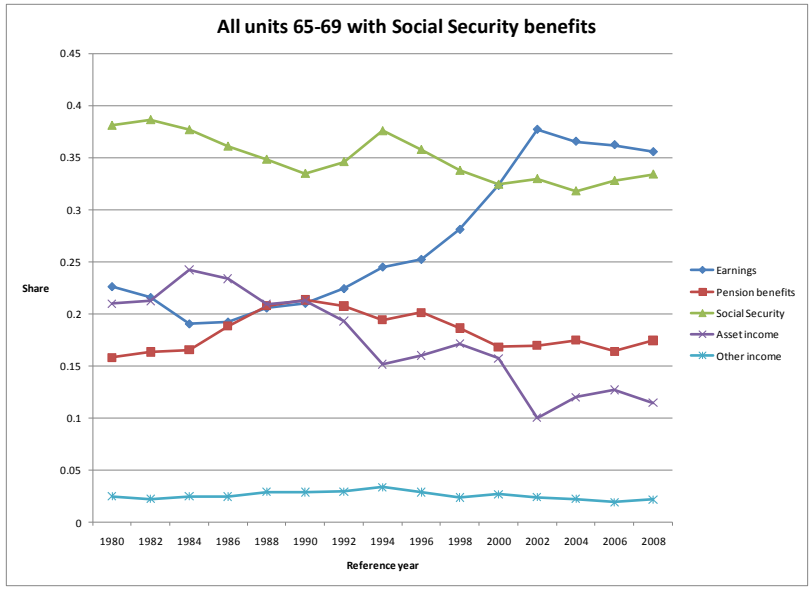
Figure 4. Income shares, all units aged 62-79 with earnings, 1980-2008.

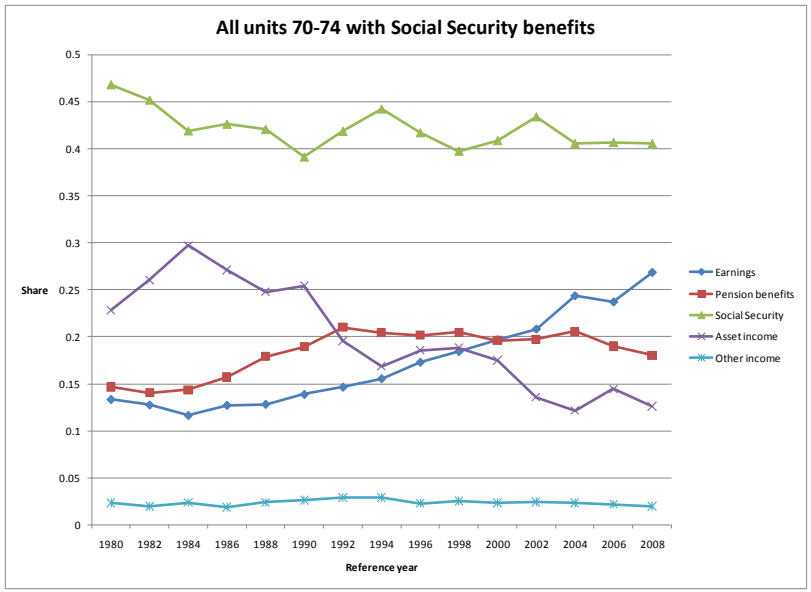


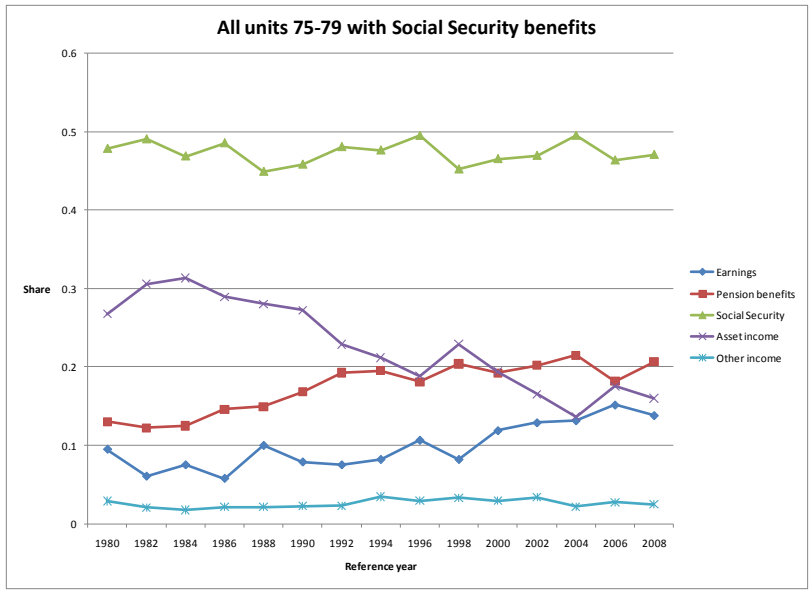
Authors' calculations using Current Population Survey data.

Figure 5. Income shares, all units aged 62-79 who receive Social Security benefits, 1980-2008.



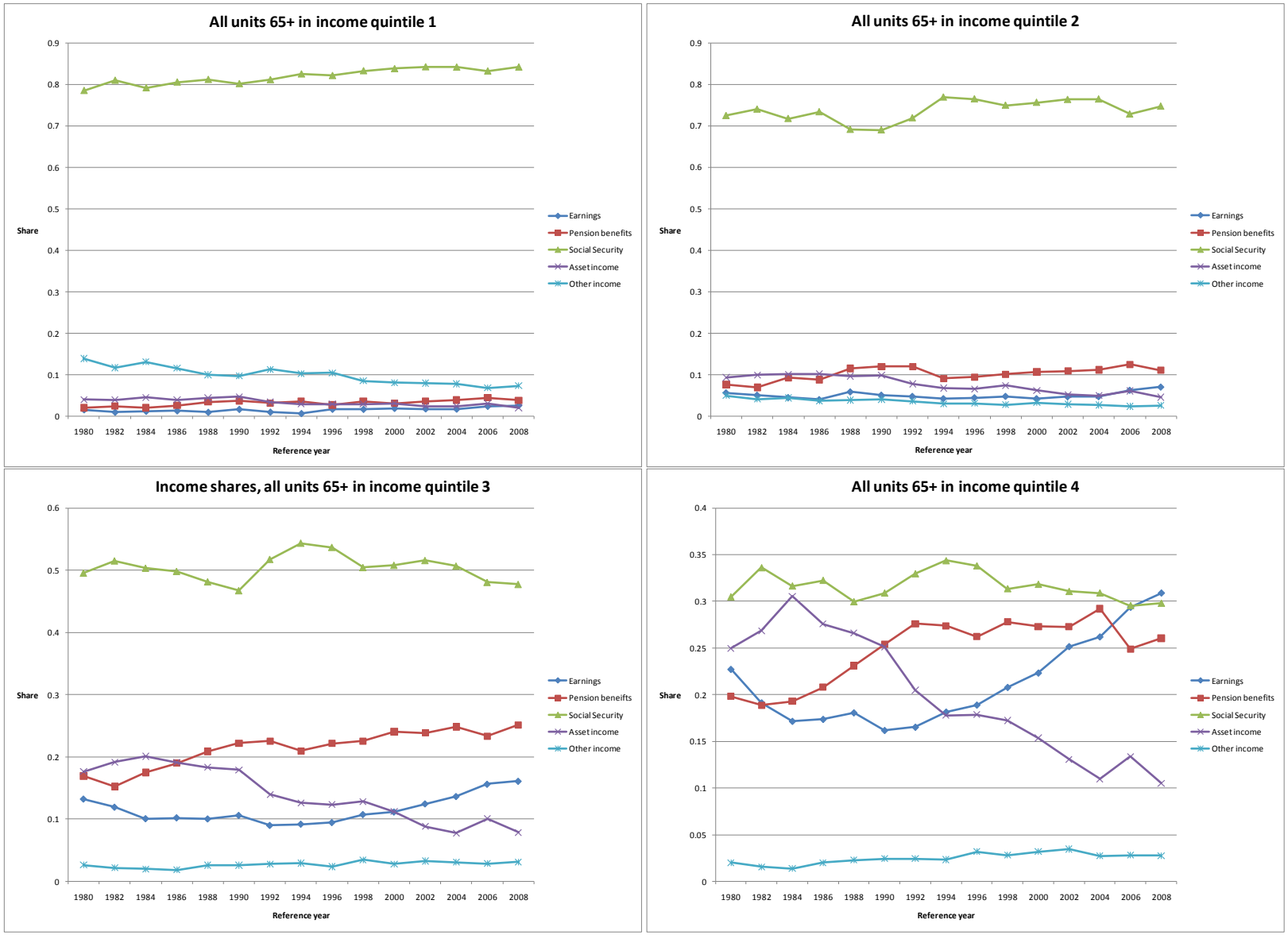






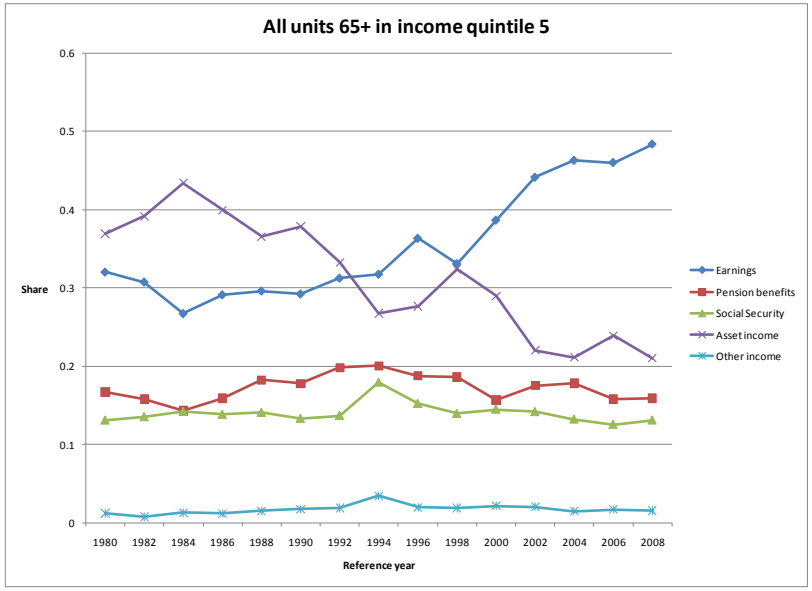
Authors' calculations using Current Population Survey data.

Figure 6. Income shares, all units aged 65 and older, by quintile, 1980-2008.



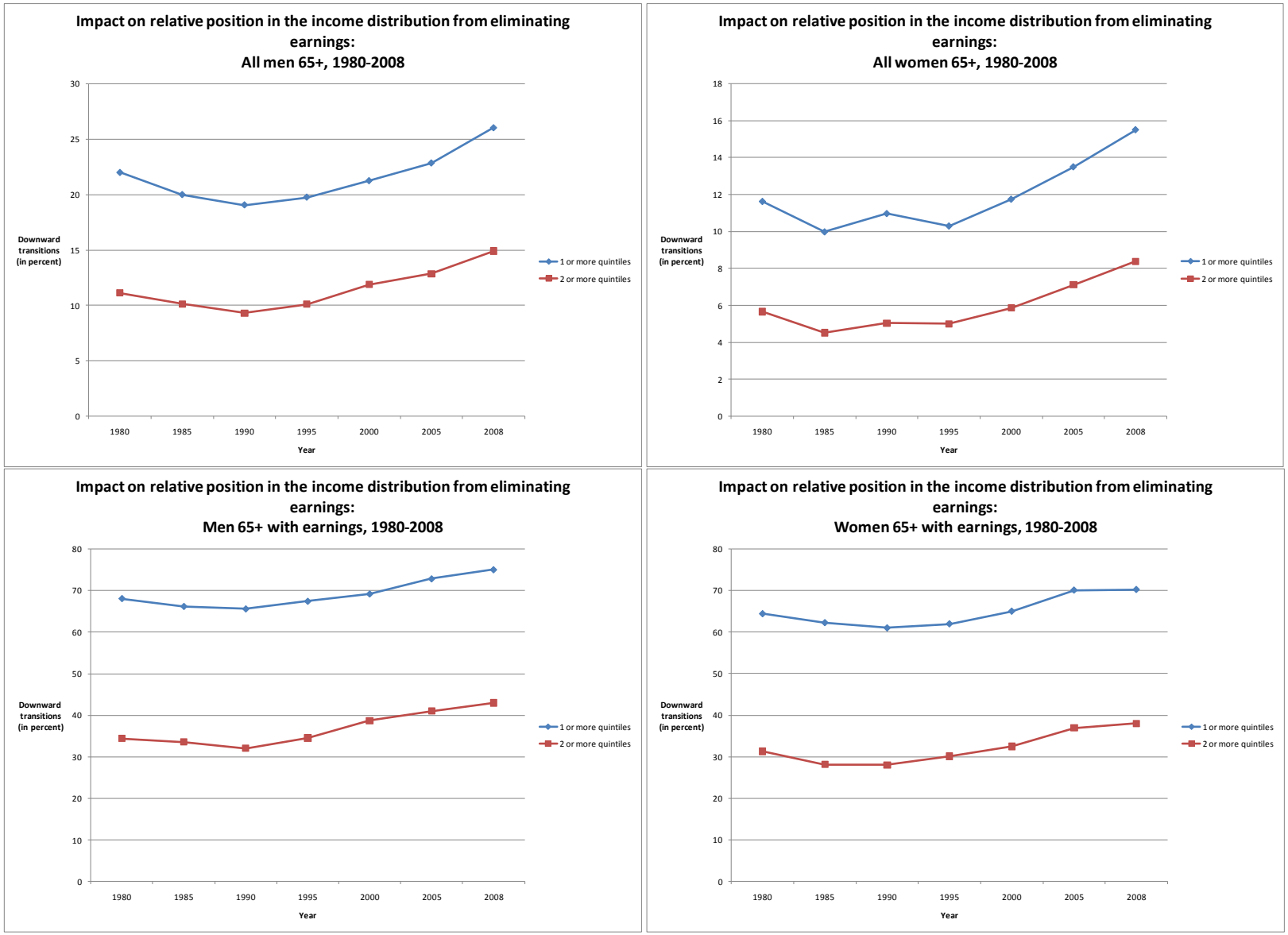
Authors' calculations using Current Population Survey data.

Figure 6 continued.



Authors' calculations using Current Population Survey data.

Figure 7. Impact on relative position in the total money income distribution from eliminating earnings.



Authors' calculations using Current Population Survey data.